COOPERATIVE PLAY AND THE AUTISM SPECTRUM: CASE STUDY

Erin Melissa Oakes
B.A., California State University, Sonoma, 2002

THESIS

Submitted in partial satisfaction of the requirements for the degree of

MASTER OF ARTS

in

EDUCATION
(Special Education)

at

CALIFORNIA STATE UNIVERSITY, SACRAMENTO

FALL
2009
COOPERATIVE PLAY AND THE AUTISM SPECTRUM:
A CASE STUDY

A Thesis

by

Erin Melissa Oakes

Approved by:

__________________________________, Committee Chair
Rachael Gonzáles, Ed.D.

__________________________________, Second Reader
Elva Durán, Ph.D.

__________________________________
Date

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Student: Erin Oakes

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__________________________, Graduate Coordinator
Guy Deaner, Ph.D. Date

Department of Special Education, Rehabilitation, School Psychology, and Deaf Studies
Abstract

of

COOPERATIVE PLAY AND THE AUTISM SPECTRUM:
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Erin Melissa Oakes

The case study details play behavior for a first grade student with an autism spectrum disorder when involved in an Integrated Play Group (IPG) at Wheatland Elementary School in Wheatland, CA. The case study intended to illustrate the qualitative changes in behavior by a student with autism when involved in an IPG. Data collection included behavioral observations with initial assessment in September 2008 and monthly play behavior observations from September 2008 to January 2009. The behavior observations detailed the student’s play style, the symbolic and social dimensions of play, the communication, and the diversity in play behavior. Findings suggest daily play instruction using an Integrated Play Group model provided the participant with opportunities to apply phrases and gestures learned in a social group with a typically developing peer.

Approved by

_______________________, Committee Chair
Rachael Gonzáles, Ed.D.

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Date

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ACKNOWLEDGMENTS

First, I would like to thank my thesis sponsor Rachael Gonzáles, Ed.D., for her continuous support through the development and completion of my thesis. Dr. Gonzáles was always there to listen and to give advice. Dr. Gonzáles has provided countless hours reviewing and providing feedback to support the completion of the thesis. I would also like to thank the students working in the Wheatland Elementary Learning Center. Their enthusiasm to learn has provided multiple opportunities to increase my knowledge and proficiency for social skills instruction. I would like to thank the Wheatland Elementary Special Education staff. Their consistent support has influenced the lives of many students.
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Chapter 1

INTRODUCTION

Background

Children build a perceptual framework of the world through play, using complicated reciprocal interactions. The development of play behavior serves many functions. Our initial sensory experience with the world is through exploratory play to receive new information about an item as well as relay the information to another through a play interaction. The foundation for social engagement is during play behavior. Early play experiences facilitate social behaviors including the ability to participate in a shared activity with a common focus. Play behavior sponsors language development and communication. Initial play behavior facilitates one to learn language and use language to for social interaction with another. Essentially, play behavior is the fundamental basis for social skills development, facilitates language, and sponsors initial communication development (Lee, Odom, & Loftin, 2007). Early deficits in play behavior have shown to impact social skills development, language development, and communication abilities (Bates, Camaioni, & Volterra, 1975; Rutherford, Young, Hepburn, & Rogers, 2006; Wolfberg, 1999; Stagnitti & Unsworth, 2000). Recent interest in the study of children with autism has sponsored considerable attention to the study of play behavior in children with autism (Nelson, Nelson, McDonnell, Johnston & Crompton, 2007; Wolfberg & Schuler, 1993; Yang, Wolfberg, Wu, & Hwu, 2003). Research has shown children with autism do not develop equivalent play behavior as typically developing children and may evidence qualitative differences in the range of play activities, social dimensions of play
and the symbolic dimensions of play (Lee, Odom & Loftin, 2007; Mundy & Gomes, 1998). Further consideration of autism spectrum disorders presents the historical foundation of the disorder.

Autism is one of five neurodevelopment disorders under the umbrella of Pervasive Developmental Disorders (PDD). Autism is associated with three primary behavioral characteristics: 1) Delays in communication, 2) repetitive and stereotypic behavior patterns, and 3) delays in speech and language abilities (American Psychiatric Association, 2000). The original definition of autism came from Leo Kanner in 1943 after Kanner observed 11 children with the similar behavioral characteristics. In addition to the three primary behavior characteristics, Kanner also noted a disregard to the social world and a lack of social interaction. Kanner referred to the autonomy as "extreme autistic aloneness" (p.33). Hans Asperger spurred the popularity for the term autism when he referenced the term in a 1938 lecture describing a subset of behaviors on the PDD spectrum currently identified by the Diagnostic Statistical Manual (DSM) as Asperger’s Syndrome (Ozonoff & Rogers, 2003; Seidel, 2006). Although, Kanner’s writing referenced autism as an innate condition, autism was misperceived as a disorder of maternal deprivation and used to describe children with socially withdrawn behavior and limited interest in social interaction (1943). The present day understanding of autism details a heterogeneous genetic origin of the disorder, with multiple causal factors (Campbell et al., 2006). Concerns for the social behavior deficits in children with autism have sponsored many to consider the influence of play instruction on the social behavior for children with autism.
Statement of the Problem

Children with autism require instruction in social skills strategies to develop prosocial behavior. At present local education agencies tend to identify social skills deficits and provide explicit instruction within the context of a separate classroom to remediate social play deficits. The isolated social play instruction does not provide students with autism access to naturalist play opportunities or facilitate direct prosocial relationships with peers. Children with autism are to receive the social skill education and apply the knowledge in a separate setting with limited practice with peers. At present, a limited number of studies have researched social play instruction using an integrated playgroup model at a school site (Lantz, Nelson, & Loftin, 2004; Liccariardello, Harchik, & Luiselli, 2008; Wolfberg & Schuler, 1999; Yang, Wolfberg, Wu & Hwu, 2003; Zercher, Hunt, Schuler & Webster, 2001). The playgroup model creates an opportunity for children with autism to employ social strategies with a peer within a naturalistic setting. The use of an integrated playgroup aims to increase prosocial behavior using typically developing peers to scaffold play behavior for a student with autism.

Purpose of the Study

The purpose of this study is to detail play behavior by a child with autism when involved in a school based integrated playgroup within a naturalistic environment. The study aims to show the impact of a school based integrated playgroup on the social play behavior for the child with autism. The research will chronicle the development of social play for a child with autism when involved in an integrated playgroup alongside typically
developing peers through a case study. The author will document the progress of play behavior for the child with autism through monthly observation records of the play sessions. The observation records evidenced the areas of need for the student with autism are social skills instruction and to identify prosocial changes in play and social behavior. Observation analysis also serves to guide future integrated playgroup instruction and the possible training needs for para-educators and play mentors. Additionally the study aims to increase peer relationships between a child with autism and his typically developing peers by facilitating prosocial interaction between the child and typically developing peers. Play mentors will receive training and instruction by the author to guide the student with autism through social play and scaffold social skills development.

Theoretical Framework

A case study illustrates a problem associated with an individual, community, group, or organization. The case study further provides a means to remedy the problem and to disclose needed areas of investigation (American Psychological Association, 2000; 2010). According to Yin (1989), a case study investigates “a contemporary phenomenon within its real-life context; when the boundaries between the phenomenon and context are not clearly evident; and in which multiple sources of evidence are used” (p. 23). Yin (1984), further emphasizes a case study approach is useful when an in-depth investigation is required on a particular subject. An in-depth investigation is reached through multiple sources of data.

The case study method relies on multiple sources of data. Data analysis sponsors paradigms to converge to create a theme and seeks to develop pertinent hypotheses for
further study. The diverse and congruent sources of data illustrate the complexity of the case study and the external conditions. According to Creswell (2007), the data collection in a case study is drawn from numerous sources of information, including “…observations, interviews, documents and audiovisual materials” (p. 74). Crewell further acknowledges the author often participates in the natural setting of the intervention, as an instrument to analyze observations and interpreting the meaning of the results. The author must rely on multiple data measures to produce an unbiased perspective of the case study. Although, commonly used in present day research, case study research methodology is the foundation of initial social sciences and mental health research.

The origins for case study research appeared in Europe in the 19th Century and utilized often by French, German, and Austrian scientists (Bromley; 1990; 1991). Case study research was further supported by psychotherapists, including, Anna Freud, Sigmund Freud, Carl Jung, and Morton Prince through client study (Freud, 1946; Freud, 1909/1963; Jung, 1969; Magid, 1993; Prince, 1905/1992; Wells, 2003). Psychotherapists completed used case study research to evaluate and treat patient conditions. Initial case study research was performed in the United States at the University of Chicago’s department of Sociology, and between 1900 and 1935. Present research continues to employ case study research to illustrate the complexity of an issue. Research conducted by Wolfberg (1999) employed cases study research to evidence gains in social communicative play.

Typically social skills instruction for children with autism is often isolated lessons in a separate setting and presents a limited opportunity for the student to apply the learned behavior in a social setting. Children with autism receive instruction on a social skill and practice the skill in isolation with a teacher (Bauminger, 2002). Theoretically, the student will apply the new social skill in a social forum and with typically developing peers without prompting. Additional social skills instruction has been designed to train typically developing peers to facilitate interactions and guide the social play of a child with autism. Typically developing peers act as play guides to a child with autism to foster prosocial social skills within the natural context of a typical play setting. The play guide prompts and encourages the child with autism to engage in behaviors within a play setting. Integrated Play Groups are designed to increase social play development using typically developing peers as mentors of play schemes based on the interests of the child with autism.
Definition of Terms

Natural Environment

Playgroups are to be facilitated in a natural environment. The Code of Federal Regulations defines a natural environment as "settings that are natural or normal for the child's age peers who have no disabilities” (United States Department of Education, 2009). A natural play environment according to Yang, Wolfberg, Wu, & Hwu (2003) is within a school, home, therapy, or community setting (p. 440). The natural setting for the purpose of this study is a general education recess session at a public elementary school.

Integrated Play Group

An Integrated Play Group (IPG) “aims to support children with autism in natural play experiences with more capable peer play partners…in small groups organized around constructive and social pretend play activities…whereby an adult facilitates spontaneous, mutually enjoyed, and reciprocal play among children while expanding on each child’s social and symbolic play repertoire” (Wolfberg, pp.6-7).

Expert Player

A play mentor or expert play is a “typically developing peers or siblings” with socially typical behavior for their age (Wolfberg, 1999; Yang, Wolfberg, Wu, & Hwu, 2003, p.440). Additionally, Wolfberg defines expert players as socially competent peers.

Novice Player

A novice player is a child with autism (Wolfberg, 1999, p.440).

Play Facilitator
A play facilitator is the adult that leads the playgroup by guiding play and scaffolding play interactions to act as an interpreter between novice and expert players (Wolfberg, 1999).

Case Study

A case study as described by Buzzell and Piazza (1994) is an open-ended inquiry where the observer must regularly evaluate complicated situations for which there is no set solution.

Assumptions

Children with autism experience deficits in the area of socio-communication. Children with autism require intervention to increase prosocial abilities. The assumptions in this study include Integrated Play Groups are an effective therapy for children with autism. Integrated playgroups access typically developing peers as mentors to play to increase cooperative play interactions. Additional assumptions assume typically developing peers are appropriate play mentors will increase cooperative play.

Justification

Students with autism require instruction to increase prosocial behavior and present difficulty generalizing social behavior taught during instruction. Considerable attention has been given to using behavioral approaches to increase functional and symbolic play for children with autism. Although the research evidences growth in play strategies, children with autism to not evidence significant growth in the area of cooperative play. The integrated playgroup model employs typically developing peers to facilitate play interactions and scaffold play abilities for children with autism.
Limitation

The study is limited to a child diagnosed with autism that lives in Wheatland, California and attends Wheatland Elementary School. The study is additionally limited to the amount of growth the participant evidences in the duration of the invention.
Chapter 2

REVIEW OF THE LITERATURE

A review of current literature will discuss the incidence and history of autism and related treatment practices. The author will additionally discuss the present socials skills interventions in the public school system, present findings on integrate playgroups and present outcomes associated with social skills instruction. The author will additionally review literature for case studies related to school intervention for students diagnosed with autism. Children with autism present several characteristics in the areas of communication, social interaction, and behavior.

Autistic Disorder and Pervasive Developmental Disorder

An Autistic Disorder or Pervasive Developmental Disorder (PDD) is a developmental disorder characterized by qualitative impairments in social interaction, impairments in communication and restrictive repetitive patterns of behavior (American Psychiatric Association, 2000). Often children with autism will experience delays in social communicative abilities including joint attention, imitation, and initiation. It is also noted social functioning deficits can influence cognitive development, language development and achievement, frequently limiting one’s ability to gain knowledge from social learning experiences and observational learning. The identification and diagnosis of children with autism has led many to study the incidence of autism.

Prevalence of Autism Spectrum Disorders

At present, autism is one of the most heritable of all neuropsychiatric disorders with monozygotic twin studies showing a possible 82–92% probability of each twin
having the condition and dizygotic twins showing a 1–10% possibility of each twin having autism (2004 Fombonne, 2003; Le Couteur, et al, 1996; Muhle, Trentacoste & Rapin,). Additionally, having a sibling with autism increases one’s probability of having autism by 6–8%. Researchers indicate the incidence of autism has significantly increased, with the increase in diagnosis of autism by age six in California from nine cases per 10,000 children in 1990 to 44 per 10,000 children in 2000 (Hertz-Picciotto & Delwiche, 2009). Additional research estimates one in 150 are diagnosed across the spectrum with autism, while 1 in 500 children are diagnosed with the full syndrome of autism (Baird, Charman, & Santosh, 2001; Bertrand, Mars, Boyle, Bove, Yeargin-Allsop, & Decouflé, 2001; Chakrabarti & Fombonne, 2001). A significant increase in the incidence of children diagnosed with autism has caused consideration regarding the reason for increased incidence. A study conducted by University of California Davis (Hertz-Picciotto & Delwiche, 2009) concluded the increase in incidence cannot be attributed to changes in diagnostic criteria. Hertz-Picciotto & Delwiche (2009), emphasized additional research needs to address the possible correlation between chemical and infectious agents in the environment and the incidence of autism. The growing incidence in autism diagnosis has prompted considerable attention to treatment and intervention practices for children with autism.

Social-Communicative Behavior in Children with Autism

A defining characteristic for autism is a “lack of varied, spontaneous make-believe play” and a “failure to develop peer relationships” (American Psychiatric Association, 2000, p.66-67). Children with autism exhibit delays in social and symbolic
play. Behaviors associated with social play include; a cooperative play interaction with a common focus where both play partners will jointly attend to the play activity and imitate play actions to advance a play repertoire. This interaction of behaviors in complicated by an implicit set of social behaviors children follow during a play interaction. Deficits associated with autism spectrum disorders impair the foundation skills necessary to facilitate play and social behavior. Children with autism lack the implicit and intuitive behaviors associated with play. Deficits in joint attention, initiating a social interaction and imitated behavior are deficits in social behavior children with autism experience.

Joint Attention, Initiation, and Imitation

Joint attention processing is one of the foundation skills of social behavior. A joint attention is a social interaction between a child and another in which they share attention on a common theme or object. Joint attention develops between the nine and 18 months of age by either responding to one’s attention directive or initiating joint attention with another person. According to Bates, Camaioni and Volterra (1975), the purpose is the “use of an object as the means for obtaining adult attention” (p. 209). The child creates a meaningful social interaction with the adult by directing their gaze at the shared object or recognizing the adults’ enjoyment of the object by smiling and responds appropriately. Early indicators of autism include a deficit in joint attention (Baron-Cohen, Allen & Gillberg, 1992). Joint attention deficits observed in children with autism include fewer eye gaze switches and an inability to use joint attention gestures to encourage a person to share their attention for an object (Charmen, et. al., 1997).
Furthermore, deficits in joint attention have shown to influence initiation, language development, and behavior imitation.

Bids for joint attention are an initiation for a play interaction. A child will direct attention by pointing or showing to initiate a social interaction with another. This is often the initial request for a social interaction through nonverbal communication. The child may produce a nonverbal directive to identify interest in a preferred item. By directing, one’s attention through nonverbal communication the child is initiating a joint attention. Children with autism tend to initiate social interactions with significantly less frequency than typically developing children (Charmen, et. al., 1997). Children with autism will acknowledge items of individual interest, however, will not initiate a bid for joint attention from a peer or adult. Children able to initiate and jointly attend to a shared interest evidenced prosocial behaviors, while children with limited interest to initiate or jointly attention to a shared interested displayed significantly less prosocial behaviors. Travis, Sigman, and Ruskin (2001) found initiating joint attention tended to be related to measures of social competence and prosocial behaviors including verbal and nonverbal communications. Bids and initiations for joint attention sponsor communication development and encourage language development.

Limited initiation for joint attention can hinder language development. Typically, developing children tend to a communicative medium to show interest and seek social engagement. Bruner (1983) indicated joint attention provides a foundation for a shared experience to foster language development. The reciprocal nature of caregiver and child interactions constructs opportunities for shared language experiences. A reciprocal
shared language experience will identify language labels learned. A shared language experience identifies common nonverbal communications. One may learn the common facial positions for emotions associated with a culture. Receptive language development is further impacted through initiation and joint attention bids. Research indicates, responding to bids for joint attention tends to predict receptive language ability, while initiating bids for joint attention predicted expressive language ability (Mundy & Gomes, 1998). Children respond and reciprocate shared attention through language experiences, exchanging initial language utterance and phrases. Exchanged utterances and phrases facilitate language development by labeling items and nonverbal communication. A child will imitate the utterances, facial expressions, and behavior of the adult while involved in a joint attention. The modeled behavior of the adult, during the joint attention, is imitated by the child and will increase skill ability and communication. One’s inability to learn from a modeled behavior and imitate can lead to deficits and can decreased skill acquisition.

Imitation is the basis for learning a new skill set. One observes a skill and imitates the behavior until the new skill is proficiently learned and generalized into all domains. Research indicates children with autism present significant challenges with imitation linked to neurological impairments and social cue deficits (de, C. & Hamilton, 2008; Southgate, Gergely & Csibra, 2009). Typically developing children will visually attend to a behavior and imitate the behavior to foster skill acquisition. Research indicates children with autism do not readily imitate the behaviors of others (Smith & Bryson, 1994). A child with autism may observe a behavior, however, will not translate
the behavior into a new skill through observation. Deficits in imitation significantly influence the ability of a child with autism to learn social play behavior.

**Autism and Peer Play**

Social play behavior is a complex set of implicit behaviors used to navigate peer play. Limited ability to respond to joint attention bids, initiate social interaction, and imitate social behavior decrease social play acquisition. Children with autism present difficulty with cooperative play with specific challenges in joint attention, initiation of play activities with typically developing peers and usage of a wide range of play activities (Rutherford, Young, Hepburn & Rogers, 2006; Wolfberg, 1999). Children with autism tend to engage in repetitive play behaviors parallel to a peer and perform play as a repetitive manipulation of objects. Often children with autism will line up toys or perform sensory manipulation of a toy. Although, children with autism will progress in their ability to engage in sensory motor play, however, their ability to branch into pretend play is often limited. Restricted interests led to less attention to adult directives with decreased opportunities for imitation and less learning opportunities (Bruckner & Yoder, 2007). Seldom do children with autism sustain social play interactions with a common focus or follow directives to maintain an activity with a common focus. Research suggests that engaging a child in a social interaction leads to a decrease in repetitive motor behavior with increased social engagement (Lee, Odom & Loftin, 2007). Delays in social interaction, communication, and stereotypic behaviors have led practitioners to seek education programs and methods to remediate deficits associated with autism spectrum disorders.
The History of Treatment for Autism Spectrum Disorders

Initial treatment practices are rooted in psychology with an emphasis on punishment based behavior change techniques (Seidel, 2006). It was not until the 1980’s did researchers enlist the use of behavior therapy with a highly structured learning environment as the primary treatment for autism encouraged by Dr. Ivar Lovaas of UCLA in 1987. Lovaas’s method identified the use of Applied Behavior Analysis (ABA) through Discrete Trial Training (DTT) as an effective treatment regime to remediate the symptoms of autism. Lovaas (1987) reported a 31-point increase on Intelligence Quotient tests between the treatment and control group, with 47% of participants included in a regular education classroom. Other interventions emphasize the use of a naturalistic setting including pivotal response therapy and incidental teaching (Koegel, Koegel & Carter, 1998; Pierce & Schreibman, 1997). Pivotal Response Therapy (PRT) teaches pivotal communication behaviors that can have a broad impact on language, while incidental teaching involves engineering the environment to facilitate communication (Koegel, Koegel & Carter, 1998). Treatment and Education of Autistic and related Communication-Handicapped Children (TEACCH) additionally relies on the organization of the physical setting to support learning for children with developmental delays. Further treatment protocols aim to increase pragmatic language and prosocial behavior as mandated by the Code of Federal Regulations (Individuals with Disabilities Education Act, 2004).

In 1975 Public Law 94-142 (Education of All Handicapped Children Act), later reauthorized in 1990 as the Individuals with Disabilities Education Act (IDEA),
established in order to receive federal funds states must develop and implement policies to provide a free and appropriate education (FAPE) to all children with disabilities (Individuals with Disabilities Education Act, 2004; United States Department of Education, 2009). IDEA propelled education agencies to provide instruction based on the assessed needs of the student. Children with autism often qualify for special education services with assessed needs to include social interaction instruction and pragmatic language. Education agencies often rely on an eclectic mix of social behavior interactions. Gray and Garard (1997) evidenced gains in prosocial behavior using literature based interventions. The literature includes the use of social stories to identify prosocial behavior using a first person account of prosocial behavior. Further interventions aim to provide social behavior instruction through a curriculum or lesson series. Bauminger (2002) noted gains in social interactions for students with autism when involved in a school-based social skills curriculum. Bauminger further noted social behaviors to be sustained through the following school year. Recent interest in social skills instruction for treating maladaptive behaviors has increased the opportunity for children with autism to receive social skills instruction using peer mentors. Wolfberg and Schuler (1993) evidenced gains in social reciprocity and joint attention when social skills instruction was prompted by typically developing peers. Wolfberg and Schuler employed typically developing peers to scaffold the play behavior in children with autism through an Integrated Play Group in a naturalistic inclusive setting. Inclusive education practices had facilitated the inclusion of students with disabilities into general education
classrooms. Marked impairments in communication and social interaction can impede the successful inclusion of children with autism into the general education classroom.

Inclusion, Public Education and Discipline

Individuals with Disabilities Education Act (IDEA) emphasizes children with disabilities are to receive services in the least restrictive environment (LRE) along side typically developing peers (Individuals with Disabilities Education Act, 2004). Research has documented children with autism display aberrant behavior including aggressive behavior and stereotypic behavior that can challenge prosocial inclusion within a general education classroom. Although IDEA (2004) policy mandates children with autism are to receive education to the maximum extent in the general education classroom alongside typically developing peers, disciplinary practices tend to exclude children from participate within the general education classroom (United States Department of Education, 2009). Exclusionary discipline remains the primary discipline practices employed for disruptive behavior. Reinke and Herman (2002) reported that teachers and administrators tend to disproportionately use exclusionary disciplinary measures with students who are identified as disruptive. Further research by Yianni-Coudurier, et al (2008) concluded aberrant behaviors tended to be the predominant reason for exclusion from the general education classroom. It was additionally determined children with more autistic ‘symptoms’ experienced decreased inclusion time within the general education classroom. IDEA (2004) mandates positive behavior supports to be used to increase prosocial behavior in the classroom and remediate aggressive and aberrant behavior through instruction (United States Department of Education, 2009).
Public Schools and Social Skills Instruction

Social skills instruction is necessary to promote the acquisition of prosocial behavior for children with autism. To remediate social interaction deficits children with autism typically require intervention to meet developmental milestones for social communicative functioning, specifically in play related behaviors. Research demonstrates the primary practice for social skills instruction occurs in a structured setting with repetition of tasks and yields the most effective results (Baron-Cohen & Bolton, 1993). Frequently, social skills instruction will occur in an isolated setting with mass practice routines and limited interaction with typically developing peers. Children with autism receive instruction on a single social skill and practice the skill with an adult until mastery. Social skills instruction is rarely implemented in the general education class alongside typically developing peers. Additionally, typically developing students seldom receive social skills instruction to interact with a child with autism. The inability for students with autism to achieve prosocial interactions is circular, as peers are reluctant to engage with the student with autism and students with autism lack the social finesse to engage typically developing peers in social interactions. Recently, there has been increased interest to provide play instruction alongside typically developing peers in a naturalistic setting.

A variety of approaches have been used for social play instruction and interventions in school setting to increase prosocial behavior for children with autism. Approaches utilized encompass behavioral approaches including discrete trail training and pivotal response training. Additionally, schools-based instruction has aimed to
increase prosocial behavior by providing instruction in isolated social skills instruction groups by providing direct instruction in using social skills. Recent interest to increase inclusive opportunities for children with disabilities has sponsored the use of integrated playgroups to use peers as mentors of play and increase social and cooperative play.

History of Behavior Analysis Approaches for Play Therapy

Behavioral approaches have been used to remediate deficits in functional play and expand a child’s play repertoire. Behavioral approaches systematically utilize a conditioning sequence to reinforce the acquisition of a new skill and possibly decrease stereotypic behavior. A considerable amount of research has evidenced skill acquisition using behavioral approaches. At present discrete trial training, authored by Lovaas, remains a predominant instructional strategy for teaching a new skill to young children with autism. Substantial research has evidenced children treated using discrete trail training achieved normal levels of intellectual and academic functioning following the intervention. Recommendations by the National Research Council (2001) suggest for significant cognitive gains to occur, children with ASD must receive 25 hours per week of direct training including discrete trial training. Downs, Downs, Johansen, and Possum (2007) reported children that received discrete trail training within a public school setting evidenced gains in adaptive behavior in the areas of communication, daily living skills, socialization, and overall adaptive behavior. Although children with autism evidenced gains in adaptive behavior, limited generalization was evidenced, indicating the child was only able to employ new skill within the setting. Additional behavioral approaches have aimed to increase play behavior by teaching play as a sequence of actions.
Behavioral approaches have aimed to increase functional play behavior by teaching a sequence of play behaviors as a play sequence. Eason, White and Newsom, (1982) taught children functional manipulation to resemble play. The instruction resulted in a decrease in stereotypic behavioral patterns and increases in toy play. Further research has evidenced changes in play behavior to incorporate choice into the repertoire of functional play behavior. Behavioral approaches have shown stereotypic behaviors can be replaced by teaching children to make a choice (Greer, Becker, Saxe, & Mirabella, 1985). Children with ASD were able to increase the repertoire of functional play by choosing an additional play routine to decrease stereotypic behaviors. Greer, Becker, Saxe and Mirabellal (1985) sought further to determine whether the toys could replace stereotypic behaviors and reinforce play behaviors without extrinsic motivation from teachers and found students would engage in stereotypic behaviors when their preferred toy was removed suggesting the function of the stereotypic behavior was play. Researchers studied teaching children with ASD to prefer books or toys over stereotypy concluded the toys functioned as reinforcers for the children with generalization into free-play settings. The data suggested conditioning toy play resulted in a decrease in stereotypy with increases in functional play behavior (Nuzzulo-Gomez, Leonard, Ortiz, Rivera, & Greer, 2002). Research tends to suggest increases in ability to perform functional play can be taught to children with autism to decrease stereotypic behaviors with generalization into varied settings and toys (Santarcangelo, Dyer, & Luce, 1987; Stahmer & Schreibman, 1992).
Additional research has aimed to increase the symbolic play for children with autism using behavioral approaches. Lifter, Sulzer-Azarogg, Anderson, and Cowdery (1993) and Thorpe, Stahmer, and Schreibman (1995) targeted play in children with ASD using pivotal training response. The intervention targeted teaching sequences of play behaviors using real objects with role playing. Following intervention positive increases were evidenced by the child with autism with generalization to new toys, playmates, and settings and were maintained after a three month follow up. Thorpe, Stahmer, and Schreibman (1995) qualified their claims indicating the children with autism displayed qualitative differences in play when compared to typically developing children. Stahmer (1995) evidenced gains using pivotal response training and reported children with autism developed complex, creative, and spontaneous play themes not suggested by the experimenter. Additionally, the play was generalized to new toys and playmates for six of seven participants. Generalization findings data indicated children performed best with therapists and training toys then with peers or siblings. The findings tend to support the importance of support from competent playmates for generalization.

Behavioral approaches have evidenced increases in social play. Using pivotal response training, Baker (2000) taught children with autism to social routines through board games using siblings. Baker (2000) found increases in social play were evidenced after a 3-month follow-up and found an increase in children’s social play, positive affect, and engagement. Additionally, all participants were engaged in breaking the rules by cheating. Jahr, Eldevick, and Elkeseth (2000) used modeling, verbal description, and imitation to teach cooperative play. The children displayed increased degrees of
cooperative play; however, play tended to resemble symbolic play sequences with rigid turn-taking sequences. A 10-month follow-up found the children generalized skills to new settings and play partners. Further behavioral approaches have extended teaching play manipulation through visual-based interventions.

Frequently, a visual-based intervention is used during instruction for children with ASD. Research has shown visual-based interventions can be effective to increase social interactions and play interactions (Gonzalez-Lopez & Kamps, 1997). Recent research suggests the use of visual strategies can promote oral language (Bondy & Frost, 1994). Ruble, Willis, and McLaughlin Crabtree (2008) employed visual schedules during social skills group therapy with the addition of role-playing and self-monitoring strategies. Increases in prosocial behavior were observed by parents in participants conversational abilities including the participants initiate interactions, maintain interactions, and respond to others. Parents indicated the participant’s ability to take turns during conversation did not change. Research has further shown an increase when initiating entry into a play setting using visually based communication (Nelson, Nelson, McDonnell, Johnston, & Crompton, 2007). Children employ visual communication to initiate a play interaction. The use of typically developing peers has shown to increase prosocial behavior.

Peer Facilitated Intervention

Inclusive educational opportunities have sponsored the onset of typically developing peers and siblings as peer play mentors to increase communication and cooperative play ability. Ganz and Flores (2008) evidenced increases in communication using typically developing peers to facilitate play with scripted phrasing. Typically,
developing children were taught to follow scripted phrases to facilitate play intervention with a peer with autism. Data evidenced children with autism produced increases in communication with higher quality comments prior to based line. Further investigation using visually based communication strategies taught through peer-mediated instruction evidenced gains in communicative ability to initiate entry into a play activity (Nelson, Nelson, McDonnell, Johnston, & Crompton, 2007). Additionally, engagement for play activities significantly increased, suggesting possible increases in joint attention with peers.

Peer imitation is a prerequisite for observational learning (Garfinkle & Schwartz, 2002). At present research has evidenced success teaching children with autism to imitate using typically developing peers to increase skill ability. Carr and Darcy (1990) used peers to teach preschool participants with autism 10 simple actions on objects. Peers demonstrated the prompts to imitate to children with autism. Following the training, the participants spontaneously imitated 10 novel actions. Garfinkle and Schwartz (2002) further sought to evidence increases in imitation using teacher lead activities. Preschool children with autism and developmental delays were prompted to imitate and then praised. Participants were redirected following a set of routine procedures if failed to imitate. Data collection evidenced each participant increased the number of peer imitation and social interaction during the intervention. Ganz, Bourgeois, Flores and Campos (2008) extended the research by adding a visual cue to improve imitation skills for three children with autism. The leader was designated by wearing a necklace and identifying text. The leader was shown a routine by the trainer and
requested peers to imitate. Trainers prompted the children to imitate the leader’s actions. Results indicated three of four participants demonstrated increases in imitation behaviors using peers with the addition of a visual cue. Furthermore, Ganz, Bourgeois, Flores and Campos (2008) indicated a direct correlation between higher levels of imitation and a lower level of prompting. Research tends to support that children with autism can successfully be taught to imitate behavior using peers leading to observational learning, although additional preteaching can be required to increase cooperative play.

Liccariardello, Harchik, and Luiselli, (2008) found children with ASD evidenced gains in initiations and social responses when involved in an intervention group combining preteaching, prompting, praise, and rewards. The participants reviewed at the start of the play session phrases to enter play and practiced with an assistant. The assistant modeled play behaviors to be reinforced during the play session. Participants were verbally prompted if needed to initiate an interaction with the peer. Data collection evidenced increases in social initiations and social responses. Findings tend to suggest the importance of preteaching play behaviors and the possible importance of the assistant as a play facilitator.

Integrated Play Group (IPG) therapy has shown to increase reciprocal play with peers. Yang, Wolfberg, Wu and Hwu (2003) concluded, when involved in a IPG children with autism evidenced gains in symbolic/pretend play with increased reciprocal play with peers. Researchers additionally observed, novice players engaged in increased play situations with a common focus and an increase in pretend/symbolic play, while functional play routines decreased. Novice players decreased the amount of time
engaged in isolated play. IPG therapy scaffolded play development to increase the amount of social pretend play opportunities through peer involvement.

Zercher, Hunt, Schuker and Webster (2001) identified expert players produced an average of three intervention behaviors each minute to direct behavior of novice players. Although, expert players were initially supported by direct prompts they transitioned to produce intervention behaviors independently. Significant gains were evidenced in joint attention episodes, symbolic play and language production (Zercher, Hunt, Schuler & Webster, 2001). Zercher, Hunt, Schuler and Webster, (2001) attributed gains to the social-communicative coaching provided by expert players to provide a socially rich interactive situation.

Integrated Play Groups for Children with Autism Spectrum Disorder

Often children with autism are involved in less play opportunities and require instruction to remediate difficulties with joint attention, imitation and initiation. Interventions in play behavior have been utilized to remediate the social skills deficits with the recent introduction of utilizing peers to facilitate prosocial interactions. Peers are used to guide children with autism to self-initiate and imitate during cooperative play activities with a naturalist setting. Garfinkle and Schwartz (2002) found after participation is a cooperative play group children with autism increased the amount of social interactions. Guided play opportunities increase joint attention, imitation and self-initiation during play to improve social competence. Stagnitti and Unsworth (2000) concluded that children that self-initiated play facilitate the development of social competence. Additionally, the rate of spontaneous imitation and joint attention increased
after children received instruction in a naturalistic setting (Ingersol & Schreibman, 2006). Instruction within a naturalistic setting facilitates spontaneous imitation and self-initiation to drive children to continue and maintain play interactions with peers.

Integrated Play Group’s utilize a naturalistic setting commonly using such areas as a play room or play space. Participation in Integrated Play Groups within a school setting in which peers guide and facilitate play interactions have shown to increase turn-taking, sharing materials and accepting direction (Lantz, Nelson & Loftin, 2004). Additionally, children maintained play behaviors with a common focus for 60% of the time (Lantz, Nelson & Loftin) and concluded that IPG intervention was effective to improve play behavior and with generalization into the student’s classroom setting. Additional intervention practices have evidenced gains in prosocial behavior for children with autism.

**Generalization**

A considerable amount of research has evidenced children with autism can generalize play skills taught in isolation to new toys and settings. Applied behavioral approaches have evidenced increases in functional and symbolic play. Stahmer and Schreibman (1992) and Santarcengalo, Dyer and Luce (1987) reported children with autism generalized the behaviors taught for toys to different toys and/or a separate setting when using a behavioral approach that encouraged children to self-monitor motivation. Additionally, parent reports indicate play increased in the home setting. Using pivotal response training, Baker (2000) taught children with autism to social routines through board games using siblings. Increases in social play were evidenced after a 3-month
follow-up. Garfinkle and Schwartz (2002) found when taught to imitate a routine children with autism are able to be taught to imitate peers. Although gains in imitation were observed during the intervention phase, increases in imitation were not generalized. Research by Yang, Wolfberg, Wu and Hwu (2003) using the Integrated Play Group model evidenced increases in symbolic and social play for children with autism. Increases in social play behavior were generalized into the home. Researchers reported participants developed mutual friendships with other children within the IPG.

Conclusion

Children with Autism Spectrum Disorders (ASD) evidence delays in social communicative development related to their ability to initiate, imitate and seek joint attention bids with peers and adults. Ongoing intervention practices have sponsored educators and practitioners to implement a variety of strategies to promote increased skill acquisition and prosocial development. Initially, intervention procedures focused on controlling the environment and teaching single target objectives through a behavioral approach. Current practices aims to increase prosocial development using peers as mentors and social skill facilitators. At present, school facilities utilize a variety of these methodologies to facilitate the prosocial involvement of children with Autism into social interactions.
Chapter 3

METHODOLOGY

Demographics of Wheatland Elementary School

The school in which the child receives instruction is Wheatland Elementary School located in Wheatland, California in Yuba County. The town of Wheatland is located approximately 15 miles outside of Beale Air Force Base (BAFB) along highway 65. Although the town of Wheatland is considered a rural area with an industry dominated by agriculture, the community is significantly impacted by families employed by BAFB. Families stationed at BAFB frequently seek housing outside the base parameters in the town of Wheatland creating a school population rich in culture and language diversity (Wheatland Elementary School District, 2008).

Wheatland Elementary School is a kindergarten through fifth grade school with approximately four hundred students. The school is a public school in the Wheatland Elementary School District. The school participates in class size reduction for grades kindergarten through second grade classes. Classrooms are not to exceed 21 students. The school includes approximately 30 teachers, a principal, a vice principal and two special education teachers. The school has met the Annual Performance Indicator (API) of the 2007-2008 school year with a score of 808 (California Department of Education, 2009). The school additionally met all 21 criteria for yearly progress (California Department of Education, 2009). The school evidences consistent academic gains in core content subject areas as evidenced by the API. Wheatland Elementary School is diverse in ethnicity, social economic status and language development.
The ethnic student population at Wheatland Elementary School is 62% White/European American/Other, 27% Hispanic/Latino, 6% Asian, 4% African American, 1% Filipino and 1% American Indian/Alaskan Native (California Department of Education, 2009). The School Accountability Report Card identifies 87% of students are considered English-proficient students and 13% of students are considered English Language Learners (ELL) (California Department of Education, 2009). Among the languages other than English spoken by students 82% of ELL students speak Spanish, 5% of ELL students speak Hmong, 7% of ELL students speak Cambodian and 6% of ELL student speak languages identified as other. Wheatland Elementary School provides English language development instruction to children that are English language learners. Additionally, 50% of students qualify for free and reduced lunch. The demographic data is an illustration of the ethnic, language and socio-economic diversity in a typical general education classroom.

General and Special Education Settings

The general education classroom for the student with autism is a self-contained general education first grade class with class size not to exceed twenty-one students. The class provides academic instruction at the first grade level in English language arts, mathematics, science and social studies using state adopted curriculum. English language development (ELD) is provided to all students for a minimum of 30 minutes per instructional school day (California Department of Education, 2009). The class receives instructional support three hours per day from a paraeducator similar to all kindergarten through first grade classrooms. Instruction is provided through small group instruction
centers for English language arts and math. Small group centers do not exceed a cohort of seven students and rotate every 15 minutes to a new center. Students with academic performance below grade level receive academic remediation in the Learning Center.

Special Education Service and Instructional Delivery

Two Learning Centers operate at the school site including a kindergarten through second grade model and a third grade through fifth grade model. Special education services for academic achievement occur in the Learning Center. Each Learning Center is staffed with a special education teacher and three-five paraeducators depending on student needs. Administration emphasizes the role of the Learning Center is to provide academic and behavior intervention in English language arts, math, written language and behavior modification for students at-risk of academic and behavior deficits. The Learning Center teacher is additionally responsible for collaboration with the general education teachers to support lesson differentiation in the general education classroom. The Learning Center is responsible to provide special education services based on one’s identified areas of need to special education students.

The Learning Center provides early intervention and specialized academic instruction accessible to all students. The Learning Center operates an inclusive special education program for students with special needs. Students identified with a disability receive services based on their identified areas of need in the general education classroom to the maximum extent and may receive instruction in the Learning Center as required. A special needs student will only receive academic instruction in the Learning Center for the identified area of need, not for the duration of the school day as common with a
special day class. All additional instruction is presented in the general education classroom. The Learning Center further follows Response to Intervention practices for early identification and intervention for academic and behavior deficits by providing behavior management instruction and academic intervention to all students. The needs based model utilized by the Learning Center allows special education students to remain in the general education classroom for the majority of the instructional day. Students identified with a special need will receive instruction for their identified area of need alongside typically developing peers in the Learning Center or within the general education setting based on the goal and objectives specified in the student’s Individualized Education Program (IEP). Social skills instruction is an instructional objective often identified in a student’s IEP and is provided in the Learning Center.

Social Behavior Instruction

Social skills instruction occurs in the Learning Center and during recess activities to promote prosocial behavior. Typically social skills instruction is accessible to all students that identify behavior at-risk for social maladjustment or aberrant behavior related a to social skills deficit. The special education teacher creates lesson plans to address a specific social skill and provides direct instruction to students concerning the skill. An application and practice session is facilitated by the special education teacher through an Integrated Play Group to support the application and practice of the social skill with peers. Generalization of the social skill is facilitated by a special education paraeducator during recesses through an Integrated Play Group to encourage the continued use of the social skill. The sequential process for teaching social play behavior
to a child and the qualitative behavioral changes observed using an Integrated Play Group is the central focus of the case study, tailored to the unique characteristic of a student with autism.

Case Study Focus Student

The focal student of the case study is Scotty (pseudo name) a six year-old student with autism with high functioning abilities. Scotty resides in Wheatland, CA with his biological mother, step father and two year old half brother. Scotty was diagnosed at the age of three with an autism spectrum disorder and received early intervention services in a special day class for preschool students identified with special needs. He transitioned from the special day class preschool into a general education kindergarten classroom with pull-out special education services in 2007 for academic instruction and social skills development. In June 2008, Scotty evidenced proficient grade level performance for English language arts and advanced grade level performance in mathematics, however, continued to evidence deficits in social skills behavior and peer interactions. The IEP team determined Scotty would benefit from receiving academic instruction in the general education first grade classroom at the start of the 2008-2009 school year and would receive special education instruction in social skills development in the Learning Center and general education environment.

The social skills identified in Scotty’s IEP as goals and objectives are for Scotty to use phrases to initiate and maintain a play experience with typically developing peers for a duration greater than ten minutes in four of five play sessions as evidenced by teacher recorded data using written transcripts, parent information surveys and
videotaped play sessions. Parents consented to the IEP with instruction in social skills using an Integrated Play Group to sponsor prosocial behavior and consent for the author to use case study research to track the qualitative changes in Scotty’s play behavior when involved in an IPG. Parents would be informed of Scotty’s progress toward the goal through trimester progress summaries indicating qualitative changes in behavior as recorded by the special education teacher. Scotty would participate in an IPG with typically developing peers at the start of the 2008-2009 school year.

Integrated Play Group Participants

*Integrated Play Group Facilitator Selection and Training*

The author, an Education Specialist, was the Integrated Play Group social skill lesson facilitator, collected data and drafted lesson plans. The author attended a two day training for providing play therapy using the IPG model in December 2007 hosted by the Angels Network and presented by Pamela Wolfberg, originator of the Integrated Play Group model. The strategies gained for the training were applied in the Integrated Play Group model at recess using a structured play routine with an in class social skills lesson in the Learning Center. Additional instructional support was facilitated by a special education paraeducator.

A special education paraeducator who worked with the student in Kindergarten was selected to facilitate the Integrated Play Group during recesses. The special education paraeducator was trained by the author to use key phrases and gestures to facilitate the engagement of the expert players and Scotty during the Integrated Play
Group. The special education paraeducator followed the lesson plans drafted by the author for the recess play sessions.

Players

The participants include Scotty and two typically developing first grade peers. The novice player was Scotty. The expert players were referred to the author using the Peer Play Mentor Referral Form (see Appendix A) by school staff. Expert players were selected according to the following conditions: 1) the novice player was a member of the student with autism’s first grade class, 2) the novice player was prosocial with good articulation, 3) the novice player followed the prompts provided by the teacher or facilitate and 4) the novice player was considered a good match for the student with autism by the general education.

Integrated Play Group Novice Player Training

The author trained expert players during two separate 15 minutes sessions during the first week of September 2008. Training sessions addressed how to interact with a student with autism, phrases to use during the play session to prompt Scotty to participate and how to follow the directions provided by the facilitator or teacher. The phrases included requesting a turn or requesting Scotty to take a turn. The Education Specialist led a discussion with the expert players addressing Scotty’s qualitative play behavior as evidence by assessment completed in September 2008.
Data Collection of the Integrated Play Group

*Initial Data Collection*

Initial assessment included a behavior observation conducted at the start of the school year in September 2008 to record the qualitative play behavior of Scotty. The author conducted the observation during morning recess, lunch recess and an in-class free play session during the school day. The author recorded the student’s play style, the symbolic and social dimensions of play, the communication and the diversity in play behavior and organized the data in the Integrated Play Group behavior observation and analysis form (see Appendix B) and the quantity of phrases Scotty used to initiate and maintain a play activity were recorded.

*Data Analysis and Instructional Modifications*

Monthly data collection from October 2008 through January 2009 included a monthly analysis of Scotty’s present level of play behavior followed by instructional planning to refine social skills instructional objectives as needed to promote prosocial development was chronicled in the Integrated Play Group lesson objectives and play development summary (see Appendix C). The author followed a sequence during data collection each month. First, the author video taped the Integrated Play Group session. Second, the author viewed the video tape and dictated the session events into writing. Third, the author counted the number of prosocial gestures and phrases used during the session and categorized the verbal phrases and/or physical gestures by social function. Then, the author recorded data in the Integrated Play Group behavior observation and analysis form (see Appendix B) to track changes observed in the play style, the symbolic
and social dimensions of play, the quantity of the phrases used, the diversity in play behavior and the amount of time Scotty remained jointly attended to the activity. Then, the author used the data to direct social skills lesson objectives for the coming month. Lastly, the author developed weekly lesson plans and used a lesson template (see Appendix D) for the daily social skill lesson. The lesson plan directed Integrated Play Group sessions during morning recess, lunch recess and an in class session with peers.

Subsequently, the author collected data during the last day in the month during the months of September 2008 to December 2008 and January 2009. In January 2009, the author compared the initial data collected in September 2008 to the data collected in January 2009 to identify the qualitative changes in social play behavior evidenced by a student with autism.
Chapter 4

RESULTS

The study followed the changes in social play behavior for Scotty, a first grade student with autism, when involved in an Integrated Play Group at a public elementary school through September 2008 through January 2009. Data collection in September 2008 included a behavior observation to provide an initial qualitative description of Scotty’s social play behavior. The author collected data on the qualitative characteristics of Scotty’s social play behavior from October 2008 December 2008 and January 2009 following each month of participation in an Integrated Play Group. The author used the data collected each month to identify Scotty’s areas of need in social play and to direct the course of the month’s social skills lessons. The present level of social play performance provided a foundation for the Integrated Play Group.

Initial Data Collection in September 2008

The initial data collected in September 2008 indicated Scotty did not respond to peers during a play activity as shown in figure 1. The overall play style for Scotty is aloof. Scotty appeared unresponsive to the peer and his main interest is the sensory manipulation of stacking objects. Scotty engaged in a parallel play activity in close proximity to a peer with no communicative response to the peer during the play session. The expert player made thirteen communicative attempts to engage Scotty in a social play activity, while Scotty continued to maintain an isolated play activity with zero attempts to initiate a peer interaction, zero responses to a peer initiation and did not use communicative phrases to continue the interaction as shown in figure 1. Although Scotty
engaged in a play activity for the duration of the play session, he remained isolated from
the expert player without engaging in a jointly attended play activity. Additionally,
Scotty evidenced a low range of play interests and a restricted use of play materials by
stacking objects. During play activities Scotty will stack objects or lines up items.
Scotty prefers to play on the computer or watch television during leisure time. The
author used findings from the qualitative play observation to analyze Scotty’s present
level of play functioning, identify his needs in the areas of social play development and
direct the objectives for September and October 2008 play lessons.

![Figure 1. September 2008 play assessment.](image)

Scotty’s present level of functioning for social development presented deficits
using and responding to socially motivated communication. Additionally, Scotty lacked
the functional knowledge for routines with play materials and the associated dialogue.
The objectives for September 2008 and October 2008 play identified Scotty participate in
play routines to evidence his knowledge of play materials and the use of communicative
phrases to initiate a play activity and respond to a peer. The play lessons instructed Scotty to use a play script to initiate a social interaction and to use communicative phrases when in the role of a chef, waiter or customer at a restaurant. The facilitator prompted as needed to use the phrases during the Integrated Play Group during September and October. October 2008 data collection evidenced gains in communication and play behavior.

October 2008 Social Play Behavior

Data collect in October 2008 indicated changes across all domains of play. Scotty increased joint attention time to 9 minutes with 60% of his play session engaged in a joint activity. Scotty’s overall play style changed from aloof to passive style. Scotty appeared indifferent to the peer, however was responsive to the peers request to enter into an interaction when physically prompted. Scotty evidenced a change in his social play style from isolated play to play with a common focus. Additionally, Scotty increased his rate of social responsiveness. Scotty used communication to enter and maintain a play interaction as shown in figure 2. Following one month of intervention, Scotty increased his initiated phrases by using one scripted phrase to enter into play activities and used three phrases to respond to the expert player and maintain a play interaction. The expert player provided ten initiation attempts for Scotty to maintain a common focus or a joint attention during the play session. Scotty did not respond to seven initiation requests made by the expert player and instead engaged in sensory play by stacking and lining up the play materials, however, Scotty did evidenced functional play characteristics. When requested by the expert player Scotty responded to three requests made by the expert
player by following a sequential pattern of behaviors as the role of chef in a restaurant using the play materials for the functional purpose. Additionally, Scotty evidenced an increase in his range of play interests with the ability to follow the routine for the play script and engage in a play activity with a common focus. The author used findings from the qualitative play observation to analyze Scotty’s present level of play functioning, indentify his needs in the areas of social play development and direct the objectives for November 2008 play lessons.

![Bar graph]

**Figure 2.** October 2008 play assessment.

Scotty’s present level of functioning for social development indicated Scotty was responsive to Integrated Play Group, however, required prompting to application play routine. Lesson objectives for November 2008 identified Scotty increased his repertoire of play activities, increase his unprompted communication to use initiate and respond to peers and increase the time he engages in a common focus. Scotty participated in play
lessons during November 2008 by learning a play script as a vet in an animal hospital.

Data collected in November 2008 indicated increases in initiated behavior.

**November 2008 Data Collection**

Data collected in November 2008 evidenced increases in communication, joint attention and knowledge of a play routine. Scotty’s play style remained passive by appearing indifferent to peers, however, was responsive to engage in play with peers when prompted by the facilitator to participate in the play session. Scotty further increased joint attention time by engaging in play with a common focus for 10 minutes during a 15 minute session. Scotty’s symbolic play additionally changed from primarily sensory to functional by using play materials for the correct purpose. Scotty’s rate of communicative responsiveness significantly changed as shown in Figure 3. Scotty evidenced an increase in communicative during play by using a combination of scripted and unscripted phrases. Scotty used three phrases to initiate play routines and he used 4 phrases to continue interactions with the expert player. Scotty initiated all play interactions and directed the actions of the expert play. The expert player did not need to direct the play session. Scotty evidenced knowledge of play routines by using the play materials for their intended purpose. The author used findings from the play observation to analyze Scotty’s present level of play functioning, identify his needs and direct the objectives for November 2008 play lessons.
Scotty’s present level of performance indicated he could independently use communication to direct functional play, however, continued to require adult prompting to enter into a play session. Play objectives for December 2008 identified Scotty enter into a play activity without facilitator prompting and increase the time he engages in a common focus. Scotty participated in play lessons during December 2008 by using his highly preferred play materials to increase unprompted attempts to enter into play. December data collection indicated increases in unprompted participation during play sessions.

Data Collection for December 2008

December 2008 data indicated Scotty increased his independent use of phrases to initiate and maintain interactions with an increased responsiveness to the peer. Although, Scotty’s play style continued to be passive, using highly preferred play materials motivated Scotty to initiate and maintain a common focus without prompting. Scotty
jointly attended for 100% of the play session with a common focus with functional symbolic play without deviating into sensory play. Scotty was communicatively responsive to the peer and increased phrases to direct the play by using nine scripted and unscripted phrases to continue a play activity as shown in figure 4. Scotty entered into the play session without prompting by using the phrase, “I want a turn” and continued to use verbal phrases to direct the play activity by announcing, “my turn” and “can I have a turn”. He responded to five peer initiations with three additional social play initiations as shown in figure 4. The author used findings from the observation to analyze Scotty’s present level of play functioning, indentify his needs in the areas of social play development and direct the objectives for November 2008 play lessons.

![Bar chart](chart.png)

*Figure 4.* December 2008 play assessment.

Scotty’s present level of performance indicated when motivated by a highly preferred activity he jointly attended for 100% of the time and appropriately responded to communication from the expert. Play objectives for January 2009 identified Scotty
engage in a common focus with a peer for 100% of the play session and increase his application of functional play routines. The lessons for January 2009 utilize a highly preferred activity to increase joint attention and unprompted prosocial communication towards peers. A discussion with Scotty’s mother, Mrs. G. (pseudo name), indicated Scotty presented a high preference for Spiderman and had memorized the dialogue from the movies. The author created lesson plans for the month of January 2009 to include activities with Spiderman dialogue in a theme based play routine.

January 2009 Data Collection

January 2009 data collection indicated changes in play style, increases in joint attention time and increased phrases to continue a play interaction as shown in figure 5. Scotty maintained a passive play style, however, was responsive when engaged in social play. Scotty engaged in a play activity with a common focus for the duration of the session as Spiderman and evidenced functional and pretend dimensions of symbolic play by using phrases and gestures associated with the Spiderman play figure. Scotty used seven phrases to initiate play interactions with expert players and responded to six requests from the expert play as shown in figure 5. The expert play used two initiations to increase his participation in the play routine. Scotty evidenced significant growth in the dimensions of symbolic play by applying imaginary dialogue to the Spiderman play figure and used phrases similar to the popular movie. The phrases appear to be imaginative dialogue given the context and evidence aspects of imaginary play. A comparison of Scotty’s play behavior for January 2009 to September 2008 evidenced changes in his play.
Comparison of September 2008 and January 2009 Play Behavior

Scotty evidenced increases in all domains of play behavior as shown in table 1. In September 2008 Scotty was unresponsive to peers. He evidenced an aloof play style with an isolated social play style and no communicative response to peers. His symbolic dimensions of play included a limited and restrictive use of repetitive sensory manipulations and parallel activities including watching television or computer games. January 2009 data collection evidenced Scotty appeared indifferent to peers, however, was responsive to peer prompts to engage in a play activity. Scotty presented a passive play style and engaged in a functional or imaginary symbolic play with a common focus. He presented a moderate rate of communicative responsiveness related to his motivation to obtain the preferred activity. Scotty further evidenced gains in his diversity of play routines. In January 2009 Scotty was able to evidence knowledge of play routines in a
restaurant, a doctor and Spiderman. Scotty’s ability to use communication during social
play significantly increased.

Table 1

<table>
<thead>
<tr>
<th></th>
<th>September -2008</th>
<th>January 2009</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Play Style</strong></td>
<td>Aloof</td>
<td>Passive</td>
</tr>
<tr>
<td><strong>Social play style</strong></td>
<td>Isolate</td>
<td>Common focus</td>
</tr>
<tr>
<td><strong>Symbolic play style</strong></td>
<td>Sensory manipulation and parallel proximity.</td>
<td>Functional and imaginary</td>
</tr>
<tr>
<td><strong>Communicative</strong></td>
<td>None. Did not respond to peer requests.</td>
<td>Moderate. Responds to peers for preferred activities</td>
</tr>
<tr>
<td><strong>Responsiveness</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Diversity of play</strong></td>
<td>Limited and restricted to repetitive routines.</td>
<td>Moderately diverse.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Presents knowledge of more than a few different types of activities.</td>
</tr>
</tbody>
</table>

Scotty evidenced an increase in his use of communication to initiate and respond to the expert player as shown in figure 6. Figure 6 shows the play behavior Scotty evidenced in September 2008 prior to the Integrated Play Group compared to January 2009 at the final session of the Integrated Play Group. September 2008 data illustrated Scotty did not initiate interactions with the expert player and responded to zero of 13 attempts made by the expert player to prompt Scotty to participate in a play interaction. Figure 6 additionally shows the increase in the rate of communicative response in January 2009. Scotty responded to six peer requests and initiated seven interactions with the expert player. Additionally, in January 2009 the expert player initiated two interactions while Scotty initiated seven interactions to primarily direct the play session.

![Figure 6. Play behavior in September 2008 compared to January 2009.](image)

Conclusion

The case study tracked the changes in social play behavior for Scotty, a first grade student with autism, when involved in an Integrated Play Group at a public elementary
school through September 2008 through January 2009. The author collected data on the qualitative characteristics of Scotty’s social play behavior following each month of participation in an Integrated Play Group to evidence changes in the play style, the symbolic and social dimensions of play, the quantity of the phrases used, the diversity in play behavior and the amount of time Scotty remained jointly attended to the activity. Data collection indicates an Integrated Play Group influences the play behavior.
Chapter 5

CONCLUSIONS AND RECOMMENDATIONS

The purpose of the study was to show the impact of a school based Integrated Play Group on the social play behavior for Scotty, a student with autism. The research chronicled the development of social play for Scotty when involved in an Integrated Play Group alongside typically developing peers through a case study. Additionally the study aimed to increase peer relationships between Scotty and his typically developing peers.

Overall, data collection from September 2008 to January 2009 indicated the Integrated Play Group tended to increase prosocial behavior for Scotty and influenced his play style, the symbolic and social dimensions of play increased the quality, and quantity of the phrases used and increased the diversity in play behavior. Data collected, further identified an increase in amount of time the Scotty engaged in a jointly attended play activity. Data collection tends to evidence the use of an Integrated Play Group was an effective intervention to facilitate prosocial play behavior for a child with autism at a public school campus.

Conclusion

Results of this investigation suggest the use of an Integrated Play Group during recess at a public school campus using typically developing peers prompted increases in joint attention and initiation with changes in the qualitative appearance of play behavior for a child with autism and an increase in the use of communication to increase play interaction. Initial data collection in September 2008 indicated the participant engaged in socially isolated parallel play without a common focus and with a limited repertoire of
play behaviors. The participant use communication to respond or initiate any bids for joint attention. Post intervention data collection evidenced increases in the participants symbolic and social-emotional characteristics of play. The student initiated and responded to joint attention bids from peers and engaged in an imaginative play routine by using phrases to direct the actions of a play figure.

Prior to Integrated Play Group intervention, the participant did not use communication to access social interactions with peers. Post Integrated Play Group data indicates the participant increased his use of communicative phrases for initiating and maintaining play interactions. These findings are consistent with present findings, indicating instruction using communication strategies can increase the use of communication and increase natural language production for a student with autism (Bondy & Frost, 1994; Koegel, Koegel & Carter, 1998). Scotty further evidenced features of pretend play by using dialogue associated with an action hero.

Scotty evidenced changes in symbolic play. Scotty initially engaged in sensory manipulation, however post Integrated Play Group indicated emerging characteristics of pretend play behavior. This finding is consistent with research showing children with ASD are able to produce pretend play in a structured setting and increased instruction in play can increase play behavior (Bauminger, 2002; Carr & Darcy, 1990; Charmen et al., 1997; Eason, White, & Newsom, 1982). The study additionally evidenced findings similar to previous research, indicating the use an Integrated Play Group using typically developing peers as play mentors, tended to facilitate changes in play behavior with

The study evidenced the changes in the qualitative dimensions of play behavior for a student with autism when involved in an Integrated Play Group by using peers as play mentors. The study further supports existing research that evidenced the efficiency of using typically developing peers to teach initiation to children with autism and suggests using typically developing peers as social mentors can be an effective tool to promote prosocial development (Garfinkel & Schwartz, 2002; Liccariardello, Harchik, & Luiselli, 2008; Nelson, Nelson, McDonnel, Johnston, & Crompton, 2007). The study further paralleled research by Wolfberg and Schuler (1993; 1999) indicating changes in symbolic and social play for the student with autism increased the ability for the student to engage in meaningful peer relationships. This study suggests the application of the Integrated Play Group model can be effective to support elementary-age children with ASD in play with typically developing peers and during general education recess. The study sponsors recommendations to improve the service delivery for social skills and play behavior instruction for children with autism.

Recommendations

With regard to the practical application for teachers, this information was noted anecdotally through interactions with teachers at the school site. A discussion with the general education indicated typically developing peers increased engagement time with Scotty and sought opportunities to include Scotty into classroom activities. Typically, developing peers were more willing to initiate interactions with the participant and
regarded atypical behavior with less concern. The general education teacher identified peers tended to use phrases and physical prompts by grabbing Scotty’s hand to engage him in a play activity. Anecdotal findings may suggest training typically developing peers may increase the success of inclusive educational setting for children with ASD.

The application of an Integrated Play Group during a general education recess provided a naturalist setting to facilitate play interactions between a child with ASD and typically developing peers. With a class time devoted to primarily academic instruction it may be advantageous to structure play instruction to occur during a general education recess setting. Further research needs to consider the efficiency of applying play instruction into a general education recess setting for play instruction to all students. Further research may consider the impact on the peer’s perspectives towards the student with autism when typically developing peers are trained to participation in an Integrated Play Group and the changes in behavior evidenced by typically developing peers. Further research may also consider the impact of using typically developing peers to facilitated prosocial inclusion in educational settings.

It is recommended institutions of higher learning provide coursework for credential and educational leaders in the application of social skills instruction for students with diverse needs. With the ongoing need to provide positive behavior support to reinforce prosocial development for all students, credential candidates and educational leaders require knowledge and strategies to facilitate prosocial behavior. Presently, institutions of higher learning do not require coursework in social-emotional, behavioral, and pragmatic language development strategies for elementary and secondary students.
The application of an Integrated Play Group using typically developing peers to scaffold play development in a student with autism evidenced significant gains. The study illustrated the impact of social skills instruction in combination with a social group to promote prosocial behavior with increases in the student’s communicative intent. The essential objective was intended to evidence the impact of play instruction on the qualitative and quantitative changes in behavior for a student with autism. Although the data evidenced these characteristics, the outstanding result from the study suggested the student gained friendship and acceptance by his first grade classmates. While a primary goal of education is to meet academic standards, the most valuable memories may be the one shared on the school playground and with the relationships one creates.
APPENDICES
Dear Teachers,

The Learning Center will be providing play instruction to a select student through peer mentoring using an Integrated Play Group at morning and lunch recess. To promote successful social skills behaviors the target student requires social skills to be modeled appropriately by a classmate or peer. The peer must meet the following characteristics:

- A member of the student with autism’s first grade class
- Models good social skills
- Good articulation
- Follows the prompts provided by the teacher or adult

Please refer any students you feel would be good peer mentors.

Thank you for your time,

Erin Oakes

Learning Center Education Specialist

Wheatland Elementary School
# APPENDIX B

**IPG Behavior Observation and Analysis**

<table>
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<th>Notes:</th>
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<td>Present Level of Functioning</td>
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<tr>
<td>Lesson Objective</td>
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</tr>
<tr>
<td>Play Style</td>
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</tr>
<tr>
<td>Social play style</td>
<td></td>
</tr>
<tr>
<td>Symbolic play style</td>
<td></td>
</tr>
<tr>
<td>Communicative responsiveness</td>
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</tr>
<tr>
<td>Diversity of play</td>
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## Analysis

## Needs

## Action Plan
### APPENDIX C

**IPG Lesson Objectives and Play Development Summary**

#### Sequence of Play Development and Lesson Delivery

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<th>Objective</th>
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<td>Using imaginative routines for Spiderman</td>
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APPENDIX D

IPG Lesson Template

Expert Players: 

<table>
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</tr>
<tr>
<td>Thursday</td>
<td></td>
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REFERENCES


Fombonne, E. (2003). Epidemiological surveys of autism and other pervasive


