The Basics and Beyond: Teaching Children on the Autism Spectrum Disorder

Ann N. Garfinkle, Ph.D.
UM-Missoula
UH-Manoa
What this talk is NOT:

• An overview of ASD
• A description of comprehensive treatments for children diagnoses with ASD
• The latest update on the incidence rate of ASD
• An overview of how to diagnose ASD
• A list of resources about ASD
• etc
What this talk is about:

• Three different foundational interventions for children with ASD and how to maximize the effectiveness of those interventions
Why?

• Because
  • These interventions aren’t always completely understood
  • The interventions have more power than we usually use
  • Maximizing the power of these interventions will help the children with ASD learn additional skills
AGENDA

I. Visual Schedules
II. AAC
III. DTT
Visual Schedules

• Foundational/universal strategy for working with children with ASD—it compensates for deficits in understanding of time and receptive communication

• Strong research base

• Helps the child anticipate his day; decreases challenging behaviors; decreases power struggles; helps teach the child a sense of time; helps the child use a que rather then a memorized routines
Aspects of the visual schedule

• The orientation of the schedule
• The type of icon
• How time is marked on the schedule
• Where the schedule is located
• Note: the child must be taught to use the schedule
Schedules Continued

• One type of schedule is not better than another
  • It’s not necessarily better for a child to use pictures instead of objects.
  • The decision is based on where the child skills are, and what is the most meaningful.
  • They can be combined
Different Types of Schedules

For the Month

For the Morning
Object Schedules

Left to Right

Top to bottom
Picture Schedules

Photographs can be of areas that the student will go to,
pictures of objects that will be used once they get there or
A teacher they will work with.
Folder or Portable Schedules
Icon Schedules
Mobile schedules
Written Schedules

It can be fancy, laminated, hand written, produced with Boardmaker or a word processing program.
Tracking Progress through day

- Check
- Remove and match
- Move and put in
- Cross out
- Pick up room
- Pick up room

Mark progress
Types of Schedules Continued

• Teacher directed
  • The teacher hands a student the object, picture or icon.

• Transition
  • The schedule is placed in a particular area and the student is sent to check it.

• Portable
  • The student carries the schedule. (like your calendar or planner or PDA)

• It is important for the student to track movement through the schedule
How to Use or Introduce a Schedule

• Start with 1-to-3 objects, photos, icons
• Use simple language “Check schedule”
• Guide the student to the schedule and then to the location the schedule is sending them.
• Sometimes it helps to have a matching object, picture or icon in the target location that the student carries and matches and places into a container.
How to Use or Introduce a Schedule

• Teach the child how to use it. (Use DTT.)
• When the student is through with task say “Check schedule” (or hand them a “check schedule” symbol) to teach them how it works.
Pitfalls

• Not teaching the child to independently use the schedule
• Only using the schedule once the child is having a challenging behavior.
• Stopping using the visual schedule after the child “knows” the schedule
• Not updating the schedule as the child gains new skills
• Not sharing “control” with the child in terms of what goes on the schedule
Beyond the Basics

• A change card
• A question mark
• Embedding choices
• Using the idea that the symbol tells you what to do to increase flexibility—game spinner; dice
AAC

- Augmentative and Assistive Communication
- Provides the child a bridge to speech or a long-term communication system
- Decreases challenging behavior
- Compensates for a deficit area
Types of Systems

• Sign
• PECS
• Mobile technology
• One system isn’t best—they are pros and cons to each
Mobile technology

• Lots of choices
• Look for flexibility
• Easy of use
• Speed of system
• Tech support
• etc
The system is one part of communication training

- Engaging a communicative partner
- Delivering a message
- Making sure the message is understood
Traditional challenges associated with AAC systems

• Too limited
• Too slow
• Too expensive
Key aspects

• Icon/symbol/unit of meaning
• Teaching the child to use it (DTT)
• Capitalize on the child’s own motivation to communicate, even if that means we create that situation
• Fading all prompts so the child is independent
• Teaching across a number of communicative partners
• Teaching across a number of environments
• Making sure there are things to communicate for/about
Pitfalls

• Not fading prompts
• Not making the system available throughout the child’s entire waking day
• Not teaching the child to use the system in multiple environments
• Not providing enough opportunities for the child to use the system
• Not physically maintaining the system-no symbol, not charged, cracked screen etc
• Not training all adults to understand the system
Beyond the Basics—during acquisition

• Consider teaching relates skills like:
  • Matching- especially picture to object; upper and lower case letters
  • Teaching categories-food, toys, etc
Beyond the Basics-System Responsibility

• PECS
  • Carry the system
  • File the symbols
  • Select relevant symbols for the activity

• Mobile Technology
  • Carry the System
  • Charging the system
  • Using the volume controls in a way that allows the child to deliver the message and is appropriate for the context
Beyond the Basics-Teaching Longer Sentences

• Teaching color, shapes, size, number, position
• Note: if the child shows the concept during play, it’s a good one to teach
• Teach using DTT
• General idea: embed the preferred item into the situation that will require the child to use the attribute in the request
Beyond the Basics-Teaching Multiple functions

- Children with ASD often make requests
- Teach comments (I see, I hear, I’m going to etc)
- Make it salient!
- Use DTT and provide reinforcement not related to the comment
Discrete Trail Training-DTT

• THE fundamental teaching strategy-once you can do a discrete trial you can do almost all of the EBPs
The general form

1. Get the child’s attention
2. Provide the instruction
3. Prompt (if necessary)
4. Provide feedback
5. Wait
6. (repeat)
Not in the definition

- Location and context
- Teacher tone
- Number of trials in a row
• Get the child’s attention
Provide instruction
Prompt

• (and fade)
• Provide feedback
• Wait
• (massed vs distributed trials)
Pitfalls

• Decontextualized
• Not taught threw all stages of learning (i.e., acquisition, fluency, maintenance and generalization)
• Skills taught aren’t functional
• Skills taught aren’t connected to other contexts or content
• Prompts not faded
• Children are taught the same skill for too long
Beyond the basics-PRT

Traditional DTT
1. Get the child’s attention
2. Provide the instruction
3. Prompt (if necessary)
4. Provide feedback
5. Wait
6. (repeat)

Pivotal Response Training
1. Use a material the child likes to get his attention
2. Provide Instruction
3. Prompt
4. Provide access to the material the child likes
5. Wait
6. Repeat
Beyond the Basics- Instructive Feedback

Tradition DTT
1. Get the child’s attention
2. Provide the instruction
3. Prompt (if necessary)
4. Provide feedback
5. Wait
6. (repeat)

Instructive Feedback
In the feedback step (4) provide additional information, may be contextually related or contextually unrelated
Beyond the Basics - Matrix training

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
• The matrix is used to systematically teach a generalized response thus maximizing instruction.
Matrix training—identify two concepts such as nouns and verbs

<table>
<thead>
<tr>
<th></th>
<th>cow</th>
<th>pig</th>
<th>cat</th>
<th>dog</th>
</tr>
</thead>
<tbody>
<tr>
<td>eat</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>run</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>sleep</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>walk</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Matrix training-teach the first 2 squares

<table>
<thead>
<tr>
<th></th>
<th>cow</th>
<th>pig</th>
<th>cat</th>
<th>dog</th>
</tr>
</thead>
<tbody>
<tr>
<td>eat</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>run</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>sleep</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>walk</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Matrix training: probe the other 2 squares (yellow) and teach if not mastered

<table>
<thead>
<tr>
<th>eat</th>
<th>cow</th>
<th>pig</th>
<th>cat</th>
<th>dog</th>
</tr>
</thead>
<tbody>
<tr>
<td>run</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>sleep</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>walk</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1

2
Matrix training-teach the next square on the diagonal (3)

<table>
<thead>
<tr>
<th></th>
<th>cow</th>
<th>pig</th>
<th>cat</th>
<th>dog</th>
</tr>
</thead>
<tbody>
<tr>
<td>eat</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>run</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>sleep</td>
<td></td>
<td></td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>walk</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Matrix training - probe the other 4 concepts in that area (yellow) and teach those not mastered

<table>
<thead>
<tr>
<th></th>
<th>cow</th>
<th>pig</th>
<th>cat</th>
<th>dog</th>
</tr>
</thead>
<tbody>
<tr>
<td>eat</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>run</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>sleep</td>
<td></td>
<td></td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>walk</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Matrix training - continue to teach on the diagonal (4)

<table>
<thead>
<tr>
<th></th>
<th>cow</th>
<th>pig</th>
<th>cat</th>
<th>dog</th>
</tr>
</thead>
<tbody>
<tr>
<td>eat</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>run</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>sleep</td>
<td></td>
<td></td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>walk</td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
</tbody>
</table>
Matrix training - probe the other 6 concepts in that area (yellow)

<table>
<thead>
<tr>
<th></th>
<th>cow</th>
<th>pig</th>
<th>cat</th>
<th>dog</th>
</tr>
</thead>
<tbody>
<tr>
<td>eat</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>run</td>
<td>3</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>sleep</td>
<td></td>
<td></td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>walk</td>
<td></td>
<td></td>
<td></td>
<td>6</td>
</tr>
</tbody>
</table>
Matrix training- 4 concepts directly taught, 16 learned (12 indirectly)

<table>
<thead>
<tr>
<th></th>
<th>cow</th>
<th>pig</th>
<th>cat</th>
<th>dog</th>
</tr>
</thead>
<tbody>
<tr>
<td>eat</td>
<td>1</td>
<td>(1)</td>
<td>(3)</td>
<td>(7)</td>
</tr>
<tr>
<td>run</td>
<td>(2)</td>
<td>2</td>
<td>(4)</td>
<td>(8)</td>
</tr>
<tr>
<td>sleep</td>
<td>(5)</td>
<td>(6)</td>
<td>3</td>
<td>(9)</td>
</tr>
<tr>
<td>walk</td>
<td>(10)</td>
<td>(11)</td>
<td>(12)</td>
<td>4</td>
</tr>
</tbody>
</table>
In summary

• Maximize what and how we are teaching
• Teach for today but build skills for tomorrow
• If you an implement the things we talked about today, you will be going a long way to having a high-quality program for a child with ASD
Thank You!

Contact me:
Ann.garfinkle@mso.umt.edu