Early Intervention & Autism Spectrum Disorders

Kristie Brown Lofland, M.S
Indiana Resource Center for Autism
Indiana Institute on Disability & Community
Indiana University
klofland@indiana.edu
812-855-6508
No one has all the answers

Autism is a neurological disorder and neuroscience is just now evolving in its understanding of the brain and learning

Attending to only special educational research is like wearing blinders to a whole world of good information

These are exciting times, capable of sparking creative ideas for the classroom!
“The worst thing you can do with a young autistic child is nothing.”
Dr. Temple Grandin
WHY IS EARLY INTERVENTION SO IMPORTANT?

- The younger the child, the better we are able to close developmental gaps—neuroplasticity.
- The younger the child, the less ingrained are habits that detract from, rather than enhance, learning.
- Younger children do a majority of their learning through the medium of play, and the years of diagnosis 3-5 are a natural time for them to acquire new skills while engaging with their natural environments.
- Very young children have very few daily obligations, so there is time for concentrated learning to occur.
- Children learn better in familiar, comfortable environments.
- The earlier a child can be involved in an effective program, the better the chance that he will be able to transition into their regular education classroom once they are school age.
ASSESSMENT

- Information is useful in determining what services the child needs and how intensive those services need to be
- The process of evaluating the child’s strengths and weaknesses
- Provides a picture of the child’s level of functioning at a particular point of time
- Gives a baseline of the child’s skill sets in a variety of areas
- On going process

DIAGNOSIS

- Usually occurs when a child is suspected of having a disability
- A trained professional observes the child, conducts test, etc., in order to determine if the child’s characteristics meet the symptoms associated with the suspected condition
- The end result is a “label”
In particular, assessments of intelligence are not as stable in young children as they are at an older age.

Lack of sensitivity for children with ASD.

Many children with ASD will show a decline in standardized scores, despite the absence of any actual regression and the presence of some progress.

Not designed to measure the progress of an individual child in an intervention program.

Not designed to be used for treatment planning and individualization.

In isolation, may not be the most informative tool to measure child progress during intervention.

Can be used for treatment planning and individualization.

More detailed information about progress toward specific goals.

Incorporates motivational and attentional strategies implemented with children with ASD.

Has the potential to measure child progress throughout ongoing intervention in a systematic way that better allows comparison of child progress and rate of learning.
TYPES OF CURRICULUM-BASED ASSESSMENTS

- STAR
- Early Start Denver Model Curriculum Checklist
- VB Mapp
- ABLLS
STAR (Strategies for Teaching based on Autism Research, Arick, Loos, Falco, Krug, 2004)

- Uses ABA instructional methods of discrete trial training, pivotal response training, and teaching functional routines
- Curriculum-based assessment in six curricular areas of receptive language, expressive language, spontaneous language, functional routines, academics, and play and social skills
Included in this kit are materials to both assess whether particular skill sets are present as well as to teach the skills once the individualized curriculum has been completed.

The kit comes with Suggestions for Use. This 60-page booklet correlates the materials with each task in the Milestones Assessment, along with lists and data sheets for Verbs, Motor Imitation with Objects, Gross Motor Imitation, Fine Motor Imitation, Mand for Actions, 300 Common Nouns, the VB-MAPP Intraverbal Assessment, and Self-Care Checklists.
Mainstay Programs for Children with ASD

- ABA
- DIR/Floortime
- TEACCH
- SI
- SCERTS
- RDI
- SON RISE
- Early Start Denver Model
EARLY START DENVER MODEL

- https://www.youtube.com/watch?v=SJ93HTeKc98
EFFECTIVE PROGRAMMING

- **COMMUNICATION SYSTEM**
- Curriculum content
- Highly supportive teaching environments and generalization strategies
- Need for predictability and routine
- Functional approach to problem behavior
- Family involvement
- Transition planning from Early Childhood program to elementary school
Children with ASD exhibit significant communication difficulties in both comprehension and expression of language

At the early childhood level, they have not learned the “power” of communication

Have not developed the “intent” to communicate

Will try to obtain desired item themselves or seek out others to obtain it for them

Do not understand that communication is an intentional exchange of information between two or more people

“If I can’t talk it out, I will act it out...”

EVERY CHILD WITH ASD SHOULD RECEIVE SERVICES FROM THE SLP
Curriculum Content

- Should address the core features and characteristics of ASD
- Goals and objectives will be highly individualized based on each child’s strengths and weaknesses
- Knowledge of typical child development is crucial as a guideline for intervention
- Core curricular areas for the child with ASD
ATTENDING SKILLS

- Must establish/teach joint attention
- A common feature of autism is the child’s difficulty in interpreting and prioritizing external and internal stimuli
- As a result, the child may demonstrate variable attending skills (i.e., can do well with a puzzle but attends poorly in circle time)
- Can have difficulty shifting attention from one stimulus to another
- Can have difficulty attending in situations where there are multiple stimuli
IMITATION SKILLS

- Imitation is a critical developmental skill for children with autism.
- Learning throughout life is based on the foundation of being able to imitate.
- The ability to imitate impacts learning in all areas, especially communication and social skills.
- Need to imitate fine and gross motor skills, imitate actions on objects, imitate designs with manipulatives, and imitate sounds and words.
Children with autism exhibit marked difficulty engaging in appropriate play skills with toys.

Their skills can range from no interest in touching or holding toys to lining up toys (manipulative/explorative play).

Functional play where they may construct with blocks or put a teacup to mouth to symbolic/pretend play where they pretend to do something with someone else that looks like role-playing.

Appropriate play skills with toys and play with peers will need to be specifically and directly taught to children with autism.
A core feature of autism is difficulty understanding and engaging in social interactions.

It is essential to facilitate developmentally appropriate social behavior.
I think the fundamental aspect of autism – the feature that you must have to be considered autistic – is either an absence or an impairment of the social instinct.

Lorna Wing – 2009

Autism is first and foremost a social disorder.!!!

Ami Klin 2014
NOT SHARING

• He is selfish!
• He is rude!
• He is mean!
• He is self centered!
• He is inconsiderate!
• He is greedy!

Or does he lack joint attention and joint pleasure?!
Challenging behavior is a reflection of problems of social thinking and emotional regulation!

*Disruptive or even aggressive behavior indicates a lack of social cognitive skills.*

Problem behaviors reflect the disability, and behavior plans should be part of the teaching IEP rather than an attachment or after thought or reaction.

So how do we teach these skills?
## 4 Cognitive Areas of Social/Emotional Intelligence – Daniel Goldman

<table>
<thead>
<tr>
<th>Self Awareness</th>
<th>Social Awareness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self Management</td>
<td>Relationship Management</td>
</tr>
</tbody>
</table>
Context Blindness and Owen

- What are you supposed to do?
- He doesn’t know what to do at school, or the library, or other common environments.
- At Disney World he is competent, calm, and happy!
OWEN AND AFFINITY THERAPY
AFFINITY THERAPY (DISNEY THERAPY)

• Play acting using favorite characters and dialogue.
• Kevin Pelphrey (Yale); Simon Baron Cohen (Cambridge); Pamela Ventola (Yale)
• Some children can develop social and emotional instincts through the characters they love.
• 16 week trial; 68 children ages 4-6
• Not yet funded as of fall 2014...
LOOK WHAT’S COMING IN JUNE.....
BIBLIOThERAPY AND NEUROSCIENCE

- Bibliotherapy: using stories to teach social and emotional information
- Neuroscience: Supports brain activation in social and emotional areas after reading a novel
- Reading fiction improves the readers ability to put themselves in another person’s shoes
- Even listening to stories about relatable emotional events can stimulate the emotional centers of the brain.
WHY HAVE RELATIONSHIP AND FRIENDSHIP GOALS?

- Friendships teach resilience and flexible thinking
- Flexible thinking is necessary for a person to realize there are several options for solving a problem
- Social negotiation skills
- Even “one good ‘friend’” helps
What are the conditions needed to learn socially?

- Social Attention!
- Social attention is rewarding.
- Maintaining and enhancing relationships.
- The theory suggests that a lack of social opportunities leads to the diminished social cognition.

Trends in Cognitive Sciences. April 2012, Vol 16, #4
Unless someone like you cares a whole awful lot,
nothing is going to get better.
It's not.
What Areas Should We Address??

Skills to Teach
Address skill deficits
- Address skill deficits
- Restricted patterns
- Communication
- Sensory
- Cognitive
- Motor
- Emotional

Task Demands
Ensure appropriate level of task demand (3 questions)
- Address skill deficits
- Restricted patterns
- Communication
- Sensory
- Cognitive
- Motor
- Emotional

Structure and Visual/Tactile Supports
Create predictability
- Preparation for change
- Routines
- Walking through new activities
Use visual supports
- Video
- Stories and cartoons
- Visual schedules and checklists
- Graphic organizers

Reinforcement
Provide reinforcement
- Contingent on expected behavior
- Frequent and consistent
- Self-selected
- Gradually decreased use
Provide range of reinforcers
- Concrete, activities, privileges
- Use of restricted interests
- Social reinforcement paired with tangible

Sensory Differences and Biological Needs
Provide a sensory diet
Monitor and address environmental stressors
- Sound, light, proximity/personal space, textures
- Movement needs
Monitor and address
- Appetite/hunger
- Fatigue
- Medical needs

Figure 3.1. Intervention Ziggurat.
If a child cannot learn in the way we teach...

we must teach in a way the child can learn.

Dr. Lovaas UCLA
Evidence-Based Practices

http://autismpdc.fpg.unc.edu/content/briefs
What are the Evidence-Based Practices?

- Antecedent-Based Interventions
- Differential Reinforcement
- Discrete Trial Training
- Extinction
- Functional Behavior Assessment
- Functional Communication Training
- Naturalistic Intervention
- Parent-Implemented Intervention
- Peer-Mediated Instruction and Intervention
- Picture Exchange Communication System
- Pivotal Response Training
- Reinforcement
- Self Management
- Social Skills
- And more!
Your story... is just beginning!
Visual Supports

Noise Levels:
- 4: Playground Voice
- 3: Classroom Voice
- 2: Partner/Small Group Voice
- 1: Whisper Voice
- 0: No Talking

Hallway Procedures:
1. Keep voices at 0.
2. Respect classrooms.
3. Keep your hands and feet to yourself.
4. Walk the "Right Way"
Reinforcement
Task-Analysis and Chaining

- Morning Procedures:
  1. Turn folder in and put up backpack
  2. Make lunch choice and get breakfast
  3. Sharpen two pencils
  4. Get started on morning work

- Daily Schedule:
  - Wednesday
    - Breakfast
    - Music: 9:00
    - Calendar
    - Journal
    - Spelling
    - Reading
    - Lunch

- I Can Clean My Room:
  - Sweep
  - Make bed
  - Sort laundry
  - Take out trash

- Visual Aids:
  - Images of daily activities
  - Checklists for tasks
  - Color-coded sections

- CHART: Task Analysis and Chaining
  - Step-by-step breakdown
  - Visual representation of tasks
1. I walk into the classroom and greet my teacher.
2. I put my folder in the folder basket.
3. I hang my backpack on my hook in the coatroom.
4. I sit down in my seat and eat my breakfast.
Technology Assisted
Intervention and Implementation
Video Modeling
Independent Work Stations
Peer-Mediated Instruction/Interventions
Picture Exchange Communication System (PECS)
Response Interruption/Redirection

Please stop what you are doing and make a better choice.
Social Narratives
Environmental Modifications
Visual Supports
Visual Supports
5 Habits of Creative Teachers

1. Curiosity
2. Remix: learn and use information to relate to your world
3. Find your tribe: a think tank
4. Dare to fail; learn from failures; empower yourself to take a few risks
5. Reflect on: challenge your assumptions