Individualized Educational Support Strategies for Students with Autism in Inclusive Classroom Settings

by Landry Fukunaga, G.A
Shannon Simonelli, PhD
Laurie Sperry, PhD

Overview

Over the last 20 years, research in the field of education has provided teachers with more information about effective interventions and strategies for students with disabilities. Current trends in education are moving toward more inclusive educational experiences for children with disabilities, alternative learning styles, and differentiated instructional practices to support all students to succeed (Yell & Katsiyannis, 2003). As more and more special needs students are being mainstreamed into general education classrooms, teachers are faced with the difficult task of meeting their specialized needs, while still providing a challenging experience for all students in the class. There have been opportunities to learn about autism from the experiences of parents of children with autism, adults with autism, and from current research on effective interventions and inclusive educational programs. Although various professional development opportunities exist, many questions still remain regarding how to best provide effective services in inclusive classrooms (Grandin, 2002; Schwartz, Billingsley & McBride, n.d.). This brief presents current research on strategies for including and accommodating students with autism spectrum disorders in inclusive classrooms.

Autism in a nutshell

Autism Spectrum Disorders range from mild to severe and are marked by impairments in social interactions, communication, and restricted interests and/or activities (DSM IV, 1994). Because autism is a spectrum disorder, it encompasses a wide continuum of behavior and symptoms range from mild to severe. Asberger's syndrome is a mild form of autism. Impairments in social interactions and communication can include inability to sustain conversations, difficulty making friends in age appropriate peers, lack of empathy, reduced eye contact, and language that develops slowly or not at all (Dunlap & Bunton-Pierce, 1999). As a result of deficits in communication and language development, students with autism may rely predominantly on visual input as a way to acquire new knowledge. This is contrary to typical modes of instruction in regular education classrooms that utilize lectures and class discussions as the

Contacts

For additional copies
of this brief go to:
www.sig.hawaii.edu/
final_products

Robert Stodden Ph.D.
Center on Disability Studies
UHM, (808) 956-9199
stodden@hawaii.edu

Carolyn Hamada
Educational Specialist DOE
(808) 733-4832 x 255
carolyn_hamada@notes.
k12.hi.us

Shannon Simonelli Ph.D.
Center on Disability Studies
UHM, (808) 956-8710
simonell@hawaii.edu

Judy Nagasako
Resource Teacher –
Character Education,
(808)735-8250 x349
judy_nagasako@notes.
k12.hi.us

primary mode of instruction (Scott, Clark, & Brady, 2000).

What is particularly challenging for a student with autism is that they have difficulties communicating with others and may not be able to convey when they don't understand a lesson nor ask for help when it is needed. A student with autism may also lack empathy or the ability to self-reflect on how other's perceive them (Klin & Volmar, 2000). This can make it challenging for these students to read social cues and function appropriately in the social situations of a typical classroom. As a result, teachers who work with students with autistic spectrum disorders may be required to read a student's nonverbal cues, predict problem situations, and develop a communication system to increase learning and understanding (Mesibov & Howley, 2003). For many teachers, especially those who are working to integrate students with autism into their general education classrooms, this can be a time consuming and arduous task. Another challenge for educators is that individuals with autism are known to have splintered skills, which means that they excel in some areas of learning, such as reading or mathematics, but perform far below their developmental level in others (Scott, et al., 2000). Since many cognitive skills are mastered sequentially, a severe delay in one area of learning (such as reading comprehension) can affect learning across all domains. It may also require that the teacher assign different assignments to a student with autism who is performing far below the developmental level of other students only on certain subjects.

Paraprofessionals such as skills trainers and educational assistants are an asset in the classroom and can help manage a student's behavior and work with students on individualized tasks tailored to build on the student's current level of functioning. However, working one on one with a paraprofessional may also put a student at risk of becoming prompt dependent (Scott, et al., 2000). As educators, we need to constantly ask ourselves: How are we going to facilitate a transition to more independent functioning? Have we set a timeline for that transition? What criteria will indicate that this student is ready for a reduction in the amount of one on one support? (Freschi, 1999). Therefore, the most effective classrooms provide for a balance between group instruction, one on one assignments, and work that promotes interaction between students.

Strategies to promote inclusion

There are several strategies a teacher can employ to help serve a wide range of individual needs, strengths and learning styles within a regular classroom that don't require a tremendous amount of additional work during an already busy school day. These include planning techniques, organizing learning environments, mastering instructional delivery that reaches students of different abilities, and evaluating the effectiveness of teaching strategies (Scott, et al., 2000). These strategies can be especially valuable in including students with autism, but may also be helpful in supporting many students with diverse needs.

Schwartz, Billingsley, & McBride (n.d) suggest several strategies to help teachers include students with autism in general education activities. They include:

1. **Teaching communication and social competence.** Interaction and communication with peers is a vital aspect of inclusive education and without these elements, inclusive classrooms provide for little outside of parallel instruction. Include social skills practice and role play in individual, self-directed student activities for students with autism. In groups, embed the material throughout the day in small groups, opening circle, gym and free choice to provide for practice and mastery of peer-related social skills through the use of cards that help students to participate using a script to prompt conversation

and by assigning partners during group work as students with autism are often left unselected due to underdeveloped social skills. A simple application by the Learning Experiences: An Alternative Program (LEAP) is to assign one student a day to be the "snack captain" who passes out snacks to every child once they have asked politely. This provides an inclusive opportunity for interaction between peers, even for students who require prompting to request their treat (Bovey & Strain, n.d.)

2. **Including personalized IEP goals into the natural flow of classroom instruction.** It is relatively simple to tailor an assignment originally created for the whole class to include one or two goals from a student's IEP. For example, including a small matching assignment for a student with autism who is working on matching emotional states or the functions of objects into a larger assignment where the students are creating a collage. The student with autism could match 5 or 6 corresponding pictures given by the teacher correctly, before going on with the larger assignment and choosing pictures he favors for his collage.

3. **Teaching and providing opportunities for independence.** By giving students with autism the freedom to explore, interact with their peers, and participate in general education activities throughout the day, they will have opportunities to independently work on functional social skills and communication. Skills trainers and classroom aides are there to support the students, but it is important to make certain that they do not become dependent on these adults. The use of daily schedules can also help to teach independence and build useful routines.

4. **Creating a classroom environment that includes all children.** Activities that help to involve all students with a broad range of abilities are those that are open-ended and support a variety of responses, are child directed, and teacher supported. Group activities are an excellent way to promote student membership by ensuring that every child has a role, either in a large or small setting. Allowing students with autism the chance to freely interact with peers during group work with support also enhances the feeling of being on the same level with other students.

5. **Generalizing and maintaining new skills.** The wide range of activities that students participate in within a general education classroom require that new skills be both generalized across different situations and maintained over time. A useful strategy for teachers is to apply new skills across a variety of settings and activities, using varying materials that are available in the general education classroom.

Differentiation tactics for including students with autism

For many educators, students with autism are among the most difficult students to reach because of their distinctive learning styles (Scott, et al., 2000).

Structured Teaching is an instructional strategy created by the Treatment and Education of Autistic and other Communication handicapped CHildren (TEACCH) program, a statewide autism learning and support project in North Carolina that helps students with autism to overcome organizational deficits and respond more appropriately to their environments (Mesibov, Schopler, & Hearsey, 1994). The elements of structured teaching can easily be applied in a special education classrooms or inclusive settings. These elements include:

Physical layout of the classroom

An organized layout in any classroom should have clearly marked areas for different activities such as individual work, group time, transitions, technology, and free play to help eliminate distractions and help students with autism to focus on the task at hand.

Building on our strengths: What's Working in Autism

by Laurie Sperry, PhD

A Sample of Capacity building at the Preschool and Intermediate school level

The Hawaii Department of Education (HDOE) has invested in developing a number of practicum sites across the state with the primary purpose of establishing a structured teaching practicum site to provide exemplary services to students with Autism Spectrum Disorders. [These sites are NOT autism centers. Rather, by establishing a model practicum program, HDOE is able to utilize these sites in the continuing education of their new and existing staff. The overarching goal of these programs is to build capacity at the school level and educate and support families. The program is run in collaboration with the District Autism Consulting Teachers and their efforts.]

These programs are at the preschool in Likelike Elementary and at Mililani Intermediate School. The preschool site was chosen because early identification and intervention is critical in the treatment of young children with ASD (Bristol, et al., State of the Science Report on Autism, 1996). The structured teaching program focuses on working with the current staff to enhance their existing programs through consultative visits from an outside consultant followed by a collaborative discussion with the staff to assist in the incorporation of autism best practices into the existing early childhood program. At both sites, the curriculum focuses on developmentally and chronologically appropriate activities with importance placed on developing communication, play/leisure, social skills, and academics and incorporating the child's interests and motivations. To date, practicum participants have included other intermediate school teachers and educational assistants. In an effort to facilitate the successful transition of one student to a high school setting, the entire receiving staff at the high school also participated in the practicum and spent a great deal of time getting to know and work with the student who will soon be part of their classroom.

The first goal of the practicum sites is to involve parents and families as a critical component of the program. Numerous characteristics associated with autism could be considered developmentally disruptive and subsequently impact family functioning (Sperry & Symons, 2002). Research has shown that parents of children with autism report higher levels of stress when compared to parents of typically developing children (Donnenberg & Baker,1993) and also reported more stress than parents of children with other disorders (Holyroyd & McArthur, 1976). For these reasons, it is essential that families and caretakers be provided with the tools and skills necessary to participate to the fullest extent possible in the treatment and day-to-day teaching of their child with autism. This program incorporates parent and staff collaboration in the development of goals and objectives to ensure that both the home and the school are working from a common understanding. The Hawaii DOE provides both a district Autism Consultant and a Social Worker to work in the family's home, providing support and parent education. Additionally, parents attend a parent briefing and are invited to work with their child and the teacher within the classroom.

The second goal of this program is to provide mentoring for staff working with children with ASD. As autism is a spectrum disorder, with each child presenting a unique set of skills and challenges, the need for professional development activities is ongoing. Therefore, training and onsite consultation is made available to direct care staff and district staff who come to observe the program. Teachers are selected from the dis-

trict to participate in a practicum that entails 1 day per week of hands on training at the practicum site for a period of 3 weeks. During this time, practicum participants are expected to accomplish a standard set of training competencies and complete a number of assignments. The district Autism Consultant is available to work with the teachers before, during, and after their practicum experience to assist them in implementing the best practice strategies they learned from the practicum site.

The overarching goal of this program is to build capacity, at the child level, at the family level, and at the direct care staff level. These programs run in cooperation with the District Autism Consulting Teachers and their efforts. These sites are NOT autism centers. Rather, by establishing a model practicum program, HDOE is able to utilize these sites in the continuing education of their new and existing staff.

An Example of Differentiating Curriculum for Students with Autism

International Day at Mililani Intermediate School is about learning to appreciate the differences of other cultures. With the theme of diversity in mind, teacher Sara Vidad-Castillo and her educational assistant Jelna Shelton decided that their fully self contained (FSC) class of students with autism spectrum disorder (ASD) would participate. Their goal was to present on the country of Japan to two other classes, but this meant that they had to consider the students' different learning styles and various strengths. An integral aspect of differentiation is building on student strengths and interests. For this reason, Japan was chosen because it reflected one of the student's specific interests. The class worked diligently for weeks, studying, preparing, and practicing their presentations.

When International Day finally arrived, modifications were made to the presentation format to ensure the successful participation of the entire class. To create an environment where the students would be most likely to succeed, they were allowed to present first, they were seated close to the front of the room so that they could see and attend to the other presentations, and they were allowed to use a table foe their visual supports and for one student's assistive technology device (Lightwriter). The students also wore Happi coats and Hachimaki on their heads.

Each student had a distinct role in the presentation to guarantee the participation of every student. One student who uses a Lightwriter was verbally asked questions about Japan's economy. Visual cue cards were ser out and after the student listened to the question, he typed in the answers and his Lightwriter provided a voice output which allowed the audience to hear his portion of the presentation.

Another student accomplished his IEP objective of speaking in sentences when he presented his aspect of Japanese culture. He used the display board to point to various Japanese foods. He then turned to the audience to explain, "These are the foods they eat in Japan. They eat soba. They eat rice."

The class also has a student with limited language capabilities. This student presented on hobbies and interests in Japan by matching Velcro labels to the corresponding pictures on the board. Another student who has high functioning autism read from a script he helped to prepare on Japan's history and culture.

This class project is an excellent example of utilizing the concept of differentiated curriculum to match the needs and abilities of the learner. Mrs. Vidad-Castillo and Mrs. Shelton are to be applauded for their creativity and dedication.

Appropriate work areas

When selecting the location of a student's individual work area, it is important to take into account the natural distractions present in the classroom. Students with autism have a tendency to be distracted by sights and sounds, therefore a student's work area should be placed where there are a minimum number of potential distractions, such as away from a window, close to the front of the room or teacher's desk, and in areas with plain walls and less visual stimuli. Keep in mind the dynamics of each distinct classroom and account for individual student preferences. In some cases, a teacher's desk may be the busiest area of the classroom or it may be necessary to keep a child who runs away far from the classroom door.

Visual schedules

Visual schedules help students with autism to predict daily events and build a routine. TEACCH classrooms use both general classroom schedules that outline the entire day for the whole class, and individual student schedules that explain what to do during the activities listed on the general schedule. Schedules are tailored to each student's comprehensive ability and can utilize words, pictures, numbers, or objects based on the capability of each student. Individual student schedules can be placed in a notebook or on a student's desk in inclusive settings and can also help students to maintain focus and complete undesirable work when they understand that a more desirable activity is next on their schedule for the day.

Individual work systems

Work systems are an integral aspect of differentiating instruction to include students with autism as they communicate what is expected for an assignment, and help them to organize themselves and complete their tasks. The most effective work systems present information visually and communicate: 1) what to do, 2) how much they are expected to do, 3) how to know when the task is finished, and 4) what to do when the work is finished. For higher functioning students, a work system could be a simple visual sequence that corresponds with the work the other students are doing. For students who are just beginning to work independently, putting an assignment in a shoebox with sequenced cards can help the student practice initiating the assignment and completing the entire task. The shoebox also signifies when the assignment is finished by closing the lid and putting the box back where it belongs.

Visual Aids are especially helpful for students with autism who have difficulty communicating and comprehending verbally (Mesibov, et al., 1994). Visual aids to promote understanding of lectures or tasks can include an outline of the lesson, a pre organized notebook, a transcript of the lecture, a schedule of tasks for the assignment, or a list of the work to be finished during that period (Scott, et al., 2000). Visually clear materials are also especially appropriate for students who have difficulties attending. By providing visual aids to accompany an assignment, a student is able to look at the material during the presentation, understand the assignment if they were not attending when it was presented, and refer back to it as needed.

Simple visual instructions are another effective strategy for teaching students to look for and follow instructions that builds on their visual strengths (Mesibov, et al., 1994). It is important to create instructions that are not too wordy to improve understanding. Also, creating instructions that are visually differentiated from the rest of the assignment will aid

in drawing their attention to the instruction first, perhaps placing them at the top of the page or as the first card in a sequenced assignment, using bold type, or creating a border that separates it from the remainder of the page. When students with ASD learn to search for instructions in all activities and assignments, they can more effectively complete their work using this information (Mesibov & Howley, 2003).

   Tiered Assignments are another way to include all students, not only those with disabilities, but also those with capabilities. Tiered assignments are based on the core idea or concept of the lesson, while creating multiple pathways to learn the material and assess learning. Multiple pathways to learning build on the theory of Multiple Intelligence which asserts that students learn in different ways which include verbal, musical, interpersonal, kinesthetic, mathematical/logical, intrapersonal, visual/spatial, and naturalistic (Gardner, 1993). Using diverse tasks and activities that enhance understanding, such as creating a visual picture or diagram, connecting a concept to mathematics, using music during an activity or interacting in groups, not only creates more opportunities for all students to get involved in the learning process, but also makes a lesson more interesting. Another aspect of tiered assignments is using multiple outcome measures and performance tasks. In some cases, an assignment can be open ended, with several options for students to show what they learned. This can be especially useful when working with students with autism who may not be as adept in preparing a paper, taking a test, or presenting a project orally. Assessment is based on understanding of the core concepts and the product is determined by student interest and ability.

Summary

   Including a student with autism into the daily activities of a general education classroom can be accomplished without a tremendous amount of additional work. By planning to incorporate differentiation strategies such as visual aids, structured teaching, and tiered assignments, a teacher can help to set up a child with autism for success in the classroom socially, behaviorally, and academically.   This brief shares numerous research based strategies and supports and demonstrates how students on the autism spectrum can be successful. In a well planned and welcoming classroom environment that focuses on building on the strengths of the student, that student can blossom.

The job of an educator is to teach students to see the vitality in themselves.

—Joseph Campbell

Resources

General Autism Info:

   National Institute of Mental Health http://www.nimh.nih.gov/publicat/autism.cfm
   Indiana Resource Center for Autism http://www.iidc.indiana.edu/irca/fwhat.html

Links to autism curriculum sites:

   Division TEACCH http://www.teacch.com/teacch_e.htm
   Different Roads to Learning http://www.difflearn.com/

Tips for Teaching and Inclusion Strategies:

Great Examples adapted from TEACCH http://members.aol.com/Room5/strat.html
New Horizonshttp://www.newhorizons.org/spneeds/inclusion/information/
schwartz2.htm
O.A.S.I.S http://www.udel.edu/bkirby/asperger/moreno_tips_for_teaching.html

References

Batchelder, L. (2000). Autism in the classroom. Retrieved May 18, 2004, from http://
www.brainconnection.com/topics/printindex.php3?main=fa/autism-class

Bovey, T. & Strain, P. (n.d.). What works briefs brief #5: Using classroom activities and routines as opportuni-
ties to support peer interaction. Retrieved August 24, 2004, from http://csefel.uiuc.edu/briefs/wwb5.html

Diagnostic and statistical manual of mental disorders: DSM IV (4th ed.). (1994). Washington, D.C.: American
Psychiatric Association.

Dunlap, G. & Bunton-Pierce, M. (1999). Autism and autism spectrum disorders (ASD). The Council for Excep-
tional Children. Retrieved October 11, 2004, from http://ericec.org/digests/e583.html

Freschi, D. F. (1999). Guidelines for working with one-to-one aides. Teaching exceptional children, 31 (4), 42-
45.

Gardner, H. (1993). Multiple Intelligences: The theory in practice. New York: Harper Collins Publishers, Inc.

Grandin, T. (1992). Teaching tips for children and adults with autism. Retrieved September 1, 2004, from http:
//www.autism.org/temple/tips.html

Mesibov, G. & Howley, M. (2003). Accessing the curriculum for pupils with autistic spectrum disorders: Using
the TEACCH programme to help inclusion. London: Dave Fulton Publishers.

Mesibov, G., Schopler, E. & Hearsey, K. A. (1994). Structured teaching. In Schopler & Mesibov (Eds.) Behav-
ioral issues in autism, New York: Plenum Press.

Schwartz, I. S., Billingsley, F. F., McBride, B. M. (n.d.). Including children with autism in inclusive preschools:
Strategies that work. Retrieved on May 18, 2004, from http://www.newhorizons.org/spneeds/inclusion/
information/schwartz2.htm

Scott, J., Clark, C., & Brady, M. (2000). Students with autism: Characteristics and instruction programming for
special educators. San Diego, CA: Singular Publishing Group.

Sperry, L. A. & Symons, F. J. (2002). Maternal Judgments of Intentionality in Young Children with Autism: The
Effects of Diagnostic Information and Stereotyped Behavior. Journal of Autism & Developmental Disorders,
33 (3), 281-287.

Yell, M. L., Katsiyannis, A. (2003). Critical issues and trends in the education of students with Autism Spec-
trum Disorders: Introduction to the special issue. Focus on Autism & Other Developmental Disabilities, 18 (3),
1088-3576.

Normal SIG stuff here (this brief is funded by...)