Teaching Music to Children with Autism: Understandings and Perspectives

According to the National Centers for Disease Control, 1 out of 150 children in the United States is diagnosed with autism. Diagnosis rates are rising by 10 to 17 percent per year. Due to this increase, more children with autism have been included in music classrooms. As a music educator and a music therapist, respectively, we have witnessed an increasing number of music teachers being asked to teach music to self-contained autism classrooms. Music teachers are often asked to do this without support or training.

When presented with the challenge of teaching a child with autism, music teachers are faced with many uncertainties and can be confused. Researchers Ruth Aspy and Barry Grossman state, "The diagnosis of autism spectrum disorders presents a maze of questions that can be perplexing for parents and educators." The purpose of this article is to offer an overview of autism spectrum disorder. We offer strategies in the areas of communication and behavior as they relate to the music classroom. In addition, we address potential sensory, emotional, and social concerns that may affect music students with autism. This information is derived from current research on the education of children with autism, music therapy research, best practice (from the coauthors' work providing music therapy to children with autism), and current music education projects with children with autism in music education programs.

What Is Autism?

"Autism is a complex developmental disability that typically appears during the first three years of life and is the result of a neurological disorder that affects the normal functioning of the brain." Typically, symptoms begin to appear around eighteen months of age. They may include (1) communication delays, (2) repeating words or phrases, (3) unresponsiveness to verbal cues, (4) social difficulties, (5) oversensitivity (sound, light, etc.), (6) resistance to change, (7) lack of direct eye contact, (8) odd or unusual repetitive play, and (9) self-stimulation. Children may display some or all of these symptoms. However, it is important to understand that each child is an individual. Get to know the child through observation, contact with parents, and consultation with other teachers.

The Spectrum

Autism is one of five disorders that fall under the umbrella of pervasive development disorders. These disorders include (1) autistic disorder, (2) Asperger's disorder, (3) childhood disintegrative disorder, (4) Rett's disorder, and (5) pervasive developmental disorder not otherwise specified. You may hear professionals refer to persons as being "on the spectrum." This refers to the idea that a child may fall on the spectrum of pervasive devel-
opment disorders. The specific diagnosis (including the severity) may give educators an idea as to how a student may behave, communicate, or acquire academic skills.

The Essence of Autism

Because of the dramatic increase in diagnosis rates, some developmental pediatricians have begun to specialize in the treatment of children on the spectrum. Dr. Richard Solomon is one such pediatrician who treats, does research, and trains therapists on how to reach children with autism.7 Solomon explains that children on the spectrum tend to be introverted and would rather live within their own, isolated world. When articulating this idea, he uses the concept of the “comfort zone” proposed by psychologist Lev S. Vygotsky.8 The comfort zone concept is part of a larger learning theory developed by Vygotsky in the early part of the twentieth century called the zone of proximal development. Children with autism often struggle with many aspects of everyday life that cause them to retreat into their comfort zone. Their tendency to retreat into their comfort zone can interfere with skills that are vital to their education. Therefore, teachers, therapists, and parents need to keep children with autism interested in being with and learning with their peers.

The central focus of Solomon’s work is how we (educators, parents, and other professionals) can entice children with autism into our world. According to Solomon, the comfort zone concept is at the core of what educators, parents, and therapists should strive to understand when working with children on the spectrum. Music educators may need to spend time with other professionals and parents strategizing how to bring students with autism out of their chosen isolation and into the music classroom. The ideas described here take time, patience, and practice to implement.

Children on the Spectrum and Music

Many music educators we have encountered in our work explain that the children they teach (who have autism) have an affinity or a talent for music. According to music therapist and researcher Michael Thaut, “Children on the autistic spectrum often have a remarkable capability and responsiveness to music as compared to most other areas of their behavior, as well as in comparison with typical children.”9 We have seen children who cannot communicate verbally acquire skills in music that exceed their typical peers. The challenge for music teachers is discovering how to tap into this responsiveness in the midst of all of the other distractions that arise for the child. The first step is to establish a solid communication strategy between you and the child.

Communication Strategies

One of the characteristics of autism is severe disturbance in communication.10 In understanding this communication barrier, it is important to understand that children on the spectrum may comprehend much more than they can express verbally (or vice versa). There are many strategies therapists and educators use to aid a child to communicate. Visual aids have been used successfully in helping children with autism communicate. A picture system called PECS (Picture Exchange Communication System) allows teachers to make pictures with words to help students on the spectrum communicate (see Figure 1).11 Within this program, there are icons (including those for music) that can be used in the classroom. If your school district provides services for children on the spectrum, it will probably have the software that creates the PECS icons (see Autism Resources sidebar). Consult your special education professional to assist you with PECS in your music classroom.

Children with autism can experience anxiety and frustration when they are unable to anticipate their schedule throughout the school day. This can often be a trigger for outbursts and disruptive behavior. The PECS can be an excellent tool for communicating the schedule to children on the spectrum of all ages. For children who can read, replacing the PECS icons with a written schedule can be a successful strategy. Many children on the spectrum carry a notebook with their schedule in it for the day.

Another strategy to consider involves choosing your words carefully, specifically, and limiting the number of words

FIGURE 1
Examples of Picture Exchange Communication System (PECS) Icons

- I want
- play
- silly
- beautiful

Note: Also consider using digital photos of people (friends, teachers), places (home, cafeteria, music class), or subjects (gym, music, etc.).

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that you say. Some children who have limited verbal skills can get confused easily with wordy sentences and phrases. In addition, take advantage of nonverbal cues, such as gazes and hand gestures, to communicate. This will encourage a child on the spectrum to look to you (and make eye contact) for instructions.

Transitions between activities can also be a source of anxiety for children on the spectrum. We want to keep children busy so we tend to plan lots of small activities within our music classes. This can be a challenge for children on the spectrum. Again, anticipate these transitions by using verbal and nonverbal cues as well as visual representations (e.g., using PECs icons). Implementing these suggestions can help alleviate anxiety for a child on the spectrum. Again, finding time to practice these transitions or to have another child assist the student can be a great help to both the teacher and the student.

The above-mentioned communication tools can help reduce anxiety and help provide clearer messages between you and a child with autism. An effective way to acquire effective communication tools with a child on the spectrum is by consulting with the child's team of teachers. This will allow you to explore which communication strategies are being used in all classes during the child's day.

**Classroom Behavior**

Many educators have found that behavior can be an issue with students with autism. Due to the obstacles children with autism face, typical classroom behaviors, such as completing independent work, sitting for an extended time, or taking turns, can be a challenge for a child on the spectrum. A student on the spectrum may act out inappropriately, which creates a disruption for the rest of the children, which can cause a classroom management problem for the music teacher.

In addition, a child with autism may engage in echolalia. This is a behavior in which a phrase is constantly repeated. This form of self-stimulation can be a clue that the student may be escaping into his or her comfort zone. Again, this is an opportunity to help the student develop more classroom-appropriate responses. Attempt to reach him or her by engaging in a conversation about what is actually going on in your classroom. You may need to acknowledge the echolalia first (for example, if the student is repeating a phrase about airplanes, say something that makes sense within that framework), and then attempt to have a conversation about what is happening in the music classroom. Again, the more you get to know a student, the more you will find a way to help the individual reengage in the present and extinguish the echolalic behavior. We have found that other teachers and families of the student in question are excellent resources in discovering such triggers.

We have also found that children on the spectrum may be sensitive to situations or environment. For example, a large, loud music room with lots of people may be the last place that a student on the spectrum wants to be. He or she may need to start class in the hallway (with supervision) and work his or her way into the room. He or she may need to wear noise-reducing headphones at first. Be aware of possible environmental triggers, such as (1) a bright room, (2) classroom setup, (3) loud noise, (4) strong smells, (5) different textures (the student's chair, the carpet, an instrument, etc.), and (6) anything visually intriguing. In large groups, the setting itself may trigger disruptive behavior.

Children on the spectrum are often dealing with a range of issues that cause them to struggle with typical classroom behavior. You may wish to have the student come to your room so you can explain and practice classroom routines with them. This may include a very specific written description. You may need to write rules out on the board or on paper for the child. In addition, a reward system might need to be in place to reinforce these expectations (such as getting to play a special instrument or time on a computer). Check with the child's classroom teacher to see if a reward system has already been put in place.

**Disruptive Behavior**

Disruptive behavior may hinder the learning of all of the students in your class at times. The key to understanding this behavior is to look at possible "triggers" that may be causing such a behavior. Researchers Kathy Gould and Cathy Pratt state, "When conducting a functional behavior assessment, professionals and family members examine setting events or triggers that may increase the probability of these behaviors." Triggers may include (1) loud noises; (2) pain, illness, or discomfort (e.g., the student may not be able to verbally express his or her discomfort); (3) attention (e.g., the student may want your attention); and (4) environmental conditions (e.g., the child may be sensitive to something in your classroom). When disruptive behavior occurs, it is important for you to follow up with other team members (e.g., special education teachers, parents, etc.). They may have seen similar behaviors and be aware of the triggers that cause such disruption.
Classroom Music Example using Picture Exchange Communication System (PECS)

- Arrange PECS icons on your chalkboard or dry-erase board in any order (e.g., an icon for warm-ups, others for songs and activities for the day).
- Have the student with autism choose the order in which these activities will occur.
- As each activity is completed, take the icon down and put it in a “Complete” box or envelope.
- Allow all the students in the class, not just the student with autism, to take turns choosing the icons.

**Rationale**: This provides the student with autism the opportunity to understand and anticipate schedule transitions.

They also may have strategies for curtailing such behavior.

**Modeling Appropriate Behavior**

Classroom peers can both assist and model appropriate classroom behavior. Recruit classmates to assist with providing specific verbal cues (e.g., “Quiet mouth,” “Sit down please,” or “Good job!”). Positive relationships between your students often result from such a situation. It is surprising how well this can work. It also alleviates the stress of managing the classroom entirely on your own. Your student may also be capable of completing a self-evaluation, which will aid his or her understanding of rewards and consequences.

Simple social etiquette can be difficult for a child with autism. However, children on the spectrum still need to learn appropriate social behavior for them to be successful in school. Therefore, everyone who is in contact with a child on the spectrum can help by encouraging them to engage in suitable social behavior. For example, if you greet a child and he or she does not respond, attempt to make eye contact and wait until the student attempts to reciprocate with either eye contact or a verbal response. This is important practice for your student. This type of response can also be accessed musically. For example, when children are participating in a call-and-response song, such as a name song or a hello song, make every attempt to get a response. As mentioned earlier, a child with autism may prefer to be unresponsive. Even a response approximation (such as eye contact and a smile) should be considered a success in this case. You may find that eventually, with repetition, the child will become more engaged with you and more willing to participate.

**Performers with Autism**

**Some Ideas for Assisting Performers with Autism**

**Rehearsal Strategies**
(Band/Orchestra/Choir):
- Simplify your rehearsal language from the podium
- Practice rehearsal routines (e.g., where to sit, where to keep music, etc.) outside of class
- Peer Assistance
  - Have students help with equipment issues, music organization, and expectations
  - Have peer work with the student privately
- Provide music in other forms (e.g., recordings, smart music, etc.)
- Rescore parts (e.g., provide a reduced clarinet four-part written by the instructor)
- Visit concert venues prior to performance and practice performance routines

**Resources to Consider**

**Classroom Music Example**
(Developmentally Appropriate Technique)

“Old Brass Wagon”
(Musical Concept: Tempo)
Circle to the left, old brass wagon,
Circle to the left, old brass wagon,
You're the one, my darlin'.

**Suggestions**
- Notice the repetition (this will help reinforce the language). Songs with fewer words will provide children with autism, who have difficulty processing language, a better chance of having a successful experience.
- Use movement to reinforce (e.g., have students join hands and circle fast or slow). Again, this will assist children on the spectrum with language and motor challenges.
- Use Picture Exchange Communication System icon of a wagon for scheduling.
- Change “Circle to the left” to “Everybody slow,” and so on. This allows for flexibility for you as a teacher and provides a chance to reinforce musical concepts.
- To solidify concept, sing “Old Brass Wagon” and play instruments rather than using movement. This adds a sensory component to the lesson.

parents, and administrators is to uncover the learning processes used in other classes. Questions you want to ask may include the following: (1) Does he or she respond to visual or aural teaching? (2) Does routine comfort the child? (3) Are there sensitivities that may impede his or her learning (e.g., loud sound)? and (4) What is the current cognitive level of the child? Answers to these questions will give you a foundation from which to start your individualization or accommodation of instruction.

We have noticed that children on the spectrum who are high functioning, when in the moment of performing, seem to go through an extra layer of decoding instruction." They will seem to be behind; however, with repetition of concepts, they
tend to eventually catch up. Children with autism also may have difficulties with fine motor (small movement) or gross motor skill (large movement) that may present challenges. Again, consult with your student's physical therapist or occupational therapists to gain insight into each child's capabilities.

A behavior and musical understandings self-evaluation (completed by the students and the music teacher together) can help a child with autism truly understand his or her progress in music class. Take the time to list expectations and attach a daily grade for each criterion. These accommodations take time to show an effect. The routine of the classroom and your expectations may take a while to sink in. You may see progress in small steps. Again, a rewards system can often aid in allowing the student to understand his or her own progress and encourage him or her to further their study. Check in with the child's classroom teacher and support staff. If an aide accompanies the child, make your expectations very clear as to what the aide should and should not do and invite the aide's suggestions. If the child has a behavior checklist, whether provided by the classroom teacher or therapist or by you, the time you spend at the end of your class filling this out with the child is golden time for developing a working knowledge of and relationship with the child. If an aide is not available, a classroom buddy can perhaps be an escort back to the regular classroom.

Sensory Processing

Children with special needs can struggle with other related disabilities. One particular disorder that affects children diagnosed with autism is the neurological dysfunction known as sensory processing disorder (SPD). This disorder does not fall under the umbrella of pervasive development disorders. A healthy human sensory system processes sensory information from the world around us and provides us with a purposeful and adaptive response. This is typically an unconscious process. Simple motor skills, such as alternating our feet when climbing the stairs, holding our hands when about to fall, or continually moving our feet when riding a tricycle, are all examples of an unconscious adaptive sensory response. For a child who struggles with SPD, these responses are not unconscious processes. Additionally, a child with SPD may avoid or seek specific sensory input. A child who is underresponsive may seek input through hand flapping, spinning in circles, chewing on inedible objects, or creating high-pitched noises. Conversely, a child who is overresponsive may be highly sensitive to noises, textures, foods, and bright rooms. To further complicate this matter, some children may avoid sensory input one day and seek it out the next. These difficulties can affect a child in your classroom in the following areas: (1) response time to cues, (2) attention, (3) refusal to participate (because of anxiety or overstimulation, etc.), (4) difficulty with movement activities, (5) appropriate focusing of attention, and (6) comprehension and retention of skills and knowledge.

Music teachers must be patient when children on the spectrum exhibit sensory needs. Most likely your students need time to adjust to their surroundings. They may already have strategies in place for when they become over- or understimulated. Since making music is a form of sensory input, it is important to understand your student and what causes him or her to struggle with sensory issues. Simple strategies, such as reducing the volume of music, slowing your teaching pace, allowing the student to go for a walk or take a break (accompanied by an aide), and more repetition, will enhance your success. Consult your special education team for suggestions.

Social Concerns

Another primary feature of autism is difficulty in the ability to relate to people, objects, and events. Children with autism tend to withdraw or be socially unresponsive. Music can be a perfect setting for children on the spectrum to strengthen their social skills and by default assist other students in your class to understand their classmate. Anything you can do to involve all of your students in aiding a classmate is a step in the right direction. This may include rotating a "helper" to assist in group activities that involve all of your students. We have observed the positive outcomes of this type of classroom. When asked to help with a classmate with special needs, children tend to take ownership of the learning community and shift some responsibility from the child's aide or the music teacher.

Emotional Concerns

Children on the autistic spectrum often display emotional disturbances, ranging from inappropriate reactions to having no affect. These disturbances again can be a sign of stress due to communication difficulties, transitions, or sensitivities. Again, it is important to explore what the trigger might be. Offentimes, a child on the spectrum has experienced an uncomfortable occurrence in your classroom.

Emotionally, transitions between activities can be difficult for children on the spectrum and can cause a wave of anxiety. Transitions range from traveling from a child's classroom to the music classroom to completing one activity and beginning another. As mentioned earlier, anything you can do to prepare a student may help alleviate some anxiety. Some tools to alleviate anxiety might include (1) playing recorded music during transitions, (2) providing verbal cues that one activity is almost done and describing what should be expected next, (3) providing a written schedule for your student, and (4) permitting the child time to adjust to what is coming next. Your pace might be too fast for his or her internal distractions. While you are teaching, a child on the spectrum may be trying to "organize" him- or herself in order to be able to just sit in your classroom. The student may have many sensory issues that are affecting him or her; may experience distractions, such as the leaves blowing in the trees or an instrument sitting on a shelf that had been used for a previous lesson that scared him or her; may be trying to figure out what the expression on your face means; and may be deciphering all of the words that are being said. All of these thoughts running around in his or her

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head must settle down before the child is able to be comfortable and ready to try to learn a new concept—these may be some of the difficulties of children on the autis-
tic spectrum in your classroom.

A Process toward Success

Our goal is to offer suggestions that will lead to more independence for the child in your music classroom. This includes allowing a child with autism the opportu-
nity to establish classroom routines, appropriate behavior, communication, and the ability to acquire music skills and understandings. Autism is a complicated disorder. We encourage music teachers to gain further understanding by partici-
pating in the special education process and by obtaining a copy of each child’s Individualized Education Program document. A combination of being aware of cues and having a working relationship with the child’s educational team will result in a clearer understanding of your student. Once these understandings are established, it is hoped that they can be generalized to other areas in the student’s school day and, eventually, in his or her life.

NOTES

1. Based on prevalence statistics from the Centers for Disease Control and Prevention, 2007; see http://www.cdc.gov/ncbddd/autism/.
10. Ibid., 165.
13. Ibid., 27.
Abstacts & Keywords

September 2009 Music Educators Journal (Vol. 96, No. 1)

- **Music in a Flat World: Thomas L. Friedman’s Ideas and Your Program**
  by Aimee Beckmann-Collier

  Technology has changed life in ways that are transforming most human societies. Music teachers are in a unique position to help their students handle this transition and become true world citizens.

  **Keywords:** economy; Friedman; global; music; skill; technology

- **Collaboration with Music: A Noteworthy Endeavor**
  by Susannah Cane

  Although some music educators might hesitate to do interdisciplinary work with teachers of other subjects for fear of diluting their programs, such cooperation can enhance learning for all and can give music additional recognition within a curriculum. This article contains a number of ideas for collaboration with teachers in other subject areas.

  **Keywords:** academic; collaboration; curriculum; interdisciplinary; music

- **Teaching Music to Children with Autism: Understandings and Perspectives**
  by Ryan Hourigan and Amy Hourigan

  As the number of children diagnosed with autism grows, music educators at all levels are faced with the challenge of how to accommodate children with autism in their music classrooms. This article explains many of the nuances associated with autism as well as strategies for the music classroom.

  **Keywords:** accommodations; adaptations; autism; autism spectrum; communication disorder; music; special needs; strategy

- **Strategies for Working with Children with Cochlear Implants**
  by Lyn Schraer-Joiner and Manuela Praise-Weber

  Music classes at all levels increasingly include children with adaptive devices such as cochlear implants. Here are ideas to help educators assist these students so they can benefit from and better enjoy their music learning.

  **Keywords:** adapt; cochlear; hearing aid; hearing loss; implant; sound; speech

- **Virtual Field Experiences for Real Music Classrooms**
  by Sarah J. Bartolome

  As the world grows increasingly interconnected, music teachers need a wider array of tools for presenting multicultural music in the classroom. Educators at any level who want to enrich their students’ musical understanding can glean ideas and resources from this look at music field education through the Virtual Field Experience.

  **Keywords:** culture; diversity; field experience; Internet; multicultural; music; resource; virtual

- **Reflections on Career Development and Eclecticism in Music Education**
  by Kirk Kassner

  Drawing ideas from his teaching experiences, a forty-year veteran music educator looks at how learning about music through a multifaceted approach can help reap a cornucopia of riches for all involved. Wise teachers will learn from many sources and across disciplines.

  **Keywords:** career; curriculum; development; eclecticism; education; evaluation; goal