

## Teaching Play Skills to Children with Autism: A Review of the Literature

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### Abstract

*Play is a universal activity that is an integral part of childhood experiences and aids in the development of important skills. While most children naturally engage in play, children with autism spectrum disorder (ASD) do not follow the typical pattern of play development and often exhibit delays in play skills. One of the defining characteristics of autism is a lack of pretend and imitative play. Given the academic, social, and cognitive benefits of learning through play, educators should make play an intervention goal for children with ASD. The majority of studies reviewed identified three effective instructional strategies for teaching play skills: video modelling, pivotal response training, and script training. These strategies result in increased levels of play, positive social interaction, and decreased inappropriate behaviours.*

Through play, young children acquire various skills that are critical to their development. In addition to the sheer joy that comes from play, appropriate play behaviours can facilitate social, language, and cognitive skills. The importance of play and its benefits are emphasized in most early childhood classrooms in order to provide plentiful opportunities for children to engage in play for both learning and enjoyment (Carrero et al., 2014). However, children with autism spectrum disorder (ASD) often have a deficit in play skills, which may contribute to delays in social development. The objective of this literature review is to gain a deeper understanding of play, its relevance to young children with ASD, and the implications for educators. The following questions were formulated to guide this literature review:

1. What is play and why is it important for the development of young children?
2. What is the relationship between play and children with ASD?
3. What are instructional strategies that promote play in children with autism?

### Background to the Research: An Introduction to ASD

ASD is a complex neurodevelopmental disorder that features social and communication skills deficits as well as restrictive and sensory behaviours (Chester et al., 2019). Children with ASD encounter challenges in developing the skills needed to initiate and sustain interactions with typically developing peers. Social behaviours such as eye contact, sharing, and turn-taking are often lacking in children with ASD, making it difficult to engage in play with others. One of the core characteristics of ASD is a lack of pretend or imitative play (Barnett, 2018). Children across the spectrum can demonstrate some basic functional play skills that are rote and repetitive (e.g. spinning or lining up objects). However, structured supports and systematic interaction is required in order for children with ASD to have opportunities to practise and develop their skills through play.

### Method

In order to find and review research about children with ASD and play skills, a search was conducted using three electronic databases: Academic Search Premier, APA PsychINFO and Education Resources Information Center (ERIC). The studies were located by using search

terms such as *autism*, *play*, *play skills*, and *instructional strategies*. Only studies that took place between 2010 and 2020 were considered, in order to review recent studies and have “up-to-date” knowledge about effective instructional strategies used to teach play skills to children with ASD. The search was also limited to English-language publications from peer-reviewed journals that included empirical data. The criteria used to select studies were: (a) focusing on children with ASD, (b) definitions of the concept of play, and (c) identified instructional strategies that support the teaching of play skills. The results varied in range of instructional strategies that target play skills. Some studies used strategies to target play skills in combination with social skills. The common strategies that appeared across the studies have been reviewed in this article. Since children with ASD have deficits in social and communicative behaviours, play is often used as the context to improve these behaviours. It was difficult to locate studies focused on directly teaching and assessing play skills.

### **Play and Its Importance**

A large amount of literature reflects the difficulty of defining the concept of play. It is a broad idea that influences people’s experiences and changes over time from childhood to adult life. For the purposes of this literature review, play is defined as “actively and functionally engaging with objects and/or other people for the purposes of enjoyment” (Carrero et al., 2014). Learning to play supports children’s development of social, language, and cognitive skills since it engages several areas of the brain. Children learn social skills through play by having exchanges with peers and adults. They also learn how to express their thoughts to others during play, cooperation, and problem solving. Interactions with others during play also teach children early functions of language, including making declarative and interrogative statements (e.g., asking to play with a specific toy). Play involves multiple cognitive skills such as interpreting another person’s intentions, understanding symbols, and developing the ability to be imaginative. Play is considered to be so important that it has become an integral part of effective early childhood practices. It provides a setting for implementing academic instruction, embedding learning opportunities, and prompting responses (Carrero et al., 2014).

Play can be classified into three categories: functional, symbolic, or socio-dramatic play (Jung & Sainato, 2018). Functional play refers to the appropriate and functional uses of an object and cause-and-effect actions (e.g., a pop-up toy). Symbolic play is defined as a child’s ability to act on an object as if it were something else. This type of play involves three forms: object substitution (e.g., using a block as a car), the attribution of false properties (e.g., pretending the dolls are eating), and the attribution of presence to imaginary objects (e.g., sailing a boat over an invisible lake). Socio-dramatic play is an advanced form of symbolic play that involves engagement in role-playing.

### **Play and Children with ASD**

Although most children can learn various skills through play with others, children with ASD have pervasive challenges in the development of play. The definition of play would fail to recognize that children with ASD demonstrate any play behaviours at all (Mastrangelo, 2009). One of the defining characteristics of ASD during early development is a lack of pretend or imitative play. Children with ASD do not follow the typical pattern of play development. Symbolic play skills are often delayed and exhibit less complex play activity. Most children with ASD can demonstrate functional play skills but it is often basic and less elaborate than that of typically developing peers. The lack of complex play is intertwined with the core diagnostic features of ASD which include rote, repetitive, and restrictive range of interests and activities. Another defining characteristic of ASD, which is central to a diagnosis, are challenges in social interactions. Social skills deficits prevent children with ASD from being able to engage in regular

play. Children with ASD have deficits in communication, responding appropriately to social cues, and forming social relationships.

Given the known benefits and skills that children can develop from engaging in play, promoting play should be a critical intervention goal for children with ASD since they have play-related and social difficulties and the fundamental importance of early play. Children with ASD require structured supports and explicit interventions to acquire play skills.

### **Instructional Strategies That Promote Play Skills**

Video modelling is a strategy that uses videos to provide modelling of targeted skills. The learner repeatedly watches a video of another individual or themselves correctly performing a targeted skill. After viewing the video, the learner has the opportunity to perform the targeted skill. There is growing evidence that supports video modelling as an effective practice for teaching children with ASD appropriate play skills. In addition to play skills, video modelling positively affects motor skills and social communication, and results in an increase in spontaneous requests (Barnett, 2018; Ganz et al., 2011). Video modelling is an effective strategy to teach play skills because it uses the visual strengths and interests of children with autism. As well, it can be implemented on its own or in combination with other instructional strategies to teach skills.

Another instructional strategy that has effective outcomes is pivotal response training (PRT), which has been popular because it can be used in a variety of different settings (Mastrangelo, 2009). It is based on the principles of applied behaviour analysis that incorporates the child's interests to teach pivotal behaviours. A pivotal behaviour is defined as "a behavior that is central to performing a variety of other behaviors in different areas of functioning" (Carrero et al., 2014, p. 19). PRT has been particularly effective with teaching skills necessary for successful peer interactions during play, such as turn-taking or verbal exchanges. Three key elements have been identified in the literature for using PRT to teach play skills: (1) provide clear, uninterrupted instructions for completing play-based tasks, (2) model appropriate play behaviour that is being targeted, and (3) provide immediate positive reinforcement or rewards for appropriate play and take turns with the child.

Script training is another strategy used to teach children specific sequences of play. Scripts are an effective tool for children with ASD because they are explicit and prepare children for certain play scenarios and how they can respond. Scripts can be written scenarios, visual prompts, or skits that provide statements and responses that would be appropriate or expected in a given situation. Script intervention suggests that children with ASD demonstrate an increase in scripted and unscripted spontaneous communication with others, and in the duration of time spent playing appropriately (Barnett, 2018).

### **Discussion**

The concept of play is crucial to children's development of various skills. However, many children with ASD have deficits that prevent them from engaging in play. Studies on teaching play skills to children with ASD indicate that they are able to engage in play with systematic teaching. Although there is a wide range of instructional strategies, – video modelling, PRT, and scripts – were most commonly used in the studies reviewed. These strategies resulted in increased levels of play, improved social interaction with peers, and decreased inappropriate behaviours (Barnett, 2018; Duenas et al., 2018; Jung & Sainato, 2013). The general consensus across all of the studies on teaching play skills was that children with ASD respond well to play intervention. Many of the studies used a combination of various strategies to teach play skills.

After reviewing the studies, there are implications for practice and future research. It was difficult to locate studies that focused specifically on directly teaching and assessing play skills for children with ASD. Many of the studies that were located used play as the context to improve

social and communicative deficits. Given the importance of play for children's development, further research is needed that targets and assesses play skills for children with ASD.

Another implication comes from the inconsistencies across studies in the classification of types of play skills targeted (Jung & Sainato, 2013). For instance, the same play behaviours were often categorized under different types of play skills: functional, symbolic, or socio-dramatic play. Clear and consistent definitions and measurements of play skills are necessary in order to target specific play skills for children with ASD.

Another factor to consider is the setting where children with ASD are taught play skills. Children with ASD have often been taught play skills and assessed in a clinical setting one-on-one with an adult (Jung & Sainato, 2013). Although the findings of these studies demonstrate an increase in play skills, more studies need to be conducted in classrooms where children with ASD will have more opportunities to participate in play with others. In the natural environment of a classroom, play skills instruction can be embedded into daily routines and the interventions are ongoing, which can promote maintenance of skills.

Play is essential for children to learn and enhance their cognitive and social development. However, children with ASD are at risk of being excluded from the benefits play has to offer. The challenges that children with ASD encounter with engaging in play highlight the need for purposeful instruction and intervention. Difficulties with social interactions place children with ASD in a vulnerable position to being isolated and rejected by their peers. All children benefit from having a sense of belonging and developing friendships. Explicit guidance and supports ensure that children with ASD have opportunities to actualize their developmental potential.

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## About the Author

Hoanglan Cardinal is a Learning Support Teacher and Reading Recovery Teacher at a K-6 school in Winnipeg, Manitoba. She completed her B.A., B.Ed., and Post-Baccalaureate at the U of M. She is in the M.Ed. program at BU, specializing in inclusive education. Hoanglan enjoys spending time with her husband, being a first time mother, and travelling.