Using Structured Play and Priming in the Natural Learning Environment to Enhance Social Skills in Children Identified as Having Autism Spectrum Disorder

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Abstract

This qualitative teacher action research study investigated the experiences of incorporating structured play and priming in the natural learning environment to enhance social skills in children identified as having autism spectrum disorder. Three fourth grade students, one female and two males, participated in the study conducted in a suburban elementary school containing approximately 592 students in the northeastern United States. Methods of gathering data included teacher observation, duration recording, event recording, reflective sheets, and rubrics. Methods of analysis included review of student work, the creating of analytic memos, coding, and construction of theme statements. Students were taught age appropriate games in the natural learning environment free of peers and then played in the natural learning environment with peers. Within the natural learning environment with peers, the teacher used peers and natural social situations to enhance students’ social skills at their individual level. Findings suggest that social skills can be increased when social skills instruction is carried out in the natural play environment. Furthermore, instruction in the natural learning environment at a student’s instructional level allows students identified as having autism spectrum disorder to begin to develop higher-level thinking skills.
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MY STORY

“The...big...bear...ran...across...the...road.”

“The red hand on the clock hit the 8. He did 5 seconds better today. I know he will do even better tomorrow. All we have to do is keep practicing,” I thought. This script played out almost every afternoon when reading with my cousin. He struggled for years with reading and keeping up with academic expectations. He was identified as having a learning disability in sixth grade, but my family worked hard to help him remain in the regular education environment to receive academic instruction.

He is one of those people who work hard at everything that is given to him, and he never complains no matter how hard the challenge. I watched him practice for years to improve his reading. Some years his reading performance would take off, and my family would relish in the joy of his accomplishments. Other years he would have such a difficult time, still not complaining, but making little or no observable gains in his reading ability.

There always seemed one strong factor that equaled a huge piece of his success or lack of success: it was his teacher. Some years he had teachers who truly understood him as a learner. Other years he had teachers who pulled out the same old lesson plans and taught the same way they had for years. It did not matter what type of learner a student in the class was. In these classes, the
students had to change to parallel themselves with the instructor’s teaching style. Needless to say, he never did well in those classrooms.

I continued to watch this for years, and I realized that we needed more great teachers in our school systems, especially teachers who understood students with special needs. I left for college ready to learn everything I needed to, so I could teach students like my cousin. On my journey to become a teacher, I discovered that there are many children out there with a wide variety of disabilities. During my first year of college, I began running a recreational program for individuals identified as being developmentally delayed. Here I encountered a wide range of disabilities, but individuals identified as having autism spectrum disorder really caught my attention. My experience in the recreational program sparked my interest, and I began seeking out any and all opportunities I could to work with children identified as having autism spectrum disorder. I began to realize that I was very good at understanding the needs and strengths of children identified with autism. My passion for teaching children remained in place, but the focus of my attention changed. When I left college, I was adamant that I wanted to teach children identified as having autism.

Two years later, I started teaching autistic support. From the beginning, teaching academics came naturally. I enjoyed creating strong lessons to meet each individual student’s needs. My students’ reading, math, and writing abilities
increased. I worked hard to improve what I was doing, but at no time was I upset because my students’ academic skills weren’t improving.

There was one area, though, where I felt inadequate. In the autistic support environment, we teach all academic areas plus social skills. When I went to college, there were no classes explaining how to instruct students on social skills. Questions were running through my head all the time. What should I teach? How should I teach it? When should I teach it with only 6 hours in the school day?

I started teaching social skills in two ways. First, I had to come up with subject matter to teach. This was difficult at first, so I taught very general rote social skills (greeting friends, how to act in the hallway, how to answer questions in class, etc.). Second, I framed the lessons the same way I constructed all of my lessons. The lessons consisted of a lesson objective, anticipatory set, procedures and a closing. Unfortunately, this did not improve my students’ social skills. The material I was using was so vague, general, and out of context that not one of my students’ social skills improved that first year. These lessons did not meet their needs or prepare them for the future.

When I went into my second year of teaching students in the autistic support program, I was determined to create lessons that focused on my students’ needs. I observed them in the school environment and began identifying the specific areas that they lacked socially. I then created lessons in the same format,
as the previous year, that focused on these areas. I was excited about the lessons and believed that they would help improve my students' social skills. I realized early on, though, that I had been wrong in making this assumption. My students were able to acquire and demonstrate the skills within my classroom, but when entering other environments, they largely failed to transfer these skills. Generalization of the instruction did not occur. What was I to do?

I began to read about different instructional techniques for social skills. Social stories, peer buddies, facilitated play, and coaching were just some of the many instructional approaches out there. I tried some, but always got the same result. Students could demonstrate the isolated skill in my room but could not take it further. Then I discovered structured play and priming. A study carried out by Kok, Kong, and Bernard-Opitz (2002) combined structured play and priming to increase students' social skills. Priming requires students be instructed on a skill prior to entering a setting. The student can be primed in the special education classroom and then the environment in which the skill will occur (with no other peers), but it is important that the last priming stage be in the environment where the skill will occur. Structured play requires a child be taught a game picked by the instructor. Students are then placed in the play environment with the play object or game with peers. The instructor is in the play environment coaching the student through social situations encountered with other peers. Students are taught to play with a multitude of age appropriate materials and/or
games. After discovering these two techniques, I wondered: **What will be the observed and reported experiences when I use the process of structured play and priming in the natural social environment to enhance social skills instruction?**
LITERATURE REVIEW

Introduction

Since 1996, the number of children labeled as having autism has increased profoundly (Scheuermann & Webber, 2002). The Center for Disease Control and Prevention estimates that 1 in 110 children have been labeled as having autism spectrum disorder, and the risk is 3-4 times higher in males than females (CDC, 2010a). With this information, it is no surprise that doctors, educators, and parents have been searching for instructional approaches that address the various needs of children labeled as having autism. Among the numerous concerns that professionals raise for children identified as having autism, social skills is one area of high concern. Social skills are the skills all people need to live successful lives. With deficits in this area, individuals identified as having autism struggle with developing social skills needed to have a good quality life. With the growing number of children being labeled as having autism it is important to prepare these children with skills to live a good quality life. In order to create instructional programs that foster growth in skills needed for adult life, it is important that educators are aware of what autism is, are aware of the characteristics that all children with autism possess, and are well versed in the instructional approaches that cultivate the most progress. Educators also need to understand the deficits students with autism face in the realm of social skills, need to understand what programs are in place within today’s classrooms to
increase social skills, and need to understand the limitations to the current practices within the field. Structured play and priming can clearly help students with autism generalize social skills across environments.

**Autism**

**Definition**

Autism is one of six pervasive developmental disorders (PDDs), better known as autism spectrum disorders. Pervasive developmental disorders encompass autistic disorder, Asperger’s syndrome, pervasive developmental disorder, not otherwise specified (PDD, NOS), fragile X syndrome, Rett syndrome, and childhood disintegrative disorder. Developmental disorders are disorders that a person is born “with or has the potential for developing” (Siegel, 1996, p. 11). Disorders of this nature are caused by abnormalities within the brain. While researchers have not identified what part of the brain is affected, it is thought that the abnormalities begin during the brain development in the womb (Siegel, 1996).

The Individuals with Disabilities Education Act of 2004 (IDEA 2004), our nation’s federal law for special education, classifies all six of the pervasive developmental disorders under the term autism.

IDEA 2004 defines autism as:
A developmental disability significantly affecting verbal and nonverbal communication and social interaction, usually evident before 3, that adversely affects a child’s educational performance. Other characteristics often associated with ASD are engagement in repetitive activities and stereotyped movements, resistance to environmental changes, or change in daily routines, and unusual responses to sensory experiences. The term does not apply if a child’s educational performance is adversely affected because the child has an emotional disturbance. (300.8[c][1])

**Characteristics**

When looking at several children identified as having autism it is important to remember that their abilities differ significantly (Mastrangelo, 2009). The term “autism spectrum disorder” is used because the range of abilities and deficits occurs along a spectrum. The skill set of many children identified as having autism spectrum disorder can be described as being splintered (Scheuermann and Webber, 2002). For example, these children may be good at decoding words but cannot comprehend a passage they just read.

The definition that IDEA 2004 requires educational systems to use to identify children as having autism combines all the pervasive developmental disorders under the same definition. The six PDDs, though different, contain the
same core characteristics. Pervasive developmental disorders are each unique in their own right, but they all encompass “severe and pervasive impairment in several areas of development: reciprocal social interaction skills, communication skills, or the presence of stereotyped behavior, interests, and activities” (American Psychiatric Association, 1994, p. 65). These three characteristics are part of a large repertoire of skills that people need to be successful or are characteristics that hinder success. When individuals present with deficits in these areas they struggle with making friendships, sustaining friendships, reading nonverbal language, and understanding figurative language (Pierangelo and Giuliani, 2008).

Reciprocal social interaction is an individual’s ability to interact with others by following social rules in an age appropriate manner. Individuals labeled as having autism under the qualifications of IDEA 2004 are not able to follow social expectations when interacting with others. Bacon. Fein. Morris. Waterhouse, and Allen (1998) found that children identified as having high functioning autism have a difficult time with social interactions and social-emotional understanding. For this reason, children identified as having autism may have trouble with initiating social interactions, a slow response to other’s social initiations, focusing their attentions on objects rather than people, and relating to others’ feelings. Some children on the spectrum can also be overly affectionate and may exhibit extreme excitement during social situations (Pierangelo and Giuliani, 2008). Students with PDD also have a difficult time
understanding basic emotions (sad, happy, mad, etc.), along with socially complex emotions (embarrassment, surprise, loneliness, etc.) (Bacon et al., 1998; Mastrangelo, 2009). Due to these atypical social behaviors, individuals identified as having autism tend to withdraw themselves or find themselves isolated from their peers (Pierangelo and Giuliani, 2008). For this reason, children identified as having autism need help comprehending social expectations and identifying social norms (Pierangelo and Giuliani, 2008). Jackson, Fein, Wolf, Jones, Hauck, Waterhouse et al. (2003) found that children with autism can learn rote social skills (like greeting a friend), but may not develop more complex social skills (play).

It is no surprise that children identified as having autism also have a range of communication abilities. Social interaction and communication are so closely linked that when one is affected, the other will also be affected. Some children on the spectrum are non-verbal, meaning that the child has no spoken language. Other children, though, are characterized as being verbal (having spoken language). Along with deficits in students’ ability to speak, students with autism spectrum disorder have deficits with their receptive (the ability to comprehend spoken language) and expressive (the ability to express oneself through language) communication. Children identified as having ASD do not develop through communication milestones as typically developing peers do. They may struggle at some levels, skip some levels, or easily master more complex communication
skills while not mastering more simplistic communication skills (Mastrangelo, 2009). The students on the spectrum that are verbal still have communication deficits that create obstacles in their lives. They are unable to “communicate in a functional manner” (Scheuermann and Webber, 2002, p.7). Scheuermann and Webber (2002), authors of *Autism: Teaching Does Make a Difference*, believe that not having functional communication is the biggest obstacle that students with this disorder face. The ability to communicate is what allows us to interact with others and navigate through our world successfully.

Since children with autism cannot easily venture through the world, it is no surprise then that another core characteristic is that children identified as having autism “have the presence of stereotyped behavior, interests, and activities” (Scheuermann and Webber, 2002, p.11). Individuals on the spectrum have a difficult time coding and categorizing information within their world (Bauminger, 2002). They use literal ideas about items/things and tend to think of things by their location in the world rather than their functional purpose (Scheuermann and Webber, 2002). When the social rules of the world that surrounds you are confusing and you do not have the ability to communicate this confusion effectively, a person is led to stick with what he or she knows and resist change of any kind. Since “students with autism over attend to environmental cues” (Scheuermann and Webber, 2002, p. 16-17), they have rigid perceptions of
the world, they adhere to rules, and need closure to activities they encounter (Pierangelo and Giuliani, 2008).

When these rules and perceptions are interfered with, many students on the spectrum begin to display behaviors that get in the way of having social relationships, living in a community, or impede learning. These behaviors may look like “hyperactivity, short attention span, impulsivity, tantrums, aggression, and self-injurious behaviors” (Scheuermann and Webber, 2002, p. 10).

**Instructional Approaches**

Children with autism spectrum disorder are a very diverse group of people and no one instructional approach will work for all individuals on the spectrum (Pierangelo and Giuliani, 2008). It is important that a team approach is implemented so each student’s individual needs are met. Programs should focus on communication, social, academic, behavioral, and functional living skills (Pierangelo and Giuliani, 2008). They should be guided by practical approaches that require the diagnoses of deficits, interventions tied to the diagnosis, and constant progress monitoring to ensure the effectiveness of the intervention (Scheuermann and Webber, 2002).

Students with autism do not learn in the same way as typically developing children. Instructional approaches and the learning environment need to be carefully planned to ensure successful acquisition of skills. Many successful instructional approaches are based on applied behavior analysis (ABA). ABA
“includes teacher-directed learning, with clear, repetitive presentations of small chunks of information, practice, feedback, and data collection (Scheuermann and Webber, 2002; Alberto and Troutman, 2003). Children with ASD tend to memorize what they are taught, so it is important to create direct instruction that imbeds errorless teaching versus instruction that tends to allow students to acquire skills through incidental learning (Laushay and Hetlin, 2000). Errorless teaching is instruction that requires a skill be taught correctly the first time presented (the answer is given and practiced over and over) (Alberto and Troutman, 2003). The student is not required to make mistakes in order to learn the skill. If instruction is created that allows students with PDD to make mistakes, students on the spectrum tend to memorize the incorrect skill, and it becomes more difficult to break the bad habit that was formed (Scheuermann and Webber, 2002). This occurs due to the need to follow rules exactly. When students with ASD have memorized a skill, strategy, or problem solving technique in a specific way, they are hesitant to change because the rule helps them make sense of the world.

It was stated previously that children with ASD have a difficult time organizing the information around them. To help students understand their environments more successfully, it is important to arrange environments “to act as cognitive organizers” (Scheuermann and Webber, 2002, p. 124). Students with ASD learn better with visual cues, so learning environments should be arranged to clearly define the purpose of each space in an environment. Visual schedules and
planners can also be used to help children with ASD organize their day and make the day more predictable to alleviate the anxiety of unfamiliar situations. These instructional supports allow the individual to be more independent in the environments they encounter daily. They allow individuals to begin, finish, and transition through activities smoothly (Scheuermann and Webber, 2002; Pierangelo and Giuliani, 2008). These instructional strategies can also imbed motivators in them. When paired with motivating activities like free time, students are more likely to follow routines, complete instructional work, and produce better quality work (Scheuermann and Webber, 2002).

It is also important to use instructional strategies that promote skill generalization. Generalization is the ability to demonstrate “skills among different people using different objects or materials, in different settings, and at different times” (Westling and Fox, 2000, p. 11-12). Generalization is very difficult for children identified as having ASD. Using the General Case Method of instruction is one way for educators to begin planning for functional skills training. This instructional approach is different from what most educators are taught about lesson planning within their teacher preparation classes. This method of planning contains six steps. The educator is required to first look at the instructional universe in which the skill will be carried out. The instructor then defines the range of relevant stimulus and response variations. These are the items that give our brain the cue to handle a situation in a certain way. For
example, the skill may be shopping at a store. The first step that would need to be taken would be entering the store. In order to enter a person needs to take the cue of the door, and then you have to be able to handle the many varieties of doors (knobs, automatic, bars, push, etc.). The third step is that the teacher selects examples for teaching and probe testing. The teacher then sequences the teaching examples in order to obtain the most acquisition and follows the sequence that was developed (steps four and five). Finally, the instructor tests generalization of a skill by using the nontrained probe examples (Fox & Westling, 2000).

In conjunction with general case method of instruction, it is important for educators instructing students with autism to use priming as an instructional strategy to teach social skills before carrying the skill over into the real world. In 2005, several researchers worked together to see the effects priming had on helping children with autism generalize social skills into the natural environment. They defined priming as directly instructing and demonstrating a desired skill prior to entering the natural environment (Sawyer, Luiselli, Ricciardi, and Gower, 2005). Another research group studied the effects of priming on children with autism. This group felt three components defined priming: “priming is conducted prior to the activity, using the same materials; the priming session is low demand, containing tasks the child can easily complete; and the priming session is rich in potential sources of reinforcement” (Zanolli, Daggett, and Adams, 1996, p. 408). Both groups found that priming was an effective
instructional strategy to help students enhance social skills (Sawyer et al., 2005; Zanolli et al., 1996). Sawyer et al. found priming to increase sharing behaviors during play sessions when combined with prompting during priming sessions and play sessions. This combination also increased generalization of skills (2005). Zanolli et al. (1996) found priming to increase spontaneous initiations when combined with prompts and reinforcement only during priming sessions.

Both studies note that priming must be combined with prompts and reinforcement to be successful. Alberto and Troutman define prompts as any additional stimulus that increases the likelihood of a desired behavior (2003). There are physical prompts, gestural prompts, verbal prompts, and visual prompts. Teachers, when deciding how to instruct, can use full prompting, which requires total assistance with the behaviors, or partial prompts, which requires the student to do some of the behavior on their own and assistance is provided when needed (Scheuermann and Webber, 2002).

Alberto and Troutman define reinforcement as:

...a relationship between two environmental events, a behavior (response) and an event or consequence that follows the response. The relationship is termed reinforcement only if the response increases or maintains its rate as a result of the consequence. (2005)
When implementing reinforcement, it is important to remember to deliver the reinforcement as soon as the desired behavior occurs, always use social reinforcers along with the material reinforcers (token), deliver the reinforcer only when the desired behavior is completed, fade reinforcement when a desired behavior is being carried out regularly and frequently, and rely on natural reinforcers as much as possible (Scheuermann and Webber, 2002). Reinforcers can be anything that increases a behavior. Many children identified as having autism tend to be motivated by uncommon reinforcers (Pierangelo and Giuliani, 2008). They may want time to themselves, they may want to carry out a familiar routine, or they may want time with a specific object. For reinforcement to work, it is important to find a reinforcer the individual finds desirable.

**Social Skills**

It is important to begin interventions with children labeled as autistic as soon as possible. Communication and social skills begin at birth. Through play children develop social and communication skills. “Play is a complex phenomenon that occurs naturally for most children; they move through various stages of play development and are able to add complexity, imagination, and creativity to their thought processes and actions” (Mastrangelo, 2009, p. 34). Unfortunately, children on the spectrum never go through all the play stages, and
their social and communication skills are affected. This continues to support the need for a comprehensive social skills program within our educational systems.

Just teaching social skills in the special education classroom is not enough. Nirit Bauminger completed a study in 2002 that used a cognitive behavioral intervention to increase social-emotional understanding of children diagnosed as having high functioning autism. The study required a research participant be paired with a teacher and a peer. Skills were taught within an isolated therapy environment (only the teacher or the teacher and a typically developing peer). Increases in social-emotional understanding did occur, but were isolated to the therapy setting. These skills did not generalize to other settings. Jackson et al. also found that social skills can be taught in an isolated environment, but they will not generalize across environments (2003).

For this reason, there has been a large push to include students with PDD into regular education social experiences. Just putting them into situations of this nature is not enough. In 2003, Jackson et al. worked together to identify the social interactions students with autism had within the general education setting. They found that the interactions that children with autism had were more likely to be with adults. When an adult would interact with them, they were more likely to respond. When a peer interacted with them, they were more likely not to respond. They found that when a child with autism initiated the interaction, it was not out of a desire to socialize, but a desire to have a need or want fulfilled. Through this
study, the researchers found that students with autism can be taught scripted responses to play situations, but it is difficult to teach social skills needed to understand the multitude of nonverbal demands presented within a play setting.

Many instructional practices have been used to help students on the autism spectrum deal with the demands of social environments. Currently, educators’ approaches to teaching social skills can fall into two categories. The first is adult-mediated approaches. This is where an adult interacts with a child with PDD to increase social skills. The adults use instructional strategies such as prompting, reinforcement, and direct instruction to increase social skills. The second approach is the peer-mediated approach. In this instructional approach to social skills, typically developing peers are selected and trained to help students with autism increase their social abilities (Laushey and Hefflin, 2000).

In 2006 Sansosti and Powell-Smith conducted a study that used an adult-mediated social skills intervention. They used social stories, “brief, individualized short stories that describe a social situation and provide specific behavioral response cues through visual supports” (p. 45), to enhance social skills. Through this adult-mediated intervention they found that social skills increased initially, but skill maintenance, the ability to demonstrate a skill over time without reteaching (Alberto and Troutman, 2003), did not occur. Bauminger also did not find generalization of social skills in his 2002 study, which used an adult-mediated approach.
Mesibov and Shea (1996) and Wagner (1998) as cited in Laushey and Heflin (2000) found that students with autism must be taught social skills with typically developing peers to foster the learning of social skills. Laushey and Heflin researched the effects of a peer-mediated approach to social skills in 2000. In their study they instructed all children, typically developing and disabled, on social skills within the regular education setting. By training all individuals, they found that social skills increased with the research participants and typically developing peers. Generalization also occurred with research participants and typically developing peers.

Thiemann and Goldstein used a combination of peer-mediated and adult-mediated interventions in 2004 when they matched a research participant with two typically developing peers and used written text cueing. The peers were trained and interacted with the research participant in a small group setting. Thiemann and Goldstein found that social skills increased when a new skill was introduced and practiced, but would decrease when it wasn’t the target skill worked on in a play session (maintenance). Their research found that conversational skills increased, and that typically developing peers became more accepting of students with disabilities.
Structured Play

Definition

Each type of social skills intervention, adult-mediated or peer-mediated, generates increases in social skills, but by themselves they don’t have strong evidence to prove acquisition, maintenance, and generalization of skills. The reason and need for social skills training is to increase frequency and quality of social skills (Scheuermann and Webber, 2002). It may be time to look at what has been effective and what has not and begin looking at social skills instruction for students with PDD in a new way. When deciding on the best approach, it is important to remember that children with PDD need help both in understanding social norms and rules and processing social information (Bauminger, 2002). This can be done through combining approaches that have been found to increase appropriate behaviors (Thiemann and Goldstein, 2004; Kok et al., 2002).

Structured play is an instructional approach that combines approaches to enhance learning. It requires an instructor to organize the learning environment, develop activities that are appropriate for students, and teach students the rules and expectations in a play activity (Pierangelo and Giuliani, 2008). Structured play “addresses challenging behaviors in a proactive manner by creating appropriate and meaningful environments that reduce the stress, anxiety, and frustration that children with ASD may experience” (Pierangelo and Giuliani,
2008, p. 39). It allows an instructor to use a variety of instructional strategies (priming, direct instruction, praise, prompting, reinforcement systems, and error analysis), which have been proven to work effectively with children identified as being autistic. Structured play also uses visual cues to help children on the spectrum discriminate between relevant information and irrelevant information (Pierangelo and Giuliani, 2008).

Kok et al. (2002) compared structured play and facilitated play to see which instructional approach was more successful at increasing communication and play skills. They defined structured play as “the use of mass practice trials under the instruction of the experimenter” (Kok et al., 2002, p. 181). In the structured play trials, the experimenters picked a toy they knew the child found reinforcing, they provided direct instruction on how to play with the toys, and then peers would join in the play. Sessions like this would continue with variations in the toy. The researchers found there were more inappropriate communication responses when using structured play than facilitated play, but communication responses did increase. Children who were instructed using structured play did better at making appropriate social interactions, and typically developing peers viewed children with ASD better at the end of the study.
Need

Children with ASD do not have high-functioning social skills (Scheuermann and Webber, 2002). They tend to have poor abstract thinking and empathy (Baker, 2008), which causes inflexible behavior, an inability to see others’ perspectives (Baker, 2008; Mastrangelo, 2009). The deficit in high-level imagination skills also creates problems with problem solving abilities so small problems appear very large for children with ASD (Baker, 2008).

Our nation’s special education law requires that children with disabilities receive a free and appropriate public education. For children with ASD, this includes social skills instruction. Lovaas as cited in Scheuermann and Webber found that social skills are essential for all areas of life. Children who have poor social skills are more likely to have poor school experiences and mental health problems as adults (Scheuermann and Webber, 2002). Even students with ASD who are labeled as having high intelligence struggle as adults. They have “trouble interacting with peers, saying whatever comes to mind even if it’s inappropriate, adapting to change only with difficulty, and even poor grooming habits” (Pierangelo and Giuliani, 2008, p. 11).

Scheuermann and Webber believe that well planned, comprehensive social skills interventions will increase independent living options (2002). Comprehensive interventions are interventions that combine instructional approaches that have been found to increase social skills in children with ASD.
(Thiemann and Goldstein, 2004; Bauminger, 2002). Studies show that social interactions and social communication are enhanced in play groups (Jackson et al., 2003; Kok et al., 2002; Laushey and Heflin, 2000; Sawyer et al., 2005; Schoen and Bullard, 2002). A child’s ability to interpret and comprehend others’ mental states and intentions can be enhanced with large amounts of opportunities to play in the natural play setting that contains natural social stimuli and reinforcers (Mastrangelo, 2009; Schueermann and Webber, 2002; Bauminger, 2002). Laushey and Heflin (2000) found that specific training and supportive structure increase age-appropriate social skills. It is also important that the instruction allows for generalization of skills across environments.

**Implementation into the Natural Learning Environment**

Hinson (2001) in his book *6-Steps to a Trouble-free Playground* was able to bring to light the continuous problems on the playground for all students within the school setting, typically developing peers and children with special needs alike. Hinson’s program follows the structure play framework, but Hinson never references structured play in his book, focusing instead on an entire school and the changes that need to be made to help students grow into individuals who can function in a world that presents many demands. To start with, Hinson requires a philosophy change from staff members in order for this program to work. School
personnel need to begin to see the recess period as an instructional period that provides a wide range of opportunities for students to develop social skills.

Hinson believes that students need to be taught appropriate games that allow everyone to be involved at all times (2001). Scheuermann and Webber believe group games enhance communication, cooperation, and socialization with typically developing peers and children with ASD in the natural setting (2002). Developmentally, young children have a difficult time organizing games that are developmentally appropriate for a group. It is important that school staff teach children a large array of developmentally appropriate games that allow children to feel competent. When children feel competent, they are more motivated to continue learning (Baker, 2008). Helping children feel competent can be done with praise, determining and using a child’s strengths, and by using the “80/20 Rule” (creating learning activities that contain 80% of what a child already knows and 20% of skills they have not yet acquired) (Baker, 2008). “Gains can be enhanced when treatment programs can strike a balance between the motivation and ability of the child and the task structure” (Kok et al., 2002, p. 193).

Hinson believes that when recess is taken seriously and organized in a manner that provides developmentally appropriate play opportunities students can become intrinsically motivated to develop their self-control and self-responsibility. Through clearly defining what games can be played and acceptable and unacceptable behavior, schools can help students develop their
social skills in an appropriate manner (Hinson, 2001). Keeping a weekly schedule of games posted and allowing students to pick games daily is important (Schoen and Bullard, 2002). Students need to be reminded on a daily basis what their choices are (motivational strategy) and that they will be expected to take part in the appropriate play activities/games. These two techniques create an environment for students with ASD that provides repetition, routine, and practice (Schoen and Bullard, 2002).

Even though Hinson’s program mainly focuses on typically developing students, accommodations can be made to make this program effective for children with PDD (2001). Before having children enter the natural play environment to play games with typically developing peers, school staff should use priming to teach students group games. Students should be taught with the materials that will be used in the natural environment (Scheuermann and Webber, 2002). Games should be “directly taught, modeled, practiced, and played” (Schoen and Bullard, 2002) and direct instruction should also be given on low level social skills (greeting peers, sportsmanship, etc.) (Schoen and Bullard, 2002). Instructors need to look at the recess period and identify the expected amount of time that is appropriate for a child with PDD to take part in a game. Instructors will also need to look at games and change rules in order to make all participants successful.
Another important piece to structured play takes place in the natural play setting. After priming has occurred and the student enters the natural play setting, they are not left to take on the environmental and social demands independently. A technique called antecedent prompting is used to help support the child with autism in the natural environment. Antecedent prompting is when a child is placed into the natural setting to play with typically developing peers and the instructor stays in the area to provide prompts to the child with ASD on initiating or responding to social interactions (Scheuermann and Webber, 2002). Kok, Kong, Bernard-Opitz used this prompting technique at the beginning of their play sessions. At the end of the play session they would stop prompting and take data on the research participant’s ability to initiate and communicate independently in the natural play setting (2002).

In 2002, Schoen and Bullard conducted research study that used the natural play setting to teach social skills to children with autism. Their instructional approach started with direct instruction in a small group setting for games and low level social skills, moving to the natural play environment with prompting, reinforcement and reflection of appropriate social skills used in the natural play environment, and visual schedules to support children with ASD. Schoen and Bullard found that social skills did increase when they directly taught cooperative recess games (priming), carried them over to the authentic social skills environment (recess), continued teaching specific social skills, and
rewarded student success (reinforcement procedures). After each play session, they also directly taught low-level social skills daily and reflected with students on how they did in the natural setting with using their social skills. Their students became excited about the new instruction and began acquiring the low level social skills. Their students were only able to acquire high-level social skills with instructor prompting.

Summary

With the growing number of children being diagnosed as having PDD, it is imperative that our instructional approaches for dealing with their deficits in social skills are effective. Scheuermann and Webber (2002) believe that a child with autism’s ability to use social skills and the social interests they exhibit are an important predictor to the success they will experience in life. In order to help increase the acquisition and generalization of social skills, educators can implement structured play instruction to help increase social skills across a multitude of settings. Structured play combines priming, praise, reinforcement, antecedent prompting, reflection, direct instruction, and error analysis into one comprehensive instructional program. It begins with direct instruction in games, using the exact play materials, and on low level social skills in a small group setting and then moves the child into the natural environment to play skills taught
with prompting. When best practices are implemented, students with PDD can grow to have a better quality life.
METHODOLOGY

Data Gathering Methods

Quantitative Data

Social skills and the increase of social skills are difficult to capture on paper. To help try to show the changes my research participants underwent, I collected quantitative data that focused on event recording and duration recording. Event recording “reflects the number of times a behavior occurs” (Alberto & Troutman, 2003, pg.103). Duration recording focuses on the length of time a person engages in a behavior (Alberto & Troutman, 2003). For my study, I used the behavior coding scheme used by Jackson et al. (2003). In their study they looked at the types of responses (how often they occurred) and sustained interactions children with mental retardation and autism engaged in. I wanted to see the types of responses and the sustained interactions my research participants engaged in and who they were engaging with (adult or child) at the beginning of the study compared to that of the end of the study once the intervention was put into effect. The types of responses and definitions are seen below:
Table 1
Definitions of Responses to Other’s Bids (Jackson et al., 2003):

- **Positive Response:**
  1. Comply/Cooperate: A generally positive response in which the child continues the interaction by complying with the verbal or nonverbal request.
  2. Prosocial Response: A response to a real or perceived distress on the part of another marked by empathy, altruism, or helping motivations.
- **Negative Response:**
  3. Noncompliance/Aggression: A child actively or passively refuses to act in accordance with a request.
  4. Avoids/Escapes: Child responds by withdrawing in the form of turning eyes, head, or body away; or walking away.
  5. Distress: An expression of distress on the part of the child.
- **Other Responses:**
  6. Looking: A child gives brief or prolonged look at face or actions of initiator.
  7. Echoes: Child repeats whole or part of utterance.
  8. Imitates: Child copies the action initiated by the other.
  9. Moving in/out of Proximity: Child moves within or without a 3-foot radius of the other child.
- **No Responses:** The child gives no apparent behavioral response to the initiator.

It is important to note that after the first round of observations, I added initiated interactions under positive responses, because there were times that my students positively initiated interactions when physical proximity of a peer occurred. I believed this to be a positive response to an environmental social cue (e.g. A person you know is walking your way, so you say hi.) I defined initiated
interaction as an initiation a child undertakes when the presence of a peer is in close proximity. This data form can be found in Appendix A.

I also used Jackson et al. behavior coding scheme to define the types of sustained interactions I was looking for when collecting data. The types of interactions and their definitions are seen below:

**Table 2**

Definitions of Sustained Interactions (Jackson et al., 2003):

- **Play Interactions**: Reciprocal play with another person. This can be fantasy, role playing, or prolonged play with objects. While playing with an object, the child must be actively involved in moving/manipulating the object or commenting on or directing the actions of the partner. When no object is involved, the child must be actively involved, verbally or physically, in the fantasy or pretend play (e.g. making animal noises, carrying on character dialogue, or instructing the partner to do these things).

- **Conversation**: An exchange of information between the two people, involving at least two contributions from the child. Each utterance may be a request, comment, question, or answer and may be a single word utterance.

- **Aggression**: Sequential acts involving physical aggression (hair-pulling, biting, pinching, scratching, spitting, hitting) or verbal aggression (threats, name-calling, swearing). This does not require mutual aggression.

- **Other Sustained Interactions**: Any other sustained interaction in which the two children are responding to each other, such as ritualized interactions (e.g. two children reciting game show scenarios).

After the first round of observations, I added moving in and out of proximity as another sustained interaction. My students showed the desire to interact with peers at recess by moving in and out of proximity for sustained periods of time, but did not have the social skills needed to begin any of the other types of
sustained interactions. I defined moving in and out of proximity as the act of a student moving in and out of a play interaction that other peers are engaging in. This data form can be found in Appendix B.

**Qualitative Data**

Qualitative data allows researchers to understand the events that occur in the natural setting. When using this type of data, researchers are looking to understand the setting, not to have their findings generalized to other environments (Hendricks, 2006). Throughout my research, I gathered and monitored student progress through observations, a social skills rubric and reflective sheets that students filled out each day.

My observational data gave me a deeper level of understanding allowing me to see how the setting impacted my research study participants (Hendricks, 2006). Since I was a participant-observer, I was taking part in the research environment. For this reason, I needed a tool that would allow me to record my observations in a manageable way. I used a field log to record field notes. My field notes were written in narrative form (Ely, 2007). By writing my logs in a narrative form I was able to get a “detailed description” of the events that took place during my study (Hendricks, 2006, p. 83). I made sure to go back to my field notes at the end of each day, so I could ensure that all events were recorded accurately. This data enabled me to reflect-on-action and reflect-for-action. I annotated these reflections about my students and myself right on the logs in pen.
As a result of taking action upon my observation and reflection, I was able to continuously make improvements to my data collection and my instruction (MacLean & Mohr, 2006). The changes I made were not always changes I expected, but I respected the outcomes and themes that were arising and acted on them (MacLean & Mohr, 2006).

The social skills continuum scale created by Pennsylvania’s Central Bucks School District Social Skills Committee can be found in Appendix C. This rubric helped me assess students’ social skills in 6 areas (self-regulation, knowledge of conventions, social interactions, social motivation, communication, and perspective taking). Self-regulation looks at a student’s ability to focus, sit and respond, work through a task (task persistence), control ones impulses, manage sensory input, and manage stress. Knowledge of conventions looks at a student’s ability to follow routines, transition between activities, and follow rules. Social interaction looks at a child’s ability to identify when he/she is being teased, to concede to a group choice, share items, follow rules, and his/her ability to participate in play activities. Social motivation looks at a student’s desire to be social, advocate for him or herself, and identify emotions in oneself. Communication looks at a student’s ability at understanding and using nonverbal and verbal communication skills. The final area the continuum assesses is perspective taking. On the scale, this area looks at students’ ability to use
appropriate personal space, to consider others’ thoughts, and identify the emotions of others.

My final piece of data is the reflective sheets, which served as important student-generated artifacts. Students completed these journals daily, so I was able to monitor both their ability to use social skills and their reflection on their ability to use the skills. I framed the responses on these sheets to ensure that responses stayed on-topic (Hendricks, 2006). The reflective sheets allowed me to monitor and reflect continuously throughout the research period (Hendricks, 2006). These sheets helped guide my instruction throughout the research period. A sample reflective sheet can be found in Appendix D.
TRUSTWORTHINESS STATEMENT

Before I began my study, it was important for me to review characteristics, instructional approaches, and social deficits of children with autism. It was also important for me to understand what has been done to enhance social skills in children identified with autism spectrum disorder. I obtained this information through an extensive review of literature that focused on instructing children with autism spectrum disorder. I viewed literature that was done recently and had an impact on my field of study (Wolcott, 2009). I evaluated many pieces of literature to decide which pieces “could be used to guide my action research process” (Hendricks, 2006, p. 49). The library research helped me build background knowledge about my study, allowed me to frame my study, and also helped me to define important characteristics within my study around current best practices. Hendricks believes that a well informed researcher is less likely to make mistakes, and to conduct research that is “important and valuable” (2006, p. 36).

When planning my teacher action research I continuously reminded myself of the importance of treating my students and colleagues with respect and honesty (MacLean and Mohr, 1999). I did this in several ways throughout my study. I received written permission from my principal through the use of a consent form (Appendix E) before beginning the study. My principal and I
discussed who and what I would be studying and how I would be protecting the privacy of my students and the school as a whole.

I also sat down with my students and took an extensive amount of time to explain to them what the focus of my study was and why I was engaging in this line of inquiry. Since they are under 18 years of age, I also obtained the permission from their parents to have them take part in my research study. To both my students and their parents, I explained that they did not have to be part of my study in order to receive the instructional design I was planning to implement. I also ensured that they understood that I was committed to keeping the information/data collected in the study confidential. Through our discussion, I explained that I would use pseudonyms to keep students identity confidential, that they could withdraw from the research study at any point during the research period without penalty, and that all raw data would be destroyed at the end of the study. I also told parents that during the research period, I would adhere to the requirements of the Individual Education Plan (IEP) for each individual research participant.

Both parents and research participants signed a consent form to give their permission to be part of the study (Appendix F). Again, the consent form clearly stated “the purpose of the study, the nature of participation in the study, that confidentiality will be maintained, and that participation was voluntary” (Hendricks, 2006, p. 111). The consent form also made it clear that there would
be “no penalty for withdrawing from or not participating in the study” (Hendricks, 2006, p. 111).

It was also important that I used multiple forms of data so I could increase the credibility of my findings (Hendricks, 2006). I used observational data, duration/event recording, a rubric, and reflective sheets, so I could collect pieces of data that looked at the study from various angles. These forms of data were what Hendricks calls triangulated sources of data. They helped make my findings more valid. They allowed me to see my data and findings from various standpoints so I could see reoccurring themes and gaps that my data produced (Hendricks, 2006).

Throughout my study, I was able to remain open to themes that arose by reflecting on the data that I collected. As I reflected, I considered “actions taken throughout the study and altered those actions as necessary” (Hendricks, 2006, p. 114). This meant that I had to change my plan of action or change my research schedule. I also took part in research groups and member checks to ensure my study was free from bias and was credible (Hendricks, 2006). I also attempted to create a thick description of the setting of the study within my field log. By sharing this descriptive setting as fully as possible within this document, I hope that other educators will be able to determine how closely this setting resembles their own so they may generalize what I have done to their own contexts.
By engaging in ethical standards and procedures that helped me identify the bias in my work, I was able to create a valid research study that gave me great insight into instructing students with autism spectrum disorder social skills in the natural setting. Through reflection, research groups, creating thick descriptions of the setting, and looking at my data from various viewpoints, I was able to improve my instructional practices and identify important themes that continue to enhance my instruction in the future.
OUR JOURNEY

Setting and Participants

School District

This study was carried out in an upper class community within southeastern Pennsylvania. The school district services 20,000 students in nine municipalities. The districts PSSA scores are the highest in the county and 6th highest in the state. 92% of the students graduating from the district go to a two or four year college. The district has a graduation rate of more than 99%.

The district services a wide range of disabilities. 98% of the district’s special education students are placed in the district. 11% of the student population receives special education services. Throughout the district there are 28 autistic support classrooms.

Our School

This study was carried out in one of fifteen elementary schools within the district. The school services an average of 592 students ranging from kindergarten to sixth grade. 54% of the school population is male and 46% of the school population is female. 9% of the school population is Indian, Asian, African American, or Hispanic. 91% of the population is considered Caucasian. 3% of
the school population is eligible for reduced lunch and 1% of the population is eligible for free lunch. At this time, the school has no migrant students enrolled.

**Our Class and the Learning Environment**

For this study two male students and one female student had structured play and priming implemented into their daily routine. The participants are labeled as having autism based on the Individuals with Disabilities Education Act of 1997 (IDEA). Michael, the first research participant, is included in the regular education environment for more than 70% of the day. Karen and Joey, the other research participants, are included in the regular education environment for less than 40% of the school day. The research participants are between the ages of 9 and 10. They are part of the fourth grade population within the school.

The fourth grade students within the school are distributed across four classrooms. Only one classroom serves as the inclusion classroom for the students that are part of the autistic support program. The other classrooms service students identified as having learning disabilities. Each fourth grade class consists of 20-25 students and a teacher. The regular education classroom that services the research participants also includes a paraprofessional. The regular education teacher of this class consults with the autistic support teacher on a daily basis. The autistic support teacher begins the year by modeling instructional and management techniques for working with the three research participants. When
in the regular education environment, they need a paraprofessional to help them maneuver throughout the routine and expectations they are required to follow.

All three-research participants receive social skills instruction within the special education environment. Within this environment, students receive direct instruction from a special education teacher and instruction is supported by a paraprofessional. Social skills instruction takes place each school day for an average of 20 minutes within the special education classroom.

At this time, all three-research participants attend recess with their regular education peers. During the recess period an observer would see four fourth grade classes and three third grade classes on the playground. The school assigns three recess monitors to supervise the playground. One paraprofessional is assigned to monitor the three research participants. During recess, students have the option to play with a variety of blacktop equipment (balls, hula hoops, and/or jump ropes) or play on the jungle gyms (slides, swings, poles for climbing, and/or monkey bars).
The Journey Begins

The Sales Pitch

As I sat waiting for my first group of parents to come in for Back to School Night, I was very nervous. My research focused on three out of seven of my students and depending on the decision their parents made that night, I would be moving forward with my research study or having to revamp it.

When planning my presentation for Back to School Night, I decided to place the piece about my research study in the middle of my presentation. By doing this I was hoping to give a first impression that allowed the parents to know that first and foremost, I cared about their child, that I know what I am doing as an educator, and that I am open to hearing their concerns.

To lead into the discussion of my research study, I decided to explain that I am constantly trying to improve my own instruction and in order to do that, I am taking classes at Moravian College. I pointed out that I chose to go to Moravian because my growth and learning is based around my classroom. I explained to the parents that I am coming to the end of my program at Moravian and I was beginning my thesis, and it was going to focus on using structured play and priming in the natural learning environment to enhance social skills in children identified as having autism spectrum disorder. I made it clear that teaching social skills has always been in my program, but research explains that it is imperative
to enhance students on the spectrum’s social skills, so they can live a successful and productive life. I explained that my goal through carrying out this study was to begin giving my students the tools needed to go through the world in a socially appropriate manner, so they can hold a job, build friendships, and navigate through the community. I explained that each week I would be teaching an age appropriate game for students to play out on the playground. The instruction of the game would occur in a small group setting, students would then play the game in the natural environment with no typically developing peers around, and then the game would be taken into the natural play setting with typically developing peers. I told the group that I would be taking baseline data the first two weeks of school. This data would allow me to see what types of interactions the students had, who they were interacting with, the engagement they had to social activities, and the social skills they currently had. I pointed out that I would be taking data in November and December to see what growth had been made.

After explaining, I told the group that I would be doing this as part of the regular social skills curriculum, but if they were willing, I would like to collect data on their children to use in my study. I waited, holding my breath. The parents all looked at each other, and Jocy’s mom said, “Of course!! Anything that will improve his social skills is wonderful.” The rest of the parents picked up their pens and signed. As they were signing, I explained that they could decide not to
have their child be part of the study at anytime, so they shouldn’t feel that they
couldn’t reconsider their decision at a later time.

*Being the Student*

Having climbed my first mountain on the path to discovery, I began to
climb the second mountain: explaining the research study to my students. How
was I going to help them understand what I was doing, why I was doing it, and
why they would benefit from taking part in the study? I decided to look and
explain it from their point of view. I was going to be the student. It is important
to note that the research participants had been taking part in a similar program in
previous years prior to this study and the following interaction:

**Teacher:** Well, ladies and gentlemen, I want to talk to you about something very
important today. Every day at this time, we meet to work on our social skills.
What are social skills again?

**Michael:** They are what we need to make friends.

**Joey:** Following the rules of games. Saying kind things.

**Karen:** What we “need” to play with people at recess!

**Teacher:** Everything you have said is part of social skills. Now, we know that
we use this time to learn more about social skills, to learn about good social skills,
and to practice our social skills, but I want to tell you something we are going to do different this year.

**Karen:** Different?!?! I want to go home. Is it time to go home?

**Teacher:** No, it is not time to go home, but different is not bad. Change can be good. Think about a time something has changed and good things came from it. Can anyone think of a change that turned out good?

**Joey:** (Does not answer, but he is quietly humming through the entire conversation.)

**Michael:** I tried camping with the Boy Scouts and liked it.

**Teacher:** Before going were you worried?

**Michael:** Very worried.

**Teacher:** Did it turn out to be fun?

**Michael:** It was great!

**Teacher:** Can you think of a change that was good?

**Karen:** No, I want to go home.

**Teacher:** Joey, can you think of a change that was good?

**Joey:** (Humming to himself) No!
Teacher: Well, change can be good and as students we change every time we learn. Learning is a good change. Did you know that I am a student and I go to school?

Karen: (giggles) No you’re not!

Michael: Teachers aren’t students!

Joey: (laughs loudly and repeats what Michael said) Teachers aren’t students!

Teacher: I am a student. I go to Moravian College and I am learning how to be a better teacher.

Michael: Do you have homework?

Teacher: Well, yes I do! I wanted to talk to you about my homework today. You know how the sixth grade students have to complete the sixth grade assessment in order to graduate from elementary school?

Michael, Joey, and Karen: Yes!

Teacher: I am coming to the end of my learning at Moravian, and I have to do a big project like the sixth grade assessment to show everything I have learned.

Michael: Really?!?!

Karen: (giggled) You have homework!!!
Teacher: I do have homework, and my homework is to become a better teacher at teaching social skills. This year I would like you to help me learn about being the best social skills teacher I can be. Will you help me?

Michael: Do we get to be the teacher?

Teacher: At times, you will be the teacher.

Karen: We get to be the teacher!

Teacher: I want to continue teaching you recess games just like Mrs. M did. I will teach you recess games before we go to recess. That is what we are going to do during this time. We will practice the games in here and out on the playground with no one else out there. We will then play the games out at recess with our fourth grade friends. After playing games we will return to our classroom and talk about the good social skills we saw out at recess and the problems we need to solve.

Joey: Like Mrs. M?

Teacher: Just like you did in Mrs. M’s room! There is a difference, though. I would like to observe you very closely and take notes about the things I am seeing. I will be carrying a note pad and/or clipboard. I will be taking notes all day long, but the most important thing is that I want to take my notes about you and use them for my homework.
Michael: That’s fine. I think it is cool that I get to be in your homework.

Teacher: Well you all need to understand that it won’t just be me and my teacher reading my homework: it can be anyone. When my project is all done, the college is going to allow anyone to read my homework. They are going to publish it.

Michael: So everyone is going to read about us?

Karen and Joey: (giggle and laugh)

Teacher: Yes, anyone will be able to read my homework. If you agree to be a part of my homework, because I can’t use any of your work if I don’t have your permission. I will give you all fake names in my homework. This way people can learn from what we did but not know who was really a part of our learning. It is important for you to understand that you do not have to be part of my study, but no matter what, you will still be taking part in recess games. If you decide that you want to be part of my homework, I need you to sign on this paper that you agree.

(The teacher reads the letter to the three participants.)

Karen: I want to help you.

Michael: I want to help you too!
Teacher: Do you want to be part of my project?

Joey: (still humming) Yes!

Teacher: Can you tell me what my project’s about?

Joey: You want to be better at teaching social skills.

Teacher: Do you understand that many people are going to be seeing my project when it is done?

Joey: (humming) Yes!

Teacher: Do you understand that you do not have to be part of the project?

Joey: Yes!

Teacher: Ladies and gentlemen, it is also important for you to know that you can drop out at anytime. So, if next week you decided that you no longer want to be in my study, you can tell me that you don’t want to be part of the study. I won’t get mad and I will still work hard to help you grow as a student and a person. Does everyone understand?

Karen, Joey, and Michael: Yes!

At this time, the students had to go to special and they were already late, so I dismissed them worried that one of them may become upset because they
were slightly off schedule. After they left, I realized that I did not have them sign the form. Later that day, I went to their homeroom class and pulled them out one-by-one. I had them re-explain what they were agreeing to and remind them that they could drop out at any point.

*Numbers, Numbers, and More Numbers*

I thought the easiest part of my study was about to begin, collecting quantitative data. Little did I know that this would turn out to be extremely difficult. Taking event and duration data is much easier in an environment that contains at most thirty individuals contained in a small area. I was now put into the middle of a very large, unstructured environment. The playground at my school contains a blacktop, playground area, and a very large field, all of which the children may use at recess. At this time, my students’ average of staying engaged in an activity for a prolonged period of time in the recess environment was 4 minutes and 20 seconds, so in a thirty-minute period of time, my students were jumping from activity to activity.

I observed each child two different recess periods in order to get a better picture of individual strengths and weaknesses in a social environment. It was helpful for me to see if specific strengths or weakness occurred in both observations, so I could begin defining what I needed to do to help students improve their social skills. In the figures that follow, I used my field log
observational data to pen a layered story explaining what recess was like for each study participant, the regular education students, and for me at the beginning of the research period.

Joey’s Story - Part 1

Joey
I really want to play with the other kids. Maybe if I move towards them they will ask me to play. I know how to play what they are playing. If only the other kids noticed me. If I just move a little closer maybe…

Regular Education Students
Why is he getting so close to us? Can’t he see that we don’t need anyone else to play? I don’t understand why he stands and stares. “Joey, go play with those kids. They need another player.”

Mrs. Fanelli
It is apparent that Joey knows how to play with the recess toys and equipment, but he just can’t use the materials to parallel play with peers. He has a desire to join in social situations. This is apparent through the amount of time and close proximity he is giving to the other students. He is trying to engage play interactions using the physical presence of his body. He does not know how to functionally use language to engage peers.

*Figure 1. Part 1 of Joey’s Story*
Karen’s Story-Part 1

Karen

There is nothing to do out here. I hate recess! It is so loud and there is too much going on. What am I going to do? I have walked all around and looked at what everyone else is doing. I have played with different stuff, but none of it is fun. It is too loud and crazy. I am going to go to the trees. At least there, there are not a million other kids yelling and balls flying past my head.

Regular Education Student

I wonder what Mrs. Fanelli’s doing? Why is she watching Karen? Karen isn’t playing with anyone. I wonder if Mrs. Fanelli wants someone to play with her? I could play with her. It seems like she is having a hard time picking something to play. I am going to ask Mrs. Fanelli if she wants me to play with Karen.

Mrs. Fanelli

Karen shows no desire to interact with anyone, adults or children. She is moving in and out of proximity with other children, but this is more of an act to find something to do. She seems very unsure how to fill her unstructured social time. At one point, she escaped the social environment by heading to the trees to be by herself. I found it interesting that a regular education student approached me and asked me if I wanted her to play with Karen. At first I was annoyed because the student shouldn’t ask me, she needs to ask Karen. I was appalled that this is how the student would handle interacting with Karen, but then I realized that I may be sending the message that I am attached to my students and you must go through me to interact with them.

Figure 2. Part 1 of Karen’s Story
Michael's Story-Part 1

Michael

I hear what everyone is saying, but none of the play ideas are better than mine. They need to understand that my idea is the best. I will tell them until they realize the mistake they are making. Once they hear the plan again, they will definitely go with my idea.

* * *

I don’t understand why they won’t go with my idea. I am so angry. I will tell them one more time. I will tell them each by themselves. If they hear it without the entire crowd, they are sure to decide to play my game.

Regular Education Students

Why can’t Michael understand that we don’t want to play his game? We played his game yesterday. It is time to play something else. Everyone else wants to play the war game. Why can’t he just have a good time and play our game? It is only fair.

Mrs. Fanelli

Michael is able to make conversational exchanges and stay focused in a large group social activity. As great as it is that he is motivated to interact with peers, he struggles with conceding with a group choice and transitioning between play activities. He also spends a large amount of time trying to convince his peers to go with his ideas. His peers are polite at first, but are beginning to lose their patience. Michael is unable to read the other students nonverbal social cues.

Figure 3. Part 1 of Michael’s Story
After observing and taking data for two days, it was apparent that my students needed good social skills instruction. Figures 4, 5, and 6 show students’ sustained social interactions at the beginning of the research period. Figures 8, 9, and 10 show students’ ability to respond to others’ social bids at the beginning of the research period.

Figure 4. Joey’s Sustained Interaction Baseline Data
Figure 5. Michael’s Sustained Interaction Baseline Data

Figure 6. Karen’s Sustained Interaction Baseline Data
Figure 7. Joey's Responses to Social Bids Baseline Data

Figure 8. Michael's Responses to Social Bids Baseline Data
Figure 9. Karen's Responses to Social Bids Baseline Data
Preparing the Way

Instructional Tools

It was important to set the stage and have some instructional tools in place prior to beginning the actual instruction with students. I had created a weekly recess schedule poster to help students organize their day and recess expectations. This schedule helped alleviate the anxiety my students felt towards the recess period and the new expectations. The schedule shown in Figure 10 has the days of the week (Monday thru Friday), a velcro spot for the name of the game being played on any given day, and a velcro spot for students' names (when students began picking the weekly recess schedule).

Figure 10. Recess Schedule
Along with the recess schedule, I created a separate token reinforcement system for this new instructional approach in the recess environment. I created “Good Friend” tickets that students could earn when they were observed being a good sport, following the rules of the game, keeping their personal space, or asking a friend to play. I distributed these tickets when I observed a student engaging one of the aforementioned activities. Students tallied the number of tickets they earned, and when they earned a predetermined number of tickets, they also earned an individual reward. When the class reached a predetermined number of tickets, they earned a group picked reward. To get the predetermined number, I figure out the largest number of tickets all students can earn in a day and multiplied the number by 30. This number was then adjusted based on students’ needs and success with the program. Examples of these tickets can be found in Appendix G.

**Making It Work for Everyone**

**Being Flexible**

It wasn’t until the middle of September that I actually had the opportunity to teach my first recess game. Once I got to this point, I realized that in order to make this work, I had to be flexible and restructure the instructional plan I had originally decided to follow (teach the game in the AS class, teach the game in the natural learning environment without peers, play the game at recess with typically
developing peers). Due to assemblies and special events in the regular education environment, I was not getting instructional time for social skills as I had anticipated. I have always struggled with teaching an additional subject in the same 6-hour day that regular education teachers have. I don’t think people realize that along with all the subjects that we need to address on any given day, an Autistic Support teacher is required to also provide social skills instruction. This becomes especially difficult when the students in the AS classroom are considered high functioning and are included for a large amount of their school day.

It became apparent that I needed to cut something out to make this work, so I decided to remove the piece of instruction that required me to teach the game in the autistic support classroom. I moved right into the natural learning environment without peers. For my first game, I decided to teach students Clothespin Tag. As soon as we walked out on the blacktop, students started spinning, flapping, and making noises. I realized that in order to get my students to focus, I needed to frame the environment in a way that would allow them to focus on the instruction I was going to be giving instead of being overwhelmed by the large playing area, so I moved the game to the large square painted on the blacktop. Unfortunately, though this did not decrease the large number of repetitive physical and verbal behaviors, because they did not know what to do at
this time. They reverted back to the inappropriate social behaviors they were familiar with to fill the time.

To further structure the environment for the students, I directed each student to stand on a number (on each side of the square the numbers 1 through 10 are painted). Once students’ focus improved, each student received a clothespin that was attached to the back of his or her shirt. I began the game and students tried to remove other student’s clothespins.

During the practice, several things occurred. First, if a student lost his or her clothespin, he or she took another clothespin found in the playing area and rejoined the game (cheating). Second, students yelled, screamed, or cried if they lost their clothespin. Third, instead of focusing on the game students ran around and entered others’ personal space to get their attention or they would play their own game within the game. At this point in time, my students lacked the appropriate social skills to play the game successfully. I realized that we needed another day to learn how to play the game before we could give it another try the following week.

*Take Two*

We played Clothespin Tag in the natural setting with no peers again the next day, and I was able to see small positive changes. Students went to the correct playing area and waited on a number to get their clothespin. When we began the game, they started playing the game well, but began to lose focus
quickly (playing their own game, invading others’ personal space, crying because of losing the game). It was at this point that I started thinking about the future social skills lessons I would be creating. I realized that it would be important to create a lesson about losing a game and how to handle the loss. I also realized that when I moved the game to the natural environment with peers, I would need to use peer models to demonstrate how students their same age handle various social situations with age appropriate social skills.

**Creating the Community**

My research could not continue without some good role models. To help all the fourth grade students understand what I would be doing at recess, I went to each fourth grade class to talk with them for 10 minutes. I explained that I would be out at recess each day playing different games. Any student was able to join the game, and if any student wanted to play one day and not another, that would be fine. Students seemed excited but also unsure of the new experience. I was unsure of what would happen on Monday when we began playing the game with peers.

**Tornado**

The first day that we played in the natural learning environment with peers felt like a tornado had gone through the playground. My students were able to
meet at the designated area, but two students began jumping around and making noises inappropriately. The other student went to a number and waited patiently. Once several students had arrived, I gave the directions and we began playing. It was very hard to prompt all of my students and run the game at the same time. Along with those responsibilities, I had to use the natural environment for a model, so at times I stopped my students and pointed out individuals who were using appropriate social skills. I felt like the whole thing was a wash out.

After recess we came in and did our first recess meeting. It was difficult for kids to come up with something they did well. I decided at this point that I needed to model what “doing well” in the play environment looked like, so I introduced the Good Friend Tickets (kept my personal space, good sportsmanship, asked a friend to play, and followed the rules of the game) and handed out the tickets each student received. There was no way I could have handed them out on the playground, which was in the original plan.

At the end of the meeting students shared their recess report and said something they wanted to do at recess the next day. Karen stated that she wanted to play with a specific child in her homeroom. I was so pleased that she exhibited this desire, because she customarily did not show a desire to play with others. It was very exciting to see that she has some motivation to socialize.

Figures 11, 12, and 13 are a look at the recess reports completed during the first week of school. For Joey and Karen it is important to note that they
wrote that they played with each other on the swings. Even though they were on
the swings at the same time, they did not interact at all, but rather just sat next to
each other. It was also interesting that when they had to report on one thing they
did well, they identified superficial skills. Michael’s recess report states that he
played basketball and warriors with friends, but this was not accurate. While
playing basketball in the same area as other students, he never interacted in a
social exchange. When he played “warrior”, he just hopped from person to
person never really staying engaged with one individual or play interaction. It
was very interesting to see how they thought just being near other people was
interacting.

Recess Report

Today at recess I played                  for 20 minutes.

For the last 10 minutes of recess, I chose to                 play on the

swings with karen.

One thing I did well was                      .

I earned ___ good friend tickets.

Figure 11. Joey’s Recess Report
Recess Report

Today at recess I played Avoid the Octopus for 20 minutes.

For the last 10 minutes of recess, I chose to play on the swings with my friend.

One thing I did well was pump in the game.

I earned 2 good friend tickets.

Figure 12. Karen's Recess Report

Recess Report

Today at recess I played Avoid the Octopus for 20 minutes.

For the last 10 minutes of recess, I chose to play on the swings with my friend.

One thing I did well was pump in the game.

I earned 2 good friend tickets.

Figure 13. Michael's Recess Report
The next day was no different than the first. We played Clothespin Tag again, and the following dialogue depicts the scene that occurred during the activity:

**The Community**

*The Community’s Story-Part 1*

**Teacher:** Everyone on the white line! Everyone on the white line!

**Students:** (Go to the white line, but are yelling and talking. Research participants are on the white line waiting quietly to begin.)

**Teacher:** If you lose your clothespin, you are out and need to sit down. So, if Mrs. V takes my clothespin (teachers model for students), I sit down where my clothespin was taken. Does everyone have a clothespin?

**Several Students:** I don’t! I don’t! I don’t! What are the rules? I don’t!

(The two teachers run around making sure everyone has what they need.)

**Teacher:** Ready, Set Go!

(Students begin running all over.)

**Michael:** (Students playing kept running out of the square.) It is not fair! They can’t run out of the square.
**Teacher:** How do you think we should handle it?

**Michael:** *(screaming)* It’s not fair! They are running out again!

(At this time, students are sitting in the exact area they lost their clothespin.)

**Teacher:** Look at George. He is chasing the kids running out. Is he getting angry? Is he yelling? What is he doing?

**Michael:** He is telling them to come back into the square, but they are not listening.

**Teacher:** You are right, and he is telling them in a calm voice.

(At this point three kids trip over the students sitting on the ground. Two have to go to the nurse and the other gets up and continues playing.)

**Teacher:** *(yelling to the group)* Everyone stop where you are! STOP!

(All the students stop.)

**Teacher:** I need all eyes on me. I have noticed that people are running out of the square and people are beginning to get hurt. We need to make sure we are all playing fair. The rules say you must stay in the square. At this point, if anyone steps out of the square, they are out of the game for the round. Does everyone understand? *(The teacher begins walking on the perimeter.)* If anyone steps out of the white line, they are out. Also, when you lose your clothespin, you need to
go to the white line and wait. Remember, we don’t sit down when our clothespin
is taken. Where do we go?

**Students:** The white line!

Through this experience, I realized that regular education students needed
some reinforcement on how to play correctly, including a review of good
sportsmanship, following the rules, keeping their personal space, etc. I decided
that I would give the regular education students generic good friend tickets. Once
they earned a ticket, they would put their name and teacher on the ticket
(Appendix H). At the end of recess, I would stop the regular education students
and have a quick mini meeting with them about the great things I saw them doing.
If they did something great, I would give them a good friend ticket to fill out. The
ticket went into a large bucket and when I had my group party, I picked ten names
from the bucket to join my class party.

**Who Am I Teaching?**

We played Avoid the Octopus at recess later that week, and we had a huge
number of kids join us, so it was very exciting. The only problem was that some
of the regular education students continued to demonstrate poor social skills.
During the beginning of the game they were cheating, not following the rules, and
being bad sports. I spent more time working with them and coaching them
through the game than I had anticipated doing. I knew that without good role
models, I wouldn’t be able to teach my students the appropriate social skills.
Since I decided to give good friend tickets to the regular education kids, I spent
the day positively reinforcing their behaviors during the game. At the end of the
game I stopped everyone and explained what “Good Friend Tickets” were and
announced who got them and for what (since it was the first time, I gave one to
everyone). It was difficult to get all students to hear what they did well, fill out
the tickets, and line up to go inside in a timely fashion.

Rain, Rain Go Away

As time went on, I continued teaching various recess games. I taught the
children No Outs Kickball, which contains a large number of steps, but it was
becoming obvious that my students’ behaviors/skills were beginning to change
slowly. I realized this change at a time when I was discouraged about one of the
largest obstacles in my way, the weather!

When the weather does not allow students to go outdoors during the recess
block, students have indoor recess within their classroom. One rainy day, I went
into the regular education classroom to see what my students were doing during
indoor recess. I found them wandering around looking at what other students
were doing or just doing their own private thing, but they did not interact with
anyone else at all.
I realized that I could carry structured play into this environment. It wasn’t ideal, but I could make it work. The next day, I taught my students how to play a board game, so they would be able to play with peers in their homeroom class. They played this with other students during that recess period.

The rain continued for the rest of the week, but this did not stop my students’ growth in social skills. Karen and Michael played the board game the rest of the week with various students from their homeroom. Each day they were able to ask if their fellow students wanted to play. The regular education students accepted the invitation and they played the rest of recess. As each research participant showed growth at this point, Joey’s metamorphosis was the largest, and his growth is depicted in the layered story below.
Joey’s Story-Part 2

Joey

I did it all by myself. I really wanted to play chess today at indoor recess. I had been watching and wanting to join for so long, but today I watched and taught myself how to play. I did not win, but the other kids let me play and did not get mad when it took me a little while to figure out the moves I wanted to make. I can’t wait to play again.

Regular Education Students

Joey asked to play chess with us today. We couldn’t believe it when he asked. He usually just stands and stares as we play, but today when one of the games ended, he asked if he could play the winner. He was actually pretty good. It did take him a little while to make some of his moves, but we didn’t have to wait too long. I wonder if he will play again?

Mrs. Fanelli

I can’t believe my eyes. Joey independently joined a group of students playing chess. He watched how to play and learned the basics of the game on his own. I was shocked by his ability to look at what was happening socially and pick up on the cues to integrate himself into the group. This never happened before. In such a short period of time, Joey was able to use social cues to figure out how to play a game, he joined the game appropriately and maintained focus during the game. This was the kid that would stand near people hoping his physical presence would allow him to join a game at the beginning of my study. Now he was independently joining an activity and using social cues to appropriately take part in a social situation with peers.

Figure 14. Part 2 of Joey’s Story
Coach

My entire social skills program to this point had changed from every other year I had ever taught. I was now doing mini-lessons on social skills topics that I felt students needed to work on. Up to this point in the study, my mini-lessons focused on students keeping their personal space, being a good sport, asking friends to play (at times I used scripts to help students learn to communicate) and following the rules of the game (at this point still very low level social skills). The most meaningful instruction and discovery for students came in the natural learning environment. In this environment, I would stop research participants to show them other students carrying out a particular social skill well. We would talk about how the student/s were using the social skill, why they were good at using it, and how their actions were making others feel. Then I would “coach” them through that skill in a natural social situation that arose for them.

This type of instruction allowed my students and me to set goals for future social situations. It also allowed my students to be supported at their appropriate developmental level, so I no longer needed to create generic lessons. Structured recess was allowing me to meet each student’s individual needs on a daily basis in a natural social environment. It put each research participant in control of his or her social skills instruction, and I became the “coach”. At the beginning of my career, I would have found it demoralizing to be a coach and mentor rather than an instructor in the front of the room for my students. Now, though, the role of
coach has become empowering to me. I have never felt more like a teacher as I do now. Halfway through the research period, I realized that this was real teaching.

We Are a Community

As the weeks went on, the numbers of regular education students taking part in structured play increased enormously. At times I debated about giving kids specific days to join the game to make it more manageable. I never went through with this, though, because I thought it was important that this remain a community program. The change in my students and the community perspective of the program can be seen in the following scene:

The Community’s Story-Part 2

Joey and Karen: We’re here, Mrs. Fanelli!

Teacher: Wow guys, you are early! Don’t you want to go play something at free choice before we begin the game?

Joey and Karen: NO!

(A student from Karen and Joey’s regular education class walks by. For the purpose of this study, we will call him Nate.)
Karen: Hi, Nate (a student from Karen’s regular education class). Are you going to play No Outs Kickball?

Nate: Hey, Karen! Yeah, I am going to play. Maybe we’ll be on the same team.

Karen: YEAH!!

A Group of Boys: Hey, Karen!

Karen: Hey!

(Karen turns to the teacher.)

Karen: They said hi to me (she giggles).

Joey: Time to play!!

(The teacher began the game. Throughout the game all students, regular education and special education, were following the rules of the game, staying focused during the play period, and cheering other students on. My students smiled throughout the entire game.)

Teacher: The score is 23 to 25.

(The recess whistle blows.)

All the students playing: Ah! Recess is over already?

Nate: We were having so much fun!
Karen: Bye, Nate! See you tomorrow!

Nate: Bye, Karen!

At the end of this recess period I had such mixed emotions. I was so excited that all the students, regular education and special education, enjoyed structured play. As I saw the smile on my students’ faces during the game, I became sad and happy. It was nice to see social situations bringing them joy instead of anxiety. It also made me sad because I wish I could have brought this joy to them sooner.

Seeing Growth

Changes

As the study progressed, I realized that I needed to add an additional reflective piece to our recess meetings. My focus in the meetings up to this point was to have students focus on themselves and how they were doing. The research participants had been doing this so well that I wanted them to start becoming aware of what others were doing (higher level social skills) and how everyone’s actions were affecting the social arena in which the research participants were engaged. During a meeting in October, I asked students to continue sharing what they did well at recess, but I also asked them to share something they saw other people doing well at recess, which could be about anyone in the school. For the
first time doing this, they were great at it. They picked various people throughout the school and talked about what they saw. Their language paralleled that of the good friend tickets as they shared examples of peers being a good sport, following the rules of the game, etc., but it was eye opening that these tickets had given them a way to communicate about social situations that they could not communicate effectively prior to this study. It was also interesting to see how they were paying attention to what was happening around them.

As time went on, the growth continued. At the mid way point, I began to document some wonderful growth as evidenced by the layered stories in Figures 15 and 16.
Michael’s Story-Part 2

Michael:
I really wanted to play on the swings today, but my friend did not. I remembered that I need to play fair and since we played on the swings yesterday, I asked what he wanted to play today. I just want to remind you that this was not easy for me, and he didn’t make it any easier. He didn’t know what he wanted to play, so I decided that giving him some choices might help. I was so happy when he picked Alien Space Craft. I love that game and we get to play together.

Regular Education Student
I knew Michael was going to ask me to play on the swings today. I didn’t want to do that and I was worried that he would spend the entire recess trying to get me to play on the swings. Amazingly, he didn’t try to make me play that. When I told him no, he asked what I wanted to play. I wasn’t expecting him to ask me, so I didn’t really know what I wanted to play. He gave me some great ideas, and we decided to play Alien Space Craft. I hope Michael stays like this. There is nothing worse than when he won’t stop bugging you about a game he wants to play, but I did have fun with him today.

Mrs. Fanelli
I can’t believe my eyes. I was preparing myself to go over and coach Michael through this social situation he has been struggling with, but he remembered our lesson together about playing fair and what that looks like in different situations. This is a huge step, because in the past, he never cared or took others’ feelingideas into consideration. He believed his ideas were the only ones worth talking about, but now he was able to ask what someone else wanted to play after his idea was turned down. Even more amazing, he offered different play ideas for the two of them to take part in instead of going back to his original idea. Taking others’ points of view and feelings into consideration is a higher-level social skill that Michael demonstrated he is capable of even though it was not easy for him.

Figure 15. Part 2 of Michael’s Story
Karen’s Story-Part 2

Karen

Today I created a new game for recess. I had been thinking about this game for a while, so I finally got the courage to tell Mrs. Fanelli that I want to play Ghost Tag. I could tell that she was unsure, but I took my time and explained to her the rules of the game. After I explained to her the rules, she loved it and said we would play it at recess. I was so happy. The kids at recess loved the game. They said they wanted to play again and told me I made a great game. After the game was over and we had our recess meeting, I started crying tears of joy because I made a game everyone loved.

Regular Education Students

I was so confused at the beginning of the game. I thought the game was like sharks and minnows, but it wasn’t so Mrs. Fanelli had to stop the game and explain it again. Once we understood, we had so much fun. We were having such a good time that more kids kept coming and joining in. I can’t believe Karen made the game up. She has some great ideas. I hope we get to play this again real soon.

Mrs. Fanelli

When Karen approached me with this idea, I was really unsure because I did not have an opportunity to pre-teach the game and my other students may have a difficult time learning it right in the natural learning environment with peers, but the kids have been doing so well, I thought I would give it a try. I am glad I did. The regular education kids enjoyed the game. We almost did not have enough room for everyone to play. Karen and the other research participants picked the game up at the same rate the other students did. Karen felt so good about herself. She was able to contribute something to a social activity that people want to do again. Even after the whistle blew to signal fourth grade recess was over, the third grade students wanted to continue playing the game. It was a successful situation for everyone.

Figure 16. Part 2 of Karen’s Story
Seesaw

As the end of the data collection period approached, I became frustrated with my students when I felt they were going backwards at times. I was seeing less flexibility, lower levels in their ability to handle various situations, and more need for teacher assistance across environments. I had expected to see a decrease here, but instead increasingly found myself handling situations like this:

Teacher: Let’s get started! Is everyone on a team?

Regular Education Student: Mark is coming. Can he be on our team?

Teacher: Remember, we don’t save spots for friends. Our teams need to be even, so I will put him on the team that needs another player. No matter who is on your team, you’ll have fun.

Regular Education Student: O.K.

Teacher: Tom you will be catcher. Betty you will be pitcher.

Karen: (starts screaming, stamping her foot, and making her hands fists) I wanted to be pitcher. I will be pitcher right now!

Teacher: (as all the kids are watching) Karen I hear that you want to be pitcher, but is yelling and stomping your foot going to get you what you want?

Karen: (screams louder) I am going to be pitcher right now!
(At this point it was making a big scene and not making a good impression on the other kids, so the teacher nicely removes her from the playing area. The educational assistant takes over, so the teacher can talk with Karen.)

**Teacher:** When you are calm, which means not yelling or stomping your foot, we will talk.

(Five minutes go by before Karen and the teacher talk.)

**Karen:** I want to be pitcher.

**Teacher:** Look how many people are playing. Can they all be pitchers and catchers today?

**Karen:** No!

**Teacher:** You were the pitcher the last time we played this game, so how would it make the other kids feel if they never had a chance to be the pitcher?

**Karen:** Mad, but I want to be pitcher!

**Teacher:** There are going to be times you don’t get what you want, but you can’t yell and stomp your feet to get it. What could you do next time you don’t get what you want?

**Karen:** I don’t know!
Teacher: Let’s watch the game and see what the other kids do when they don’t get picked.

(The teacher and Karen walk closer to the playing area.)

Teacher: They are switching now, so let’s keep our eyes open to see what other people do when they are not picked for pitcher.

Karen: O.K.!

Teacher: Look at that student. He is upset that he didn’t get picked. What did he do?

Karen: He made a noise and walked away.

Teacher: Right, but he is still upset. Is he yelling and screaming?

Karen: No!

Teacher: It looks like he is taking deep breaths and kicking the ground in a way that would not hurt or bother anyone else. He is also getting ready to play again, because he doesn’t want to miss out on the fun. What could you do?


Teacher: That is a good start. Let’s try that first.
It was very difficult for me to understand what was happening, but after analyzing what was occurring with my students, I realized that my students’ social ability had increased. This was evident in their ability to carry out low-level social skills (remaining focused, following the rules of the game, cheering friends on in a play situation, etc.). At this point in the study, my research participants’ needs had changed. They were encountering new/higher-level social situations (dealing with denial/loss, understanding others’ feelings, reading nonverbal social cues, etc.) that they had not encountered before or did not care about previously. For this reason, it remained important for me to continue assisting them through these more complex social situations.

By the end of the study, students’ engagement in activities and interactions with peers had changed drastically. Students regularly asked friends to play or join an activity, and they remained focused in play activities and seemed to enjoy every moment of their time spent socializing with peers. Figures 17, 18, and 19 depict what the recess period looked like for the recess participants as we neared the end of the data collection period.
Joey’s Story-Part 3

Joey

Some of my friends asked me to play Zombie Tag at recess. I had so much fun. I kept saying, “You can’t get me,” and they couldn’t. I did have to take a break for a little because I started coughing, but my friends came over to check on me and I got right back into the game. I hope we play that game again tomorrow at recess.

Regular Education Students

We played with Joey today at recess. Someone made this game up called Zombie Tag and we asked Joey if he wanted to play. He was so good. No one was able to catch him. He did stop playing for a little because he was coughing really badly, but when we checked on him, he was OK and joined the game again. I hope he plays again, because I want to try and catch him tomorrow.

Mrs. Fanelli

Today at recess some of the regular education students asked Joey if he wanted to play Zombie Tag. He joined in and did great. He was able to stay focused on the game even though he was sick. He was able to make appropriate comments during the game and it was evident that he was enjoying himself, because he was smiling and laughing the entire time.

Figure 17. Part 3 of Joey’s Story
Karen’s Story-Part 3

Karen

Today at recess I asked the kids from my class if I could join their basketball game. It was the best game ever. I made a ton of baskets, and all the kids were high-fiving me and telling me I was doing great. I know that I am not as good as them at playing basketball, but they don’t seem to mind. One of the kids from my class even gave me a hug when I made a shot. I love recess!!

Regular Education Students

Karen played basketball with us today. It was so great having her play with us. She isn’t that good at basketball. She can’t dribble, but it wasn’t a big deal. Everyone was OK with her getting the ball and running it up to take a shot. We obviously made everyone else follow the rules, but no one minded that we bent the rules for her. It actually felt good playing a game and making it easy for everyone to join in.

Mrs. Fanelli

At this moment I could cry. I can’t put into words what it was like watching Karen play with the other kids. Karen asked to join the basketball game. She was making appropriate comments, calling kids by name, and cheering friends on. She was trying to dribble, but not doing great. She was able to follow the action of the game, and she was attempting to make shots. I was so proud of her, but not just her, the entire group of kids. The regular education kids were so open to her joining. They didn’t mind that she really couldn’t dribble or shoot very well. They made sure she got the ball and was completely part of the game. Every attempt she made to help her team was paralleled by the support of her peers. This one moment in time allowed me to see the power of structured play and priming in the natural environment. It didn’t just affect my students, but an entire community.

Figure 18. Part 3 of Karen’s Story
Michael’s Story—Part 3

Michael
I played on the playground with friends today. I had a difficult time concentrating, because I felt awful and it was so cold. When I did play, I joined a secret spy game. Some of the kids were spies and others were bad guys. The spies had to find the bad guys and arrest them. It was a fun game, but I wasn’t very excited to play it, so I left to play the group game. I hope I feel better soon.

Regular Education Students
Michael left us to play the group game today. I don’t know what is wrong with him. He really has got better at playing what everyone wants to play, so I don’t understand why he left today. Maybe tomorrow he will be back to normal.

Mrs. Fanelli
Michael was really off today. He was out the day before and is just not back to normal. Lately, I have had to pull him away from his friends to play the group game, but today he went over to the game willingly even though I told him he had free choice. This shows he really is not feeling well. He was involved in the play activity with his friend, but just did not seem excited to be playing. During the group game, he did not talk much and did the minimal to stay engaged. Hopefully he will be back to normal soon.

Figure 19. Part 3 of Michael’s Story
METHODS OF ANALYSIS

Analysis of Collected Documents

Ongoing Analysis

Since I am a special education teacher, I look at data on a daily basis. It is one of the things I enjoy most about my job. I love looking at data and setting a plan in place to help students move forward, so continuously looking at my data throughout my study was no different. Cher Hendricks (2006) recommends that action researchers need to take part in “continuous, ongoing reflective planning” (p, 110). When we do this as researchers, we are able to see when instructional plans or data collection procedures need to be changed. I took part in continuous data analysis throughout the 14 weeks that my study took place. This analysis allowed me to consider “actions taken throughout the study and alter those actions as necessary” (Hendricks, 2006, p. 114).

Quantitative Data

From the start of my study, I began placing my event and duration recording data into tables and graphs. By doing this, I could look at the data in various ways in order to see which display allowed me to best understand the findings and answer my research question. It also allowed me to see which displays allowed others to best understand the results of my study (Hendricks,
2006). I also compared pre- and post study data to see if any change had occurred in the types of responses and sustained interactions my students were engaging in. This data allowed me to see the strengths and needs of my students and how they developed and changed over time. This served as an overall measure of students’ ability to respond to others’ social bids and remain engaged in a social activity.

**Rubrics**

Students’ social skills were assessed using the social skills continuum in Appendix C. When analyzing this data, the instructor was looking to see if students’ skills moved from left to right on the continuum. Each social area was defined with six quadrants. The first quadrant, which was the one furthest left, was marked as “Not Proficient”. The last quadrant, which was the one furthest right, was marked as “Proficient”. As students move right, they are in need of less support, but it was important for the instructor to remember that students’ movement may fluctuate left and right based on their zone of proximal development.

**Codes, Bins, and Theme Statements**

During this process, I studied my data to find patterns and themes. As my field log began to grow, I went through the documents and began coding my field log. Coding allowed me to get involved in “an ongoing effort to make sense of
the observations and data as they were being collected, right from the start” (MacLean and Mohr, 1999, p.57). The codes allowed me to record important concepts/themes/ideas that were growing within my data. I recorded these codes in a coding index, which I updated several times throughout my study. Coding allowed me to make sense of and manage the large amount of data I was collecting in my field log (Bogdan and Biklen, 1998). I continuously reviewed and analyzed my codes throughout the research study.

At the end of my research study, I began to group codes that had similar patterns or ideas together. Codes with similar patterns were placed into bins (Ely, 2007). The bins allowed me to begin finding the answers to my research study. From the bins, I was able to be open to the themes, which arose to answer my research question (Hendricks, 2006). These themes were supported through the codes and bins created from my findings.

**Memo Analysis**

Throughout my study, I wrote several analytic memos to help me analyze my research through several perspectives. As I read the ideas of Dewey (1938) and Vygotsky (1978), I found quotes within their writing that allowed me to analyze my work and the educational experiences I was providing.

Dewey allowed me to view my data through a progressive lens. Through Dewey’s ideas I was able to see that the social skills instruction I was delivering through the use of structured play and priming was always challenging my
students to learn more. At no time was there a point where skills were mastered. Growth was always occurring and continuing through the use of the resources my students and I were surrounded with and my knowledge of students’ strengths and needs. With this information in place, learning continued to grow based on students’ needs.

Vygotsky allowed me to analyze my study through the lens of social interaction. His ideas really allowed me to look deeply at my procedures and instruction to see if I was working in students’ zone of proximal development. At one point in my study, I felt that I had failed, but when I viewed my study through the lens of social interaction, it became apparent that I did not fail. I did just the opposite. I moved my students to a new level of learning where they will initially need more supports, but with the right guidance they will continue to grow. Vygotsky explains it as a child advancing from one developmental level to another. When this advancement occurs, so do the “motives, inclinations, and incentives” (p.92) for that child and the teacher needs to be ready to support this child with the new demands present.

Along with analyzing my study through the lenses of educational philosophers, I wrote a mid-study methodological memo. This memo allowed me to look at my research question and see if any sub-questions had emerged. I was able to analyze the data I had already collected so I could make changes in my instructional or data collection plans if necessary. I also created a new timeline of
expectations for the rest of the study. By creating a timeline, I was setting a plan on when things needed to be done and times I should analyze my data. This allowed me to remain focused on my research question (Hendricks, 2006).

**Narrative Writing**

I also had the opportunity to use narrative forms of writing to tell my research story. These forms of writing, the layered story and dramatizations, allowed me to again look at my study from a different angle (Ely, 2007). Through narrative writing, I was able to look through the enormous amount of data collected and make meaning of those data that best helped me to answer my research question.
FINDINGS

For so many years I spent hours planning social skills lessons that seemed to leave no lasting impact on my students. I felt lost and unsure how to enhance skills that were so imperative to their success in life, so I sought to determine what the observed and reported experiences would be when I use the process of structured play and priming in the natural social environment to enhance social skills instruction. Little did I know that this journey would be a life changing experience not just for my students, but for me too.

Vygotsky (1978) made the following statement, which helped me to understand a crucial mistake I had been making in my instruction. “Concreteness is now seen as necessary and unavoidable only as a stepping stone for developing abstract thinking as a means, not as an end in itself” (p.89). In my initial career as an educator, I had ended my instruction with concrete skills, not providing my students any instruction that allowed for abstract thinking. Through this study, I realized that in order to help students improve their social skills; social skills instruction can’t be a one size fits all approach, because students’ skill deficits vary. Figures 4, 5, and 6 show students’ sustained social interactions at the beginning of the research period. Figures 7, 8, and 9 show students’ ability to respond to others’ social bids at the beginning of the research period. Figures 20, 21, and 22 are another example of students’ varying skills at the beginning of the research period.
These figures demonstrate that students did not start with the same skills. In no other area of instruction do I create lessons where one size fits all. I always have a minimum of two different approaches to instruction or two different lessons going on at any given time in my classroom to meet individual student needs. With such different strengths and needs in social skills, why would I create social skills lessons that did not meet individual student needs? It became apparent throughout the study that *structured play and priming in the natural learning environment allows the instructor to scaffold instruction to create instructional opportunities where teacher and student work as partners in learning to enhance high-level (abstract thinking) social skills.*

Dewey (1938) really helped me see the benefits of scaffolding. He states, "It thus becomes the office of the educator to select those things within the range of existing experience that have the promise and potentiality of presenting new problems which by stimulating new ways of observation and judgment will expand the area of further experience" (p. 56). He wants educators to realize that they need to know their students’ strengths, needs, and/or ability levels and use that knowledge to plan educational experiences posing a problem that requires students to use skills already acquired, but to also build upon these skills, so their skills are stretched to a new level.

Within my study, I connected priming and structured play within the natural social environment to enhance social skills. With structured play, I taught
age appropriate games to students with autism, so they could play these games with peers. I selected games suited to students' physical abilities, ability to focus, and ability to follow through with multiple steps.

I used priming in the natural social environment to teach all the aspects of the game (rules, how to use materials, errors students may run into, etc.) prior to entering the social environment with peers, so students did not have to try and juggle learning a new game and new social demands at the same time. Once students had mastered the various aspects of the game, they could enter the natural social environment playing a game that was familiar to them. With the low level obstacles out of the way, they could take on social problems encountered during a play interaction. During these encounters, it was my job to help students solve problems through the experiences they encountered. I helped students read and understand the social experiences that occurred in the natural setting. After the experience had occurred, the students were required to reflect on the choices they made and make plans for future social endeavors. I then continued to create social experiences that challenged each student within his or her instructional level.

I have found that learning experiences focused on problem solving within individual instructional levels is what so many students identified with autism spectrum disorder have lacked within their instruction. Jackson, Fein, Wolf, Jones, Hauck, Waterhouse et al. (2003) found that children can learn rote social
skills, but have a difficult time developing more complex social skills. Sawyer et al. (2005) and Zanolli et al. (1996) found priming was successful but needed to be combined with prompts to see social growth.

When I combined structured play and priming in the natural learning environment, I started to see that structured play and priming begin building abstract thinking, helping students begin to develop high-level social skills. Figures 4, 5, and 6 show what students’ sustained interactions were at the start of the research period. Figures 20, 21, and 22 are pieces of the social skills continuum used to assess students’ social skills at the beginning and end of the research period. The skills depicted in these figures are skills that require abstract thinking in order to have success carrying the skills out. A child cannot stay engaged in a play interaction unless he or she is able to concede to a group choice, share, identify peers emotional needs, predict/identify the thoughts/feelings of others, etc.

<table>
<thead>
<tr>
<th>AREA</th>
<th>SOCIAL INTEGRATION</th>
</tr>
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<tr>
<td><strong>INTERACTION</strong></td>
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</tr>
<tr>
<td><strong>PAIRWORK</strong></td>
<td><strong>Social Integration</strong></td>
</tr>
<tr>
<td><strong>GROUPWORK</strong></td>
<td><strong>Social Integration</strong></td>
</tr>
<tr>
<td><strong>SHARING</strong></td>
<td><strong>Social Integration</strong></td>
</tr>
<tr>
<td><strong>SELF-PROVIDING</strong></td>
<td><strong>Social Integration</strong></td>
</tr>
<tr>
<td><strong>FOLLOWING</strong></td>
<td><strong>Social Integration</strong></td>
</tr>
<tr>
<td><strong>PLAY</strong></td>
<td><strong>Social Integration</strong></td>
</tr>
</tbody>
</table>

*Figure 20. A Piece of Joey’s Social Skills Continuum Data*
Vygotsky explains that even games with rules turn into imaginary play situations. He states, “the simplest game with rules immediately turns into an imaginary situation in the sense that as soon as the game is regulated by certain rules, a number of possibilities for action are ruled out” (Vygotsky, 1978, pg. 96).

When taking part in a rule based game, students must think abstractly to make a successful move that benefits the child. If they don’t think about all their options within the rule-based game, then they will face the negative consequences that will arise.
Even with the slow progress I documented here, I believe that students are benefiting from the use of rule based, structured games to enhance social skills in children identified as having autism. Again, Vygotsky explains that the first step to children developing their abstract thinking skills is by having an object present in order to think of that action. Students then are able to understand its meaning and purpose without the object being present. Finally, students can think of an object and understand its purpose with the object nowhere in the area of the child. Currently, when a student has a difficult time visualizing something within the games we play, I use a visual prop. For example, when playing Ghost Tag, students taking on the role of ghosts wear a white shirt. I hope to move away from this when students are ready, but the rate of decrease depends on students’ increase in abstract thinking.

Change can cause a great deal of anxiety for students diagnosed as having autism spectrum disorder. Students with autism thrive and find comfort in routines, concrete expectations, and rules (Pierangelo and Giuliani, 2008; Scheuermann and Webber, 2002). The research participants in this study were no different. I found that teachers can motivate students identified as having autism spectrum disorder when undergoing social skills instruction using structured play within the natural play environment through scaffolding, providing opportunities for interaction, reinforcing positive student behavior, meeting students’ instructional needs, and putting control into students’ hands.
I did this through the tools I used to enhance this program, including Good Friend Tickets, the recess chart, priming, visually constructing boundaries in the play environment, and setting clear expectations, among others. The change in motivation can be seen in some of their last reflective logs.

**Recess Report**

**Today at recess I played** [Student] **for 20 minutes.**

**For the last 10 minutes of recess, I chose to** [Student] **so**.

**One thing I did well was** [Student].

**I earned ** [Student] **good friend tickets.**

*Figure 23. Joey’s Last Recess Report*

Today at recess I chose to find something to do all by myself.

[Student] **things are cool**.

**I earned ** [Student] **Good Friend Tickets.**

*Figure 24. Karen’s Last Recess Report*
**Recess Report**

Today at recess I played ___________ for 20 minutes.

For the last 10 minutes of recess, I chose to ________.

One thing I did well was ________.

I earned ___ good friend tickets.

*Figure 25. Michael's Last Recess Report*

In these logs, it is apparent that students enjoy recess, take part in age-appropriate games, and desire interactions with peers. At the beginning of the research period students showed little desire or ability to interact with peers, but it would now be highly unusual to walk out on the playground and not see them with a group of children. The change in responses to social bids can be seen in Figures 26, 27, and 28.
Figure 26. Joey's Responses to Social Bids

<table>
<thead>
<tr>
<th></th>
<th>Baseline (%)</th>
<th>Baseline (%)</th>
<th>Baseline (%)</th>
<th>Baseline (%)</th>
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<td>18.0</td>
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<td>Other Responses</td>
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<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
</tbody>
</table>

Figure 27. Michael's Responses to Social Bids

<table>
<thead>
<tr>
<th></th>
<th>Baseline (%)</th>
<th>Baseline (%)</th>
<th>Baseline (%)</th>
<th>Baseline (%)</th>
</tr>
</thead>
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<tr>
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<td>73.0%</td>
<td>73.0%</td>
<td>73.0%</td>
</tr>
<tr>
<td>Negative Responses</td>
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<td>5.0%</td>
<td>5.0%</td>
<td>5.0%</td>
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<tr>
<td>Other Responses</td>
<td>8.0%</td>
<td>8.0%</td>
<td>8.0%</td>
<td>8.0%</td>
</tr>
<tr>
<td>No response</td>
<td>14.0%</td>
<td>14.0%</td>
<td>14.0%</td>
<td>14.0%</td>
</tr>
</tbody>
</table>
Figure 28. Karen’s Responses to Social Bids

It wasn’t just the research participants who avoided making social relationships with peers, but it was also the regular education students who rarely went out of their way to interact with the research participants either. Figures 4 and 6 shows that two out of three research participants spent most of their time moving in and out of proximity of people at the beginning of the research period. The research participants showed a desire to interact, but they did not yet posses the skills to do so in socially acceptable ways, nor did the regular education students try to engage the research participants in social interactions. Students were moving in and out of proximity to try and obtain an interaction, but such interactions did not occur of their own volition. **In order to increase social skills for students diagnosed with autism spectrum disorder the larger community must also buy in and begin to change their social perspective and behaviors.**
This may be facilitated by identifying community needs, implementing a reinforcement system for the school community as a whole, and changing procedures to meet all students' regular and special education needs.

Dewey (1938) believes that teachers should use all their resources to enhance instructional opportunities. Dewey states, “above all, they should know how to utilize the surroundings, physical and social, that exist so as to extract from them all that they have to contribute to building up experiences that are worthwhile” (p. 30). He describes the importance of creating experiences that encourage growth and believes that good instructors are able to look around them at all the resources naturally available to them and use these natural resources to create instruction that advances students’ skill levels.

When creating this study my overall desire was to increase social skills. I continuously looked at what I had already done and why it was failing to allow social skills to grow at a more advanced level. I realized that I needed to use all the instructional environments and resources available to me to help social skills grow and generalize across environments. The largest resource that I had was the student body at large, and these students were my key to moving my students forward. I worked hard to motivate them to take part in my games. I also positively reinforced the school community to improve age appropriate behaviors to gain appropriate models, enhance social relationships, and change the community’s perception on interacting with all members of the community.
By the end of my study, my use of structured play and priming in the natural learning environment was no longer just for the instruction of my students. It became instruction for the entire school community. What I was doing could be viewed as Universal Design for Learning. This meant that all students’ needs across the school community were being taken into consideration and instruction was framed around the community and individual student’s needs. By doing this, the community as a whole was able to grow and change.

Through a change in the whole school attitude, the use of motivational techniques and through scaffolding instruction, **structured play and priming in the natural play environment leads to longer engagement in social situations, an increase in appropriate social responses, and an increase in ability to engage with same age peers.** This growth in social skills can be viewed in Figures 26 thru 31. These figures show how students’ ability to respond to social bids and sustain social interactions increased throughout the study.
Figure 29. Joey's Sustained Interaction End of Study Data

Figure 30. Michael's Sustained Interaction End of Study Data
As the study came to an end, Vygotsky’s word continued to flow through my mind. “The influence of play on a child’s development is enormous” (Vygotsky, 1978, pg. 96). I now understand the importance of play not just as a means to increase social skills, but also as a way to increase abstract thinking skills.
FINAL THOUGHTS

My research period may have ended, but I am not done following this journey. The growth that my students continue to demonstrate is amazing to me, and I still need so many questions answered. I want to know if and how skills learned throughout this study generalize to other environments. How will the skills mastered through instruction using structured play and priming in the natural learning environment remain in place over an extended period of time? Will structured play and priming in the natural learning environment continue to enhance abstract thinking skills in students with autism spectrum disorder?

My colleagues and I have added different instructional techniques to continue enhancing the positive aspects of structured play and priming. We have begun to videotape recess sessions, so we can go back to different situations and use them as instructional points within our classrooms. This has been helpful, because students have become more aware of how they look out on the playground and are striving to improve their behaviors to reflect what is viewed as socially appropriate. When using video modeling, we only focus on the positive things that are seen during a recess period, and celebrate the positive behaviors that continue to emerge.

The community is another area that remains vital to this program. Without the school community buy-in, the program would not be able to support
our students’ continued growth. It has begun to emerge that this is not a special education program, but a school program. In order to continue this mind set, we have added a calendar out in the hallway, so the school community always knows the games that will be played daily. We try to communicate as much as possible the expectations for the recess period, and the regular education teachers have been very supportive of our efforts.

I still do not feel confident as a social skills instructor, so I will continue to stretch myself to the limit. It is imperative that I strive to help all my students improve their social skills, so they can grow to be individuals that can maneuver through the world. If I can help them build their abstract thinking skills, I know that my students will go on to experience an increased quality of life.
REFERENCES


Individual with Disabilities Education Act (IDEA), 34 C.F.R. § 300.8 (c)(1) (2004).


Appendixes
### Appendix A: Event Recording Data Form

**Structured Play**

*Event Recording Sheet*

The recorder is to place the date. As you observe a child, please indicate the child's behavior by circling the correct response and who it was towards (Adult (A) and Child (C)), and at what time the behavior occurred.

<table>
<thead>
<tr>
<th>Date</th>
<th>Time Start/Stop</th>
<th>Positive Response</th>
<th>Negative Response</th>
<th>Other Response</th>
<th>No Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>A C</td>
<td>A C</td>
<td>Comply/Cooperate</td>
<td>Noncompliance/Ago</td>
<td>A C</td>
<td>No Response</td>
</tr>
<tr>
<td></td>
<td>A C</td>
<td>Propos.al Response</td>
<td>Avert/Escape</td>
<td>A C</td>
<td>No Response</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Initiated Interactions</td>
<td>Distress</td>
<td>A C</td>
<td>No Response</td>
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<td>A C</td>
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<td>Avert/Escape</td>
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<tr>
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113
Appendix B: Duration Recording Data Form

### Structured Play

**Duration Recording**

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<th>Stop Time</th>
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<tr>
<td></td>
<td>Play interaction</td>
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<tr>
<td></td>
<td>Conversation</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Aggression</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Other sustained Interactions</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Moving in and out of proximity</td>
<td></td>
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<tr>
<td></td>
<td>Play interaction</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Conversation</td>
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<td>Conversation</td>
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<td></td>
<td>Aggression</td>
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<td></td>
<td>Other sustained Interactions</td>
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<td>Moving in and out of proximity</td>
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</tbody>
</table>
### Self-Regulation

<table>
<thead>
<tr>
<th>Area</th>
<th>Not Proficient</th>
<th>Proficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>HABITS</td>
<td>Indiscriminately chooses one item</td>
<td>Selects and organizes own relevant strategies</td>
</tr>
<tr>
<td>Rap</td>
<td>Lacks and responds to group</td>
<td>Lacks and responds to group</td>
</tr>
<tr>
<td>PERSERVATION</td>
<td>Requires constant attention to task</td>
<td>Requires constant attention to task</td>
</tr>
<tr>
<td>INFLUENCE</td>
<td>Lacks impulse control</td>
<td>Lacks impulse control</td>
</tr>
<tr>
<td>SENSORY MOTOR</td>
<td>Poorly initiates or initiates with prompts</td>
<td>Lacks impulse control</td>
</tr>
<tr>
<td>STRESS MANAGEMENT</td>
<td>Unorganized behavior in stressful situations</td>
<td>Unorganized behavior in stressful situations</td>
</tr>
</tbody>
</table>

### Knowledge of Conventions

<table>
<thead>
<tr>
<th>Area</th>
<th>Not Proficient</th>
<th>Proficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROUTINE</td>
<td>Disrupts repeated daily routines</td>
<td>Follows repeated daily routines</td>
</tr>
<tr>
<td>TRADITION</td>
<td>Fails to maintain traditions</td>
<td>Maintains traditions</td>
</tr>
<tr>
<td>RULES</td>
<td>Uses stimulus vs. reinforcement</td>
<td>Uses reinforcement</td>
</tr>
</tbody>
</table>

### Social Interaction

<table>
<thead>
<tr>
<th>Area</th>
<th>Not Proficient</th>
<th>Proficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>TEASING</td>
<td>Does not exhibit</td>
<td>Exhibits teasing</td>
</tr>
<tr>
<td>GROUP INTERACTION</td>
<td>Uncomfortable with group</td>
<td>Comfortable with group</td>
</tr>
</tbody>
</table>

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**Appendix C: Social Skills Continuum**

The continuum assists teachers in tracking the progression of students' social skills. It is based on the description that more closely represents the student's current level of performance.
<table>
<thead>
<tr>
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<th>Not Proficient</th>
<th>Proficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>BEING SOCIAL</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>social introverted</td>
<td>social interactive</td>
</tr>
<tr>
<td>SELF-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ADVOCACY</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>self-advocate for self</td>
<td>self-advocate for others</td>
</tr>
<tr>
<td>EMOTIONS TO</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SELF</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>identifies emotions</td>
<td>identifies emotions</td>
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</tbody>
</table>

**SHARING**
- does not recognize others
- does not share toys or materials
- shares materials with prompt
- independently shares materials
- shares materials independently

**RULE FOLLOWING**
- does not show awareness of game rules
- follows rules of two-child game
- follows rules of extended group game

**PLAY**
- demonstrates lack of awareness with toys
- participates in play activities
- independently participates in play activities
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**COMMUNICATION**

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**PERSONAL SPACE**

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Appendix D: Reflection Sheet

Recess Report

Today at recess I played ____________________________
for 20 minutes.

For the last 10 minutes of recess, I chose to
_________________________________________________________________

One thing I did well was ____________________________
_________________________________________________________________
Appendix E: Principal Informed Consent Form

August 2010

Dear [Parent’s Name],

I am currently enrolled in the Master’s program in Curriculum and Instruction at Moravian College. The current course I am taking, Reflective Practice Seminar, requires that I carry out a study of my classroom and my teaching methods. The focus of my research this semester will be attempting to improve students’ social skills through the implementation of structured play. In doing this, I hope to improve students’ social skills and their ability to generalize social skills across various settings. This study will take place starting September 1, 2010 and will conclude December 15, 2010.

To begin the process, I will be collecting data through observations of your child at recess. When observing students, I plan to identify the type and number of responses students make when another individual initiates an interaction with them. I will also be observing the type of sustained interaction and the duration of this interaction students take part in. From this point, I will take the observation data to begin developing social skills lessons that meet your individual child’s needs. Your child will receive direct instruction in specific social skills. He/She will also receive direct instruction on how to play various games that can be played at recess. He/She will be required to take part in these games during the first twenty minutes of recess. For the last ten minutes of recess, your child will get to pick any activity in which he/she would like to take part in. The class will work together to develop a weekly recess schedule, so students feel motivated to take part in our structured play program. After recess each day, students will fill out a recess report that will come home. This report will inform you of the activities your child took part in during the recess period. Half way through the study period and at the end, I will observe and collect data to see if any changes have occurred.

All students will participate in structured play activities and instruction, but only data gathered from research study participants will be included in my study. This study is completely voluntary, and a student may withdraw from the study at any time without penalty. If a student withdraws or a parent does not provide consent, I will not include the student’s data in my study. The names of all participants
will remain confidential. There is also no mention of the name of the institution, specific faculty members or cooperating teachers. Minor details in student work may need to be altered to maintain student anonymity.

You may contact me at [redacted] or via e-mail at [redacted]. If you have any further questions, you can contact Dr. Joseph Shosh, my advisor at Moravian college, at [redacted]. If not, please check the appropriate box on this page of this letter and return it to me at your earliest convenience.

Sincerely,

Gabrielle Fanelli
Autistic Support Teacher

I attest that I am the principal of the teacher conducting this research study, that I have read and understand this consent form, and received a copy. Gabrielle Fanelli has my permission to conduct this study at [redacted] Elementary School.

Principal’s Signature: ___________________ Date: _______
Appendix F: Parent/Student Informed Consent Form

September 2010

Dear Parents and Guardians,

I am currently enrolled in the Master’s program in Curriculum and Instruction at Moravian College. The current course I am taking, Reflective Practice Seminar, requires that I carry out a study of my classroom and my teaching methods. The focus of my research this semester will be attempting to improve students’ social skills through the implementation of structured play and priming. In doing this, I hope to improve students’ social skills and their ability to generalize social skills across various settings. This study will take place starting September 1, 2010 and will conclude December 15, 2010.

To begin the process, I will be collecting data through observations of your child at recess. When observing students, I plan to identify the type and number of responses students make when another individual initiates an interaction with them. I will also be observing the type of sustained interaction and the duration of this interaction students take part in. From this point, I will take the observation data to begin developing social skills lessons that meet your individual child’s needs. Your child will receive direct instruction in specific social skills. He/She will also receive direct instruction on how to play various games that can be played at recess. He/She will be required to take part in these games during the first twenty minutes of recess. For the last ten minutes of recess, your child will get to pick any activity in which he/she would like to take part in. The class will work together to develop a weekly recess schedule, so students feel motivated to take part in our structured play program. After recess each day, students will fill out a recess report that will come home. This report will inform you of the activities your child took part in during the recess period. Half way through the study period and at the end, I will observe and collect data to see if any changes have occurred.

All students will participate in structured play activities and instruction, but only data gathered from research study participants will be included in my study. This study is completely voluntary, and a student may withdraw from the study at any time without penalty. If a student withdraws or a parent does not provide consent, I will not include the student’s data in my study. The names of all participants will remain confidential. There is also no mention of the name of the institution, specific faculty members or cooperating teachers. Minor details in student work may need to be altered to maintain student anonymity.
You may contact me at [redacted] or via e-mail at [redacted]. If you have any further questions, you can also contact Dr. [redacted], principal of [redacted] Elementary School, at [redacted] or [redacted], school counselor at [redacted]. You can also contact Dr. Florence Kimball, Dean of Comenius Center at Moravian College, at [redacted] or Dr. Joseph Shosh, my advisor at Moravian College, at [redacted]. If not, please check the appropriate box on this page of this letter and return it to me at your earliest convenience.

Sincerely,

Gabrielle Fanelli

Autistic Support Teacher

☐ ☐ I give permission for my child’s data to be used in this study. I understand that I will receive a signed copy of this consent form. I have read this form and understand it.

☐ ☐ I do not give permission for my child’s data to be included in this project.

Student’s Signature: __________________________ Date: ________

Parent’s Signature: __________________________ Date: ________
### Appendix G: Good Friend Tickets for the Research Participants

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<td>I was a good sport.</td>
<td>I kept my personal space.</td>
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<td>I kept my personal space.</td>
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</tbody>
</table>
GOOD FRIEND TICKET

Name: ______________________
Class: ______________________

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