SPOTLIGHT ON THE BEGINNING COMMUNICATOR – PART 2

Assessment Tools/Practices for Moving Forward with AAC
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• I am receiving an honorarium and travel support for this presentation.
• I am a paid employee of Chesterfield County Public Schools.

Evaluation
Outcomes/Implementation

• Develop list of behaviors (unconventional gestures/signs) and meanings
• Expand signal repertoire
• Identify appropriate symbol set (object, miniature object, tactile, Tobi, photograph, color drawing, high contrast background, etc)
• Identify device to support present communication
• Plan for future (e.g. training eye gaze, partner-assisted scanning, etc.)

Continuum of communication skills

Partner-perceived → Intentional → Symbolic

Intentional Communication

Directed at a communication partner vs. toy/object
Uses voice, gesture, or eye gaze toward listener e.g. eye gaze between object and adult
Child waits for a response
Initiates and persists until there is a response
Behavior stops when the goal is met
Displays of satisfaction evident

Early modes of communication

• Vocal
  - Cry, whine, vocalization, word
• Unaided (part of child’s body)
  - Gesture/sign
  - Eye gaze
  - Body Movement
Aided
  - (part of system: objects, photos, switches, etc.)
Nonverbal signals

<table>
<thead>
<tr>
<th>Nonconventional gestures</th>
<th>Conventional</th>
<th>Symbolic</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Postural change (tone)</td>
<td>• Head nod/shake</td>
<td>• Point/eye gaze toward object, photo, etc.</td>
</tr>
<tr>
<td>• Sounds</td>
<td>• Eye gaze</td>
<td>• Voice output device</td>
</tr>
<tr>
<td>• Closing eyes</td>
<td>• Smile/frown</td>
<td></td>
</tr>
<tr>
<td>• Respiratory changes</td>
<td></td>
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</tbody>
</table>

Communication Dictionary

<table>
<thead>
<tr>
<th>Behavior</th>
<th>Meaning(s)</th>
<th>Adult Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clap my hands</td>
<td>I like that.</td>
<td>Affirmation</td>
</tr>
<tr>
<td>Finger to lips</td>
<td>I’m thirsty.</td>
<td>Provide drink</td>
</tr>
<tr>
<td>Head on lap</td>
<td>I’m tired/bored.</td>
<td>Acknowledge +</td>
</tr>
<tr>
<td>*Reaches for a full or empty cup</td>
<td>I’m thirsty.</td>
<td>?</td>
</tr>
<tr>
<td>wants more.</td>
<td>wonders is it full</td>
<td></td>
</tr>
</tbody>
</table>

Responding to Signals

Cynthia Cress (2018)

- Reinforce/strengthen
  - Non intentional (unintended Meaning)
    - Signal: Student looks down. Meaning: “frustrated or mad” Response: “Your face says you are mad.”
  - What to do more often
    - Emphasize new concept (Label action)
    - Signal: Student leans forward in wheelchair. Meaning: “I want out of chair” Response: touch shoulder
      and say, “I see you want OUT.”
  - Elicit new skill/strategy (increase complexity)
    - Signal: Student reaches toward object but doesn’t look at partner
      - Meaning: I want out. Response: hold object near partner’s face and wait for student to look at & reach to object
    - Signal: Student looks and vocalizes
      - Meaning: I want attention/greeting Response: Provide device with message “Hey, come here.”
  - Build a social routine/anticipation
    - Signal: Student rolls object on floor
      - Meaning: “I want to toy” Response: take turn and wait for turn
  - Help student expand cognitive skill
    - Signal: Bang toy on table
      - Response: Say word to label object/action; show how to put toy in container
  - Expand behavior to new contexts

Case Study 1 Request for Evaluation

- Student suffered an hypoxic-ischemic encephalopathy, resulting in an acquired brain injury 8 years ago. Student has orthopedic impairments, cortical visual impairments, and reduced stamina and alertness. She responds mostly to auditory stimuli (smiling, laughing, vocals, facial expression) especially when listening to audio recordings of family members. A few word approximations have been heard in the past.

- What additional information would you like to gather?

Accept/Reject or Yes/No?

- Modes:
  - Affect (smiling/laughing vs. whining/crying)
  - Body movements (push away, grab)
  - Eye movements
  - Gestures-Head nods/shakes
  - Vocalizations/words
Training yes/no ala Linda Burkhart

Model head nod/shake
Teach using multisensory approach
Start with accept/reject
Provide target using your fingers or
talking switch ¼"-1" from student’s
dehc or chin- touch to fingers/switch
rewarded
Fade tactile targets
Reward head movements-give verbal
feedback

What about yes/no….yes or no?

Hierarchy posted by Carrie Leonhart, ASHA Div. 12 group discussion (March 13, 2019)
- Accept/reject: (Do you want___?)
- Choice – preferred items/actions
- Label/possession: Is this a ___? Do you have ___?
- Personal Knowledge: Are you a girl? Is Ms. ___ your teacher?
- Basic Needs: Do you need help? Are you hungry?
- Preferences/Opinions (Do you like? Is ___ your favorite
movie?)
- Vocabulary Knowledge (Function, Attribute, class)
- Academic Fact-Based
- Memory based
- Negation – double negative
- Implied WH – Do you have plans for the weekend?

Identify device to support present skill level

- Single switch
- Dual Switch
- Four/Eight Choice
- Multiple level static board device
- Dynamic Display: Access method

Case Study 2

PJ is a 4 year old who has an X-linked intellectual syndrome (ATR-x). He has been identified as having a Developmental Delay and Visual Impairment (brain does not consistently understand or interpret what the eyes see, delays with fixation and tracking objects, intermittent esotropia, and moderate astigmatism or blurry vision). PJ is highly motivated by food but when upset ruminates (throws up liquid/food and then moves around in mouth), pulls his hair, cries, or attempts to pull an adult’s clothing or hair. PJ demonstrates low tone, sits in a wheelchair or Rifton seat with pommel, foot rest, seat belt, and tray. He is beginning to explore textures with his hands. PJ is excited by vestibular and large sensory input such as bouncing, rocking, or swaying. Parents would like to explore communication devices that would allow PJ to clearly communicate wants/needs.

- Where would you begin?

Types of switches

- Color-coded
- Tactile

Teaching switch Use

L. Burkhart-Stepping Stones Continuum
Goal: Motor learning to automaticity paired with cognitive learning,
- Active participation
- Problem-solving
- Feedback
- Motivation
- Opportunities
Stepping Stones summary

1. Single Switch cause/effect
   - Exploration/discovery
   - Brief effect
   - Not achieved in 3 sessions... adjustments needed

2. Single Switch-Multiple Locations & Functions
   - One switch for a purpose (car knocks down blocks, dog pushes ball, etc.)
   - Lots of practice

3. Two Switches – Two Functions
   - One switch works/one doesn’t
   - Two voice output messages with different purposes
   - Game spinner/voice output message
   - Computer access/message
   - Two controls on computer
   - Two switch scanning – control of timing, allows for distractions, more active control by user

Stepping Stones (continued)

4. Two Switch Step Scan
   - One switch moves something "mover"
   - Second switch only works when destination reached "selector"

5. Two Switch Step Scanning-Failure-Free Learning
   - Computer apps
   - Partner-assisted activities ("next" and "that’s it")

6. Two Switch Step Scan to Target
   - Increase accuracy and cognitive engagement

Identify appropriate symbol set

- Actual object
- Miniature object
- TOBI (True Object Based Icon)
- Tactile symbol
- Photograph
- Line Drawing
- High Contrast

Object schedule

True Object Based Icon

Differentiating message w/color and texture cues?
Core words – www.project-core.org

Tactile Symbols

Tactile symbol device

Use of switches- classroom activities-
- Operate appliances (blender, food processor, popcorn popper, pencil sharpener) using an environmental control unit (e.g. Powerlink)
- Operate devices that provide sensory feedback (lights, Lite Brite, music, fan, vibratory objects)
- Participate in games: Start/stop music for Freeze game; play Red Light, Green Light
- During story time, use switch to play repetitive phrase from a book.
- Join in music time by using a Big Mac to play a recording of drum rolls or cymbal clashes.

Oldies but goodies

Classroom switch activities with a Clock Communicator
- Direct peers to string beads as to size, color, and shape.
- Select a peer to take a turn in a game.
- Retell parts of a story by selecting picture from story.
### Add a language component

- **Possible goals:**
  - Using single message voice output switch:
    - Call for attention, greet others, request a turn, provide information, e.g. “I’m here.”
    - Use a single switch with voice output to make a choice, e.g. “that’s it” in the context of partner-assisted scanning
  - Multiple message sequencer (Step by Step)
    - Participate in social exchange through 2 turns
    - Direct a communication partner to complete a task

  Should be referencing a shared item/activity - keep focus on toy, story being read, game, etc.

### Strategies that make a difference

- **Encourage vocal/sound play**
- **Turn-taking**
- **Interactive routines**
- **Cause/effect activities**
- **Joint attention**
- **Develop symbolic referents (pairing symbols with words/actions)**
- **Communication partner training**

*PARTNERS MUST BE RESPONSIVE TO CHILD’S ATTEMPTS…*

### Choice-making…it takes two…or does it?

- Train reach/eye gaze to single desired item (think PECS)
  - “I see you’re looking at the drums…you want a turn.”

- Must have an established mode for communicating choice*
  - Pointing/reach
  - Readable eye gaze to objects/pictures
  - “Yes” response to partner scanning

### Mistakes that sabotage

- **Testing vs. teaching**
- **Respond to choice/provide correction vs. “Are you sure?”**

### Low Tech Eye Gaze (via blink)

![Low Tech Eye Gaze](image)

### Simple design

![Simple design](image)
Modified PODD Book

What is Partner-Assisted Scanning?
- https://www.youtube.com/watch?v=nGpSXQKrmR4

Partner Assisted Scanning
- PODD (Pragmatic Organization of Dynamic Display)

Partner-Assisted scan with Touch Chat

Case Study 3
- Student has limited use of his hands. The team would like to pursue the possibility of electronic eye gaze as his low tech signals are difficult to read.
- How would you proceed?
Other Important Variables/Challenges

- IEP team makes decisions
- Parent preferences/input
- Classroom realities vs. # of repetitions required to learn new behaviors
- Frequent student absences (illness, outside therapies, etc.)
- Frequent staff changes

References

- Sensory Guru User’s Guide, Sensory Eye-FX V1.2.0 software.

Resources

- https://www.youtube.com/watch?v=qh9m414Zw0 (Tactile Symbols with Kathy Howery)
- https://www.praacticalaac.org