AAC and the iPad

Presenter: Stephanie Meehan, M.A., CCC-SLP

Moderated by: Amy Hansen, M.A., CCC-SLP, Managing Editor, SpeechPathology.com

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AAC & the iPad
Stephanie Meehan, M.A., CCC-SLP
University of Kansas

Who am I?
Clinical Assistant Professor and PhD candidate at the University of Kansas

Major area of study and expertise is in AAC

Lead a clinical practicum team of graduate and undergraduate students, each semester we serve a caseload of approximately 30 clients. These clients have a range of diagnoses and goals.
Today
1. Lay some foundation about AAC and AAC assessment
2. Discuss feature matching
3. Identify methods to narrow down the choices and evaluate iPad applications
4. Language facilitation strategies
5. Core vocabulary

Learning Objectives
1. After this course, participants will be able to list 2-3 resources to identify iPad apps for AAC.
2. After this course, participants will be able to define feature matching and describe its purpose.
3. After this course, participants will be able to describe the assessment process to identify the best AAC system for any user.
4. After this course, participants will be able to define what core vocabulary is, why it is important, and how to implement it in intervention.
5. After this course, participants will be able to describe similarities and differences between 4-5 comprehensive iPad applications for AAC.

AAC Myths
1. AAC does not impede speech and language development.
2. Children and adults do not need to match or identify pictures to develop AAC skills.
3. No one has to start with a paper based or low tech AAC system before moving on to a high tech system.
4. There are absolutely no cognitive or behavioral prerequisites to use AAC.
5. Access to the “hardware” of AAC is only the first step. The teaching, intervention, and support that follows is the critical piece.
6. Someone does not have to be completely nonverbal to benefit.
7. It is never too late to start using AAC.
You & the iPad

Many of you use an iPad in your intervention to address a variety of speech and language goals. There are many iPad apps that target specific areas of speech and language.

Some of you have people on your caseload that use an iPad as an AAC device.

Some of you have people on your caseload with whom you’d like to implement some form of AAC.

iPads are...

• Trendy
• Relatively inexpensive
• Relatively easy to acquire
• Accepted socially

Possible Scenarios

1. The child or adult you are working with comes to you with an iPad already.
2. The school/hospital/clinic you work for has provided you with iPads for intervention and for use as an AAC device.
3. You are considering an iPad during an AAC assessment.
4. The iPad is the best choice for the person you are evaluating.
Assessment

Who is involved?
Facilitators
Finders
General practice clinicians/educators
AAC Specialists
AAC Experts

“It is possible that we [can] forget or temporarily suspend well established strategies for assessment”

Our “first obligation” is to identify a person’s strengths and needs (current & future) and match them to the most appropriate tools & strategies.

Feature Matching

A process in which a person who uses AAC strengths and needs (current & future) are evaluated and matched to specific features of AAC symbols, strategies, & devices. (Costello & Shane, 1994)

Feature matching provides a framework for clinical decision making rather than making a recommendation based on media coverage, public testimony, personal thoughts, experience, or comfort level, and well meaning friends and family.
In paper by Costello, Shane, & Caron...

Clinical reports state that in a 6 month period (Feb-August 2012) 8 full time clinicians said that almost 78% of all patients and families initiated a discussion regarding possible use of a mobile device platform. Nearly 40% brought a mobile device to the clinical evaluation and a third of those had pre-loaded an AAC application.

Candidacy Models

Participation Models

<table>
<thead>
<tr>
<th>Phase 1</th>
<th>Referral</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase 2</td>
<td>Initial Assessment/Intervention for Today</td>
</tr>
<tr>
<td>Phase 3</td>
<td>Detailed Assessment for tomorrow</td>
</tr>
<tr>
<td>Phase 4</td>
<td>Follow-up Assessment</td>
</tr>
</tbody>
</table>
The assessment should result in a profile that can be matched to the operational requirements of various AAC options.

Important Areas

- Cognition
- Language
- Literacy
- Motor
Assessment Approaches

Norm referenced assessment
Criterion based assessment
Predictive assessment/feature matching

Assessment Domains

Positioning and seating
Motor capabilities
Cognitive/linguistic capabilities
Literacy skills
Sensory/perceptual skills

Positioning Principles

Use self as reference
Ensure stable base of support
Decrease the influence of atypical muscle tone
Accommodate fixed deformities and correct flexible deformities
Provide the least amount of intervention needed to achieve the greatest level of function
Provide support for resting
Motor Capabilities
Access for participation in assessment
Direct selection is best
Yes/no questions
Eye gaze
Access for the long term

Capabilities = Options
Apply motor skills to options for interfacing with device
Direct Select
Degree of accuracy
Number and size of targets
Scanning
Access
Step scanning
Automatic scanning
Directed scanning

Cognitive/Communicative Development
Awareness
Communicative intent
World knowledge
Memory
Symbolic representation
Metacognition
Visual perceptual skills
Symbol Assessment

Real object
Photograph
Colored drawing
Symbols

How can you determine symbol understanding?

Functional Use (e.g. spoon, cup)
Receptive labeling
Visual matching
Symbol assessment in context
Question answer format
Requesting format

Advance Symbol Use

Combining symbols
Categorization assessments
Association assessments

Bruno

Language

Single word vocabulary
Comprehension
PPVT
Macarthur
Bracken Basic Concepts
Clinical Assessment of Language Comprehension
Morphosyntactic and grammatical knowledge
CELF
TACL
Language sample analysis
Literacy Capabilities

Word recognition
Spelling
Recognition of correct spelling
Able to give first letter
Reading comprehension

Sensory/Perceptual Capabilities

Visual acuity
Visual field
Light sensitivity (e.g. glare)
Blind spots
Color perception

The iPad came out in 2010 and there are over 300 application available for communication.

This is...overwhelming.

How do you begin to sort through all the apps!?!?
Take a GULP

Ask: What do I want the person to be able to do with this app?

Get: a comprehensive list of AAC apps. Explore the product videos on iTunes, YouTube or at the vendor’s website.

Use: a feature match approach to assessment to ensure a good fit between the app and the communicator.

Look: at app reviews to get a sense of what others think and narrow down your options.

Play: See if you can get a lite version to explore before you decide. Ask around. Maybe a colleague or someone at your school has the app and will let you take a look at it.

(PraacticalAAC.org)

Identify person’s strengths & needs (current & future) and match to most appropriate tools & strategies. If assessment outcome supports device platform, continue.

Clinician must know available apps and be able to compare features of communication apps.

Clinician feature matches the needs and strengths to the specific features of all available communication apps.

Functional evidence based on clinical trial is conducted to assess the appropriateness of selected apps to communication needs.

1. Purpose of Use
2. Output
3. Speech Settings & Customization of Speech Settings
4. Representation & Customization of Display Settings
5. Feedback Features & Customization of Feedback Features
6. Rate Enhancement & Customization of Rate Enhancement
7. Access & Customization of Access
8. Required Motor Competencies
9. Support
10. Miscellaneous & Customization of Miscellaneous
Important: Not all features may be available in currently existing apps.

Which makes it even more important to feature match and not fit a person to a platform or app.

AAC App Assistant

The AAC App Assistant provides:

- Side-by-side comparison charts summarizing some basic features of appropriate AAC Apps (features such as symbols included, vocabulary provided, page layout options, voice/languages available, selection methods, which device it works with, free trial/lite versions, etc.). Features are continuously being added.
- The ability to identify Apps based on communication features required to meet the communication needs of the individual.
- Information for each identified App with prices and links to websites to continue to finalize your decisions.
- Developers can add additional information for your decision-making process.
- Comments are invited on Apps – and screened to provide the most educational value.
- Works well in conjunction with augmentative communication (AAC) evaluations.

www.aactechconnect.com

http://www.aactechconnect.com/?page_id=555

Apps Assistant only includes apps that meet the following criteria:

- Must use voice output.
- Must be an App to augment communication with pictures &or spelling (text-to-speech).
- Must be customizable (i.e., adding pictures for picture-based Apps and phrases for spelling/text-to-speech Apps).
- Must have a website with easy to locate information about the specific App.
- Must be currently available on iTunes in the US.
- Developers must have a working email address.
- Absence of negative technical reviews.
- Exceptions will be made if it meets most of the criterion and is judged to be a unique and valuable App.
- Does not include apps with partial functioning (i.e., storytelling, single context, etc.).
- Must be updated regularly including iOS versions 5.1 and above in most cases.
AAC Ferret

- filtering the apps based on your specific combination of criteria, also offering the ability to refine your original search;
- providing a user friendly and intuitive app that finds apps for you and links you directly with the App Store description and screenshots;
- allowing a PDF document to be generated with the results of your search;
- providing in built support features such as preselected searches, a basic tutorial, info buttons for terminology definitions and email support and feedback.

So at the end of this LONG process...
You might find that an iDevice as an appropriate platform...

Apps are also chosen through feature matching!

Some apps that are inclusive

Speak for Yourself
Touch Chat with Word Power
LAMP Words for Life
Dynavox Compass
Core Vocabulary

80% of what we say comes from a list of just **200** words.

85-90% of what we say comes from a list of **300-400** words.

(Baker & Hill, 2000)

I know many parents & educators who are so happy to have their child be able to just express their needs. I think people who do this are doing a great disservice to their child because there is so much more to life & communication than just expressing needs.

- John Feucht, a person who uses AAC

Core vocabulary = multiple meaning words

Core words are frequently used.

They do not vary across age/gender/setting

GO
UP
TURN
STOP
Families & the iPad


64 survey respondents, parents of children with a communication related disability and who either were using a mobile device and an AAC app (n=42) or whose parents were considering the purchase of an iDevice and/or a communication app (n=18).

60% said their child had not received an assessment.
37% purchased out of pocket
15% received funding from a school district
7% insurance funded the device
5% other sources of funding

What influenced that purchase(most influential factor)?
33% said easy of use
31% said affordability
17% chose multiple device functions
9% ranked durability
1% said screen size

When asked exclusively about apps participants said the single most helpful piece of information was "information about how the child can use the application for communication with input from professionals."

The most influential characteristic were ease of use, affordability, visual appeal to the child, and number of preprogrammed words, icons, or phrases.

Those with a device cited consumer review information as helpful and those without a device wanted more information about how to get support for their child.
The families were also asked about their support needs and preferences. One of the most frequently selected responses was the school-based SLP. SLPs were cited as the most frequent support and the most desired. 17% reported they needed to learn how to use the device but 51% reported needing to learn how to use the application. Help with supporting the child’s use of the device for communication purposes was the was reported as the type families most wanted to receive. 1-2 hour sessions with a professional was selected by 49% of the participants as the form in which they would prefer to receive the support.

Language Facilitation Strategies

1. Aided input
2. Wait time
3. Expansion
4. Visual supports
5. Modeling!

Final steps to success

1. Presume competence (for yourself and especially the children and adults you serve)
2. Write AAC training into the IEP, for the family and other professionals on the team
3. Send the device home!
4. Inclusion, inclusion, inclusion.
5. Start where you are and use what you can!
6. Begin NOW, begin TODAY, doing something, even if it is not perfect is better than doing nothing!