Autism Spectrum Disorders: Strategies for Success

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IDEAS Conference
Epworth by the Sea, St. Simons Island
June 5, 2011
Pervasive Developmental Disorder

- Rett’s Syndrome
- Non-verbal Learning Disability
- Asperger’s Syndrome
- Childhood Disintegrative Disorder
- Autism
- PDD-NOS
Prevalence

- Latest CDC statistics are 1:88
- Affects boys 5 times more than girls
### Identified Prevalence of Autism Spectrum Disorders
**ADDM Network 2000-2008**
Combining Data from All Sites

<table>
<thead>
<tr>
<th>Surveillance Year</th>
<th>Birth Year</th>
<th>Number of ADDM Sites Reporting</th>
<th>Prevalence per 1,000 Children (Range)</th>
<th>This is about 1 in X children...</th>
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<td>2000</td>
<td>1992</td>
<td>6</td>
<td>6.7 (4.5-9.9)</td>
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<td>2002</td>
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<td>14</td>
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<td>8</td>
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<td>11</td>
<td>9.0 (4.2-12.1)</td>
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<tr>
<td>2008</td>
<td>2000</td>
<td>14</td>
<td>11.3 (4.8-21.2)</td>
<td>1 in 88</td>
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Key Points

• Autism is a *syndrome* which means not all affected individuals will have all the signs.
• The *diagnosis* is emphasized on what the individual has in common with others with autism.
• Autism manifests in each individual differently
DSM-IV Criteria

• SOCIAL DEVELOPMENT

• COMMUNICATION

• ACTIVITIES AND INTERESTS
  » For autism, six positive signs, at least 2 in social, at least one from comm. & one from activities.
  » For PDD, NOS, no criteria met in atypical interests and activities
  » Asperger’s may not be detected as early and people with AS are rarely mentally retarded—they usually have narrow interests and may appear “quirky.”
Qualitative Impairments in Communication

• A delay or total lack of the development of spoken language
• Marked ability to initiate or sustain a conversation with others
• Stereotypes and repetitive use of language or idiosyncratic language
• Lack of make-believe or imitative play
Social Development

• Deficient use of nonverbal behavior such as eye-to-eye gaze, facial expression, body postures, and gestures
• Failure to develop peer relationships
• Lack of spontaneous seeking to share enjoyment, interests, or achievements
• Lack of social or emotional reciprocal
A Story: What happened here?

You enter your neighbor’s house through the side door. This is the kitchen. On your left is a fish bowl and over it is a family photograph. The floor is blue and white tile, with a small floral blue wallpaper covering the walls. The family dog, Butch, is sleeping on the floor. On the counter are empty ice cream containers, and a spoon with melted ice cream is laying in a spoon rest. A cake with chocolate icing and pink candles with flowers is half-eaten.
Test of Social Know How

• Charlie, age 22, had been out of work for several months. On this day his hopes were high because he was on his way to apply for a job that was just right for him. As Charlie rode his elevator to his interview a stranger said pleasantly, “Nice day isn’t it?” Just then Charlie happened to see his reflection in a mirror. His hair was sticking up in a peculiar way. He turned to the friendly stranger and asked, “Do you have a comb I could borrow for a minute, please?”
Restricted, Repetitive and Stereotyped Patterns of Behavior, Interests or Activities

- Abnormal intensity or focus of interests
- An apparent compulsive adherence to specific nonfunctional routines or rituals
- Stereotyped and repetitive motor mannerisms (e.g. hand flapping)
- Preoccupation with parts of objects
Asperger’s Syndrome

• Social difficulties
• Preoccupying, Narrow Interests
• May seem very intelligent in specific areas (rote memorization is excellent)
• Better long term prognosis, but vulnerable to other psychiatric disorders such as depression or psychosis.
Intervention Philosophies

- The child must be made to fit the world
- The world must be made to fit the child
- Combined approaches
Applied Behavior Analysis

- Comprehensive; all skill domains addressed;
- Skills broken into small components, defined in observable, measurable terms;
- Individual strengths and weaknesses assessed by direct observation and measurement;
- Each component skill taught via many trials or learning opportunities, each comprising a specific antecedent stimulus, response, and consequence;
- Multiple, repeated learning opportunities arranged, in both structured and naturalistic situations.
What is a behavior?

Anything that can be observed and measured.

Affected by antecedents, consequences and establishing operations.

Serves a function to the individual.

Is easier to replace than simply eliminate.
Reinforcers

- **Primary**
  - Natural, unlearned and unconditioned
  - Food, liquid, sleep, shelter

- **Secondary**
  - Value has been learned or conditioned
  - Words of praise, opportunity to engage in preferred activity (Premack Principle), token exchange/boards

Secondary can be taught by pairing with primary and then fading the primary.
• Stimulus Control
  - Any behavior that is more likely to occur in the presence of the stimuli that accompanied the behavior when it was reinforced in the past.
• Shaping
  – A new behavior is learned by successive approximations of the desired behavior.

"Now that desk looks better. Everything's squared away, yessir, squaaaaaaared away."
Structured Teaching

• Increases understanding
• Increases learning
• Calms and organizes
• Builds independence
• Reduces behavioral problems
TIER OF STRUCTURED TEACHING

- Physical Structure
- Schedules
- Work System
- Routines And Strategies
- Visual Structure
Physical Structure

Refers to the way that you organize materials and furniture to provide context and meaning

• Clear Physical and Visual Boundaries
• Minimize Visual and Auditory Distractions
• Develop Basic Teaching Areas
  – Group Areas
  – Play/Leisure Areas
  – Work
    • Teaching
    • Independent
  – Transition
Individual Daily Schedule

Tells what activities will occur and in what sequence—a *routine* to teach *flexibility*

**Types of Schedules**

- Object
- Picture or Photograph Cards
- Written or Icon
- Icons
- First, Then
Work Systems

Builds independence, sequencing, and generalization across settings

The work system answers four questions:
1. How much work?
2. What work?
3. Concept of finished?
4. What happens next?
How Does Structure Lead to Independence?

- Can be implemented in any setting
- Can be used to teach any task
- Is a support that remains throughout life
- Helps keep a child focused and prepared
Gabby’s Rules

• Sit at my desk during work times
• Raise my hand to talk
• First I finish my work, then I can look at my book.
• Keep my hands to myself.
• I can get things from the red basket and not Mr. Sandoval’s desk.

*If I follow the rules, I will earn a sticker.*
Social Skill Instruction

- Peer and adult interaction skills
- Appropriate behavior in a variety of contexts (What do I do....)
- Managing emotions
Promoting Conversation Skills

• Practice turn taking
  – Board games
  – Passing a “talking object”

• Use concrete visual reminders to prompt conversation

• Provide topic suggestions

• Use scripts
MY TURN TO TALK
Morning Conversation Starter

For breakfast I ate______________________________________

I like the______________________________________________

After breakfast I ________________________________

            Tomorrow I would like to eat

______________________________________________________
Teaching Social Skills

- Comic Strip Conversations
- Social Stories
- Educational approaches/Direct instruction

Generalization
The Social Story Kit
-Carol Gray

Getting Started

Social Stories describe social situations in terms of relevant social cues, and often define appropriate responses. Social stories present social information to students with autism, while minimizing the social aspects of teacher/student interactions involved in instruction. In this way, social information is presented as clearly as possible, with limited interference from the social interactions involved in traditional teaching.

Social Stories are written in response to individual student needs. These needs may be identified through:

1) observations of situations which are difficult for the student;

2) the student’s responses to questions about social situations which indicate the student is “misreading” a given situation; and/or

3) social skills assessments and curriculums.

Based on identified needs, social stories may:

1) describe any situation in terms of the relevant social cues and/or correct responses in a non-threatening format;

2) personalize or emphasize social skills covered in any social skills training program;

3) translate goals (possibly written by students) into understandable steps;

4) explain the “fictional” qualities of commercial stories/movies/etc., identifying realistically appropriate from inappropriate interactions depicted in those stories;

5) teach routines, as well as helping students to accommodate changes in routine.
I usually eat breakfast with Sally. Sometimes Sally has important things to say at breakfast time. When someone else is talking, they like to have other people listen. When you are looking at someone who is talking, they can tell that you are listening. If they can’t see your face, the don’t know if you are looking at them, so they don’t know if you are listening.
Can I see the dinosaur?

I like that he is not too close.
Hey, he is too close! That makes me mad and makes me feel uncomfortable.
Let’s Talk About…

Social Stories
Let’s Talk About…

Power Cards
Let’s Talk About…

Lunch Bunch
and
Circle of Friends
Repetitive Motor Behaviors

• Is the person stressed?
• Are they understanding the language, situation, expectations?
• Is the behavior interfering with their performance?
• Is the behavior distracting to others?
Managing Repetitive Talk

- Assess
- Set natural limits (time, place)
- Put talking time on the schedule
- Write a social rule
- Write a social story
- Concrete visual limits to talk
Use special interests to… (power card)

- Help child master concepts and skills
- Promote peer interaction
- To reinforce less preferred activities, following rules, etc.
Teaching Peer Interaction Skills

Social Groups

• Foster opportunities with all kinds of peers
• Provide typical peers with information and encouragement to assist them
• Use structure to ensure successful experiences
• Teach play and leisure skills that are common among same age peers (needs to be usable).
What is Sensory Integration?

- It’s the ability to take in, process, and act upon environmental input. It’s composed of 3 senses that most individuals are not aware of:
  1. Tactile - touch receptors of the skin
  2. Vestibular - movement, balance & gravity primarily received through inner ear receptors.
  3. Proprioceptors - Body position received through muscles, ligaments & joint receptors.
How does it help them function?

• When all the synapses in our brain are connecting and chemicals are flowing, then we are able to process environmental & internal information. These all impact our feelings, thoughts and actions.
Calming Techniques

- Sweet candy
- Classical music without words
- Vanilla, banana, & coconut are calming smells
- Slow deep breathing
- Visualization
- Yoga
- Warm blankets
- Hugs
- Rocking chairs / slow rocking
- Dim lights

- Lay bean bag on top of them and apply deep pressure
- Going to quiet corners
- Getting in a large box or tent
- Suckers
- Wrapping in blanket
- Pushing against wall
- Brushing / jt. Compressions
- Deep pressure
- Wt. blanket
- Slow swinging
Alerting Techniques

- upbeat classical music
- Pine, citrus and peppermint smells
- Sour candy-peppermints
- Bright lights
- Fast swinging or fast movements
- Tag, hide & seek

- Cause & effect toys
- Visually stimulating rooms
- Light touch
- Tickles
- Koosh balls
- Crunchy foods
- Irregular movements (upside down)
Activities to prepare the body for work.

- Wiggling beside desk - helps get all the wiggles out before sitting down to work.
- Rocking ball - helps calm them down.
- Flying airplanes - tones the neck & back muscles so they can sit at their desk.
- Chair push ups - gets them ready for writing & cutting.
- Carry heavy items - (ex. Books) gets their brain more focused for learning.
- Clapping games - get hands ready for writing & cutting.
- Rocking puppy - good for all the muscles & calming to the body.
To help keep them on track

- Provide picture schedule to allow them to know what’s coming next or write schedule on board.
- Notifying them of transitions allows them time to prepare for a change.
- Give them breaks.
Sensory Integration does not attempt to develop specific skills, but it provides the sensory & motor activities which help the overall functioning of the nervous system which in turn enhances language, motor skills, attention, behavior etc.
Definition of Differentiation:

Variations of a teacher’s response to learner needs

1. **Readiness Level**—will vary
2. **Interests**—almost always a “special interest”
3. **Learning Profile** – next slide

RIL
ASD Learning Profile
(tendencies—remember, every child is different) 😊

Learning Characteristics:
- well developed long term memory
- excellent rote memory
- good visual skills
- hyperactivity
- delayed response time
- needs help to problem solve
- short attention span to some activities and not others
- problems organizing; executive function difficulties
- sensory issues
- literal interpretation—you say, “Take a seat” and the child says, “where?”
- difficulty imagining, thinking “outside the box”

Physical Characteristics
- clumsiness
- balance
- stiffness
- tired easily
- motor planning—can’t make body do what it needs to do
What can be Differentiated?

1. **Content**—what is being taught
2. **Process**—how the student learns what is being taught
3. **Product**—how the student shows what he/she learns
4. **Pacing**—how long the student takes to learn (or how quick!) **CPPP**
Working on the Work
Design Qualities

- Content and Substance
- Organization of Knowledge
- Product Focus
- Clear and Compelling
  Product Standards
- Protection form Adverse
  Consequences for Initial Failures

- Affirmation of Performance
- Affiliation
- Choice
- Novelty and Variety
- Authenticity
Content and Substance

- Begin with the easiest task and progress to more difficult tasks as you go. Students are easily overwhelmed and frustrated—prevent it if at all possible (until they learn better coping skills).
- Students are very motivated by their special interests—use them as options for assignments or a reward for successful completion of difficult activities. (Be strategic—put the most loved activity/reward immediately following the hardest task (usually writing).
- Allow students to read various leveled books on the same subject (adjust the access, not the content).
- Use available resources/make needed accommodations (Students with Asperger’s often respond well to visuals, graphic models and technology. They often have impaired gross or fine motor skills so extra time or the use of a computer to type might help).
Organization of Knowledge

1. Children with ASDs have difficulty organizing space and time. Use visuals and checklists to help students begin to understand tasks with steps such as the writing process.

2. Since most students with autism thrive on clear expectations and routines, there are many different methods a teacher can use to help create smooth transitions.
   a) Write class schedules and time frames on the blackboard, or use a picture schedule for younger children.
   b) Explain changes in the routine well in advance (e.g., “On Thursday, we will have an assembly. That means you go straight from your second period class to the auditorium.”)
Product Focus

• Through the student’s IEP, teachers can develop class schedules which will be motivating and challenging to the student while addressing his/her needs.

• See where the child works most effectively; near the teacher or near a quiet open space so they can focus on the product.

• Be sure to explain why students need to complete certain activities and what will be the long-term benefits of knowing certain things such as multiplication.

• It may be helpful to show an example of what a finished product looks like. If a student gets hung up, encourage them to slow down and help them through the hurdle, if needed.
Clear and Compelling Product Standards

- Clearly articulate standards and expectations to students.
- It might be helpful to write them down and make them “very official.”
- If the student starts to get behind, communicate with parents quickly.
- Remember RIL +CPP = Differentiation. 🙂
Protection from Adverse Consequences for Initial Failures

1. Begin with building a positive relationship with the student. When they feel safe and competent, they will perform at their best.

2. Begin by showing them how to complete the assignment, using a positive manner that implies success.

3. Some students require scheduled sessions with trained staff members who can help them “solve the puzzles” they encounter in everyday activities and help alleviate depression caused by perception of social failure.
Affirmation of Performance

• Many students with Asperger’s/ASDs will go on to make great contributions to society. However, we must tap into their strengths and offer support so that they do not dropout of school because academic and social demands are too high. Take time to praise, display and send positive notes home.

• Identify the student’s special gifts and teach him/her to share those gifts through tutoring, class presentations, or parent nights.

• Reinforce correct responses and appropriate behavior with descriptive statements that identify what made the answer "right".
Affiliation

1. Children with Asperger’s should not be seated near class bullies or aggressive students. Rather, sit them next to students who can serve as a “peer buddy.”

2. Avoid self-selection when students are being assigned to a group.

3. Teach students how to function as a team and accept all members.

4. Rapport - Maintaining rapport with students can help establish a positive classroom environment. Teachers can establish rapport by talking to students about topics in which they are interested, sharing their own interests, providing opportunities for students to perform activities in which they excel, and complimenting students.
Choice

1. Given them something interesting to work on while the teacher is giving directions and getting ready to go; waiting is difficult and can cause negative behaviors.

2. Allow a student to talk their way through completing a math problem as a scribe writes it down to “prove” they know the process.

3. Utilize a “work file” of different tasks the student can choose to complete any 3 out of 5 tasks.

4. Instead of writing a 5 page report on a topic, allow student to list important facts about the topic, create a timeline, or script a movie about the topic.
Novelty and Variety

- Vary the presentation and response modes of instructional activities.
- Encourage students to try new things in a safe way (students with ASDs generally do not like change but will have better outcomes if they could learn to work better when there are changes).
- Encourage students to be innovative and work as part of a team to try something new.

• Remember RIL + CPP = Differentiation. 😊
Authenticity

- Use “special interests” to motivate work completion and special talents to contribute to group projects.
- A desired activity is available to students on the completion of an undesirable activity (Premack Principle). “First work, then you can read about trains.”
- Children with ASDs may not understand why they have to do certain things that seem “illogical” to them—for example, why redo an assignment when it has already been done? The student will benefit from an explanation (Ms. Wilhoite can help with social stories); the earlier the explanation can be given the better.
Refusal Behaviors

- One refusal can lead to another and a pattern can develop quickly
- Serves a function in the child’s life
- Be a detective (remember the iceberg)
- Teaching and environmental modifications
- Get them started
- Sensitive approach
- Balanced expectations
- Supply independent activity during wait time
- Ignore
General Behavioral Strategies

Before a meltdown—when you see “rumbling”:

- Antiseptic bouncing
- Proximity Control
- Signal Interference
- Touch Control
- Defusing Tension through Humor
- Support from Routine

Interest Boosting
Redirecting
Cool zone
Acknowledging student difficulties
Just walk and don’t talk
Sources


On the web

Teaching Children with Autism
http://www.polyxo.com/aba/

Dr. Mac’s Amazing Behavior Advice Site
http://behavioradvisor.com

The Gray Center for Social Learning and Understanding
http://www.thegraycenter.org/

The University of North Carolina TEACCH Autism Program
http://www.teacch.com/

Technical Assistance Center for Social Emotional Intervention for Young Children
http://www.challengingbehavior.org/do/resources/teaching_tools/ttyc_toc.htm

Circle of Friends
http://www.circleoffriends.org/

Power Card Strategies
http://autismspectrum.illinoisstate.edu/resources/factsheets/powercard.shtml