Beyond Requesting: An Overview of Communication Possibilities Using the iPad

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Outline

- Intro
- Rationale for using visuals
- Overview of communication/language
- A review of strategies and tools that can be used to promote a variety of communicative functions while using the iPad
- Questions and answers

What is NOT in the outline:

- A list of apps to load on iPads so that learners can learn independently.

In order to support communication, we must focus on real communication opportunities!

Intro

Autism is an increasingly pervasive problem
- 1 in 88 children between age 3-17 affected (CDC, 2012)
- 1 in 68 as of last month!

Language impairment is one of three core diagnostic characteristics (DSM-IV)
- Estimated 1/3 - 1/2 of population with Autism have non-functional speech (Miranda, 2003)
- Deficits in both receptive language (Boddaert et al., 2003) and expressive language (Wetherby & Prizant, 2000; Lord et al., 1997)
- Better understanding of nouns (both spoken and visually) (Schlosser & Sigafoos, 2002)
- Difficulty with verbs, prepositions and descriptors (and other linguistic constructions) (Schlosser & Sigafoos, 2002) – leads to difficulty following novel or complex directives.

Focus at Boston Children's Hospital:

- Use visuals to support communication, enhance language development, and improve instruction for individuals with ASD
- Take advantage of technology when possible
  - Ease the burden associated with creation, storage and access of visual supports
  - Improve the quality and effectiveness of visual supports
- Approach communication and language development in a comprehensive manner

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https://www.facebook.com/ACPCHBoston
Let’s take a step back

What is Language:
In the Autism Language Program, we have outlined 7 pragmatic functions for which all competent communicators use language:

1) Protests
2) Requests
3) Commenting/Labeling
4) Directives
5) Questions
6) Transitioning and Organization
7) Social Pragmatics

Let’s take a step back

What Language Allows:
To discuss items not available in the immediate environment

When language is not readily or sufficiently available, behavioral forms of communication are often used to supplement or replace symbolic forms of communication

Rationale for using visuals:
- Capitalize on relative natural strengths and preferences
  - Visual processing (e.g., Althaus & Sonneveld, Minderer, Hensen & Til 1996)
  - Attraction to visual input – electronic screen media (ESM) (Shane & Albert 2008)
- Provide a sustained referent
  - Capture and sustain attention
  - Reduce load on memory to support overall processing
- Provide a concrete representation of abstract and difficult language
- Visual supports used for the purpose of: (Gosnell, 2010)
  - Expanding expressive language
  - Expanding pragmatic functions
Rationale for using visuals:

- Visual cues used for the purpose of comprehension, which are imposed as an alternative to, or in conjunction with, speech.
- We must focus on comprehension prior to, and/or in conjunction with expression.

We cannot expect learners to use complex language for various functions without exposure to, and explicit teaching of, abstract language, including verbs and prepositions, as well as abstract language concepts such as semantic relations and syntactic structures.

Feature Matching of Apps

Domains to consider:

- Historical Domain (e.g., medical, educational, vocational, social)
- Patient Centered Domain (e.g., primary/secondary users; establish STGs and LTGs)
- Medical Domain (e.g., prognosis/progression; vision; hearing)
- Motor Domain (e.g., access)
- Speech Domain (e.g., AAC as a primary or secondary tool)
- Language Domain (e.g., vocabulary selection; pragmatic functions)
- Communication Educational
- Behavioral (e.g., self-stimulatory behaviors)
- Financial

Feature Matching of Apps (some examples)

A Quick Look at P2G

Proloquo2Go is a terrific, revolutionary application; however, it is not a panacea in itself.

The iPad in itself cannot solve communication issues; rather, it is how we teach and prepare learners to communicate that is important.

A Quick Look at P2G

Considerations:

- Comprehension of the task
- Symbol size and field size
- Representations (picture symbols vs. photographs)
- Navigational requirements
- Motivation
- Etc.
iPad Tips:

1. **Guided Access** – to prevent exiting of apps
   - To set up: Settings > General > Accessibility > Guided Access
   - Turn it on and set up a passcode
   - Triple click to start or stop

2. **Restrictions** – to prevent deleting/purchasing/YouTubing, etc.!
   - To set up: Settings > Restrictions > Enable Restrictions > Toggle as needed

3. **Locking the screen orientation**
   - To set up: Settings > Use Side Switch to: “Lock Rotation”

Directives

**Video Modeling**
- Boston Children’s Hospital Teaching Imitation Program

**Dynamic Scene Cues**

**Static Scene Cues**

**Language Element Cues (e.g., ALP Animated Graphics, sequences)**

**Noun Element Cues**

**Important Skills:**
- Follow familiar 1-step directives (e.g., come here, sit down)
- Follow novel directives
- Follow multi-step directives

*Ability to follow novel and/or multi-step directives supports an individual's ability to be independent (e.g., within classroom instruction, ADLs, etc.)*

**Directives**

Following Multi-Step Directives through the use of **Static Scene Cues**

Same principles apply

Organize scene cues to promote success:
- Use Photo Albums
- Use scheduling apps such as: First/Then Visual Schedule HD (by Good Karma Apps)

**ALP Animated Graphics**
Language Element Cues

Language Element Cues allow for the generative combination of words to create and express an infinite amount of thoughts.

Directives

Noun Elements Cues

Expressive Directives

Topic Displays

• Visual element displays
• Depict vocabulary pertaining to a specific topic
• Elements placed in columns
• Elements organized in modified Fitzgerald Key Format and are color-coded by part of speech
• Left-to-right orientation reflecting English syntax

Expressive Directives

Topic Displays

• Build language form and content
• Include multiple parts of speech (not just nouns)
• Allow use of semantic relations and syntactic constructions
  • Receptive
  • Expressive

Engage in Interactive Activities!

Topic Display – Sensory Input
Engage in Interactive Activities!

*Engage in Interactive Activities!*

**Topic Display – Connect Four**

**Engage in Interactive Activities!**

**Topic Display – Singing (text-based)**

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**Protests**

What it takes to protest appropriately

- Recognition of disinterest/dislike
- Means of expressing said disinterest/dislike

Herein lies the problem...

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**Protests**

- **MODEL, MODEL, MODEL!**
  - Two-tier learning model
  - Make sure to change the order!
  - Once concepts are learned, consider Video Modeling (e.g., using the iPad)

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**Protests**

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**Requesting**

Why Do Most People Start Here?

**BENEFITS:**
Objects are relatively easy to represent
Immediacy effect to reinforce communicative intent

**OTHER CONSIDERATIONS:**
- Do not focus on requesting at the expense of other language functions
- Do not emphasize only the one syntactic structure:
  - [Person] + I + want + [object/activity], please
- At a more basic level – are you sure that cause and effect is understood?
Requesting

To Start:

ENGINEER THE ENVIRONMENT!

Motivation is wonderful – use it to our advantage!

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Requesting

If cause and effect is understood, look at representations and requirements of use:

- Remember the levels of representation!
- What navigational requirements are there?
- Flipping through a communication notebook or navigating through a high tech device
- What about grid vs. scene?

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Requesting

Regardless of the vocabulary programmed or available

REMEMBER THIS:

- The demands placed on the learner will influence, positively or negatively, how well "it" is used.
- With regards to devices, device abandonment is based in part on vocabulary selection
- Just because the vocabulary is in available, it doesn’t mean that it will be used!

THE TOOLS ARE ONLY AS STRONG AS THE IMPLEMENTATION

Engineer the environment!

- Communication should be fun!
  - Hidden iPod example

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Labeling and Commenting

- What makes us comment or label?
  Put a fork in their t-shirt drawer!

SURPRISES UNEXPECTED OCCURRENCES NOVELTIES

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Labeling and Commenting

- Labeling is the precursor to commenting
- Highly dependent upon joint attention
- Compare success of using a distal point to draw attention to something in the environment vs. how well kids with ASD often attend to electronic screen media....

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Labeling and Commenting

- Think about task demands and vocabulary
  - “I see + a paperclip” “I hear + a drum” vs.
  - “RATS!” “Yucky!” “That’s silly!”

Remember that they’re just KIDS! Have fun and goof around!

- Also, once again – model, model, model!
Labeling and Commenting

- Topic Displays can be incredibly useful to support commenting, as well
- Supports modeling
- Provides relevant vocabulary

“Matthew eats cookies”
“Mom pours the milk”

(Directives still work, too: “Dad, share the cookies!”)

Additional Tools to Encourage Labeling and Commenting

- Photo Albums
  - Pictello
  - My Pictures Talk
  - Kid in Story Book
  - many more

- Visual Scene Displays
  - Scene Speak
  - GoTalk NOW
  - TouchChat
  - AutisMate

Social Pragmatics

No Quick Fix!

If you want to work on social interactions, work on SOCIAL INTERACTIONS

Look In My Eyes!

Conversational building apps (e.g., Conversation Builder) do exist for practice – yet make sure you target generalization

Social Pragmatics

Learning social norms

Social stories are wonderful!

Microsoft Word, Pictello, My Pictures Talk, Kid in Storybook

Video Modeling

Thank you
Hi – What’s your name?

Excuse me
Hi - Can I play with you?

Learning to knock

Photo Albums for Social Stories (just a few)

- Pictello ($18.99)
  - Slideshow mode (options for animations, timing)
  - Can organize categorically (e.g., Summer 2014 stories)
  - Wizard-mode to guide you step-by-step
  - Back up to the cloud/Dropbox integration
  - Pronunciation manager/speech rate/voices, etc.
  - Pictures and movies
  - Sleek look

- My Pictures Talk ($2.99)
  - Lets you ‘lasso’ an individual’s body to superimpose in a personalized background for ideal customization
  - Back up to Dropbox or share via email
  - Community library also exists

- Kid in Story Book Maker ($6.99)
  - Lets you ‘lasso’ an individual’s body to superimpose in a personalized background for ideal customization
  - Back up to Dropbox or share via email
  - Community library also exists
Learning social norms
Contingency Maps/Boards ... on the iPad lock screen!

Greetings and Partings
iPad lock screen!

Maintaining Conversations
Image Spinner ($0.99)

Imagine you thought this talk was 10 minutes long...
Timers, Countdowns, First/Then Displays can help make tangible the highly abstract fourth dimension that is time!

First/Then Displays
First/Then Visual Schedule HD:

Countdown Displays
Transitions and Organization

Visual Timers

- The new iOS 7 clock is a great free resource
  - (free; iOS)
  - N.B.: No seconds and alerts are limited

- Time Timer Application
  - (varies; iOS and Droid)
  - Can repeat, change when, save many timers, etc

- Online egg timer
  - (free; computer)
  - www.online-stopwatch.com/eggtimer-countdown

First/Then Displays with Embedded Countdowns and Timers

Any drawing app that allows you to use photographs will work – SMART Notebook, Doodle Buddy, Whiteboard

Activity or Daily Schedules

- First/Then Visual Schedule (HD)
  - 9.99; 14.99
  - Autismate
  - 149.99
  - iPrompts
  - 99.99
  - Visual Routine
  - 4.99

Activity/Daily Schedulers

First/Then Visual Schedule HD

Social Stories or Book Previews

Prepare individuals for what is to be expected

***I don’t give shots!***

Kid in Story Book Maker ($6.99)

Temporal Concepts

Sliding Template Display (SMART Notebook)
Interrogative sentences, phrases, or gestures that are spoken or written

Questions are directed to someone in order to receive information in reply.

Questions have both a receptive and an expressive component

When individuals do not speak, they are often bombarded with questions.

Comprehension of yes/no questions is not typically observed until language approaches that of a two-year old age equivalency (Chapman, 1981).

Yes/No Questions in the Visual Immersion System can occur with one of three question forms:

- Factual (e.g., Is this a ______?)
- Informative (e.g., Do you have the ______?)
- Preferential (e.g., Do you want a _____?)

Teach Yes/No through video modeling (see also: Protests) using apps with visual scene display and video options such as GoTalkNOW

Also – may teach comprehension of yes/no through the immediacy of reinforcement

I have provided several templates and a copy of the handouts here:

http://bit.ly/1kCotnQ

If you’re interested in hearing about the release of our new book Enhancing Communication For Individuals with Autism: A Guide to the Visual Immersion System
Please provide your contact information here:

http://bit.ly/1l6RY1t

Contact:
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Thank You!