Assessing During Instruction: Measuring REAL Success for Communication

Linda Burkhart & Gayle Porter

The Brain Builds Connections
Based Upon Associations to Known Understandings

Neurologically, Learning is:

• Strengthening Existing Connections
• Adding New Connections by Association
• Discarding Unused Connections

“What Fires Together Wires Together”
“Use it or Lose it!”

Connections are Formed within
Natural Contexts
It has to make sense to the kid!
Connections are Formed within Multiple Modality Experiences with Active Participation

Problems with Learning Language in Educational Settings

- Mismatch between need for data and the needs of the child
- Typical classroom interaction patterns are set up for children who already have language skills
  - Mostly one way - teacher instructing, kids responding
  - Not suited to following the child's lead

Problems with Testing and Assessment

“Catch 22” in AAC

“We can’t determine the child’s true level of functioning because of the child’s lack of reliable means of communication.

We can’t plan viable communication intervention because of the lack of data regarding the child’s true level of functioning”

Goossens’, 1989, p. 14

Catch 22!

1. Aided language does not naturally exist in the environment
   - Child cannot spontaneously “uptake” something that is not there
   - Professionals intervene - provide aided language based on their expectations of what’s possible

2. Child can only demonstrate ability to use what has been set up for use
   - The “different” communication behaviours of children who have complex communication needs may influence the input naturally provided by others.

3. Others can only be influenced by child’s use of what has been set up to use.

Dynamic Assessment

“Vygotsky (1978) argued that standardized tests (in which the tester cannot actively intervene to enhance the test taker’s performance) provided data only on the individual’s past history and present functioning, not on his future potential. He sought to find out where (and how) education could optimize each individual’s performance across a variety of skills.”

**Zone of proximal development**  
Vygotsky (1962, 1978)  

The zone of proximal development is jointly determined by the skills of the child and the form of structured guidance provided by the skilled partner.

**Dynamic assessment**
- **Quantitative**  
  - Determine amount of change in test-teach-test  
  - Ready to learn a skill
- **Qualitative**  
  - Identify processes or factors that interfere with the person’s successful completion of task  
  - Identify processes or means that enable the person to learn to successfully complete task  
  - Identify how the person solves problems and suggests specific strategies  
  - Bridges assessment – intervention gap

**An initial focus on receptive input**
- Provides children with opportunities to learn, over time, how aided symbols are used to communicate.
- Provides opportunities to observe the child’s response to this mode of communication and discover, over time, the strategies which will enable the child to communicate more effectively.

**Beginning Communicators talk on their own topic first**

- **Communication is a function of the child’s intent**
- **Autonomous message**
- **Enable an individual to say what they want to say**

**Remembering the Intent of AAC: Communicative Autonomy**

**Requiring too much ‘correctness’ early in the language learning process, can derail the developmental process, by undermining the child’s confidence as a learner**
Many communication turns are non-obligatory

When answering questions becomes the focus of language instruction and testing:

- Then the natural process of language learning through interaction is disrupted – changes the pragmatics
- Always ask questions - Only learn the pragmatic function “answer”
- Directed to “Tell me ..” - next turn is “compliance”
- Child may learn that the purpose of AAC system is to answer questions - to do work
- Not learn it is a tool to express own messages

When answering questions becomes the focus of language instruction and testing:

- The child begins to assume a more passive role
- Waits to be asked questions or told what to do
- Put her efforts into ‘pleasing’ the adult, instead of expressing her own ideas

Being too narrow in writing the measurable outcome of a goal that states what a child must say and how often he must say it, can actually lead to inappropriate instruction and decreased opportunities for learning

In Research and Clinical Practice: Pragmatic Use of Communication is Measured by it’s Appropriateness, Not by Quantity

Appropriateness is dependent on the interaction with communication partners in specific contexts

During snack, (Name) will request a drink 4 out of 5 times - Problems:

- Does (Name) want a drink?
- How do you know if he is requesting a drink 4 out of 5 times that he wants a drink?
- What determines 5 times?
- What does he learn about communication if he has to ask for drink when he doesn’t want one?
- What if he wants to say “I want to go play now”?
During math activities (Name) will respond to the question: How many? when presented with a group of 1-10 items.

**Problems:**

* If the child answers with an incorrect number, then the child has met the communication component of this goal: respond to the question how many, but has not met the criteria on the content of this goal – understanding quantities.

**More Problems:**

* It is very easy to inadvertently mix content and communication in the same goal.
* This makes it difficult to know what the child is achieving - a correct answer - or an appropriate form of communication.

**Writing IEP Goals and Objectives**

Goals must be measurable, but do not have to be measured in a testing format.

**Collecting Data**

Data collection must be reasonable and reflect real communication.

<table>
<thead>
<tr>
<th>Name:</th>
<th>Goal:</th>
<th>Date</th>
<th>Context</th>
<th>Message</th>
<th>Notes (partner’s response)</th>
<th>Independent?</th>
<th>Yes/No</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Language Sample**

<table>
<thead>
<tr>
<th>Student:</th>
<th>Wta</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Code:**

Plain text = Speech
Interpretations / gestures = Enclosed in parenthesis
Aided Language (PODD) = Underlined
*SGD (Speech Generating Device)
Capital letters = Sign Language
Italics or Cursive = list of choices and concrete items according to a context (used for children who scan)
// = phrase or word represented by one symbol or one activation in aided systems
" " = speech word approximations from student
### Language Sample Forms

**Language Sample Form**

<table>
<thead>
<tr>
<th>Person</th>
<th>Language sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child</td>
<td>I want to do something / play / categories / toys / ball</td>
</tr>
<tr>
<td>Teacher</td>
<td>Oh, you want to play with the ball, do you? Let's see what kind of balls we have.</td>
</tr>
<tr>
<td>Child</td>
<td>categories / describing words / big</td>
</tr>
<tr>
<td>Teacher</td>
<td>That's a good idea, I love playing with the really big ball, now if I could just remember where it is...</td>
</tr>
<tr>
<td>Child</td>
<td>(child points to closet)</td>
</tr>
<tr>
<td>Child</td>
<td>You want me to look in this closet?</td>
</tr>
<tr>
<td>Child</td>
<td>(child nods)</td>
</tr>
</tbody>
</table>

**Code:** Plain text = Speech

- Interpretations / gestures = Enclosed in parenthesis
- Aided Language use (PODD) = underlined
- Capital letters = Sign Language
- Italic or Cursive = list of choices and concrete items according to a context
- // / phrase or word represented by one symbol or one activation in aided systems

---

### Language Sample Form – Partner Assisted Scanning

**Student:** Allie

- For each series of communicative turns, start with writing **date, time and context** on one line and recording the conversation on the next line. Use one line for each new communicative turn.

<table>
<thead>
<tr>
<th>Who</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>8/23/09 2:30</td>
<td>Eating blueberries</td>
</tr>
<tr>
<td>Allie</td>
<td>(teaches for PODD communication book)</td>
</tr>
<tr>
<td>Linda</td>
<td>Do you have something to say?</td>
</tr>
<tr>
<td>Allie</td>
<td>(Yes) / Quick Word / Uh oh</td>
</tr>
<tr>
<td>Linda</td>
<td>Uh oh, you ate them all. Do you have more to say?</td>
</tr>
<tr>
<td>Allie</td>
<td>(Yes) / more</td>
</tr>
<tr>
<td>Linda</td>
<td>Oh, you want some more blueberries</td>
</tr>
<tr>
<td>Linda</td>
<td>Back to start / I think is / great - Those blueberries are great</td>
</tr>
<tr>
<td>Linda</td>
<td>More to say / Favorite - Those blueberries are your favorite</td>
</tr>
</tbody>
</table>

---

### Language Sample Form – Variation

**More specific information for SLPs and skilled data recorders**

**Date/context** | **Who** | **Message** |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

### Quick Language Sample

**(Less skilled data recorders)**

<table>
<thead>
<tr>
<th>Student Name</th>
<th>Date/Time</th>
<th>To whom</th>
<th>How</th>
<th>Message that the child communicated</th>
<th>Context</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kate</td>
<td>6/7/11</td>
<td>Looked at book</td>
<td>Want / bathroom</td>
<td>Math - independent</td>
<td></td>
</tr>
<tr>
<td>Kate</td>
<td>6/7/11</td>
<td>wilderness</td>
<td>Think / silly</td>
<td>Group - children enjoy nature sentences</td>
<td></td>
</tr>
<tr>
<td>Sue</td>
<td>6/7/11</td>
<td>Seemed upset</td>
<td>shop</td>
<td>Reading - worksheet</td>
<td></td>
</tr>
<tr>
<td>Kate</td>
<td>6/7/11</td>
<td>Thought</td>
<td>Something's wrong / sick / tummy / go / home</td>
<td>Lunch</td>
<td></td>
</tr>
<tr>
<td>Mary</td>
<td>6/7/11</td>
<td>Looked at book</td>
<td>goodbye</td>
<td>End of day</td>
<td></td>
</tr>
</tbody>
</table>

---

**Sample goal for a child at the beginning stages of aided language input**

(Name) will show increasing interest and attention to someone using a comprehensive aided communication system (such as a PODD) to talk to him/her in natural contexts throughout the day.
• Define “attention” specifically for this child

• Minimum of (10) times during the school day in a variety of contexts.

• looking towards the communication symbols or the communication partner
• calming during this process
• looking away to the side but with a stillness as if listening
• responding the partner’s message

Possible Data Collection Chart

<table>
<thead>
<tr>
<th>Date</th>
<th>Opportunity presented (Someone talks to the child using PODD)</th>
<th>Child Attended (looked towards, calmed, responded to the message, etc.)</th>
<th>Notes on attention (being observed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>09/10/09</td>
<td>Thul Thul</td>
<td>Thul</td>
<td>Mostly looking at book, and vocalizing</td>
</tr>
</tbody>
</table>

Possible Benchmarks (based on the child)

• Increased attention to Modeling of Communication System for a variety of communicative functions in
  • 2 contexts
  • 4 contexts
  • 6 contexts

Possible Benchmarks (based on the child)

• Increased attention based on the number of symbols modeled in sequence:
  • 1, 3, 5, etc.

• Decrease in level or numbers of prompts needed to facilitate attention (see chart) for increasing length of utterance modeled

Level of Facilitation Used to Gain Attention

<table>
<thead>
<tr>
<th>Facilations used to get attention to symbol</th>
<th>Attention to symbol</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moved symbol to child’s gaze</td>
<td>Thul</td>
<td>7</td>
</tr>
<tr>
<td>Moved column of symbols to child’s gaze</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Moved communication display to child’s gaze</td>
<td>Thul</td>
<td>3</td>
</tr>
<tr>
<td>Highlight with flashlight</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Tapping point</td>
<td>Thul</td>
<td>5</td>
</tr>
<tr>
<td>Shaking of symbol/display</td>
<td>Thul</td>
<td>10</td>
</tr>
<tr>
<td>Use of a slant board</td>
<td></td>
<td></td>
</tr>
<tr>
<td>simple point</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Modeled / Attended to

<table>
<thead>
<tr>
<th>Date / context</th>
<th># of symbols in sequence attended to / out of # modeled</th>
</tr>
</thead>
<tbody>
<tr>
<td>x/xx/xx Circle time</td>
<td>3/3, 2/4, 2/2, 0/2, 1/1, 1/1, 3/3</td>
</tr>
<tr>
<td>Bathroom</td>
<td>2/2, 1/3, 1/1, 1/1</td>
</tr>
<tr>
<td>Language arts</td>
<td>3/3, 6/6, 1/1,</td>
</tr>
</tbody>
</table>

Decrease Challenging Behaviors

With the use of aided symbols to assist receptive understanding in natural contexts throughout the day, (Name) will show a ___% decrease in the following behaviors... (or increase in ___ appropriate behaviors)

Initiating

Within natural contexts throughout the day, (Name) will initiate use of their communication system by one of the following methods: (define specifically for this child) and attempt to communicate something via ____ (define access strategy). Measured by increasing in frequency over baseline.

<table>
<thead>
<tr>
<th>Name:</th>
<th>Date:</th>
<th>Number of times child initiated use of PODD</th>
<th>Totals:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>09/10/09</td>
<td>TTL III</td>
<td>8</td>
</tr>
</tbody>
</table>

(Name) will intelligibly initiate communication with an expanded range of communication partners (measurement of baseline vs. current)

| ![Communicative Functions Chart] |

Communicative Functions

For early communicators: Write goals that will show an increase in the number of communicative functions expressed and used appropriately by the child in natural contexts. We cannot determine which functions the child will select to use first.

- request objects
- request/direct actions
- request assistance
- request recurrence
- request cessation
- ask questions
- express opinions
- protest
- complain, etc.
As the child’s ability to express ideas increases, then writing goals to focus on more specific operational, pragmatic, semantic, syntactic or strategic skills might be appropriate.

Expressing communicative functions must be based upon the child’s intent and therefore can only be modeled by others in contexts and not specifically prompted.

Therefore, progress cannot be measured by the reduced amounts of prompts needed.

Progress is measured by the increasing use of communicative attempts and functions by the child in natural contexts.

Within natural contexts throughout the day, (Name) will use an increasing number of communicative functions or intents expressively with his/her communication system using ____ access strategy.

Examples of communicative functions and intents:
- Request objects
- Request action
- Request activity
- Request a turn
- Reject, protest, complain
- Respond/acknowledge
- Inform (draw attention to something)
- Clarify or specify for example in the case of something is wrong
- Comment on action/object
- Express an opinion
- Ask a question
- Answer

<table>
<thead>
<tr>
<th>Name:</th>
<th>Communicative Function</th>
<th>Number of times expressed with P O D D</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Request objects</td>
<td></td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Request action</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Request activity</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Request a turn</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Reject, protest, complain</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Respond/acknowledge</td>
<td></td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Inform (draw attention to something)</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Clarify or specify for example in the case of something is wrong</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Comment on action/object</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Express an opinion</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Ask a question</td>
<td></td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Answer</td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

Within natural contexts throughout the day, (Name) will use an increasing amount of vocabulary (items in the communication system, sign, speech, etc) to express intents.

Vocabulary Use

Use Language Sample Forms and/or
Ask Questions

(Name) will appropriately ask a variety of questions, providing partner with sufficient information to understand her specific question. E.g. "Why", "What ....", "Where...." "when.....", "who....", "how.....", " Whose ....", "Can I ....", "Do you ......." (as measured across all activities during a school day)

Syntax

(Name) will use appropriate syntactical forms (sentence structure) to provide sufficient information to enable trained partners* to understand his message without contextual cues.

*Trained partner = person trained how to use partner-assisted auditory scanning communication book

Use Language Sample Forms

Utterance Length

Within natural contexts throughout the day, (Name) will increase the length of utterances, by using two or more words/symbols in a meaningful message

Use Language Sample Forms

Functional and Appropriate Use

(Name) will participate in class discussions and interact directly with peers to express a range of meanings.

* Relate information
* Ask questions
* Answer questions
* Give oral presentations

Use Language Sample Forms

<table>
<thead>
<tr>
<th>Date</th>
<th>Message</th>
<th>QudP</th>
<th>Partner</th>
</tr>
</thead>
<tbody>
<tr>
<td>10/09</td>
<td>I went to the movies Wednesday</td>
<td>Y</td>
<td>Peer</td>
</tr>
<tr>
<td>10/09</td>
<td>I went to the movies Saturday</td>
<td>N</td>
<td>Assistant</td>
</tr>
<tr>
<td>10/09</td>
<td>I saw dinosaur museum</td>
<td>N</td>
<td>Class</td>
</tr>
</tbody>
</table>
When Writing and Measuring Goals

• Ask: How will this impact the child’s long term destination of being able to say what she wants to say, to whoever she wants to say it, whenever she wants to say it?

• Keep in mind Pat Mirenda’s principle for evaluating effectiveness of intervention: Does it matter?