AAC
One Size Does Not Fit All

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Learning Objectives
• Identify 2 benefits of using tablet technology for communication
• Identify 2 benefits of using dedicated AAC devices for communication
• Identify 2 language/vocabulary programs
• Identify 2 therapeutic strategies to support use of AAC

Videos examples will be provided throughout the presentation

What is Communication?
Speech

A Look

Text
Sign Language

Symbols or Pictures

Speech Generating Devices
Effective or Ineffective?

Think about typical language development...
From birth, babies hear and respond to the spoken word. Caregivers expose babies to language for the first 12-18 months of their lives without expecting that he/she will utter a single understandable word.

http://atto.buffalo.edu/

What is AAC?

• Alternative and Augmentative communication (AAC) includes all forms of communication (other than oral speech) that are used to express thoughts, needs, wants and ideas.

• We all use AAC when we make facial expressions or gestures, use symbols or pictures, or write.

• People with severe speech or language problems rely on AAC to supplement existing speech or as an alternative for speech that is not functional.

http://www.asha.org/public/speech/disorders/AAC/
Exposure to Language for AAC Users

If a child is exposed to using AAC only during therapy sessions, it will take 84 years to be exposed to the same amount of language as a typically developing peer in his/her first 18 months.

Jane Korsten

Goal of AAC Use

Effective Communication

When the intent and meaning of one individual is understood by another

The “Magic” Formula

Motivation

Physical Effort   Cognitive Effort   Time

Bruce Baker
Bruce is a linguist and developer of Minspeak, a way of representing language in a communication device.
Motivation

Refers to how much the student wants to communicate the message.

Physical Effort

Takes into consideration the amount of energy required to produce the message.

This may involve pointing to a picture or a series of letters. It could also mean pressing a switch once or multiple times as in the case of a communicator who has significant physical challenges.

Cognitive Effort

Involves remembering where a message is located and/or coded.
Time

Refers to how long it takes to produce the message.

If the motivation to communicate a message is greater than the physical effort, cognitive effort and time required to produce it, then communication will occur.

If not, no message will be generated.
An Overview of the Assessment

- The individual
- The communication partners
- The environment
- The communication tools

The Individual

Cognitive Skills

Vision

Hearing

Physical

Language Skills

Behavior Considerations

Initiation and Persistence

Communication Partners

Family

Teachers

Siblings

Peers

After School Care

Instructional Assistants
Environment

Examples of No Tech and Low Tech Strategies

Yes/No questions
AAC: ONE SIZE DOES NOT FIT ALL

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Video example

Object Symbols

Video example
Video example

Mid-Tech

Video example
The systematic process by which a person's strengths, abilities and needs are matched to available tools and strategies.

(Shane & Costello, 1994)
## Feature Match Comparison Chart

<table>
<thead>
<tr>
<th>Key Features</th>
<th>Basic</th>
<th>Enhanced</th>
<th>High End</th>
<th>Premium</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connectivity</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Speech Recognition</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Hands-Free Operation</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Color Coded</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>High Volume</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Selective, Symbolic, Non-verbal</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Portability</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Accessory/Configuration Options</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Aural Output</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Application Support</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Accessibility/Modifiability</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Accessibility/Scrolling</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

*Note: Features marked with an asterisk (*) indicate enhanced features.*
Video examples

Feature Match Comparison Chart

<table>
<thead>
<tr>
<th>Key Features</th>
<th>Device 1</th>
<th>Device 2</th>
<th>Device 3</th>
<th>Device 4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Video examples
<table>
<thead>
<tr>
<th>Feature</th>
<th>Product A</th>
<th>Product B</th>
<th>Product C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accessibility</td>
<td>Better</td>
<td>Same</td>
<td>Worse</td>
</tr>
<tr>
<td>Weight of the device</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Mounted to a wheelchair</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Battery Life</td>
<td>12 hours</td>
<td>8 hours</td>
<td>16 hours</td>
</tr>
<tr>
<td>Environmental control</td>
<td>Available</td>
<td>Available</td>
<td>Available</td>
</tr>
<tr>
<td>Internet access</td>
<td>Included</td>
<td>Optional</td>
<td>Included</td>
</tr>
</tbody>
</table>

- Weight of the device
- Mounted to a wheelchair
- Battery Life
- Environmental control
- Internet access

Video examples
Resources to help with Feature Matching

AAC Evaluation Genie

- informal diagnostic tool to assist in identifying skill areas that relate to the language representation methods commonly found on augmentative communication systems.
- Designed to help build a framework for selecting an appropriate augmentative communication system.
- 14 subtests that can be administered with a screening option available.

Visual Identification
Visual Discrimination
Noun Vocabulary
Function Vocabulary
Verb Vocabulary
Category Recognition
Word Association
Category Inclusion
Category Exclusion
Pixon Core Vocabulary
Unity Core Vocabulary
Unity Icon Patterns
Picture Description
Word Description

Additional Evaluation/Screening Tools
The SETT Framework

A four part model intended to promote collaborative decision-making in all phases of assistive technology service design and delivery from consideration through implementation and evaluation of effectiveness.

SETT is an acronym for Student, Environments, Tasks, and Tools

Joy Zabala
http://www.joyzabala.com/

TASP: Test of Aided Communication
Symbol Performance

– Grammatical encoding
– Categorization
– Syntactic performance
– Symbol size and number

by Joan Bruno and Mayer-Johnson, LLC

WATI

• Adapted the SETT framework across all domains

• Chapter 3- Addresses AAC
Vocabulary: So Many Choices

There are approximately 750,000 distinct words in the English language. Where do we begin?
Finding a Balance

Phrase or Sentence-based Vocabularies

Spelling
Word Based Vocabularies

Gives an individual the most efficient and flexible AAC system

But remember....

One Size Does Not Fit All
Core Vocabulary

Words that will be taught in the future

Words that the individual is learning now

Words the individual already knows

All Words are NOT Created Equal

on hibernate what

go have have

do turn Paul Revere

cylinder what want

am Jupiter a

scaffolding off

Information provided by PRC consultant, Kara Bidstrup, M.S., CCC-SLP
Core vs. Fringe

- hibernate
- what
- have
- Paul Revere
- Jupiter
- a
- scaffolding
- off

Information provided by PRC consultant, Kara Bidstrup, M.S., CCC-SLP

Fringe Vocabulary

- Words that occur infrequently and lack versatility
- Only 20% of words in a sample of 100 words are fringe vocabulary
- Proper names and other nouns

How Many Core Words are Nouns?

<table>
<thead>
<tr>
<th>Core Words List Position</th>
<th>% Of Nouns</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - 50</td>
<td>0%</td>
</tr>
<tr>
<td>51 - 100</td>
<td>1%</td>
</tr>
<tr>
<td>101 - 200</td>
<td>9%</td>
</tr>
<tr>
<td>201 - 300</td>
<td>12%</td>
</tr>
<tr>
<td>301 - 600</td>
<td>20%</td>
</tr>
</tbody>
</table>
Generative Language is Based on Core Vocabulary

• 80% of what we say throughout a day comes from a small bank of 400-500 CORE words

• 20% of what we say comes from a bank of thousands of FRINGE words

Vanderheiden & Kelso (1987)
Picture Based Apps

GoTalk Now
By Attainment Company

My First AAC
By Inijini

Video examples

Text to Speech Devices

Lightwriter
Unique feature: dual display
By Toby Churchill
Text-based apps

- Predictable
- Verbally Premium

Video examples

Dynamic Display Devices featuring Symbols and Text

- Accent
  - 14" 10" 8"
  - By Prentke Romich Company

- I-Series devices
  - 15" and 12"
  - Eye tracking additional cost
  - By Tobii Dynavox
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NovaChat
Screen Sizes
12" 10" 8" 5"
By Saltilllo

T-Series
Screen Sizes
15" 10" 7"
By TobiiDynaVox

Word Power

• Combines the features of core vocabulary, spelling and word prediction.
• The core words in WordPower™ are categorized, color-coded and alphabetized for easy access.
• Available for most SGD’s as well as for iOS systems

Developed by Nancy Inman

Video example
**Proloquo2Go**

- Research-based Basic Communication, Intermediate Core or Advanced Core vocabulary level
- 23 pre-designed grid sizes ranging from 9 to 144 buttons on the screen
- Create and edit buttons with 20,000 symbols or use your own photos

**Video example**

**LAMP Words for Life**

LAMP Words For Life is based on Prentke Romich Company’s (PRC) Unity language system and Language Acquisition through Motor Planning (LAMP), a therapeutic approach that uses consistent motor planning for access to vocabulary.
Video examples

Compass

- Multiple Pagesets, communication Topics and vocabulary, help to increase communication efficiency and speed.
- 1400+ High-contrast symbols

Video example
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**Sono Flex**

Combines core and topic-based vocabulary
50+ pre-made context vocabularies;
11,000+ SymbolStix® symbols

One pageset within the SonoSuite

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**Video example**

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**Pros of Tablets for AAC**

- Less expensive
- Cool factor
- Many app choices
- Lightweight
- Often a greater comfort level for communication partners because it’s familiar
Cons of Tablets for AAC

- Durability
- Touch screen sensitivity
- Glitchy alternative access options
- App support and training
- Volume limitations
- Limited ability to trial
- May not be covered by insurance
- Limited app options for tablets other than iPads
- Updates
- Becomes outdated quickly

Pros of Speech Generating Devices

- Covered by insurance
- Technical support available by phone, web and in person
- Manufacturers have to repair/support device for a minimum of 5 years from the ship date
- Adequate volume
- Protective casing
- Alternative access methods more reliable
- Loans/rentals available

Cons of Speech Generating Devices

- Weight of device
- Communication partners may view the system as more complex
- Cost
- Dealing with the funding process (paperwork!)
Remember, Effective Communication Lets Us:

- indirectly gain control over the environment.
- regulate social encounters.
- receive and convey information.

Review

- Identify 2 benefits of using tablet technology for communication
- Identify 2 benefits of using dedicated AAC devices for communication
- Identify 2 language/vocabulary programs

See you after lunch for:

- Identifying Communication Barriers
- Creating Communication Opportunities
- Pulling it all Together: Implementation!