



Get Engaged: Designing Instructional Activities to Help Students Stay On-Task

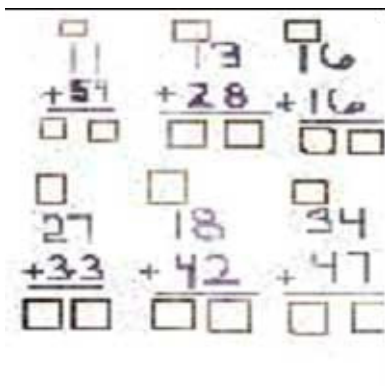
Contributed by Kara Hume

The amount of time a student with an autism spectrum disorder (ASD) is actively attending to and interacting with his/her environment has been cited as one of the best predictors of positive student outcomes (Iovannone, Dunlap, Huber, & Kincaid, 2003). When a student is engaged it is more likely that connections are being formed, productive routines are being created, and interactions are occurring. When unengaged, students lose out on important learning opportunities and may become distracted, disruptive, or may demonstrate challenging behaviors. When these challenging behaviors occur, it is important that elements in the environment are examined—including variables related to the curriculum. Curricular variables may include the length of the instructional activity, the difficulty of the content, the types of materials, the organization of the task, and/or the relevance of the information presented (Dunlap, Kern, & Worcester, 2001). Following are some practical strategies, supported by research, designed to increase active involvement in students with ASD by modifying the instructional activities.

Deliberate Design

Engagement of students with ASD is less likely unless careful planning in the design of educational materials and activities occurs. Traditional teaching procedures and resources, such as standard lectures and worksheets, may not be appealing or easy to understand for students with ASD. Several additional considerations may be required.

Organization: Students with ASD may have greater difficulty in organizing and sequencing materials due to deficits in executive functioning (Mesibov, Shea, & Schopler, 2005) and/or challenges in modulating sensory input. Worksheets with a great deal of information, or large quantities of materials that may fall or become mixed together may be distracting or overwhelming for students. It is often necessary for staff members to assist in organizing materials, and to present them in a minimally stimulating manner. The placement of materials in containers, folders, baskets, or trays may be beneficial, as well as limiting the amount of information and size of the work space to reduce stimulation.



Organization of a math worksheet: limited number of problems and limited amount of space; worksheet is organized so student knows where to put responses.



Organization of an alphabetizing activity: materials are placed in containers and stabilized on tray; limited letters (A-E); no extraneous information; work space is defined.



Organization of an art activity: steps are listed sequentially for student to follow.



Organization of desk area: all materials are placed in color coded folders and binders; school supplies are placed in a container on the desk.

Clarity: Students with ASD may also have difficulty interpreting the importance of information and give undue attention to details (Mesibov et al., 2005). It may be necessary to emphasize the most important aspects of the task or activity in an effort to make the meaning more salient. This may require the use of color coding, numbering, highlighting, or adding additional visual cues.



Clarifying the sequence of steps: numbers (along with the container) are used to identify the order of steps in setting the table.



Clarifying the item to recycle: both pictures and an example of the actual object are used to highlight what item should be placed in each drawer.






Clarifying the name when sorting mail: both pictures and written words are used to highlight where mail should be delivered.

Wide Range of Materials

Using a variety of materials is important for students with ASD for several reasons. Students may become rigid in their use of a material if a range of options is not presented. For example, if students are learning to sort objects by color and only colored bears are used, the skill may not generalize to sorting colored paper, colored socks, or colored cubes. Using multiple exemplars for each skill is essential if generalization is to occur (Horner, Dunlap, & Koegel, 1988). A range of materials can also make the difference between students simply being present, and students participating and being engaged (Kluth, 2003). When a variety of materials are used, students have a chance to be successful and learn in a way that suits them.

Several studies have indicated that varying materials can decrease challenging behavior and increase time on-task (Kern, Childs, Dunlap, Clarke, & Falk, 1994; Dunlap, Foster-Johnson, Clarke, Kern, & Childs, 1995). Kern et al. (1994) found that when a student was asked to complete tasks requiring fine motor skills, he engaged in challenging behaviors. When a laptop computer or tape recorder were provided, self-injury decreased and all assignments were completed. Similarly, Dunlap et al. (1995) found that when a student was required to assemble ballpoint pens, problem behavior occurred. When the materials were changed, and the student assembled sandwiches instead, on-task behavior increased. Kluth (2003) provides some examples:

IN ADDITION TO TRYING:	TRY USING:	
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<p>Books</p>	<p>Adapted books (laminating pages, rewriting text to make it easier or more relevant), magazines, comic books, advertisements, audio books, movies</p>	
<p>Worksheets</p>	<p>Adapted worksheets (highlight information), laminated sheets and EXPO marker or grease pencil, small chalkboard or wipe board, overhead projector</p>	
<p>Pencils</p>	<p>Computer, typewriter, rubber stamps, magnetic letters or words, pencil grips</p>	

Incorporate Strengths and Interests

When designing instructional materials it is essential that the strengths and interests of students with ASD are considered. The inclusion of both elements will assist in increasing both student understanding and motivation.

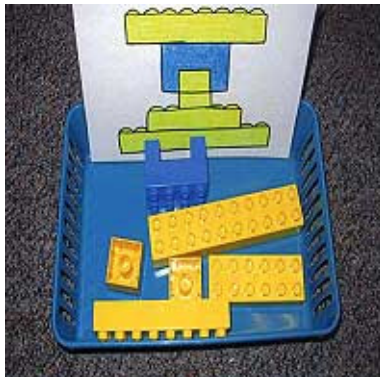
Visual Information: There is substantial evidence that students with ASD have strengths in processing visual information in comparison to processing language or auditory information (Mesibov et al., 2005; Quill, 1997). When instructions related to a task or assignment are given verbally, students with ASD may have difficulty understanding and responding quickly and appropriately. Providing the information visually, embedded within the activity, instead allows students to continually refer to the instructions and have a clearer understanding of what is expected. Providing the information visually capitalizes on the strengths of students and provides more opportunities for the student to practice the skill independently (without relying on verbal directives from staff). Visual instructions may be given in many forms—from more concrete (the materials indicate what is expected) to more abstract (written words).



The materials define the task.



A jig shows the layout of materials in their correct sequence.



A product sample.



A written list with pictures.

Relevance: Incorporating the unique interests of students with ASD into the content and/or layout of instructional activities is another strategy to increase both engagement and meaning. Capitalizing on student interests can provide motivation to complete activities, and students may find the activities more reinforcing than traditional social reinforcement from staff members or peers. The areas of interest may be incorporated subtly (i.e., picture of a Power Puff girl hidden on each text book page) or overt (i.e., the content of the word problems is related to Power Puff girls). Kern et al. (2000) found that students were more likely to complete activities, such as worksheets related to the concepts of “same” and “different” and counting, if Power Ranger pictures were used instead of the standard drawings. A decrease in challenging behavior and an increase in productive behavior was also noted. Including the preferred cartoon characters may have helped to impose meaning into an activity that may have previously lacked importance.



Reading comprehension activity using Thomas the Train.



Fine motor lacing activity incorporating Dora the Explorer.



Packaging activity featuring McDonalds products.

Tips When Making & Using Engaging Instructional Materials

- Consider how all students may benefit from the modifications described above—not just students with ASD.
- Think about how materials can be used across curricular areas or for more than one purpose to ensure the most use.
- If adaptations are not possible for all activities, think about using task interspersal—interspersing activities that have a lower interest level with those that carry a high interest level. Staff is likely to see improvement in on-task behavior using this strategy.
- Think creatively about how activities can be made. Use parent volunteers, student helpers, scout troops, and/or community members. On-line resources such as www.do2learn.com, www.preschoolfun.com, and <http://members.aol.com/Room5/tasks.html> may be helpful, as well as products found at www.tasksgalore.com and www.hot-ideas.org.
- Consider how you might share resources with other teachers or create an activity lending library in your building/district.
- Instructional activities should relate to your individual assessments of student needs and the curriculum used by your school/state.

References

Dunlap, G., Foster-Johnson, L., Clarke, S., Kern, L., & Childs, K. (1995). Modifying activities to produce functional outcomes: effects on disruptive behavior of students with disabilities. *Journal of the Association for persons with severe handicaps*, 20, 248-258.

Dunlap, G., Kern, L., & Worcester, J. (2001). ABA and academic instruction. *Focus on Autism and Other Developmental Disabilities*, 16, 129-137.

Horner, R., Dunlap, G., & Koegel, R. (1988). *Generalization and maintenance: Lifestyle changes in applied settings*. Baltimore, MD: Paul H. Brookes.

Iovannone, R., Dunlap, G., Huber, H., & Kincaid, D. (2003). Effective educational practices for students with autism spectrum disorders. *Focus on Autism and Other Developmental Disabilities*, 18, 150-166.

Kern, L., Childs, K., Dunlap, G., Clarke, S., & Falk, G.. (1995). Using assessment based curricular intervention to improve the classroom behavior of a student with emotional and behavioral challenges. *Journal of Applied Behavior Analysis*, 27, 7-19.

Kern, L., Delaney, B., Clarke, S., Dunlap, G., & Childs, K. (2000). Improving the classroom behavior of students with emotional and behavioral disorders using individualized curricular modifications. *Manuscript submitted for publication*.

Kluth, P. (2003). *You're Going to Love This Kid*. Baltimore, MD: Brookes Publishing.

Mesibov, G., Shea, V., & Schopler, E. (2005). *The TEACCH approach to autism spectrum disorders*. New York, New York:: Plenum Press.

Quill, K. (1997). Instructional considerations for young children with autism: The rationale for visually cued instruction. *Journal of Autism and Developmental Disorders*, 27, 697-714.

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