- Meeting the Common Core State Standards for Students with Autism: The Challenge for Educators

- November 21, 2013
  - Sue Constable
  - Karen Bowen Dahle
  - Stephanie Sokolosky
Agenda
8:30-9:45 AM

• The Culture of Autism
• Three Psychological Theories of Autism.
• Evidenced Based Practices (EBP)
• CCSS that may be Difficult for Students with ASD in ELA and Math
• EBP Examples
With Contributions From:

• Sheila Smith and Wendy Szakacs from OCALI

• Addressing the Common Core Standards for Learners with Autism Spectrum Disorders
The “Culture of Autism”

• Was suggested by Mesibov, Shea, and Schopler (2005)

• It frames the manner in which individuals with ASD perceive and interact with their world as different, but not as a deficit.

• Individuals with ASD have unique strengths and interests that should guide our practices
While there is the spectrum in Autism, the notion of an autism culture suggests that individuals share predictable patterns of thinking and behavior that guide our understanding and interactions.
The Culture of Autism

A few of the characteristics
Mesibov, Shea and Schopler

• Strengths in and preference for visual information

• Communication problems
  – In the social use of language
  – The understanding of non verbal information
  – Difficulty with abstract or nuanced language
  – Delayed development of vocabulary and grammar
Systemizing in Autism
(Simon Baron-Cohen)

Individuals with ASD show good, and sometimes superior, skills in *systemizing*.

Most are hyper-sensitive to detail and prefer predictable, rule based environments.

They are superior on tasks that involve searching for details and analyzing and manipulating systems.
Autism

• Is a spectrum disorder

• Affects individuals differently and to varying degrees

“When you’ve seen one person with autism, you’ve seen one person with autism.”

Stephen Shore
Common Core State Standards: Students with ASD

- Aligning educational programs for students with ASD to the Common Core State Standards (CCSS) may challenge the general and special educators who support these students.

- All educators who work with students with ASD need to consider specifically how the students’ disabilities affect the students’ involvement and progress.
Common Core State Standards (CCSS)

- Are designed to provide a consistent, clear understanding of what students are expected to learn, so teachers and parents know what they need to do to help them

- Standards are designed to be robust and relevant to the real world, reflecting the knowledge and skills that our young people need for success in college and careers
Forty-five states, the District of Columbia, four territories, and the Department of Defense Education Activity have adopted the Common Core State Standards.
Three Characteristics That Can Impact Access of the CCSS

Delayed theory of mind (Baron-Cohen, 1995): Being in someone else’s shoes

Weak central coherence (Frith & Happe, 1994): Can’t see the forest for the trees

Impaired executive function (National Research Council, 2001): The executive’s assistant
Theory of Mind (ToM): Being in Someone Else’s Shoes

- ToM is the ability to recognize and understand the thoughts, feelings, beliefs, and intentions of other people.

- Individuals with strong ToM know that other people have thoughts that differ from their own and understand that they need to consider these differences during all social interactions.

- Another term for weak ToM is “mindblindness,” which is difficulty “putting oneself in another person’s shoes” (Baron-Cohen, 1995)
Individuals with ASD often find it challenging to understand the nonverbal cues (facial expression, gestures, and body language) that indicate another person’s thoughts, feelings, intentions and beliefs.

They may misinterpret those cues and respond very differently than one might expect.
Central Coherence: Can’t See the Forest for the Trees

- Strong central coherence is the ability to see the big picture from a collective set of details.

- Children with ASD can be remarkably good at attending to detail but appear to have considerable difficulty perceiving and understanding the overall picture or gist of something (Frith & Happé, 1994).
Central Coherence That Impacts CCSS

• The concentrated focus on details makes it very difficult to process information into meaning and comprehension.

• Students may not focus on the details that are important to the meaning of the story.
Executive Function: The Brain’s Executive Assistant

• A collection of brain processes which are responsible for planning, flexibility, abstract thinking, rule acquisition, initiating appropriate actions, inhibiting inappropriate actions, and selecting relevant sensory information

• Individuals with ASD most often present with deficits in organization and planning, working memory, inhibition and impulse control, time management, and prioritizing and using new strategies (National Research Council, 2001).
Executive Function That Impacts CCSS

• Students with ASD often have difficulty initiating their work, staying on task and being able to organize themselves.

• As students get older, assignments and projects that extend over a period of time prove to be quite difficult as planning, prioritizing and recognizing length of project sections can be areas of weakness.

• Frith (2008) noted that individuals with EF differences have trouble generating and manipulating ideas. They find it difficult to integrate new information, situations or rules with existing concepts and knowledge, especially in times of stress.
Evidence – Based Practices

National Professional Development Center

• http://autismmpdc.fpg.unc.edu/content/evidence-based-practices
Evidence-Based Practices

National Professional Development Center Goals:

- Promote development, learning & achievement
- Increases state capacity to implement EBP
- Increase number of highly qualified personnel
What are Evidence-Based Practices (EBP)?

Focused interventions that:

• Produce specific behavioral & developmental outcomes
• Have been demonstrated as effective in applied research literature
• Can be successfully in educational settings
• (Odom, Boyd, Hall, & Hume, 2009)
Identification of Evidence-Based Practices

• Identified to core features related to ASD

• Birth to 21 years

• Identified & grouped teaching interventions that addressed outcomes & common core domains
Evidence-Based Practices

Available Modules Examples (43)

- Antecedent-Based Interventions (ABI)
- ASD-4-EI: What Early Interventionists Should Know
- Assessment for Identification
- Autism and the Biopsychosocial Model: Body, Mind, and Community
- Cognitive Differences
- Comprehensive Program Planning for Individuals With Autism Spectrum Disorders
Evidence-Based Modules

Examples continued:

• Customized Employment
• Differential Reinforcement
• Discrete Trial Training
• Extinction
• Functional Communication Training
• Language & Communication
• Supporting Successful Completion of Homework
Definition of Evidence-Based Practice National Professional Development Center (NPDC):

To be considered an evidence-based practice for individuals with ASD, efficacy must be established through peer-reviewed research in scientific journals using:

• randomized or quasi-experimental design studies. Two high quality experimental or quasi-experimental group design studies
Evidence-Based Standards

• single-subject design studies. Three different investigators or research groups must have conducted five high quality single subject design studies, or

• combination of evidence. One high quality randomized or quasi-experimental group design study and three high quality single subject design studies conducted by at least three different investigators or research groups (across the group and single subject design studies).
Evidence-Based Practices

- To date, the NPDC on ASD has identified 43 practices that meet the above criteria for evidence-based practices for children and youth with autism spectrum disorders.
- The NPDC on ASD is in the process of developing online modules for each of the 33 identified evidence-based practices. These modules are available on the Autism Internet Modules (AIM) website.
- http://autisminternetmodules.org/
Evidence-Based Practices

Evidence-Based Practices are to be used to implement instructional and behavioral interventions in modules or briefs

- Autism Internet Modules (AIM)
- For the rest of the evidence-based practices for which an online module is not yet available on AIM, the center has released the core components of the module, called evidence-based practice (EBP) briefs
Evidence-Based Practices

• EBP briefs include an overview of the practice, step-by-step directions for implementation, an implementation checklist, the evidence base for the practice, and supplemental materials. EBP briefs and their components are available for download through the EBP Briefs page. http://autismmpdc.fpg.unc.edu/content/briefs
Example: Charlotte

Charlotte, a child with ASD in second grade, is able to read and decode words in a story that her language arts group is reading.

She is able to name the characters in the story; however, when the teacher asks how the characters respond to events in the story, she becomes very anxious, stammers, and often gives an answer that does not relate to the story.

She does not understand the characters’ thoughts, feelings, and intentions.
CCSS

- **CCSS.ELA-Literacy.RL.2.3** Describe how characters in a story respond to major events and challenges.

  - Student may struggle to come up with correct answer in response to questions about character perspectives and responses.

  - Student may have difficulty determining how dialogue or incidents in a story propel a character’s actions
Informal Assessment Questions which will Lead to an Intervention Match

1. Does Charlotte understand her own feelings/differing emotional states? (Buron & Wolfberg, 2008)
2. Does Charlotte understand the reason(s) for feeling a specific emotional state? (Buron, & Wolfberg, 2008)
3. Does Charlotte know how to utilize a healthy way to cope/deal with differing emotional states?
4. Does Charlotte understand that other people have a perspective? (Baron-Cohen, 1995; Frith, 2008)
5. Does Charlotte understand that other people have a perspective, that this perspective needs to be taken into consideration and this perspective changes? (Baron-Cohen, 1995; Frith, 2008)
6. Does Charlotte understand that characters in the story have a perspective that is different from their own and that it changes in response to major events and challenges in the story? (Colle & Baron-Cohen, 2008)
7. Does Charlotte understand why the character responds the way he/she does in response to major events and challenges in the story? (Colle & Baron-Cohen, 2008)
8. Is Charlotte able to recognize each character’s perspective and make inferences or reconcile actions or behavior? (Happé, 1994)
Charlotte

• Understands her feelings and her differing emotional states

• She can link her emotions to events or actions/she understands the reasons for her emotional state

• She is currently learning how to respond conventionally with her different emotional states
Intervention Match

- **Visual Supports** - The Incredible 5 Point Scale 1,2,3; Graphic Organizers 5,6; Videos of Emotions 1,2,3,4,5

- **Social Narratives/Social Stories™** - 1,2,3,4,5,6,7, 8

- Cartooning/Comic Strip Conversations™ - 4,5,6,7, 8

- Role Play – 4, 5,6,7, 8

- Positive Reinforcement - Sticker chart for identifying emotions/feelings of self and others earning computer time
The Incredible 5 Point Scale
The Incredible 5 Point Scale

• Is a visual representation of:
  – an emotion

The scale simplifies emotions by assigning them a number and/or color. It is created for a group specific individual and tailored for a specific situation or behavior.
A “5” Could Make Me Lose Control

Kari Dunn Buron
# A 5 Could Make Me Lose Control Worksheet

<table>
<thead>
<tr>
<th>Activity</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eating in the cafeteria</td>
<td></td>
</tr>
<tr>
<td>Taking a walk</td>
<td></td>
</tr>
<tr>
<td>Walking in the hallways</td>
<td></td>
</tr>
<tr>
<td>Playing a board game</td>
<td></td>
</tr>
<tr>
<td>Having to stop one thing to do something else</td>
<td></td>
</tr>
<tr>
<td>Riding the bus to school</td>
<td></td>
</tr>
<tr>
<td>Sewing</td>
<td></td>
</tr>
<tr>
<td>Listening to music</td>
<td></td>
</tr>
<tr>
<td>Reading</td>
<td></td>
</tr>
<tr>
<td>Having a schedule change</td>
<td></td>
</tr>
<tr>
<td>Homework</td>
<td></td>
</tr>
<tr>
<td>Someone looking at me</td>
<td></td>
</tr>
<tr>
<td>Listening to directions</td>
<td></td>
</tr>
<tr>
<td>Specials</td>
<td></td>
</tr>
<tr>
<td>Yelling</td>
<td></td>
</tr>
<tr>
<td>Someone telling me what to do</td>
<td></td>
</tr>
<tr>
<td>Going to bed at night</td>
<td></td>
</tr>
<tr>
<td>Playing with gimp</td>
<td></td>
</tr>
<tr>
<td>Someone touching my stuff</td>
<td></td>
</tr>
<tr>
<td>Crowds</td>
<td></td>
</tr>
<tr>
<td>Having a substitute teacher</td>
<td></td>
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<tr>
<td>Handwriting</td>
<td></td>
</tr>
</tbody>
</table>

- Helps to define purpose
- Facilitates conversation
- Helps identify events
- Offers place to start
- Group setting
- Individual setting
- Fun activity
- Can add additional items

- Robert Rocchio
Strategies

- Lesson on what a strategy is
- Brainstorm list of possibilities
- Motivating
- Able to be utilized across setting
- Start with what student can do
- Reinforce
- Practice use of strategy to teach skill
- Consult with various staff i.e. OT, Speech/Language, Clinical Social Worker, etc.
- Visual supports
- Ongoing –strategies may be updated

- Robert Rocchio
Incredible 5 Point Scale Examples
<table>
<thead>
<tr>
<th>Looks Like:</th>
<th>Feels Like:</th>
<th>What To Do:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lose Control</td>
<td>• someone touching me or my stuff</td>
<td>• walk away and be alone</td>
</tr>
<tr>
<td></td>
<td>• high pitched voices</td>
<td>• listen to music</td>
</tr>
<tr>
<td></td>
<td>• not being able to find something</td>
<td>• look at picture</td>
</tr>
<tr>
<td>5</td>
<td>• being told “No”</td>
<td></td>
</tr>
<tr>
<td>Mad</td>
<td>• looking at someone</td>
<td>• walk away and be alone</td>
</tr>
<tr>
<td>4</td>
<td>• being late for school</td>
<td>• play with gimp</td>
</tr>
<tr>
<td></td>
<td>• being around rowdy people</td>
<td>• take deep breaths</td>
</tr>
<tr>
<td>Nervous</td>
<td>• too many people talking at once</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>• looking sick</td>
<td>• take a few deep breaths</td>
</tr>
<tr>
<td></td>
<td>• too many people talking at once</td>
<td>• count to 10</td>
</tr>
<tr>
<td></td>
<td>• dogs</td>
<td></td>
</tr>
<tr>
<td>Uncomfortable</td>
<td>• walking in the hallway</td>
<td>• take a few deep breaths</td>
</tr>
<tr>
<td>2</td>
<td>• lunchroom</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• someone else breaking a rule</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• crowds</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• loud noises</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>• riding in the car</td>
<td>• life is good!</td>
</tr>
<tr>
<td>Happy</td>
<td>• looking at books and photos</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• music</td>
<td>• shopping</td>
</tr>
<tr>
<td></td>
<td>• eating</td>
<td>• computer time</td>
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Self-Monitoring

- Self-reflection 3 times a day
- Identifies high risk situations
- Visually identifies daily progress
- Facilitates conversation
- Ownership on student
Data Collection
Annual Functional Goal = learner + *individual learner’s target performance* + *measurability*. Objectives should be directly related to the goal. They can represent either sub-skills or components of the goal, or specific targets along the way toward achievement of the annual goal.

- **Area:** Social and emotional
- **PLOP:** Student can identify his emotional state and understand why he is feeling that specific emotion. With verbal prompts, the student is able to use coping strategies when upset 40% of the time
- **Baseline:** With verbal prompts, the student is able to use coping strategies when upset 40% of the time
- **Goal:** With verbal prompts, will utilize coping strategies such as, requesting space outside the room, deep breathing or using a fidget, 70% of the time
- **Progress measured:** student will self monitor use and non use of coping strategies that worked for her throughout the day.
- **Objectives:**
  - Student will increase her ability to utilize coping strategies 50% of the time.
  - Student will increase her ability to utilize coping strategies 60% of the time.
  - Student will increase her ability to utilize coping strategies 70% of the time.
Example: José

José, a second grader with autism, is reading a book about pirates and their journey on boats in the Caribbean.

José has a great deal of difficulty identifying the main purpose of the text as his extreme fear of sharks makes him unable to concentrate on the content of the novel and instead focuses all his attention on finding more information about sharks.
CCSS

- **CCSS.ELA-Literacy.RI.2.2** Identify the main topic of a multi paragraph text as well as the focus of specific paragraphs within the text.

- Due to central coherence challenges, the student may be unable to identify the main topic of the focus or specific paragraphs and instead may focus on unimportant details.
Informal Assessment Leading to Intervention Match

1. After reading the story can José answer the question: What are the pirates in this story doing?
2. Can José tell the story as a sequence of events, rather than randomly including each event separately? (Loth, Gomez, & Happe, 2008)
3. When telling the story, is José able to include the most relevant events in the story? (Volden & Johnston, 1999)
4. Are there causal connections among the concrete story elements?
5. After reading the story, is José able to make inferences about what could happen next? If the story continued, what might the pirates do the next day? (Nuske & Bavin, 2011)
6. Can José fill in details that are not explicitly stated in the story, such as, “What kind of food do the pirates eat?” (Gopnik, 2000)
7. Can José move from his fear of sharks to think about the story as a whole?
Intervention Match

• **Social Narratives/Social Stories™** - 1,2,3,4,5,6,7
• **Cartooning/Comic Strip Conversations™** - 1,2
• **Visual Supports** - *The Incredible 5-Point Scale* 7; Graphic Organizers 1,2,3,4,5,6; Pictures of events for Sequencing 1,2; Map 1,2,3
• **Positive Reinforcement** - Social reinforcement 1,2,3,4,5,6,7; Earns time to look up information about sharks for completed work 1,2,3,4,5,6,7
Example: Jack

Following a class field trip to a local theater, the teacher asked students to write about the sequence of events that occurred during the play.

Jack initiated his task by writing his name on the paper. He then looked at his classmates’ papers to see what they were writing. The paraprofessional assigned to work with Jack redirected his attention and told him to start writing.

After about 5 minutes, he started to become more and more anxious. Jack kept saying that he did not know what to write.
CCSS

- **CCSS.ELA-Literacy.W.2.3** Write narratives in which they recount a well-elaborated event or short sequence of events, include details to describe actions, thoughts, and feelings, use temporal words to signal event order, and provide a sense of closure.

- Student may have difficulty initiating writing tasks, knowing what to write about and are often unable to retrieve language needed to write in a sequential organized fashion.

- Student may have great difficulty organizing his/her writing with well structured event sequences, and instead may focus on unimportant details. Student may have a strength in spelling but struggle to create a narrative. Student may have a strength in word recognition, but not be able to comprehend the meaning of the words.
Informal Assessment Leading to Intervention Match

1. Is Jack able to problem solve how to approach this assignment? (Planning, Organization – McDougall, 2001; Azano & Tuckwiller, 2011)
2. Does Jack know how to break down this assignment into smaller parts? (Planning, Organization - McDougall, 2001)
3. Can Jack initiate the first step in this task? (Initiation – Azano & Tuckwiller, 2011)
4. Was Jack able to retain what happened at the theatre? (Working Memory – McDougall, 2001)
6. Is Jack able to identify what details are important from the trip? (Working Memory & Recall – Dendy, 2011)
7. Is Jack’s anxiety interfering with his ability to complete the assignment? (Controlling Emotions – Dendy, 2011)
8. Is Jack able to request help from the paraprofessional or teacher so he can carry out the task? (Self-Regulation – McDougall, 2001)
Intervention Match

- **Structured Work Systems** – Written direction steps to complete this type of assignment 1,2,3
- **Visual Supports** – Written steps of the assignment 1,2; Pictures or video of the field trip 1,3,6; “Help” or “I have a question” card 3, 8; List of questions to answer about sequence of trip 6; Calming Activities Picture/Word Choice Board 7
- **Graphic organizers** – Sequence chart 1,5; First, next, next, last Chart 2,5
- **Positive Reinforcement** – Token board for completing steps in the task 1,2,3,5,6,7,8
Math CCSS Examples

Frank and Ernest

Hey, wait... number 17 is the same as number 3, and number 12 is the same as number 6... and number 14 is practically the same as number 2, and...
Mathematics: Grade 2
4 Critical areas

• Extending understanding of base-ten system

• Building fluency with addition and subtraction within 100

• Using standard units of measure

• Describing and analyzing shapes
4 math content areas in Grade 2 CCSS

• Operations and algebraic thinking
• Number and operations in base ten
• Measurement and data
• Geometry
Operations and Algebraic Thinking

• Work with equal groups of objects to gain foundations for multiplication.

• [CCSS.Math.Content.2.OA.C.3](#) Determine whether a group of objects (up to 20) has an odd or even number of members, e.g., by pairing objects or counting them by 2s; write an equation to express an even number as a sum of two equal addends.
CCSS.Math.Content.2.OA.C.3

- **Concept:** Odd/even numbers
- **Characteristic:** Executive functioning
- **Evidence-based practice:** Visual Supports

Odd number →

Odd number

Even number ←

$8 + 8 = 16$
Measurement & Data

- Relate addition and subtraction to length

- CCSS.Math.Content.2.MD.B.6 Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2, ..., and represent whole-number sums and differences within 100 on a number line diagram.
CCSS.Math.Content.2.MD.B.6

- **Concept:** Relate addition and subtraction to length
- **Characteristic:** Executive functioning
- **Evidence-based practice:** Visual Supports
Geometry

• Reason with shapes and their attributes

• **CCSS.Math.Content.2.G.A.2** Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.
CCSS.Math.Content.2.G.A.2

- Concept: Reason with shapes and their attributes
- Characteristic: Executive functioning
- Evidence-based practice: Visual Supports
Common Core State Standards: ASD Resources

<table>
<thead>
<tr>
<th>Resource</th>
<th>Resource Provider</th>
</tr>
</thead>
<tbody>
<tr>
<td>High-quality, evidence-based instruction</td>
<td>AIM, NPDC</td>
</tr>
<tr>
<td>Accessible instructional materials</td>
<td>AIM/CAST</td>
</tr>
<tr>
<td>Universal Design for Learning</td>
<td>OCALI UDL, National UDL Center, CAST</td>
</tr>
<tr>
<td>Appropriate accommodations</td>
<td>PARCC, Smarter Balanced</td>
</tr>
<tr>
<td>Assistive Technology</td>
<td>ATIM</td>
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</tbody>
</table>
In Summary

• If we are to ensure that all students—including students with ASD—achieve these standards, educators must recognize how ASD can affect students’ performance in the general curriculum.

• Educators must also understand evidence-based practices and match these strategies that can assist these students in meeting the new CCSS
Final Thoughts....

Individuals with ASD have limitless potential!

*Their* potential to achieve is only limited by *our ability to teach.*