

AUTISM SPECTRUM DISORDER SERIES

Five Things Every Teacher Must Know about Their Students with Autism

By

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This article discusses five tenets central to the creation of effective instructional practices for children with autism. The ideas presented have support from both the professional literature and the experiences of the authors and include: (a) recognizing heterogeneity; (b) appreciating comprehension-production discrepancies; (c) utilizing visual supports; (d) understanding emotional dysregulation; and (e) intervening through strengths/preferences. It is the authors' contention that these tenets provide a foundation for any instructional efforts and are applicable to all members of school communities.

Abstract

This article discusses five tenets central to the creation of effective instructional practices for children with autism. The ideas presented have support from both the professional literature and the experiences of the authors and include: (a) recognizing heterogeneity; (b) appreciating comprehension-production discrepancies; (c) utilizing visual supports; (d) understanding emotional dysregulation; and (e) intervening through strengths/preferences. It is the authors' contention that these tenets provide a foundation for any instructional efforts and are applicable to all members of school communities.

Five Things Every Teacher Must Know about Their Students with Autism

The Centers for Disease Control and Prevent (CDC) recently shared data collected from eight-year-old children in 11 states suggesting that the current prevalence of autism is 1 in 68 (CDC, 2014a). This figure represents a 120% increase from statistics reported just 13 years ago (CDC, 2014b). The rise in autism prevalence paired with the push for inclusive schools (Causton-Theoharis & Theoharis, 2008) is increasing the number of children with autism in regular education classes. While these children exhibit varied strengths, most will present significant educational, social-communication, and behavioral needs.

Today's teacher faces many pressures. Flannery (2010) reports teacher challenges created by student overpopulation, technological innovations, bullying, state and federal requirements, varying parent involvement, low salaries, poor child health, and limited financial resources. Added to this daunting list is the need to create effective learning environments that span a continuum of inclusiveness for all children, including those on the autism spectrum. Unfortunately for many teachers, inclusive educational demands have come without adequate preservice or inservice training (Rosenzweig, 2009).

The purpose of this brief article is to share five tenets central to the creation of effective instruction for children with autism. These come from both the professional literature and the over 80 years of collective experience accrued by the authors, all speech-language pathologists who have worked or currently work in school settings. The ideas raised here are intended to provide a foundation for any instructional efforts, and as such, should be applicable to all members of school communities (school personnel and student peers). This said, our article specifically targets classroom teachers.

Tenet 1: All Children with Autism Are Different

You may have heard it said that if you have met one child with autism, you have met one child with autism. This is all too true. Although this paper shares several behaviors or observations common to children on the autism spectrum, no specific manifestation of characteristics is evident in every child. This variability is apparent in how the Diagnostic Statistical Manual (APA, 2013), the premier source for autism diagnosis, provides numerous illustrative examples in its diagnostic criteria. While there are core deficits such as impairments with imitation, joint attention, and play skills (Kasari, Freeman, Paparella, Wong, Kwong, Gulsrud, 2005), the appearance and severity of these deficits will vary.

What is a teacher to take away related to individual variance in autism? We suggest teachers view every child individually. By doing so they will allow time to observe both strengths and needs before applying solutions based on commonly held assumptions. Careful observation will lead to more authentic and practical instructional solutions.

After advising caution with general solutions, we recognize that our four remaining tenets emerge from general assumptions about the population. Of course, the application of these and any other ideas impacting instruction should occur after careful reflection related to individual need.

Tenet 2: Don't Assume Comprehension Based on Expressive Ability

Speech-language pathologists often use the terms content, form, and use to describe expressive language (Bloom & Lahey, 1978). Form describes structure (e.g., both the sounds produced and the overall subject-verb-object framework of sentences) while content describes meaning. Use, in contrast, denotes interpretation dictated by context. If a child offers the utterance "I don't have any milk" while looking at a parent in the kitchen, the sentence framework and the pronunciation of sounds are the form, words convey meaning, and the context allows for interpretation as an indirect request.

For many verbal children on the autism spectrum, language form is a relative strength, apparent in both speech clarity (Bartolucci, Pierce, Streiner, & Eppel, 1976; Kjelgaard & Tager-Flusberg, 2001) and the use of more advanced grammatical constructions (Park, Yelland, Taffe, & Gray, 2012). One might question how a strength (albeit a relative strength) in form emerges in this population. Ogletree (2016) describes one possible explanation in his discussion of gestalt or holistic processing preferences in persons with autism.

Most communicative partners of verbal individuals on the spectrum have experienced echoed phrases, sentences, or even short narratives. According to Ogletree (2016), the ability to echo may reflect a gestalt language acquisition and processing style that considers language units as wholes rather than as parts. Gestalt strategies are often evident as young children move from not speaking to using entire phrases. A gestalt language learning style can be an alternative route to productive speech and language (Ogletree, 2016).

While echoes often convey meaning within context, they can occur without comprehension. For example, a very young child might regulate herself as she puts down an electrical plug by saying a sentence she has heard before: “You better stop that right now.” However, she may not comprehend the meanings of the individual words and sentence framework she produced, particularly if they appear in a different context. That is, the individual with autism may not understand language at the same complexity level at which they are capable of using it expressively.

Limited comprehension can also be related to relative weakness in the area of language use. Commonly referred to as pragmatic or social impairments, deficits in understanding others’ language use are frequently observed in children on the autism spectrum (Koegel, 1995). For example, children may fail to comprehend facial expressions, subtle gestures, non-literal language, and meanings expressed through paralinguistic and extralinguistic aspects of communication (e.g., proxemics, pitch, tone of voice, loudness), which are all critical components of communicative messages.

Teacher advice from this tenet is to probe for comprehension. While the comprehension-production gap has been reported to close as children with autism become older (Kjelgaard & Tager-Flusberg, 2001), teachers and other communicative partners should assess and support comprehension as a means of improving communicative competence. Informal comprehension assessment can be as simple as probes in which teachers ask students to: (a) follow directions that contain the words the student (or teacher) uses; (b) define words the student or teacher uses, or (c) say things in a different way. “Word logs” may also help with tracking unusual expressive offerings which, in turn, could be probed for comprehension. More proactively, words and concepts in academic material (e.g., the language of mathematics such as “sum”, “multiply,” “divide” or “compute”) could be introduced through manipulatives and comparative examples to support comprehension. For example, the word “sum” could be presented with the word “add” during physical activities illustrating summation. With respect to assessing comprehension of others’ social and pragmatic use of language, teachers may ask students what they suppose others may be thinking and why. Support for this type of comprehension (e.g., the comprehension of facial expressions) can come in the form of visual cues, an appropriate segue for our next tenet, the use of visuals.

Tenet 3: Be Visual, Be Visual, Be Visual

For some time, theorists have suggested that persons with autism prefer static over transient stimuli (Schuler, 1995; Ogletree, Morrow-Odom, Westling, 2013). This premise has provided support for the instructional use of visuals. Possibly the most well-known application of visuals is the use of visual schedules. These typically use objects or two-dimensional representations to depict the flow of an activity or event.

Activity schedules illustrate the sequence of the activity from start to finish, allowing the individual with autism to progress, with visual cuing, to task completion. An example might be completing a word wall representing a geography story. The schedule would represent each step of the activity from beginning to end (e.g., finding the story online, printing it, searching for relevant words, enlarging words, changing word fonts to create an attractive display, cutting out words, and assembling words on the wall). The child using this activity schedule would be directed to the schedule as needed to complete each step of the task.

Event schedules represent the sequence of a day’s activities. This type of schedule application depicts each major activity of a day to assist with ongoing transitions. For example, as a child arrives at school there is typically an initiating activity and a fairly predictable sequence of activities that follow until the day ends. A visual representation of each activity assists with more seamless transitions for children who struggle to move through necessary daily events. Simply stated, activity and event schedules provide expectation and predictability for students.

There have been several other instructional applications of visuals. One of this article’s co-authors has used strategies as simple as a written word on a magic slate or index card to promote comprehension and verbalizations related to questions. For example, she presented a child with significant echolalia “yes” and “no” cards when asking questions as a means of prompting a relevant response rather than an echo. She also used other simple visuals to signal students to listen (a hand to the ear) or look (a drawing of eyes) during group lessons (e.g., reading groups, PE instruction).

Finally, this author teaches the use of “who” questions through written scripts. In this example, the script is used to set up a question within dialogue and the written word “who” is used to prompt the child’s question.

Video modeling is still another visual application that assists with comprehension, social-skill attainment, and task completion (Janzen & Zenco, 2002). In today’s age of the computer tablet and smart phone, videos can easily be created and shared to demonstrate a desired skill or introduce a new experience. For example, a video illustrating exercising or running around the bases could promote participation in these activities where the child has not been successful before.

A final example of the benefits of visuals in instruction comes from the work of Shane, Obrien, and Sorce (2009). These authors describe the ubiquitous use of the Visual Graphic Language System to encourage the expression and understanding of seven communicative functions: protesting/refusal, organization/transition, requests, directives, comments, questions, and social pragmatics. In sum, visuals are paired with all receptive and expressive communication attempts to support success. Shane et al. suggest that the level of users’ communicative competency should be used to determine how visuals are delivered, e.g., through manual signs, gestures, or photographs.

Takeaways from this tenet are simple. First, identify opportunities throughout the day where visuals may support communication or instructional success. This should be a team activity. That is, teachers and other educational/support staff should have this discussion collectively. Working interprofessionally typically results in multiple perspectives and can contribute to more integrated service delivery. Second, determine what types of visual supports will assist individual learners. Obviously, some children on the autism spectrum will understand symbolization and benefit from abstract symbol forms like print, while others may need the more iconic support provided by pictures or objects. Finally, identify a common set of instructional techniques to introduce visuals and schedule specific windows of time for their use. This provides a greater likelihood of consistency across instructional partners and assures some use of visuals during what can be very busy teaching days.

Tenet 4: Behaviors can Result from Emotional Dysregulation

The new DSM criteria for autism (APA, 2013) provide an entire classification section describing restrictive and repetitive behaviors. These include but are not limited to stereotypic movement or object use, inflexibility with routines and activities, fixations/preoccupations with objects, and unusual sensory responses. Historically, these types of behaviors have been recognized as both a source of family stress and a significant impairment to learning (Dunlap, Dyer, & Koegel, 1983; Gabriels, Cuccaro, Hill, Ivers, & Goldson, 2004). Accordingly, one can understand why these behaviors have been discouraged and targeted for elimination (Foxx & Azrin, 1972).

More recently, many behaviors observed from children with autism have been associated with a dysregulated state. Emotional dysregulation can be defined as the failure to modulate emotions effectively and, though not a core feature of autism, has been tied to behavioral responses such as anger, avoidance, and restrictive and repetitive actions (Samson, et al., 2013). Interestingly, people without disability exhibit behaviors when stressed or anxious as a means to obtain optimal states of arousal and responsiveness (DeGangi, 2000). Some might tap a pencil, while others kick their leg or twirl their hair. Still others may bite their nails or pace back and forth. If we consider the possibility that many of the more troubling behaviors observed in children with autism are in some way analogous to those we exhibit, they become easier to accept and new avenues for intervention can be considered.

Increasingly, many interventions address the concept of emotional regulation. The Social Communication Emotional Regulation and Transactional Support (SCERTS) model incorporates emotional regulation through goals promoting self-regulatory and mutual-regulatory abilities (Prizant, Wetherby, Rubin, & Laurent, 2003). Self-regulating activities can include the introduction of calming or excitatory movements depending upon the needs of the learner (i.e., their state of arousal). In contrast, an activity targeting mutual regulation may be the instruction of vocabulary describing feelings or requesting attention. The acquisition of “feeling” and “attention-getting” words provide the child tools with which to draw others into their efforts to be regulated.

One author of this paper regularly observes self- and mutually regulating strategies in her school. Self-regulating examples include the use of a small trampoline in a class for a child who needs to become more aroused and engaged, or a calming corner for students who become agitated. A mutually regulating example includes the creation and instruction of a symbol array depicting feelings (e.g., a happy face, a frustrated face, and a nervous face) that the child uses to communicate emotional state and/or request assistance. In these examples, solutions were instigated after careful consideration of the regulatory needs of each child.

The central takeaway from this tenet is that behavior is not necessarily a reaction to someone else's actions. It may well be a child's reaction to his or her own dysregulated state. Learning to alter emotional states should be a team activity. One author of this article suggests that all behaviors should be addressed through a behavior intervention plan generated by a team consisting of behavior specialists, speech-language pathologists, occupational therapists, and classroom/special-education teachers.

Tenet 5: Build on Strengths and Preferences

The final tenet of this paper is a call to strength/preference-based instruction. Too often educators and related service personnel have focused on what children with autism cannot do or do not do well. This is deficit programming. Deficit instruction has several drawbacks. First, it identifies the recipient of services as, for lack of a better word, defective. This orientation contributes to a general perception of disability rather than ability. In a world where the ultimate goal for individuals with autism is success within society's mainstream, emphasizing abilities is important. Second, deficit programming works from weakness. Targeting deficits puts interventionists in the unenviable position of "playing from behind." This sports metaphor emphasizes the uphill climb so often associated with deficit-based instruction. Finally, targeting weaknesses often fails to address the more socially valid needs of children. If our strategic orientation is simply to identify and then remediate weaknesses (characteristic of the medical model (Sullivan, 2011)) we may well be ignoring how our efforts are supporting meaningful change in children's lives. For example, if a speech-language pathologist identifies a weakness in the use of a specific grammatical structure, successful intervention related to this structure does not assure communicative outcomes that make a difference. In sum, intervention must lead to meaningful, socially valid outcomes for children.

The alternative to deficit programming is strength/preference-based instruction. This type of teaching is premised on the assumption that all children have strengths/preferences, and that strengths provide a springboard for student success (Lopez & Louis, 2009). As emphasized earlier in this paper, children with autism make up a heterogeneous population with varying abilities. As such, we should expect to see a range of student strengths/preferences. Identifying strengths/preferences and applying strength-based instruction requires us to view children positively. This may be challenging but is worth the effort.

Authors of this article have used several student strengths/preferences in intervention programming for children with autism. For example, one author used a student's interest in reptiles (an unusual strength/preference) to encourage the completion of a group project on the life of presidents in the 19th century. Students in the group were assigned different aspects of life in the 1800s, and the child with autism discussed climates and wildlife (including reptiles) indigenous to presidents' home regions. An example more specific to speech and language involved promoting the use of a voice output communication aid (VOCA). The child in this example reached for and touched desired objects as a means of requesting. This, however, was not effective in larger groups where his choices were not seen by others (as in places such as physical education class). A VOCA was introduced, and the child was expected to reach and touch symbols (his strength) to generate a voice response, allowing for more authentic group participation (e.g., the selection of games and activities). A final example involved a child with unusual reading ability being assigned the task of oral reading (her strength) in a group of other children. In this situation, group members provided excellent explanations of word meanings for the child with autism, who often did not understand words she could read fluently.

A takeaway from this tenet is a call for us all to question deficit-based beliefs and practices about children on the autism spectrum. Although this can be difficult, it is the right thing to do. Once we are identifying children's strengths/preferences, we also have to be creative about how to use them to achieve meaningful, socially valid outcomes.

Concluding Thoughts

The authors of this article recognize the myriad challenges facing today's teachers, including those associated with instructing children on the autism spectrum. While we do not have all the answers, it is our hope that the tenets discussed and illustrated here provide motivation and direction for instructional innovations with this special population.

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