

Harnessing the Power of Play

Opportunities for Children With Autism Spectrum Disorders

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The amount and type of play necessary for children's development can be a contentious issue among educators and parents. However—despite the ongoing debate between the value of a play-based versus strictly academic curriculum—the literature is clear about the substantive benefits of play, particularly for children with autism spectrum disorders (ASD). What is the nature of play for children with ASD? What are the developmental opportunities for these children at various stages of play? What are the goals, learning strategies, and necessary accommodations/modifications necessary for play to be incorporated in a student's individualized education plan? What particular challenges do the child, family, and school face?

Play is a complex phenomenon that occurs naturally for most children; they move through the various stages of play development and are able to add complexity, imagination, and creativity to their thought processes and actions. However, for many children with ASD, the various stages of play never truly develop, or occur in a fragmented fashion. Difficulties in motor planning, expressive and receptive communica-

tion, imitation, and fine and gross motor movements are just some of the many obstacles they encounter during play. ASD is a severe, lifelong, neurologically based condition, identifiable by deficits in imitation, gesturing, observational learning, joint attention, symbolic play, and understanding the expression of emotion (Soucy, 1997). Students may also exhibit variability of intellectual functioning; uneven developmental profile; unusual perceptual responses; aggressive or self-injurious behavior; restricted, repetitive, and stereotyped patterns of behavior; pre-occupations with a restricted range of interests; obsessive routines and rituals; repetitive motor mannerisms; distress over changes in the environment and odd responses to sensory stimuli; and difficulties in sleeping, toileting, and eating (Soucy).

Because children with ASD generally experience difficulties in the social, emotional, behavioral, and cognitive domains (all of which are essential to success in the home, school, and community) it is expected that their play experiences would also be compromised. Children with ASD have trouble initiating and sustaining their play, and typically display delayed patterns of social interaction. The degree of impairment, the continuum of symp-

toms, and the extent of ability differ significantly from child to child, and some social impairment may be situation dependent.

One of the most visible signs of autism is the inability to relate to others (Wolfberg & Schuler, 1993). Understanding subtle emotional cues and facial expressions can be particularly challenging for students with ASD, and their withdrawal often includes minimal eye contact and active avoidance of social contact. Moreover, their capacity for intersubjectivity—that is, the ability to acquire and manage representation of self and other through interactive social experiences—is widely regarded as compromised (Toomey & Adams, 1995). However, extensive opportunities for play may enhance a child's awareness of other people's mental states and intentions.

There is a wide array of learning opportunities for children with ASD at various play stages, and play can be incorporated into a student's individualized education program (IEP). Teachers might also consider the implications of a play-based curriculum for the inclusive classroom, and should be aware of challenges faced by the children, their families, and school communities.

Definition of Play

There is a vast amount of literature reflecting the difficulty in defining *play*—it is a large idea that influences human experience from childhood to adult life and therefore changes over time. Definitional variations also reflect scholarly discipline, ideology, and cultural preferences (Sutton-Smith, 1995). My working definition incorporates the descriptions put forth by Garvey (1977); Rubin, Fein, and Vandenberg (1983); and Smith and Vollstedt (1985), who propose that play

- Is pleasurable and enjoyable.
- Has no goals imposed from the outside.
- Is spontaneous, voluntary, and intrinsically motivating.
- Involves some active engagement on the part of the player.
- Requires attention to the means over the end production of the action or activity.
- Is flexible and changing.
- Must have a nonliteral orientation.

It is important to note that children whose functioning has been compromised—such as children with ASD—may show a variety of features in their play (e.g., inflexibility, concreteness, constrictedness, impulsivity, irrationality, unreliability, and inability to engage in or sustain imaginative play) that are not generally accepted in the definition of play (Hellendoorn, Van der Kooij, & Sutton-Smith, 1994). Children with ASD do exhibit play, although the type and quality of their play varies from those children who appear to be following a typical developmental trajectory.

Play has been categorized according to ages and stages, and various terminology has been used to describe its progression. Along with the difficulties inherent in defining play there are also challenges in categorizing play stages, because theoretical orientations along with whether researchers observe play in solitary or social contexts influences one's understanding of play stages (Garner, 1998). Researchers and practitioners have used both social and cog-

nitive stages to categorize play. The social stages include: solitary; parallel; associative; and cooperative (also called peer play, sociodramatic play). The cognitive stages include: object play (also called practice, exploratory, manipulative play); functional; pretend/symbolic play; and games with rules. Many of the stages overlap and some have further subdivided the stages to include social and motor play.

In typically developing children, play skills begin during infancy and progress in a somewhat sequential fashion during the first few years of life. According to Minor (2003), functional play and symbolic play generally develop sequentially. Within each play category there exists multiple levels, and it appears that overlap exists among the ages at which the skills first appear. For example, a child may demonstrate the ability to occasionally place the correct three-dimensional shapes in a sorter at 13 months (functional play); however, the skill may not mature and increase in frequency and accuracy until 19 months.



In this article, I discuss the cognitive (rather than social) stages of play development because the majority of research studies on play and ASD come from the field of psychology, where such cognitive terminology is used. Further, this discussion includes peer play as a separate category because it is an important dimension of symbolic play that requires unique consideration—it is a common goal in play therapy for children with ASD.

Learning Opportunities for Children With ASD at Various Play Stages

Many accepted definitions of play would otherwise fail to recognize that children with ASD demonstrate any play behaviors whatsoever. However, applying our working definition of play, I would argue that many of the more structured, behaviorally based play interventions are far too adult-directed, goal-oriented, and involuntary to be deemed true play. Further, because many behavioral approaches (e.g., applied behavior analysis) involve the adult selecting the toys/materials, setting, and activity, it is difficult to ascertain whether the play is intrinsically motivating for the child with ASD or if play is not developing because the child lacks motivation to engage with items chosen by someone else.

Although children with ASD may demonstrate only fractions of what might be considered play, any attempt to engage with either an object or person can be turned into a playful interaction filled with learning opportunities. There is a variety of prospects for enhancing growth and development for children with ASD at various play stages.

Developing Nonverbal Thinking, Communication, and Imitation Skills

Children with ASD typically demonstrate strengths in the nonverbal thinking and visual domains (Quill, 1995); using visually based approaches will generally yield excellent play skills. Children can be exposed to a variety of nonverbal tasks, such as simple sorting

and matching, that will later help them with differentiating objects. This basic skill can then be transferred to an interactive reciprocal exchange between the child with ASD and a play partner. Sorting and matching tasks can be expanded to include two or more attributes (e.g., color, size, shape, texture, etc.) or two or more categories (e.g., utensils vs. toys). Puzzle tasks are also a form of sorting because the child is learning to place different pieces into specific spaces. Matching tasks, because they can be abstract, are often more difficult for the child with ASD; matching activities that require matching objects in the environment to drawings or photographs or more representative matching such as sorting pictures within specific categories, however, might be more helpful.

Communication skills (both receptive and expressive) also develop during play experiences. Hogan (1997) outlined the various stages of communication development that may be practiced during play:

Matching tasks, because they can be abstract, are often more difficult for the child with ASD.

Expressing needs. This involves making some indication of need without necessarily directing the communication toward another person.

Expressing specific needs. This is typically motor communication, which may include reaching for objects, taking a person to an object, bringing an object to a person, or putting a person's hand on an object.

Using gestures. This stage includes pointing, looking back and forth between an object and another person, shrugging the shoulders, and other common gestures.

Joint attention. This is the ability to share attention with another person while both people are paying attention to the same object. For example, pointing to an object of interest is joint attention. Creating surprise situations during play may prompt joint attention, as may creating situations in which something unexpected happens.

Use of visual information to communicate. This type of communication, which is most often used to request something that the child wants, can easily be incorporated into play experiences. For example, a request to play with a peer using a specific toy could be communicated by giving the toy to the peer, by bringing the peer to the toy, by giving a picture of the toy to the peer, or by giving the peer a card with the toy name printed on it (e.g., car). It is important to always include visual means for communication during play activities because it is more meaningful, more motivating (communication in action), reminds the child that communication involves other people, and acts as a bridge toward more complicated or symbolic types of communication such as words.

Signing. The use of sign language helps with the development of spoken language (Miller & Eller-Miller, 1989). Spoken words should always be paired with manual signs so that the meaning of the signs can be transferred to the

spoken words. For some children, the use of signing seems to “pull” spoken language from them; for them, manual signs are an important transition to functional spoken language.

Using words. This includes developing and expanding vocabulary, providing modeling of clear spoken words, and encouraging spontaneous communication by placing toys out of reach, placing toys in tightly closed containers, and hiding toys under blankets. It is important to create play situations that do not require extensive prompting on the part of the adult. Further, providing visual images (even after the child begins to speak) will help resolve word retrieval difficulties.

Children with ASD may not necessarily progress through all levels of communication, or may skip some levels and easily master others. When creating play opportunities it is crucial to remember that the child's receptive

communication may not be at the same level as his/her expressive communication. It is also important to have the child generalize the communication developed during play to peers and various environments.

Imitation skills are also being developed during play activities. According to Hogan (1997), the most difficult aspect of imitation is learning the imitation process and understanding that it can be used to learn new things. In the early stages, imitation can be developed by using facial expressions or objects. For example, shaking a toy rattle involves using an object for its intended use (also known as *functional play*). Imitation involving the use of actions that objects do not usually perform would be the next step during play experiences (e.g., rolling a drumstick across a table instead of hitting a drum). Turn taking during imitation can also be incorporated into various activities, supporting the development of more sophisticated play stages (e.g., sociodramatic play with peers). Giving children with ASD ample opportunities to imitate actions that they cannot see themselves performing will enrich their ability to engage in more complicated forms of play. For example, imitating the actions of a nearby puppet while the child is holding a puppet over his/her head is a skill that requires the child to perform without seeing his/her own actions. If the child comprehends matching, imitation games can be introduced—such as having a peer build a tower with specific colored blocks and then having the child with ASD imitate the design (and vice versa). The imitation of body movements usually follows object imitation. These types of activities can be easily introduced during recess and physical education with dyads or in larger groups.

Object Play

During free-play situations, children with ASD explore objects less often and less thoroughly than their peers (Beeghly, 1998). However, with appropriate scaffolding (handing objects to the child one by one or limiting the physical space in which the child can

move), the child's exploratory play behavior increases (Beeghly). Promoting early object-directed (relational) play is important for the development of meaningful perceptual representations and the subsequent development of functional and symbolic play (Van Berckelaer-Onnes, 2003). Toy-play behavior is one of the first play experiences in which unusual play development can be detected in children with ASD. The manipulation of toys helps children to detect their varying characteristics, which in turn helps them give meaning to the toys. The oral and manual manipulation of objects allows infants to learn about the properties and classification of different objects, the causal relationship between events, and how to influence the world around them (Williams, 2003). For children with ASD, the goal appears to be the manipulation of the object rather than making sense of its properties.

Retrospective parental reports noted that young infants (later diagnosed with autism) demonstrated unusual patterns of visual inspection (twisting an object close to the eye; Williams, 2003). Researchers at Leiden University developed an intervention program based on toy-play, and found significant differences in toy-play behavior between children with autism and other groups such as children with hearing impairments or learning disabilities (Van Berckelaer-Onnes, 2003). They concluded that children with autism showed limited and stereotyped activities due to an inability to give meaning to the toys: The children with autism only saw details of the toys and were not able to combine these into meaningful wholes. The toy-play program developed at Leiden University attempts to improve the exploration and understanding of toys for children with ASD, and includes specific materials and methods.

Materials. These should be different in texture, weight, shape, color, and sound because children with ASD have difficulty integrating incoming stimuli. Different senses (vision, hearing, feeling, etc.) are addressed at the same time. Toys are related to the four play

levels (manipulation, relational play, functional play, and symbolic play).

Methods. First, children are assessed to ascertain their level of perception. The trainer and the child sit in a right-angled corner, not facing each other. The intention is that the child focuses on the toys. The trainer offers a toy to the child. At first children are allowed to manipulate the toy by themselves and then the play-trainer demonstrates other ways of manipulating the toy and gives the toy back. The child gets a second opportunity to manipulate the toy. The trainer does not focus on the functional use of the toy but emphasizes the various sensory, manipulative, and relational possibilities. The program is not based on behavior modification, but is designed to stimulate the experience that play is pleasurable in itself.

Children with ASD require extensive opportunities to engage in object-directed play so that their level of understanding will become more coherent and meaningful. Both sensory and motor experiences along with cause and effect understanding are promoted in object play, allowing children to explore the properties of objects and use their senses (e.g., visual tracking, feeling, and hearing) to learn.

Functional Play

For most children, the ability to use an object in accordance with its socially designated function (such as putting a toy pan on a stovetop) occurs at approximately 13 to 15 months. Functional play does not necessarily involve pretense; the child may regard a toy pan as a small—yet real—pan (Williams, Reddy, & Costall, 2001). Gaps in the functional use of objects may actually be the result of a child's difficulty relating to people (Williams et al.): People play a vital role in showing children how to use objects properly, by making certain aspects salient within the context of joint attention and imitation. Because children on the autism spectrum fail to engage other people in their use of objects or fail to use other people to guide their own dealings with objects, they do not receive information about how to use the objects in

functionally appropriate ways. During functional play children learn to name objects and make associations, both of which help them develop the more complex skills needed during symbolic/pretend play. Unfortunately, little research has been conducted on how to facilitate the development of functional play in children with ASD, although prompting procedures have been shown to be successful (Charman & Baron-Cohen, 1997).

Symbolic Play

Ungerer and Sigman (1981) posited that the number of symbolic play acts exhibited by children with ASD is correlated with their level of expressive and receptive primary language skills. In addition to this link with language, symbolic play also relies on social awareness. As play scenarios become more complex they almost always contain themes modeling common social interactions. Therefore, a child's understanding of the social world may also become a critical factor in the ability to create and maintain elaborate pretend play scenarios (Fein et al., 1991).

There is evidence that the symbolic play of children with ASD can serve to highlight language potentials, and that play qualities are of higher predictive value than IQ scores in assessing the prognosis of language development (Jarrold, Boucher, & Smith, 1993). The

that there is a definite positive correlation between symbolic play and language during the early stages of language acquisition in both typically developing children and those with ASD. Singer and Singer (1990) provide an excellent analysis of the value of symbolic play:

Children expand their vocabulary, learn to name objects, learn how to form sentences or phrases by linking objects with actions and learn how to use descriptors such as adjectives and adverbs. They also learn about object constancies and about persistence in dealing with objects. They form event schemas and scripts about what one does or expects of others in a variety of situations (i.e., from eating out in restaurants to attending parties, or keeping doctor appointments). Children also learn strategies for solving problems, from the simple uses of sticks as levers to problems of orderly sequence, number-object relations and cause and effect. These all fall under convergent cognition. Furthermore, creative processes, that is, the ability to produce varied and flexible associations (divergent cognition) also develop. The child also learns a flexible use of narrative thought, the ability to shift between, on the one hand, the need to remember or anticipate

ability to believe, expect, hope, and manipulate relations in others (Singer & Singer, 1990).

It is important to introduce the child with ASD to the world of symbolic play, visualization, and imagery. For example, when the child wants juice, make the teddy bear thirsty, too. Greenspan and Wieder (1998) provide a list of strategies and suggestions for helping the child with ASD build a symbolic world:

- Identify real-life experiences the child knows and enjoys and have toys/props available to play out those experiences.
- Respond to the child's real desires through pretend actions (e.g., if the child puts his/her foot in a pretend pool ask "Is it cold?").
- Encourage role-playing with dress-up, props, puppets.
- Use a specific set of figures/dolls to represent family members.
- Substitute one object for another when props are needed (e.g., spoon is a birthday candle).
- Help the child elaborate on intentions—ask who is driving the car, where it is going, whether he has enough money, did he remember the keys, and so forth.
- Insert obstacles into the play (e.g., make the bus block the road).
- Use play to help the child understand and master ideas/themes which may have frightened him/her (fantasy vs. reality).
- Match your tone of voice to the situation during play (e.g., pretend to cry when the character is hurt).
- Discuss the child's abstract themes such as good guy/bad guy, separation/loss, and various feelings such as fear, jealousy, and anger.

Many children with ASD begin symbolic play as something rote and mechanical. One parent described her child's symbolic play in the following way:

Dylan's play still had a flat quality to it. People and animals went through their paces mechanically

During functional play children learn to name objects and make associations, both of which help them develop the more complex skills needed during symbolic/pretend play.

idea that play and language are interrelated is not surprising; both involve a communicative function of sharing objects with others, and children use both play and language to experiment and thereby learn about symbolic transformations and various self/other relationships. Lewis (2003) regarded play as instrumental in developing both the comprehension and production aspects of language; Fein and colleagues (1991) demonstrated that symbolic play is closely related to language production and comprehension, and

events, and on the other, the need to engage in formal logical thought and clear communication. Symbolic play also brings out the beginnings of reading, writing, or story comprehension. (p. 29)

During symbolic play children use language to make and manipulate metarepresentations, make inferences about causes and predictions about future events, distinguish reality from fantasy, and express mental experiences. Symbolic play characterizes the

with no emotion. They woke up, ate meals, went to school or work, went home. They never fought, never got frightened. There were no good guys and bad guys, no scary monsters, none of the fantasy elements that so often populate children's play, through which they work out their feelings and develop reality testing. (Greenspan & Wieder, 1998, p. 52)

If a child with ASD merely pushes a car or train back and forth without having it go anywhere, it could be due to an inability to make predictions, engage in two-step actions, or think abstractly. Difficulties with language and motor planning may also thwart a child from developing elaborate symbolic sequences during play. Expressing ideas symbolically requires longer sequences of actions (Greenspan & Wieder, 1998) and the capacity to sustain the object in thought (develop an image or cognitive map of the object in its physical absence).

Peer Play

Children with ASD often have difficulty establishing and maintaining relationships with peers. These challenges become even more apparent in the school setting and may include an inability to greet others; difficulties with imitation, following instructions, sharing toys, and taking turns; and an inability to ask for help and request objects/events. This is largely due to the nature of the disorder that prevents children from processing information internally so that it can be related to external events. Difficulties in social interaction and reciprocity are the primary diagnostic and defining characteristics of ASD and are often complicated by the impairment of communication and imagination. The social play of young children with ASD generally has less proximity to peers, reduced levels of social initiation, fewer responses to social overtures, and more solitary activities as compared to the play of children with other developmental disabilities (Watson, Baranek & DiLavore, 2003).

In her literature review of social interventions with demonstrated empirical support, Rogers (2000) emphasizes the important role peers play in developing social and communication skills in children with ASD. Peer-mediated techniques for increasing interactions between typically developing students and those with ASD include: (a) teaching peers to persistently initiate contact with a child with ASD (e.g., sharing, helping, giving, affection, and praise), and (b) teaching peers through role playing so that the learned techniques can be used with a child with ASD. These strategies have been successful in maintaining high rates of social reciprocity for both parties and decreasing inappropriate behaviors. Peer tutoring using incidental teaching, adult instruction in social games, social skills groups, and "circle of friends" are all well documented interventions that effectively involve peers to promote social engagement (Rogers).

The wide array of research on peer-mediated buddy programs for children with ASD has resulted in a refinement of techniques and strategies to make the programs effective for both the child with ASD and the peer helpers. Myrick and Bowman (1981) describe four necessary peer buddy characteristics: being caring, accepting, understanding, and trustworthy, and note that these qualities should be highlighted when training a peer buddy so that they can understand the importance of the helping relationship. The aim of many peer-mediated buddy programs is to establish a strong, mutually satisfying, social relationship between the child with ASD and the peer buddy. In this model, students directly attempt to influence a peer's social behavior through some form of social interaction. The three most common approaches include: (a) proximity interventions (socially competent children are placed together with intellectually and/or physically challenged children and are instructed to play with these children with no specific training); (b) prompting/reinforcing interventions (peers are trained to prompt and reinforce the social behavior of the child with special needs); and (c) peer

initiated interventions (typically developing peers are instructed and trained to initiate social contact with the target students; Roeyers, 1995).

Prizant, Wetherby, and Rydell (2000) suggest a transactional approach to peer play intervention that incorporates both developmental and ecological features. The key principles of their approach include:

- (a) engineering environments so that naturally occurring interactions and play routines are consistent, predictable and familiar,
- (b) controlling for novelty within interactions and the environment,
- (c) fostering shared control/reciprocity among social partners,
- (d) acknowledging unconventional verbal and social play behaviors as purposeful and intentional,
- (e) enhancing intrinsic motivation through highly predictable joint action routines,
- (f) creating multiple opportunities for expressing communicative intent to establish joint attention and social interactions, and
- (g) systematically transferring active participation and support from the adult to peers. (p. 198)

The movement toward full inclusion of young children with disabilities in the general education classroom has accentuated the need to promote reciprocal peer interaction among children of varying abilities (Zercher, Hunt, Schuler, & Webster, 2001).

Play and the Child With ASD in the Inclusive Classroom

Many play strategies do not take into account possible environmental obstacles (e.g., a classroom with 30 children). Children with ASD can be easily overloaded by sensory stimuli (e.g., fluorescent lights, loud voices, etc.); give careful consideration to the classroom set-up, including seat assignments. Mastrangelo (2005) demonstrated that children with learning difficulties (such as a learning disability) and low self-esteem made the best peer buddies for children with ASD—because these children felt empowered to be in a leadership role where they could finally be cast as helpers rather

Table 1. General IEP Goals Supported by Play Experiences

Goal	Play Experience
Social-Emotional Development	Interact with peers of all abilities, interests, & talents Develop social/communication skills Develop turn-taking skills Become an active participant Sustain attention and concentration Develop initiative and risk-taking behaviors (e.g., spontaneously inviting peers to play) Develop and/or continue to develop relationships and maintain friendships
Motor Development	Improve eye-hand coordination Develop fine/gross motor skills
Communication	Use verbal expression Develop expressive/receptive language skills Develop skills in written expression
Personal Development	Develop independent thinking and problem-solving strategies Develop independent use of specialized equipment Develop life skills Develop self-advocacy Develop choice-making skills Learn rules of safety Learn concept of personal space Develop self-confidence and self-esteem Develop creativity and curiosity Increase flexibility and adaptability to changes and routines

than feel helpless. Further, although the peer buddying began as a mentorship program in Mastrangelo’s study, the friendships were maintained long after the study was completed.

Developing IEP Goals

Many parents and teachers view play as an add-on, and may not be inclined to see the value of including it on a student’s IEP. The perception is that play takes away from academic learning and this is particularly true as the student moves through the primary grades (Mastrangelo & Killoran, 2007). Bodrova and Leong’s (2003) research has clearly shown the opposite: Children in classrooms where teachers used

Vygotskian strategies to enhance play and who spent almost half of their class time in play (50–60 minutes) scored higher in literacy skills than students in control groups. Not all play is created equal; it is dependent upon the teacher’s approach, classroom materials, and time. It is not surprising that parents and teachers have conflicting views on the value of play and whether it should form an integral part of the curriculum.

IEP play goals can cross various domains, supporting behavioral, social-emotional and cognitive development, along with communication, organization, and motor development. Table 1

demonstrates how play experiences may address IEP goals.

General IEP goals can be further developed into specific learning expectations or skills, with the student’s IEP delineating the strategies/accommodations to be used as well as the relevant assessment for each. Table 2 illustrates how to break down a goal (here, social/communication skills) this way, as well as how to incorporate play opportunities.

The play curriculum is filled with opportunities for children to develop various skills. With adequate play provisions, children with ASD can flourish socially, emotionally, and cognitively. Parents will be more inclined to accept and embrace an IEP that is based on a child’s developmental level, reflects the student’s interests and motivations, and clearly articulates the development of skills through play opportunities. Because children with ASD are more likely to persevere with activities or objects that are highly motivating and interesting for them, it is important to incorporate these into the program regardless of their eccentricity. Children with ASD will be more inclined to accept children into play that incorporates objects that are highly salient for them (e.g., their perseverations).

Assessment of Play Skills

Teachers must remain flexible and develop teaching and assessment strategies (e.g., oral presentation of learning, conferencing with the student, and breaking play activities into smaller chunks) specific to the child and the play activity. One way to assess children’s play is to develop a chart that lists the various classroom centers and includes various play behaviors (i.e., specific IEP objectives). The assessor checks off and comments on whether the child is demonstrating any of the behaviors at the specific center (see Table 3). Videotaped documentation allows the educational team to review subtleties that might be missed while observing children engaged in play. Teachers can also assess and evaluate students during play by listening to language; analyzing social behaviors within the activi-

Table 2. Expanding a General IEP Goal to Delineate Expectations, Skills, Strategies, Assessment, and Play Opportunities

IEP Goal	Learning Expectations/Skills	Teaching Strategies/ Accommodations	Assessment
Develop social/communication skills	Learn and generalize the rules of social interaction (e.g., reciprocity, turn taking) Understand the nonverbal social behavior of others Use appropriate nonverbal communication (e.g., eye gaze, facial expression, conventional gestures, volume, tape, rate of speech) Maintain an acceptable social distance Be able to begin, maintain, and end a conversation Develop coping skills (e.g., regarding anxiety, frustration) Repair conversations and ask for clarification Minimize difficulties in topic management (e.g., preoccupation with one topic) Learn to initiate play with peers	Teach problem-solving/decision-making skills/conflict resolution Teach initiating techniques Use social stories, comic strip conversations, and scripts Video modeling Use drama and role playing Use cooperative games Pair with student of similar interests Use inclusive strategies (e.g., circle of friends, peer mentors) Use inclusive language and encourage collaboration Invite participation in groups Teach perspective taking Provide a safe and accepting classroom and school environment	Track frequency of positive/negative interactions during play Anecdotal reports Student self-assessment Conference with student, parents, staff, agencies Record effectiveness of techniques used

ty; observing how children select, approach, and complete play tasks; observing how children interact with other children; and by observing how children use manipulatives (Barrett, Littleford, Valee, & Wannamaker, 2000). Continuous assessment of the student’s play allows the teacher to (a) determine the child’s current strengths, needs, and interests; (b) develop appropriate curriculum expectations for the student’s IEP; (c) adequately plan, implement, and revise the IEP; (d) pinpoint specific difficulties; and (e) inform parents, support personnel, and other teachers about the student’s development. Moreover, these assessments provide valuable information to other support personnel who may be working with the child.

Brown and Murray (2001) suggest teachers should assess play skills in a variety of settings with a variety of materials. Popular play-based assessments (i.e., Transdisciplinary Play Based Assessment (TBPA), Linder, 1993; Play in Early Childhood Evaluation System (PIECES), Kelly-Vance & Ryalls, 2005; Play Assessment Scale, Athanasiou, 2007) do not account for

the variations in play seen in children along the autism spectrum. In their discussion of assessments, Brown and Murray note that “traditional assessments assume that play development is a linear process and they do not easily translate into interventions for children who exhibit discontinuities in development” (p. 313). Teachers can create an individual play profile for an individual student by observing the child in naturally occurring play contexts. Moreover, videotaping sessions of children’s play allows the teacher to review segments in order to closely examine a child’s motivation and interest, and to take notes.

Wolfberg’s (2003) model for observing play considers both the symbolic and the social aspects of play. The symbolic categories include (a) no interaction with play materials, (b) manipulation of materials, (c) functional use of play materials, and (d) use of materials in a symbolic way. The social categories include (a) isolated play, (b) orientation (where the child observes other children playing but does not interact with them), (c) parallel play,

and (d) common focus in play with other children.

Play provides a useful index of a child’s general developmental status. In addition, watching children at play provides opportunities to gather data and is a nonthreatening way to obtain valuable information on all children, including those with behavior difficulties, cognitive and language delays, inattention, and/or impairment of motor function. Play assessments are applicable to many children whose impairments may negate the validity of conventional assessment instruments.

Challenges and Concerns

Challenges for the Child With ASD

Many children with ASD develop *learned helplessness* as a result of their inability to communicate and control their environment (Mistrett, Lane, & Goetz, 2000). There is a drive to have successful interaction with the physical and social world, and when children with ASD feel incompetent they begin to learn that they cannot do or cannot achieve. This learned helplessness further exacerbates the problem, because

Table 3. Sample Assessment of Play Behaviors at Classroom Centers

Student: Date:	Dress-Up/ House	Sandbox	Water Table	Playground	Puppets	Arts & Crafts	Blocks/ Construction
Purposeful exploration of materials/toys (learns through trial & error)							
Sustains interest in play							
Imitates play behaviors of play partner							
Demonstrates problem solving							
Asks questions for clarification							

many children begin to develop low-self esteem and adults regard them with apathy. Children with ASD experience a battle between their internal drive to play and their inability to access play.

Challenges for the Family and School Community

Parents of children with ASD may unknowingly promote play deficits and feelings of incompetence among their children. Mothers of children with ASD play less with and are more controlling of their children than are mothers of typically developing children (Hanzlik, 1989; Jobling, 2003). Jackson, Robey, Watjus, and Chadwick (1991) found that parents of young children with disabilities shift in their role, from play partners to medical coordinators. In their discussion of parental challenges, Mistrett et al. (2000) note that “spontaneous interactions become inhibited by the parent’s anxiety over the medical condition of their child as well as by the reduced level of responsiveness that many children with disabilities exhibit” (p. 6).

Parents have the opportunity to foster development through play just as often, if not more often, than teachers do—through time at the park, play dates, family game time, and board games. Rough-and-tumble play, which parents can easily incorporate in the home environment, is an integral part of a child’s development, and most children with disabilities benefit from it. Orr (2003) describes the effect of rough-and-tumble play on the development of the vestibular system and the importance of including it in the play repertoire.

One of the greatest challenges for parents and educators is limiting the desire to direct a child’s play. Choice and control are essential in play, because they give children a sense of ownership; allow risk taking; and promote creativity, appreciation and confidence. One difficult situation educators face is deciding when to stand back and observe play, and when to jump in to extend and enrich children’s play and development. There is a strong belief among educators, particularly those in the field of special education,

that children with ASD require more direct instruction than do their typically developing peers (Mastrangelo, 2005). As a result, play is often regarded as an add-on to many programs. Callas, Bruns-Mellinger, and King-Taylor (1998) assert that “the value of play can be difficult to explain to those who adhere to more traditional methods of direct instruction. Even more difficult is trying to convince the proponents of direct teaching and drill of isolated skills that young children”—especially those with overreactive sensory systems—“do not learn well this way” (p. 21).

The benefits of play on the development of cognitive, social-emotional, communication, language, and sensorimotor domains are well recognized in the literature (see Greenspan & Wieder, 1998; Wolfberg, 2003). However, education programs for children with ASD often comprise strict medical and therapeutic interventions to compensate for deficits. The focus is on skill development, and play is used as a reward after the child has worked through various program areas. As a

result, play is often not intentionally included or delineated in the programming for children with ASD. An early study (Anderson, Hinojosa, & Strauch, 1987) indicated that when play is limited by internal (individual) and external (environmental) factors, the ability to learn and develop the skills and attitudes associated with play is also limited.

Recommendations for Program Planning

Classroom-based play skills interventions should focus on the developmental readiness of the child with ASD. Terpstra, Higgins, and Pierce (2002) note that children demonstrate more acquisition and generalization of *developmentally* appropriate play activities rather than *age* appropriate activities when the developmental readiness of the child is considered. In addition, when beginning a play skills intervention program, both parents and teachers must consider the child's language development and use a variety of settings to engage the child in play (e.g., the classroom, playground, park, the child's home, and the home of a friend). The goal for both teachers and

ning, it is crucial to consider the unique profiles of children on the autism spectrum.

Final Thoughts

Play is an important component of any child's education: It is through play that children learn about the world around them, test ideas, ask questions, and come up with answers. It is all the more important to provide ample opportunities for play for children with ASD, so that they can begin to acquire the skills that will help them in other domains such as communication (expressive/receptive), reciprocity (turn taking), and sensory processing. It can be challenging to work on play skills with a child on the autism spectrum who is socially unresponsive, noncommunicative, and unwilling or unable to engage in play that requires social interaction rather than perseverative interactions with objects (e.g., spinning). Because much of the play of children with ASD involves manipulating objects with which they are thoroughly familiar, parents, teachers, siblings, and friends can begin reciprocal interactions with objects that are of salience to the child.

Play is not only a tool that pries open all areas of development and attempts to expand them; it is also a bridge between teacher and student.

parents is to find ways to incorporate play in day-to-day experiences. Further, they need to build on the child's existing play abilities and compensate for the limitations imposed by the disability by providing the necessary accommodations and modifications to teaching, assessment, and the environment.

Children on the autism spectrum vary considerably in their ability to play, and some will demonstrate solid play skills at specific play stages. The wide disparity among children makes program planning difficult, and as a result many teachers resort to a universal method for all children. A one-size-fits-all approach is detrimental to a child's learning; when program plan-

Play is a powerful way to reach a child with ASD, and the key to success is balancing a developmental approach to play that encompasses some structure coupled with following the child's lead. Play is not only a tool that pries open all areas of development and attempts to expand them; it is also a bridge between teacher and student. Play is crucial in preparing children for adult life. Children with ASD can begin to develop positive play experiences if we take into account their level of development and make appropriate social contexts available to them. The overall goal is to ensure that children on the autism spectrum generalize the many skills they learn during play experiences to a variety of contexts and

people. If we begin to make play an integral component of every child's daily educational and home life, then we are one step closer to moving the child up the developmental ladder.

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