What do we know about autism and AAC?

- Approx. 50% do not develop speech or develop limited speech and language abilities (CDC, 2007)
- Does not prevent talking (Miliar et al., 2006)
- Decreases challenging behaviors and improves communication skills (Ganz et al., 2012)
- Barriers to implementation (Granlund et al., 2008)

Are mobile devices (e.g., iPads) the answer?

- Highly desirable and socially acceptable
- Perhaps less stigmatizing
- Kagohara et al., (2013) Systematic review of 8 studies investigating the iPad as a speech generating device (SGD) - results positive for improving communication skills
- More research is needed investigating use of the iPad as a SGD.
What did we do?

Brief Intervention utilizing
- Interdisciplinary Team - 3 Sessions with parents, child, bilingual SLP and parent coach (AT/MSEd)
- Family-Centered Approach - Intervention plans with parental input; parent coaching and training, high interest in iPad; borrow iPad to use at home, school, therapy
- Cultural Sensitivity - bi-lingual sessions. Reports translated in Spanish for Hispanic families.

What words did we use?

27 Core Words (Banjee et al., 2003):
- High frequency
- Relevant
- Words used in multiple contexts
- Range of communicative functions
- Visual Masking to target words
- Pattern vs symbol recognition
Who did we see?

<table>
<thead>
<tr>
<th>Gender</th>
<th>Diagnosis</th>
<th>Ethnicity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male: 81%</td>
<td>ASD: 76%</td>
<td>Hispanic: 71%</td>
</tr>
<tr>
<td>Female: 19%</td>
<td>DD: 10%</td>
<td>Non-Hispanic: 29%</td>
</tr>
</tbody>
</table>

Nonverbal / Verbal:
- Nonverbal: 67%
- Verbal: 33%

42 dyads ages 2-12

How did we measure change?

Communication Complexity Scale (Brady et al., 2012)

Pre-Intentional Communication
- 0: No response (no communicative behavior)
- 3: Single orientation + 1 potentially communicative behavior (reach, vocalizing, touching device, take hand)
- 5: Scanning (between objects) with or without PCB

Intentional Non-Symbolic Communication
- 6: Dual orientation (shift focus between object and person)
- 7b: Dual orientation with 1 or more PCB

Intentional Symbolic Communication
- 10: One word verbalization, sign, or AAC symbol selection
- 11: Multiword verbalization, sign or AAC symbol selection

What happened?

- Child Outcomes
  - Improved joint attention
  - Increased initiation
  - Increased engagement

- Parent Outcomes:
  - "[He] was able to use it with ease."
  - "I like this program for my son"
  - "He interacted with others in the room..."
  - "...giving us hope that she will be able to 'talk'..."
What did parents think?

- **How satisfied were parents?**
  - 21% Highly satisfied
  - 79% Satisfied

- **Did iPad meet need?**
  - 19% Yes
  - 81% No/unsure

What did we learn?

- AAC works but differently for different individuals
- Can work with any interests, in any environment
- Strategies/environment more important than device/app
- More research is needed—bilingualism and AAC
  - Parents Spanish only but child receives instruction and therapies in English

What happened after 1 year?

- Contacted 18 of 28 families
- Significant majority using iPad
- Small % had no access
- 50% using across environments
- 50% school/therapy only
- Benefits (portability, security, literacy, behavior)
- Barriers (cost, distraction, technology too difficult)
- Views on bilingualism (mixed)
TalkBoard

- $16.99
- Upload your own photos & record your own voice
- Ranges from 1-20 cells
- Branch boards to one another
- Can begin by focusing on core vocabulary (structure grid by using handout provided)
- Comes with video tutorials for each app feature
- "Back up & restore" feature
- Boards can be printed and easily shared with others

LAMP Words for Life

- $299.99
- Most robust app
- Ideal for communication throughout user’s lifetime
- Fantastic for language development
- Includes 3000+ words and allows for creating personalized boards
- Vocabulary builder: hides words to limit distractions
- Word finder: allows user to search for words on different pages

References


