

# iPads: A continuum of Tools for AAC

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# Agenda

- Definitions/Historical Perspective
- iPads for communication: Pros and Cons
- Goals for communication
- Assessment - feature matching
- AAC Tools Available
- Hands-on time

# Augmentative and Alternative Communication (AAC)

- Any approach designed to supplement or replace verbal communication.
- Examples: sign language, gesture, communication books, “high-tech” dedicated devices and mobile devices

# AAC “dedicated devices”

- Tobii Dynavox (now merged)
- Prentke Romich



# Historical Perspective

- 40 year history
- Much research and development occurred before each device was released to the public
- Vocabulary systems reflected good practice
- Support/Teaching materials “part of the package”
- High production costs and low demand led to high costs and strict funding guidelines

(Jane Farrall, Speaking APPropriately: AAC Apps for iPad, prepared for the Inclusive Learning Technologies Conference, 2012)

# Then the iPad came along (2010)!

- AAC became more “consumer driven”
- Decreased cost and increased comfort with technology helped parents “take the lead” in choosing apps
- AAC became more mainstream

(Jane Farrall, Speaking APPropriately: AAC Apps for iPad, prepared for the Inclusive Learning Technologies Conference, 2012)

# iPad PROS

- Cool & socially acceptable
- Portable
- Camera allows to capture vocabulary “on the go”
- Relatively inexpensive
- Bypass the lengthy, complicated funding process
- Making progress towards gaining more funding options of iPads (AbleNet/ FRS Custom Solutions)
- Hundreds of apps to choose from
- Some nice accessibility features

# iPad Cons

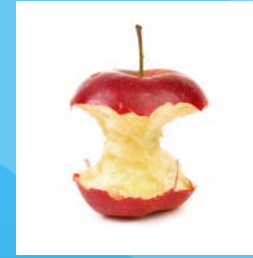
- Quick selection of an app may lead to abandonment
- Some apps do not reflect good research and practice
- Access drawbacks
- Often limited tech support included with app purchase
- Not a dedicated device - students may see as a toy/leisure activity
- Frequent updates in iOS platform and app software may lead to glitches/inconsistencies
- Many apps moving to subscription-type services



# Goals for Communication

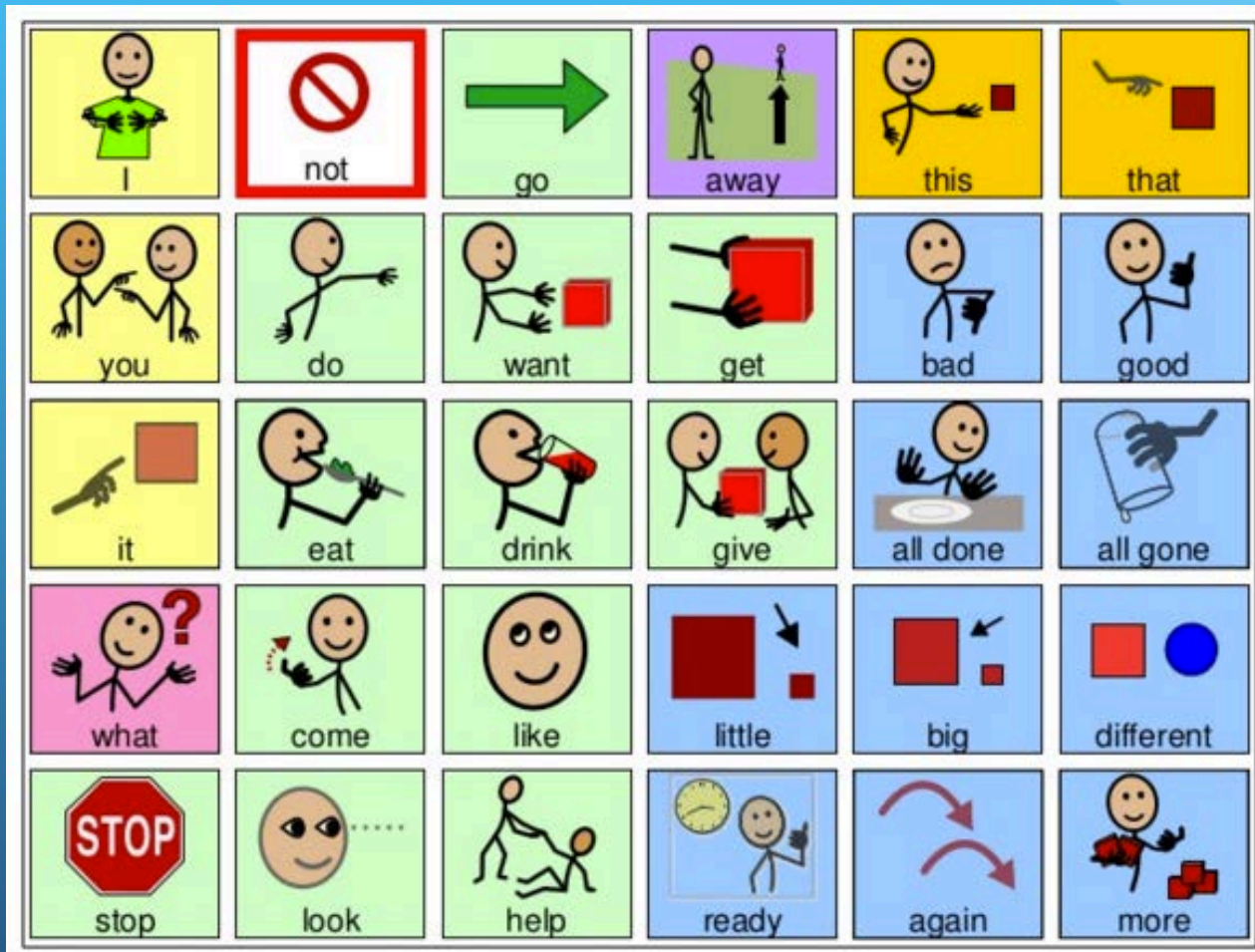
- Core vocabulary vs. pre-stored messages
- Most AAC users who develop a high level of competency require core word vocabulary as the base of their language system, as most of what we say we have never said before
- Most AAC users require some pre-stored messages as the most EFFICIENT way to communicate a message
  - Repair messages (“That wasn’t what I wanted to say!”)
  - Time sensitive messages (“I have to go to the bathroom”)
  - Independence messages (“Can I have a turn?”)

# Core Vocabulary



- Small set of simple words, in any language, that are used frequently and across contexts. (Cross, Baker, Klotz & Badman, 1997)
- A few hundred words that account for approximately 80% of the words we use.
- Early sight word lists (i.e. Dolch) often contain core words
- Foundation for SNUG (spontaneous novel utterance generation)

# Sample Core



Kate Ahern, Ms. Ed

# Fringe Vocabulary



The rest of vocabulary is called “Fringe” vocabulary.

- Specific to a topic
- Frequently emphasized in academics
- Was traditionally emphasized in AAC practice
- Easier to picture (mostly nouns)
- Makes up approximately 20% of communication interactions

# Sample Fringe

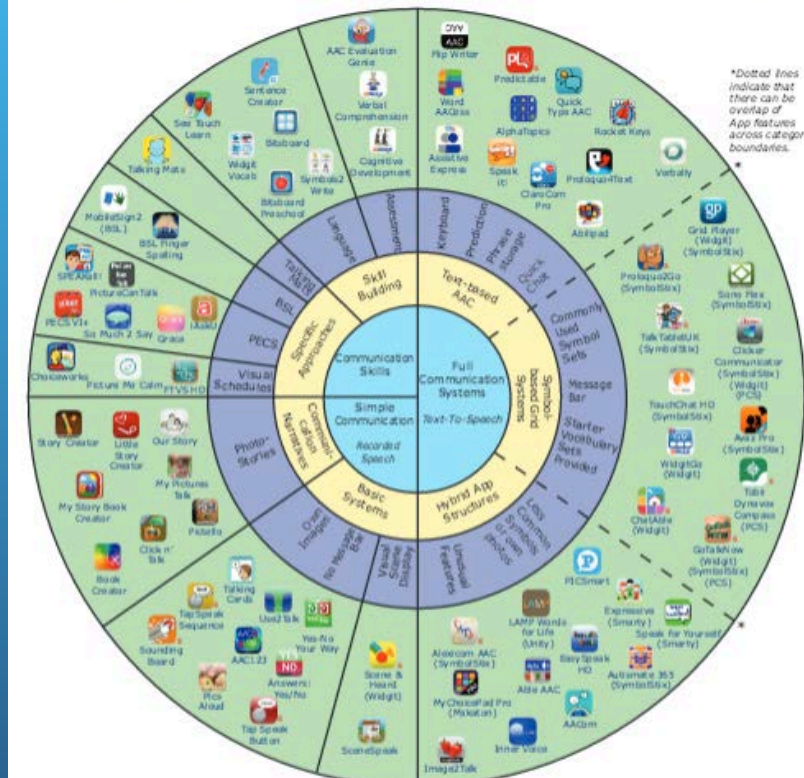


# When we talk about an iPad app as an AAC device...

- OUR GOALS ARE THE SAME!
- Assessment and feature matching are KEY to success when choosing a language system for a student.

# With over 300 apps for communication...How do you decide?

iPad Apps for Complex Communication Support Needs:  
Augmentative and Alternative Communication (AAC)



<http://www.callscotland.org.uk/Common-Assets/ckfinder/userfiles/files/iPad-Apps-for-Complex-Communication-Support-Needs.pdf>

# Some stats about families and the iPad

- “iPads, Mobile Technologies, and Communication Applications: A Survey of Family Wants, Needs, and Preferences” (in prep), A. Meder
- 64 Survey respondents, parents of children with a communication related disability and who either were using a mobile device and AAC app (n=42) OR whose parents were considering the purchase of an iDevice and/or communication app (n=18)



# Assessment/Funding

- 60% said their child hadn't 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 the purchase?

- 33% said ease of use
- 31% said affordability
- 17% chose multiple device functions
- 9% ranked durability
- 1% said screen size

# Take a GULP (PraacticalAAC.org)

- Ask: What do I want this person to be able to do with this app?
- Get: a comprehensive list of AAC apps. Explore product videos on iTunes, YouTube or the vendor's website
- Use: a feature match approach 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

# Assessment

- Who should be involved?
  - AAC User
  - Parents
  - Teachers
  - Speech Language Pathologists
  - Occupational Therapists
  - Physical Therapists
  - Vision Specialists
  - AAC Specialists
  - AT Specialists

# What is feature matching?

- A process in which an AAC user's strengths and needs (current and future) are evaluated and matched to specific features of AAC symbols, strategies and 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 (Stephanie Meehan, University of Kansas)

# Some things to think about...

- Positioning and seating
  - Muscle Tone
  - Supportive Seating
- Motor capabilities and overall access abilities
  - Scanning vs. Direct select
  - # and size of targets
- Cognitive and linguistic capabilities
  - Communicative intent
  - Memory
  - Symbolic representation
- Literacy skills
  - Word Recognition, spelling and reading comprehension
- Sensory/Perceptual Skills
  - Visual acuity and field, light sensitivity, color perception

# A look at a feature matching chart

**Feature Comparison**

App	Price*	Device			Type				Speech			Symbols				Access				Prediction		Exports		Programming			Other	Notes													
		Pad	Phone, Touch	Read	Spelling	Picture/Symbol based	Linking boards	Storyboards	Visual schedules	Simulates PECS	None	Digitized	Synthesized	Boardmaker/PCS	SymbolsSix	Pre-loaded images	Other	Import Personal photos	Import Google images	Direct	Vertical swipe	Horizontal swipe	Auditory Scanning	Visual Scanning	HeadEye tracking	Word prediction			Grammar prediction	Spell check	Save as phrase/text/cass	E-mail	Print	Within app	Internet	Internet share capability	Subscription required	Message Display Window			
AAC Buddy	\$44.99	X	X	X		X	X		X		X			X	X	X		X										X													
Alexicom AAC	free \$40/mo	X	X	X		X			X		X			X	X	X		X		X	X							X													
Answers: Yes/No	1.99-.99	X	X							X																		X									2 choices/ board, reading required				
Assistive Chat	\$24.99	X	X		X					X									X	X				X																	
AutoVerbal	\$9.99	X	X		X	X				X				X					X	X	X																				
First-Then	\$9.99	X	X				X	X			X			X		X		X	X	X																					
Grace	\$37.99	X	X			X			X					X	X	X		X																							
I Can Speak	\$29.99	X	X		X	X				X				X										X																	
iComm	free \$26.99	X	X			X				X			X	X	X	X	X	X	X	X	X																				
iCommunicate	\$49.99	X	X				X	X			X			X		X	X	X	X	X	X						X														
iInteract	\$8.99	X	X			X	X				X			X																											
iMean	\$4.99	X			X					X														X																	
iPrompts	\$49.99	X	X				X			X				X	X	X	X	X	X	X																					
Look 2 Learn	\$14.99	X	X			X			X				X	X	X	X	X	X	X	X																					
My Choice Board	\$9.99	X	X			X			X					X		X	X	X	X	X																					
My Talk Tools	free \$39.99	X	X			X	X			X				X	X	X	X	X	X	X																					
MyPECS	\$4.99	X	X			X		X						X																											
New Voice	\$149.99	X			X					X									X	X					X																
OneVoice	\$199.00	X				X				? ?				X		X		X	X																						
PhraseBoard	free	X			X	X			X										X	X				X	X	X	X														
PredictAble	159.99	X			X																X			X	X	X	X														
Proloquo2Go	\$189.00	X	X		X	X	X			X			X	X	X	X	X	X	X	X				X	X	X	X	X	X												
Small Talk Aphasia	free	X	X			X				X				X	X	X	X	X	X	X																					
Sounding Board	\$49.99	X	X			X	X			X				X	X	X	X	X	X	X																					
Speak It!	\$1.99	X	X		X					X														X		X															
Stories2Learn	\$13.99						X			X				X		X	X	X	X																						
TapSpeak Button	\$14.99	X	X							X																															
TapSpeak Choice	\$99.99	X								X	X	X		X		X																									
TapSpeak Sequence	\$29.99	X	X			X	X			X				X		X																									
TapToTalk	free \$99.95	X	X	X		X				X				X		X																									
TouchChat	\$149.99	X	X		X	X	X			X				X		X								X	X																
TouchChat with																																									

[http://www.faast.org/sites/default/files/Crawford\\_Watson-Apps\\_Feature\\_Comparision-AAC.pdf](http://www.faast.org/sites/default/files/Crawford_Watson-Apps_Feature_Comparision-AAC.pdf)

# Apps

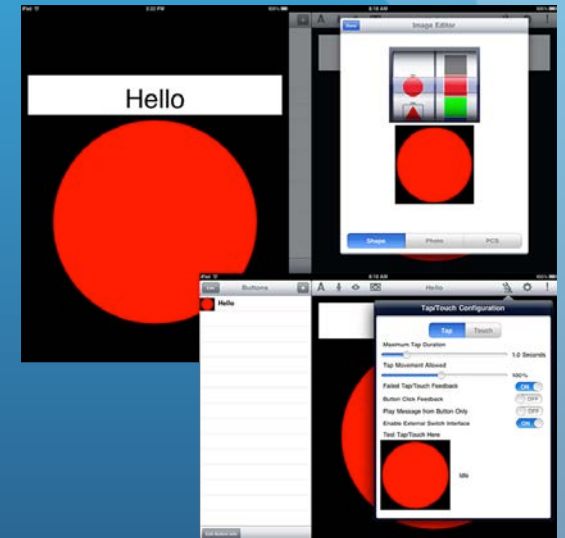
- TapSpeak Sequence
- Pictello
- PODD
- LAMP Words For Life
- Proloquo2Go
- TouchChat
- Tobii Sono Flex
- Predictable
- HUNDREDS MORE!

For more apps visit [www.janefarrall.com/aac-apps-lists/](http://www.janefarrall.com/aac-apps-lists/)



# TapSpeak Sequence

- \$29.99 for Basic Version
- \$49.99 for TapSpeak Sequence Plus (this version includes 4500 Dynavox/Mayer-Johnson PCS picture symbols)
- Used as a sequential message voice output device
  - Tell news, jokes, messages from home
  - Complete interviews
  - Participate in shared reading activities in the classroom (repeated text)
  - Participate in sequential tasks (getting ready for bed or making a sandwich)



# Pros

- Unlimited number of messages
- Unlimited sequence length
- Unlimited recording length
- Can use a variety of visuals (button vs. Photographs/videos vs. symbols)
- Can include a timer in the sequence
- Tap response is configurable
- Can be used with switches
- Sample sequences are included

# Cons

- No lite version
- No symbol set included in the basic version
- Limited use as a communication system
- Doesn't provide tactile feedback like a hard switch would do

# Pictello

- \$19.99
- Create an slideshow with synthesized or recorded audio
- Social stories
- Sharing information
- Sequences for a task
- Telling a joke or reciprocal conversation



# Pros

- Intuitive to use with “Wizard” mode
- Can save and export stories as a PDF
- Facebook User’s group has activities to download
- Can record student’s voice
- Can enter text with word prediction
- Playback options automatic and manual, switch
- Can highlight text as you go

# Cons

- User must program all content
- Limited use as a communication device
- Only 1 picture per page
- No symbol set included
- No “lite” version (PowerPoint can do similar things)

# PODD

- Pragmatically Organized Dynamic Display (Gayle Porter, Australia)
- Organized around pragmatic intent (i.e. Something's wrong, chat, go somewhere)
- Designed as a low tech system for people with complex communication needs (CP); communication partner modeled language to match visuals
- Growing in popularity with other populations

# PODD on SGD

- Available for intermediate language level (16-40) on Windows tablets
- Grid Player App from Sensory Software (free)
  - PODD grid not included but can be loaded for free if you purchase Grid 2 software for the computer
- Dynavox Compass software with PODD (\$299.99)





# Compass with PODD

- Pros
  - Uses PCS symbols
  - Editing software available on the computer
  - Developed by Gayle Porter who created the paper PODD

# Compass with PODD

- Cons
  - Not a straight copy of the paper versions, but they do use similar patterns
  - Navigational pathways can be lengthy
  - Only available in 15 or 60 cells
  - Expensive

# LAMP WFL

- \$299.99
- 84 buttons available per page
  - Main page: 82 core words, 1 clear button, 1 spelling/numbers page button
- Motor plans can grow, but they never change
- Every word has a consistent and unique motor plan associated with it



# LAMP WFL

- Three levels
  - 1<sup>st</sup> Level: 84 One-hit - hit the button, get that word
  - 2<sup>nd</sup> Level: 84 Transition - every word is accessible in 2 hits or less
  - 3<sup>rd</sup> Level: 84 Full - access to 6000 words in 3 hits or less

# LAMP WFL

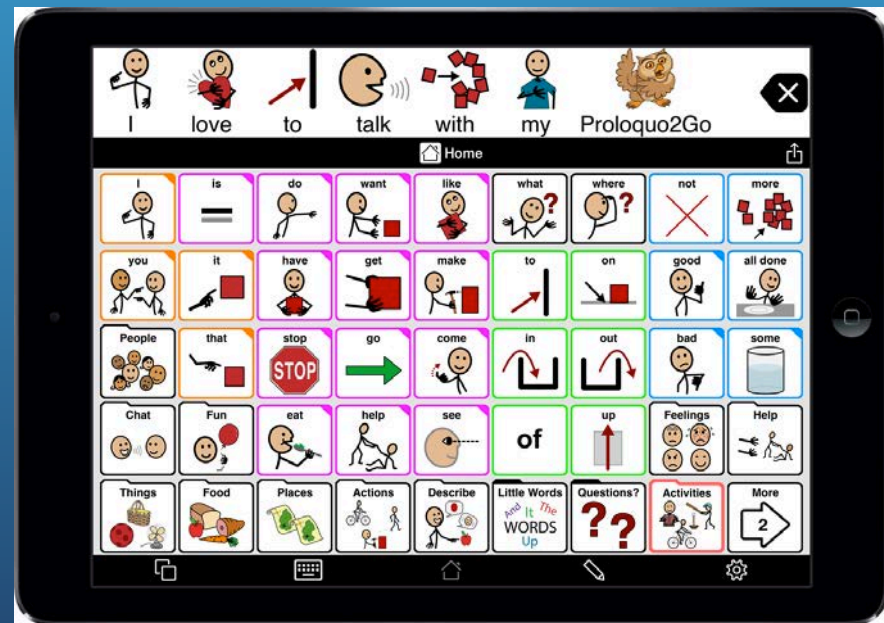
- Pros
  - Very thoughtful in planning
    - No duplicate words
    - Vocabulary selection for each level is highly research based
  - Vocabulary builder tool to mask words that aren't being targeted
  - Plenty of room to allow for fringe vocabulary to be added
  - Text on every icon
  - Word finder tool
  - Website has TONS of free tutorial videos, guides, information

# LAMP WFL

- Cons
  - Only available in layout with 84 buttons
  - No lite version available
  - E-mail support is only support included with purchase
    - Can purchase a premium support plan for \$125.00/year (telephone) or \$50.00/year (live chat support)
  - Expensive

# Proloquo2Go

- \$249.99
  - Full featured communication app that has recently updated to include Crescendo TM Vocabulary
    - 3 new vocabulary levels and 23 grid sizes ranging from 9-144 buttons on the screen
  - Can be used on any iOS device, including the apple watch



# Proloquo2Go

- Pros
  - Very customizable to different types of students, skill levels
  - Accessibility options (switch accessible, hold duration, repeated tap options, dimmed or hidden buttons)
  - Grammar support
  - Minimal re-customization as vocabulary grows - supports motor learning
  - Expressive power (pre-recorded expressions and sounds)
  - Word prediction in typing view
  - Share folders/users between devices



# Proloquo2Go

- Cons
  - No Lite version
  - No data collection feature
  - Only access to Symbol Stix or Photos
  - Technical support through e-mail or Facebook messaging

# Touch Chat

- \$149.99 / \$299.99 with WordPower
- Lite version \$9.99 for interface without sound

I want a pretzel

Vocab Menu

Questions ?	People 	Actions 	Describe 	Things 
Chat 	I want 	I don't want 	I need 	Keyboard 
Time/Date 	Core Words And It The WORDS Up	School 	Work 	Shopping 

Touch File

PEOPLE 	QUESTN ?	PLACES 	SOCIAL 	TIME 	GROUPS 	DESCRB 
I	me	any- every- but or	that	this	more	ABC 123
my	can	to	the	a-	and	at
it	do	ACTIONS 	come 	go 	for	in
you	is	be-	drink 	eat 	of	on
your	-s -ing -er -est	.	play 	want 	out	with

# Pros

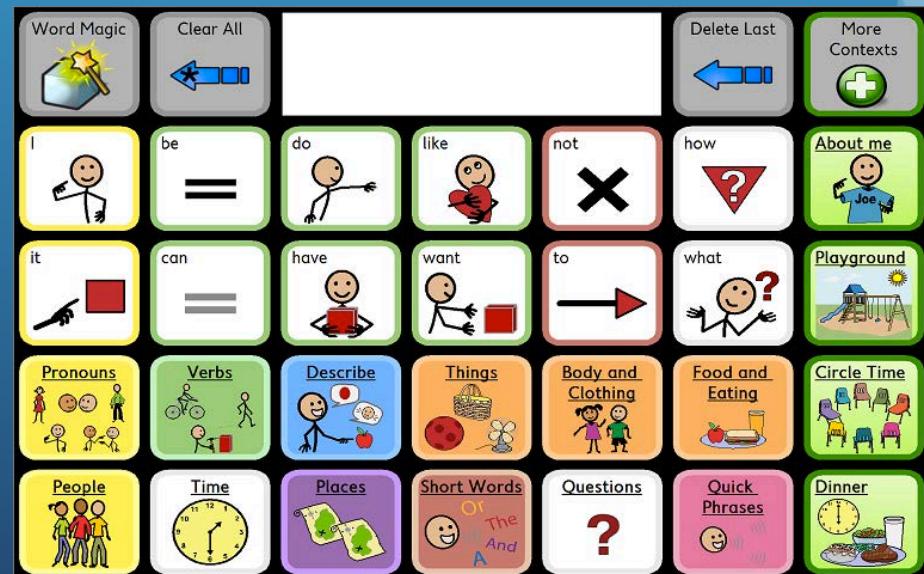
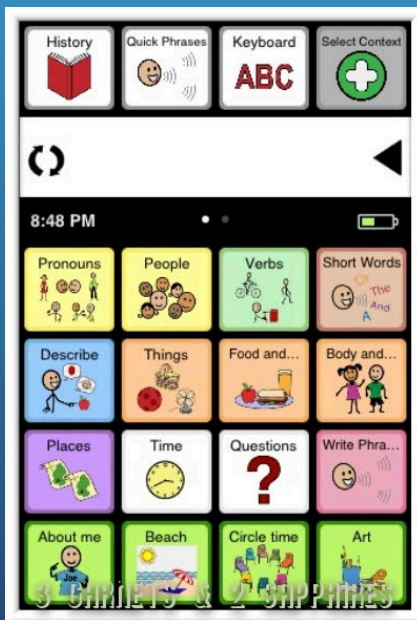
- Full-featured communication App
- Available on dedicated devices as well
- “Hide” mode for growing vocabulary
- Many vocabulary sets included
- Can play audio files through pushing a button
- Can take pictures while programming
- In app purchases available (voices, symbol sets)
- Can share user areas via the Cloud, Air Drop
- Instructional videos and tech support available

# Cons

- Expensive with Word Power
- PCS not available
- Premium tech support charges a fee

# Tobii Sonoflex

- \$99.99
- Combines core and topic-based vocabulary and comes with 50 pre-made context vocabularies
- 32 buttons plus navigation window on iPad
- 20 buttons plus navigation window on iPhone



# Pros

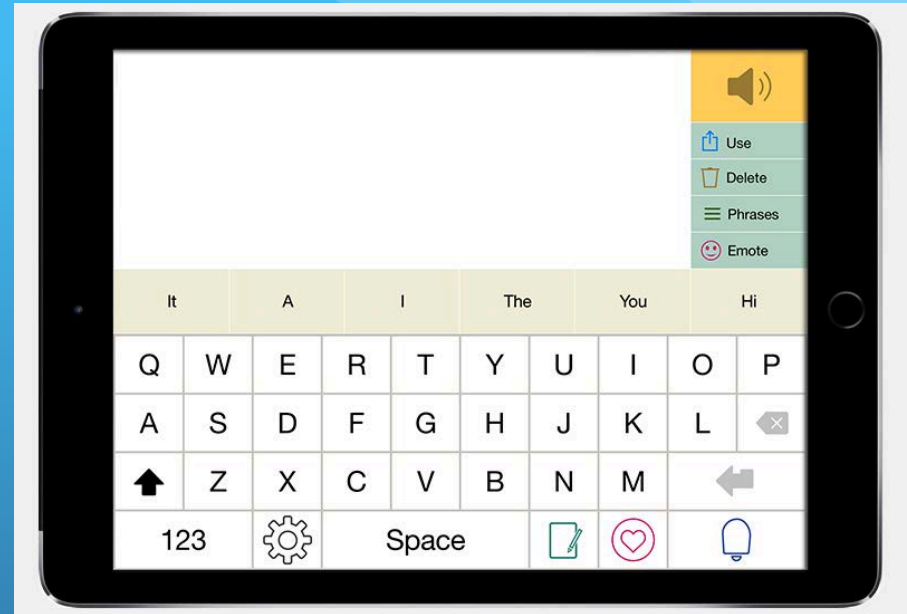
- Can easily change contexts for language use
- Pre-made conversation sets (frequent comments, questions, etc.)
- Good basic core and “core-like” categories on the home page
- Grammar support and history tracking
- Also available on the Android

# Cons

- PCS Symbols not available
- Icons are laid out by priority and alphabetically - User may have to navigate through multiple pages to find words and may be difficult for someone without literacy skills
- No motor planning approach
- Difficult to customize
- No immediate voice output upon vocabulary selection
- Does not allow for scanning options
- Tech support through e-mail only

# Predictable

- Text-based
- \$159.99
- For iPhone and iPad
- Word prediction -
  - Learns user's vocabulary
- Can use voice banking
- Save phrases or favorites
- Integrates with social media, YouTube, DropBox





# Predictable

- Features
  - Clean, visually appealing layout with customizable color schemes
  - Good ability to save frequently used messages
  - “Emote” feature (laugh, cough)
  - User Friendly
  - Hand writing feature
  - Several keyboards available (QWERTY, ABCDEF, and high frequency)

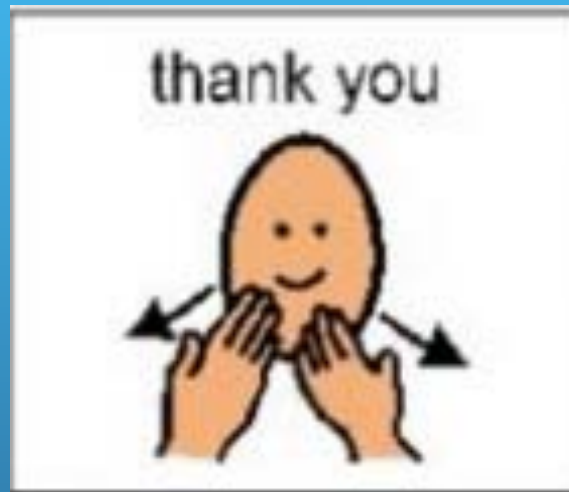
# For More Info

- Websites
  - [www.janefarrell.com](http://www.janefarrell.com)
  - [Spectronics.com](http://Spectronics.com)
  - PrAACticalAAC ([practicalaac.org](http://practicalaac.org))
  - YouTube reviews and tutorials
  - [Speechtechie.com](http://Speechtechie.com)
- Apps
  - AAC Ferret app helps with feature matching
  - AAC Genie

# Other places to look for information

- Facebook
  - Praactically speaking AAC
  - Praactical AAC
  - Pictello Users Group
  - Proloquo2Go or Proloquo2Go Professionals
  - TouchChat App Users Group
  - Speak For Yourself Users Group
- Blogs
  - <http://teachinglearnerswithmultipleneeds.blogspot.com/>

# Final Questions & Comments



Please feel free to e-mail us at:

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