National Association of
naset
Special Education Teachers

AUTISM SPECTRUM DISORDER SERIES

Facilitating Inclusion for Students with Autism Spectrum Disorder

Introduction

Inclusion refers not merely to setting but to specially designed instruction and support for students with special needs in regular classrooms and neighborhood schools. Instruction, rather than setting, is the key to success and decisions related to the placement of students are best made on an individual basis in a manner that maximizes their opportunity to participate fully in the experience of schooling. Inclusion is also called integration or mainstreaming. There is much evidence to suggest that students with ASD can benefit from integration with typical peers.

Teacher Preparation

One of the most effective ways teachers can prepare for the inclusion of a student with ASD is to develop an understanding about the disorder by obtaining accurate information. Having access to accurate information fosters understanding and facilitates a positive attitude toward the challenge of including a student with ASD.

It is also important to gain knowledge about effective inclusion strategies. This can be achieved through reading, seeking out professional development experiences and by talking to or observing teachers with experience teaching students with ASD in integrated settings. Students with ASD constitute a diverse group so it is important to acquire as much information about the individual student as possible.

Being proactive and anticipating potential problems increases the likelihood of successful inclusion. This involves identifying potential difficulties the student may encounter in the classroom and developing strategies to deal with or avoid such issues. Teachers also need to develop ways to facilitate peer interactions, consider behavioral issues and develop support plans.

Students with ASD have unique patterns of learning. It is not unusual for them to forget previously learned concepts and skills. Similarly, students with ASD may be able to demonstrate a skill in one setting or on one task but not others. What may seem like noncompliance or stubbornness may be a manifestation of neurological and/or learning differences. These patterns are characteristic of ASD. While an uneven pattern of learning is a common feature of ASD, each student is unique. It is important to base expectations on knowledge of the disorder, and on knowledge of an individual student's strengths and needs.

The inclusion of students with ASD is the collective responsibility of teachers, teacher assistants, school administrators, school district consultants and parents. All partners must work together for the experience to be successful.

The following suggestions may help teachers prepare to receive a student with ASD:

- Identify potential resources and sources of support.
- Seek the advice of experienced teachers.
- Set reasonable and achievable goals.
- Use existing or published resources, e.g., social scripts, visual supports. Individualizing programs does not necessarily mean developing all materials from scratch.
- Remember that even well-documented, evidence-based and widely used strategies do not work with all students.
- Clearly define the roles of all staff working with the student.

Preparing Students with ASD

Competent social skills are essential to successful inclusion. However, it is unrealistic to postpone integration until the student has developed all of the prerequisite social skills. It is important to acknowledge that some students who would benefit from inclusion may take several years to develop even basic peer interaction skills.

In the home and preschool environments, teachers and parents can prepare students for inclusion by increasing their awareness of and interest in peers. It is often helpful to specifically point out peers who are engaging in activities that may be of interest to children with ASD. Integration offers a wide variety of behaviors, skills and attitudes to imitate and incorporate into existing skill sets. Consequently, enhancement of the student's imitation skills is an important component of programs for students with ASD.

Promoting Understanding

The most effective way to promote understanding and acceptance in the classroom is to model these positive attitudes. Students tend to perceive students with special needs as valued and equal members of the class when teachers:

- recognize students' achievements in meaningful ways
- call on students to participate in ways that are meaningful to them
- communicate that teasing and bullying are not acceptable and will not be tolerated
- adapt the program to allow all students to participate and learn.

It is human nature to be curious about and cautious of those who are different. Providing students with information can satisfy this curiosity. There are many ways to teach students about ASD. These include: reading books, facilitating class discussions, showing videos and/or inviting guest speakers to talk to the class. Parents can be effective and powerful guest speakers to invite into the classroom. Have students with ASD create an "All About Me" book or give short presentations about their strengths to share with classmates. Decisions about the amount and type of information to present should be made in consultation with students and their parents. The information should be comprehensive enough to address pertinent questions and dispel misconceptions, but limited enough to respect students' privacy.

Respond to questions raised in class in an honest, open manner and address any incorrect assumptions and fears.

The following are common questions classmates ask:

- How did the student get ASD?
- Can I catch ASD?
- What can I do to help?
- Will the student get better?
- Why does the student do that (questions about specific behaviors)?

In some cases, parents express concern about having a student with ASD placed in their son or daughter's classroom. It can be helpful to explain how inclusion can be beneficial for typical students. Opportunities to interact with students with exceptional needs can promote understanding and acceptance. Inclusion should not adversely affect the quality of other students' education nor should it significantly reduce the amount of teacher attention each student receives.

There are several books and programs that foster disability awareness and understanding. The activities generally highlight what it is like to live with a disability and conclude that all people have strengths and limitations. Ask students to communicate messages to each other without using words to help them experience what life is like for students with ASD. Or, ask students to complete simple tasks wearing mittens or oven mitts, follow verbal instructions issued in another language or while wearing earplugs to sensitize them to obstacles faced by their classmate with ASD. To promote empathy, ask students to describe the feelings they experienced when visiting foreign lands or in unfamiliar situations.

Adapting Instruction

One way to facilitate acceptance and understanding is to adapt instruction to ensure all students have access to programs of study. Decisions regarding adaptations should consider students' skills and abilities, and the topics being taught. In some cases, it may not be necessary to adapt lessons at all. In other situations, it may be necessary to provide supports such as peer partners, for students to be successful. Alternatively, it may be necessary to adapt the actual lesson or classroom activity. Adaptations can range from relatively minor, e.g., adjusting the size of the task, to major revisions, e.g., altering the content or difficulty level. In some cases, programming may involve individualized functional goals that are addressed within the classroom.

Adapting Equipment

In some situations, it may be necessary to adapt classroom materials to increase the likelihood of success. The following is a list of possible equipment adaptations:

- Grip adapters may be required for pencils, spoons and toothbrushes for students who display fine motor difficulties.
- Raised line paper creates a more obvious physical boundary and can help students print between lines.
- Some students display a high level of motor restlessness and have a difficult time inhibiting movement for extended periods of time. In such situations, inflated seat cushions may have a

- positive impact on their ability to attend. Similarly, some students are more attentive when seated on a therapy ball.
- Zipper extensions and/or shoes with Velcro closures may allow students to dress independently.
- Students who experience great difficulty with fine motor tasks may be more successful using computers to complete written assignments. Some students respond positively to early literacy software.
- Adapted scissors may help students cut paper more effectively and independently.
- Spatial concepts, such as left and right, are often difficult for students with ASDto understand. It may be helpful to mark shoes in an unobtrusive manner to ensure they are placed on the correct foot.
- Some students become distracted by irrelevant information, e.g., page numbers, lines, pictures. It may be necessary to eliminate extraneous details from books and worksheets.
- Some students find glossy surfaces distracting. It may be necessary to adapt books and desktops to give surfaces a matte finish.

Occupational therapists are an excellent resource for ideas on how to adapt equipment to ensure students with ASD experience success.

Adapting the Physical Environment

Given that many students with ASD display difficulty self-modulating sensory information, it is important to consider which areas within the classroom are most conducive to learning. If students tend to over-react to auditory stimulation, it may be unwise to have them sit near the door. Similarly, students who have a difficult time coping with fluorescent lighting may experience more success when seated by a window. If students are preoccupied with computers or the alphabet, it may be beneficial to position their desks so these items are not visible. Many students with ASD have relatively subtle sensory issues. For instance, if a student is sensitive to certain smells, he or she may have a difficult time attending to structured tasks when sitting near peers wearing perfume or cologne.

In some situations, it can be helpful to define the physical space associated with a particular activity in a concrete manner. For example, students with ASD may be more successful during group activities that are completed on the floor if a specific space is defined for them. Mats or squares can be provided for all students to avoid drawing attention to an individual student. Alternatively, if a student has a difficult time concentrating when peers are present in the immediate environment, it may be helpful to assign the locker or coat hook at the end of a row.

Adapting Evaluation Methods

Existing evaluation and report card formats may not have the flexibility or capacity to provide relevant information on the progress and learning of a student with ASD. It may be necessary to develop a separate system to measure progress and communicate this information. Prior to introducing a new unit or concept, it is important for teachers to determine how students with ASD will be expected to demonstrate learning. For instance, it may be necessary to:

- test recognition skills (multiple choice tests) versus recall skills (tests that require students to generate correct answers)
- specify the amount of supervision or prompting required for specific tasks
- reduce the length of tests
- give oral tests

- allow students to use tools, such as dictionaries, counting blocks or calculators
- evaluate skills based on observation of performance
- complete baselines and post-teaching skill checklists to assess skill development.

Adapting Assignments

Students with ASD often require more time than their classmates to process verbal information and initiate responses. This difficulty is often compounded when fine motor skills are delayed. When new concepts are introduced or relatively difficult tasks are presented, it may be helpful to present students with shorter or condensed versions of the task. For example, if the class assignment involves a worksheet with 10 math questions, present students with ASD with five questions. This type of adaptation stresses the importance of quality, not quantity. As students experience success, the length of tasks should be gradually increased so they complete the same amount of work as their peers.

Adapting Input Methods

Given that impaired communication skills are a hallmark of the disorder, it is not surprising that an effective way to adapt tasks for students with ASD is to alter the way instructions and lessons are delivered. Reduce the length or complexity of instructions. Simply stating, "Get your math book," may be easier to comprehend than "Now it is time to turn our attention to the world of math; get out your materials." Because some students display attention difficulties, they often have a difficult time attending to and remembering verbal instructions. It is often helpful to provide students with written instructions to refer to throughout activities. Some students respond better when words are printed in a relatively large font.

Students with ASD tend to be visual learners and in many situations "a picture is worth a thousand words." It is often effective to provide visual supports to augment learning activities or instructions. This may involve bridging written words or instructions with pictures, providing pictures alone, or actually modeling specific tasks or steps. Rather than showing the class a finished class project and verbally explaining the steps involved, it may be more effective to model each step of the process. Or, it may be possible to call upon a peer to model the steps.

Adapting Output Methods

The verbal skills of students with ASD are often significantly delayed, so it is often necessary to adapt how students are expected to respond to questions and assignments. Consider these adaptations. Expect students with ASD to:

- print, rather than write, their responses
- give single word responses rather than phrases or sentences
- type their responses rather than printing them
- circle correct responses rather than printing them
- copy their responses rather than working from memory
- point to responses rather than answering questions verbally
- provide picture symbol responses rather than verbal answers
- draw pictures rather than print responses
- develop collages rather than stories or paragraphs.

Modifying Content and Difficulty Levels

It is sometimes necessary to modify the content or difficulty level of learning activities to better suit the interests and learning needs of students with ASD. This type of modification can take many forms. Because these students often have difficulty comprehending abstract concepts, it may be necessary to present concepts in a concrete manner. For instance, the concepts of "public" and "private" are relatively abstract. In order for students to grasp these concepts, it may be necessary to present concrete examples and explanations of each. This could be achieved using words, pictures or real-life experiences.

Concept maps can also be used to make abstract concepts understandable. They allow a group of students to work on the same project at a variety of different levels. Generally, the main concept is outlined in the middle of the map using words or pictures. Lines are then drawn to connect related facts or concepts. Each concept is defined using words, hand-drawn pictures or photographs cut from magazines. Concept maps are often helpful as they result in a concrete visual representation of a pertinent topic or issue. They also allow students with ASD to actively participate in group projects.

Some students with ASD resist tasks that are not meaningful to them. It is often helpful to incorporate students interests into lessons. For instance, if a student displays a strong interest in dinosaurs, ask the student to print out dinosaur names instead of completing the printing exercise the rest of the class is working on. Similarly, providing the student with a dinosaur book during free reading periods may increase the student's level of participation. Although the ultimate goal of programming is to broaden the student interests, incorporating preferred topics into learning activities can promote skill development and increase motivation. Adding a sensory element to activities can also motivate some students. For instance, printing letters in sand or forming them out of play dough can make printing more appealing.

Students with ASD tend to be more motivated when activities have a distinct purpose they understand. Counting blocks for the sake of counting blocks may not seem meaningful, but counting how many students are present in the classroom and taking attendance information to the office may seem more purposeful. Similarly, printing out random words may not be motivating, however printing out their daily schedules or the lunch menu may be more meaningful. Presenting learning activities in a game format can also increase interest in participation. For example, if the topic is "Community Helpers" it might be possible to develop a bingo game for students, e.g., "This person keeps the community safe by putting out fires."

Promoting Organization

Some students with ASD have a difficult time keeping their materials organized and retrieving them when required. They may also miss out on important verbal instructions. As a result, they experience anxiety because other students are ahead of them. One way to avoid these problems is to help students develop effective organizational strategies. It may be possible to:

- color code materials and have the color associated with a particular subject on the student's daily schedule, e.g., math is red, spelling is blue
- place labels or pictures in students' lockers or desks to indicate where materials should be placed
- provide students with tubs or bags to store materials associated with a particular subject
- provide agendas or checklists to ensure students are aware of all assignments and deadlines

- help students ensure that their binders are organized in an effective manner
- provide students with visual checklists to ensure that specific routines are completed, e.g., putting required materials into backpacks at the end of the day.

Some students require assistance to effectively organize their thoughts. They tend to benefit from strategies such as making outlines and concept maps.

One-to-One Instruction

Leaving the classroom for one-to-one tutoring or therapy is one instructional option that teachers and parents may consider. In some cases, such tutoring can occur within the classroom environment, e.g., in a quiet corner. The main consideration in determining whether pull-out time is necessary is, "Can this concept or topic be taught effectively in a group environment?" If the answer is "yes," then providing isolated instruction may not be warranted. Classroom teachers should make decisions regarding pull-out time after carefully considering students' needs, and consulting with parents and other team members.

Some students with ASD learn more efficiently when environmental distractions are minimized and/or when they receive direct one-to-one teaching. Therefore, pull-out time may be necessary when new concepts or relatively difficult concepts are introduced. Also, some students experience significant levels of anxiety when they make errors in front of their peers. In such cases, pull-out time allows students to practice skills without an audience. In some situations, it is difficult to adapt a particular lesson, so it can be more efficient to work outside the classroom.

When pull-out instruction is necessary, it is critical that learning activities within and outside the classroom be coordinated to promote skill development and generalization. Students need to learn to benefit from group learning experiences and attend to classroom teachers. One alternative to pull-out time is to create groupings of students with similar skill sets and provide small group instruction.

Promoting Positive Peer Interactions

A concerted effort must be made to help students with ASD refine their social skills and to provide peers with the skills and knowledge they need to successfully interact with classmates who have ASD. Students need opportunities that promote positive interactions. Adult assistance should be deliberately faded to allow students to interact as naturally as possible. Peers are often discouraged from talking to a student who is working with the teacher assistant, so students with ASD are sometimes isolated if they may spend considerable time working with teacher assistants.

Refining the social skills of students with ASD should be a primary and ongoing educational goal. Different interventions and teaching approaches are required by different students, in different situations. In some cases, it may be necessary to teach critical social skills during pull-out time or by creating a small grouping of students. Social scripts and stories can also be developed to help students negotiate their way through specific social situations. Teaching staff can also provide students with social coaching. This can involve "coaching from the sidelines" while interactions are occurring or by debriefing with students after interactions.

Classmates frequently misinterpret the behavior or mannerisms of students with ASD. For example, it is common for peers to assume that students with ASD are unfriendly when they do

not respond to questions or greetings. Some students assume that echolalia is intended to mock others or that it is a result of "being allowed to do whatever they want to." It is important to help peers develop insight into the possible causes or functions of the behaviors students with ASD often display. Dispelling myths can help peers become more accepting.

It is also helpful to give peers specific instructions about how to interact with students with ASD. Peers are often reticent to interact with students with special needs for fear that they will say or do something wrong. The best way to overcome this fear is to provide students with accurate information and practical suggestions:

- Encourage peers to be gently persistent during interactions. They should repeat questions and comments, and not give up prematurely.
- Encourage classmates to offer cues and assistance rather than giving answers to students with ASD.
- Coach peers to provide adequate time for students with ASD to process information before making additional comments.
- Provide concrete suggestions about ways to respond to specific behaviors and/or situations. For example, peers should be told what to do if a student engages in potentially dangerous behavior, displays aggression, fails to follow the rules of a game, has a seizure, etc.
- Dealing with negative behaviors should never be the responsibility of peers.
- Explain how students with ASD communicate, e.g., word approximations, sign language, picture symbols and gestures, to facilitate understanding.
- Encourage peers to incorporate visuals when communicating with students with ASD.
- Encourage peers to make sure students with ASD are attending before asking questions or making comments.
- Tell peers that it is acceptable to say "no" or "stop" when students display inappropriate behaviors.

In some situations, it may be useful to enlist a specific peer or a small group of peers to help students with ASD develop peer-interaction skills. Select mature peers who display high levels of self-confidence and strong social skills. Once peers have been enlisted, they should be provided with specific roles and responsibilities. It is often helpful to assign play buddies so students with ASD can participate in recess activities. It may be possible to assign study buddies for certain classroom activities. Regardless of the roles they are asked to assume, it is important to remember that peer coaches require ongoing support and encouragement.

Consider creating opportunities to facilitate peer interactions in the classroom. When activities are completed in defined physical spaces, peers are in close proximity to one another and less likely to spread out and form subgroups. It can also be beneficial to create situations that allow students with ASD to demonstrate their strengths to classmates. Students often respond positively when they are placed in situations where they are more able or skilled than their partners. Ask students to read to younger students or tutor students in subject areas they have mastered. Facilitate peer interactions by planning cooperative learning activities that require group members to work together. To maximize effectiveness, each member of the group should be assigned a role consistent with his or her skills.

Forming teams and partners can be anxiety provoking for students with ASD, particularly to those students who are aware that they are less able or different from their peers. Use creative ways to pair up students and form teams. For example, it may be possible to form teams or partners on the basis of height, month of birth, color of eyes, favorite sports team or by lottery. Such methods ensure students have opportunities to partner with a number of different peers.