

USING VISUAL SUPPORTS TO FACILITATE VERBAL LANGUAGE IN PRESCHOOLERS WITH ASD

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COMMUNICATION DEFICITS IN ASD

There is a considerable amount of literature available describing the broad range of communication deficits in children with Autism Spectrum Disorder (ASD) (Dawson et al., 1998; Paul et al., 2007; Stone et al., 1997; Wetherby et al., 2004). Notable deficits include: a slower rate of communication (Wetherby et al., 2007); a restricted range of communicative functions (Wetherby et al., 2004); a limited repertoire of and unconventional use of communicative gestures (Dawson et al., 1998; Stone et al., 1997); and limited functional verbal abilities (Paul et al., 2007). However, there is less information available to clinicians regarding the range of verbal abilities of children with ASD, as research has primarily addressed the social deficits related to language for those children with ASD who have relatively intact syntactical, morphological, and semantic structures but lack pragmatics (see Prelock et al., 2011 for review). Paul and colleagues (2007) noted that verbal children with ASD at an early language stage who had large single word vocabularies were not combining words into phrases and sentences. Immediate and delayed echolalia is also prevalent in the ASD population (Tager-Flusberg et al., 2005).

LANGUAGE INTERVENTIONS & VISUAL SUPPORT USE WITH INDIVIDUALS WITH ASD

While some evidence-based interventions targeting early language development exist, they primarily use mand modeling (i.e., modeling words or phrases expecting the child to imitate) (Prelock et al. 2011) to develop verbal language and to assist children with ASD in transitioning from single words to phrase use. The sole use of mand modeling is concerning as it relates to the presence of echolalia in children with ASD. Using verbal modeling alone may, in fact, reinforce echolalia and children with ASD may fail to develop the ability to create and use novel phrases and sentences to effectively and efficiently communicate with others. While explicit instruction is often required for children with ASD to use language in a functional manner (Ogletree et al., 2007), an inherent difficulty with structured teaching is the possibility of prompt reliance. The fading of prompts and adult support is essential for independence and generalization (Milley & Machalicek, 2012). Using visual supports as a means to prompt verbal language may serve to increase a child's independence while simultaneously decreasing the need for adult modeling.

The use of visual supports with individuals with ASD have been proven effective for easing transitions and managing difficult behavior (Frea et al., 2001; Waters et al., 2009), teaching social skills (Garrison-Harrell et al., 1997), as an alternative communicative mode (Bondy & Frost, 1994), and developing receptive language (Preis, 2006). Effective language development interventions that use visual supports, such as aided language stimulation, have been primarily used with children who are non-verbal and using augmentative and alternative communication (AAC) systems (Bruno & Tremblath, 2006). Given the breadth of evidence supporting the use of visuals with children with ASD, it would seem logical that a clinician would also use them to support early language development in verbal children with ASD.

CASE STUDY

This seminar will present a case study of a three-year old boy with ASD who has a moderate cognitive delay. Pre-intervention, Sean had a large single word vocabulary of nouns, verbs, and basic descriptors (i.e., colors) and demonstrated an understanding of picture symbols; he did not spontaneously use word combinations. Topic boards for specific activities were created in a style of traditional communication

boards typically used for non-verbal children with developmental disabilities (Beukelman & Mirenda, 1998). A color-coding system depicting word types was used and boards were organized to replicate general sentence structure (e.g., from left to right: people [yellow border], verbs [green border], nouns/objects [red border], descriptors [blue border]). Effectiveness of the intervention was measured using baseline, intervention, and withdrawal phases (ABA design) in which Sean was engaged in motivating activities that allowed for natural communicative temptations (e.g., bubbles, painting/craft, wind-up toys). Baseline and withdrawal phases were one-week long and topic boards were not used for any activities. The intervention phase was two-weeks long and topic boards were used throughout the program day (i.e., 9:00-3:00) for various activities. Specific data was collected for five 10-minute sessions per week regarding the spontaneous use of two-word phrases, the level of intrusiveness required for prompted phrase use, and the variety of phrases used. Preliminary results indicated topic board visual supports were effective in increasing both spontaneous use of phrases, as well as the variety of phrases used. There was a notable difference in the need for adult verbal modeling between the baseline and treatment phases.



SEAN

Level of Functioning

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MSEL - unable to compute Early Learning Composite; Developmental Quotient: 53

PLS-5 Total Language Score: 75

CSBS Communication Composite: 67 (Late One-Word Stage)

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- Requested using single words (primarily in Japanese)

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- Used a variety of single words (nouns, verbs, colors, names) in English & Japanese to communicate for a variety of functions (requesting, rejecting, protesting, commenting, answering basic "wh-" questions)

CLINICAL APPLICATIONS

Clients who successfully learn to build phrase length using visual supports typically present with a communication profile that includes communicative intent, a single-word vocabulary that includes a variety of nouns and verbs, as well as the ability to initiate communication using a variety of single words.

Teaching should be based on the client's interests, particularly in the initial learning stages, so it is important that the clinician monitor the client's interests and motivations. Often, clients with ASD present with "odd" interests (e.g., filling a rubber glove with water); since motivation

effective for teaching new skills such as the use of phrases. Other highly-motivating activities that may promote the use of phrases include snack or meal times (e.g., requesting specific foods or actions with foods "Cut chicken", "Pour juice", etc.), social play (e.g., songs, chase, tickles) and sensory activities (e.g., lights, spinners, squishes with a pillow, "rough & tumble" play). Teaching strategies include sabotaging the environment to create communicative temptations (e.g., putting preferred items in closed jars or out of reach) and demonstrating expectant waiting rather than immediate prompting. It is important to allow clients an opportunity to initiate communication using any means (e.g., gesture, single word) and then build on the communication by modeling a longer phrase and pairing the model with a visual support. Starting with most intrusive prompting (i.e., modeling) and pairing the model with a less intrusive prompt (i.e., visual support) allows the clinician to fade the verbal model and promote independence. The use of a Total Communication approach (e.g., verbal + picture/photo + sign) exposes the child to a variety of modes of communication and provides them with the opportunity to explore which mode best suits their needs.

Mean Independence Using Two-Word Phrases

