

Using the Apple iPad to Enhance Engagement and Achievement in Speech and Language Therapy for High School Students with Autism Spectrum Disorders

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Purpose

- High School Students with Autism Spectrum Disorders (ASD) are often difficult to motivate and have a variety of speech and language needs.
- School-based speech-language pathologists frequently experience budget restrictions limiting access to materials.

Purpose

- Many students are motivated by technology used for teaching and reinforcement.
- New technologies provide programming flexibility allowing a variety of needs to be addressed by the same device.

Research Question

- Will the use of an Apple iPad improve student engagement and increase achievement in Speech and Language Therapy for students with ASD at the high school level?

Procedures

- A Speech-Language Pathologist (SLP) was provided with one Apple iPad by the UCF Center for Autism and Related Disabilities (UCF CARD).
- This SLP identified programs, or apps, that would contribute to specific speech and language needs for students with ASD on her caseload.
- Apps were used regularly in speech and language therapy to target goals and for reinforcement of positive behaviors.

Procedures

- The Seminole County Public Schools grant was approved to provide SLP with five iPads to use as a class set in small group therapy setting.
- This project did not allow SLP to have access to add/remove apps or to make any modifications.

Outcomes

- The flexibility of using multiple apps within the same therapy session allowed the SLP to easily cater materials to specific speech and language needs for each student in a group.
- Skills targeted with the use of the iPad include:
 - Sentence structure
 - Vocabulary
 - Social Skills
 - Problem Solving
 - Understanding Emotions
 - Abstract Concepts
 - Reading
 - Augmentative Communication
 - Monitoring Voice Volume

Outcomes

- Low-functioning students were easily provided with age-appropriate materials to target language needs.
- Progress on IEP goals was increased by anywhere from 30% to 50%.
- Negative behaviors were decreased or eliminated and students were motivated to attend/participate in therapy.

Outcomes of 1 vs 5 iPads

- Having a class set made individualizing activities more feasible.
- Students were able to work at their own pace when every student had their own iPad.
- Students sought additional help outside of therapy time to use the iPad for academic purposes.

Outcomes of 1 vs 5 iPads

- SLP was able to administer web based transition assessments to the group at the same time. Results were emailed and printed to add to IEPs.
- Trickier to monitor the screen on an iPad when multiple students are seated at the table to ensure students are working on task.

Considerations

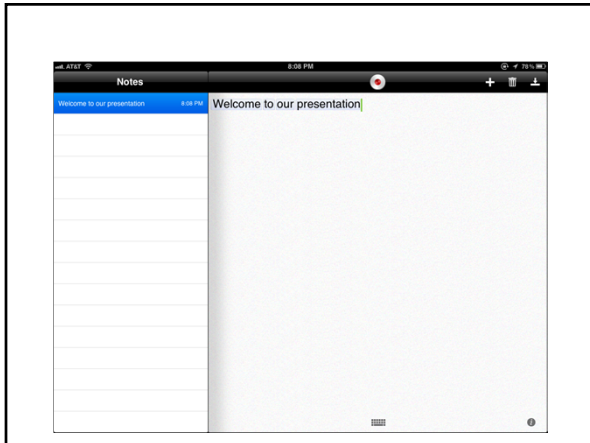
- SLPs who are using this technology must be provided with access to purchase and update apps to optimize functioning.
- Don't forget that you can use Safari if apps do not meet your needs.
- Internet access must also be considered. The iPad has several options for this access, but accessibility is most effective if the school is equipped with a wireless network.

Considerations

- It is important to note that the iPad was used as a therapy tool, essentially providing materials and activities for the SLP to use within a targeted therapy session.
- Be aware that apps need to be age appropriate despite cognitive functioning level. This is always a challenge for high school students with disabilities. Consider developmental level and interests.
- Cases for iPads to protect from being dropped or thrown.

Apps in Action

- Dragon Dictation, Cost: Free
 - This app allows the user to dictate voice for transcription which can be later emailed or posted to a social network site.
 - This app was used with a student who uses low vocal intensity in the absence of any vocal anomaly. She was initially resistant to therapy, but became motivated when the iPad was introduced. She liked the challenge of having the app dictate the sentence correctly.
 - Great app for speech, voice or language.



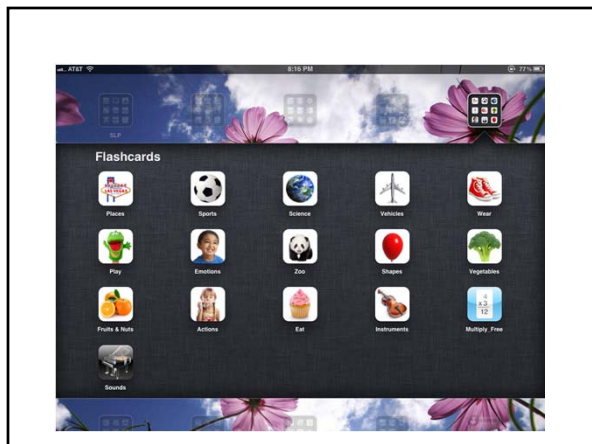
Apps in Action

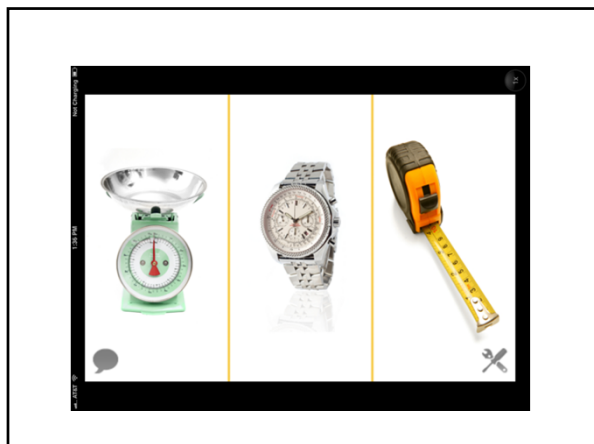
- Proloquo, Cost: \$189.99 (can get user license discount)
- This app is designed to use the iPad/iPod as a communication device.
- Allows user to:
 - Access text to speech with word prediction
 - Access preprogrammed vocabulary
 - Create novel or preprogrammed sentences and answer questions



Apps in Action

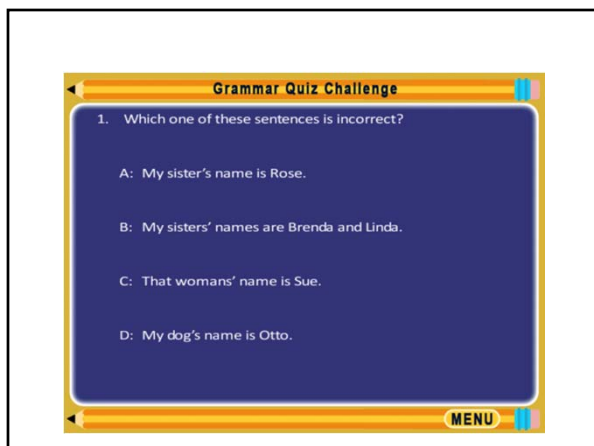
- Kindergarten.com, Cost: \$0.99
 - This developer makes apps in a variety of categories which allow the user to see a picture and hear the word.
 - Categories include;
 - Actions, sports, alphabet, food, playtime, emotions, clothing, shapes, science and many more
 - This app also has receptive games where the user hears a question and chooses the correct answer from a field of 3 pictures.

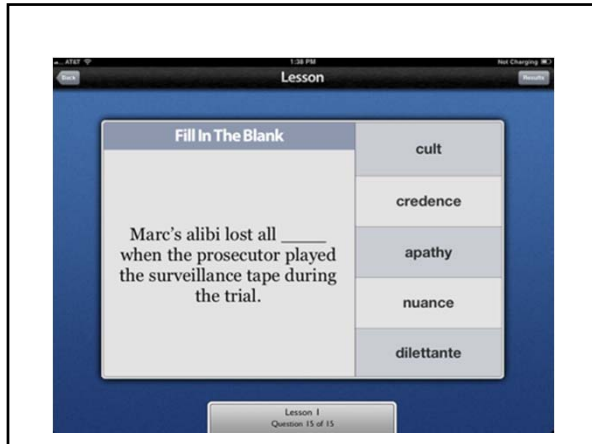




Other Apps

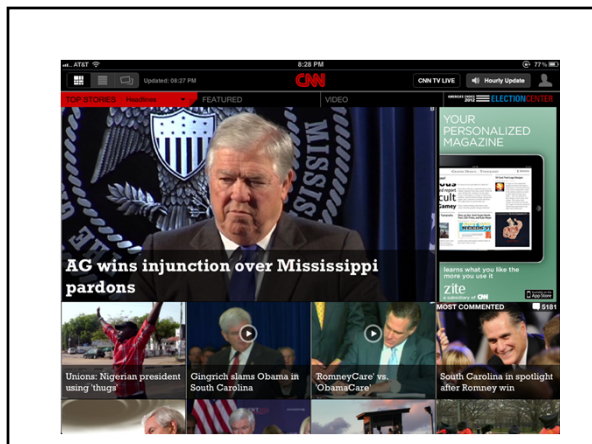
- Grammar Express, Cost: \$0.99 - \$1.99
– Targets grammar skills
- Vocabulary Power Plus, Cost: Free
– Higher level vocabulary skills

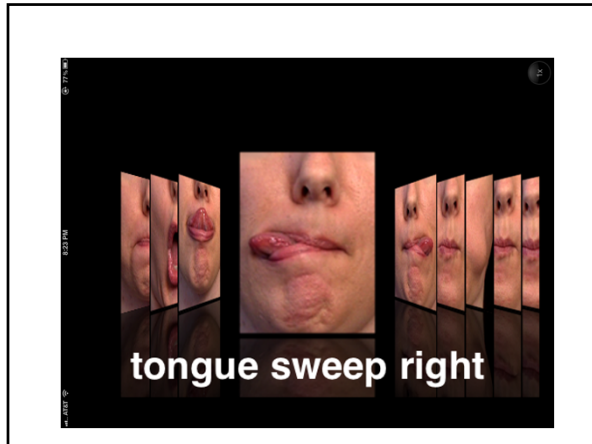


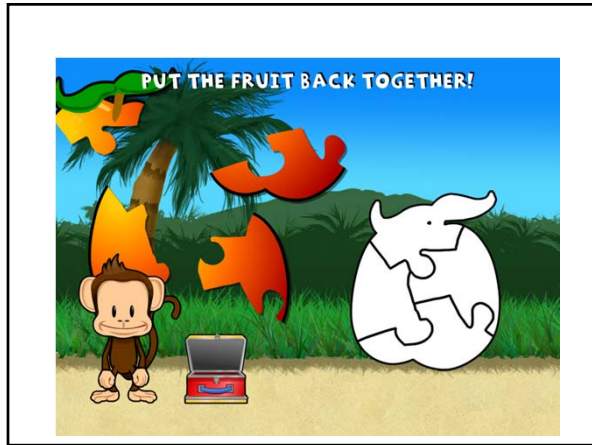


Other Apps

- MSNBC/CNN/E News, Cost: Free
– Reading comprehension/ problem solving
- Lingraphica.smalltalk, Cost: Free
– Oral motor exercises
- Monkey Lunch Box, Cost: \$0.99
– Basic Concepts

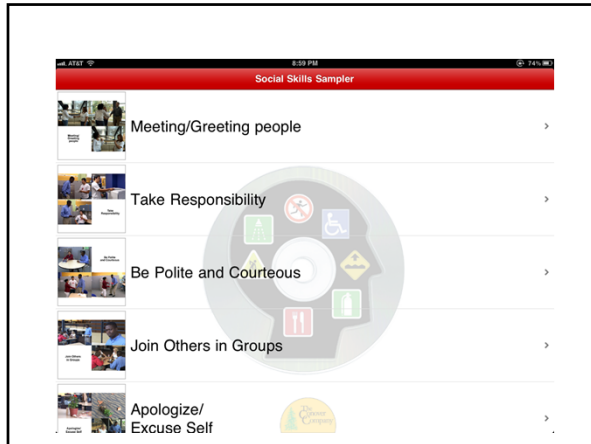


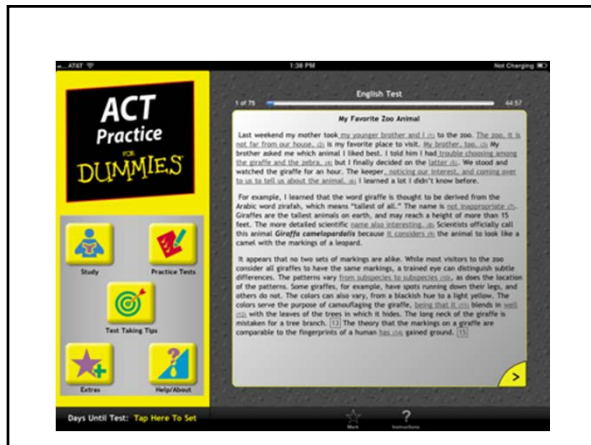




Other Apps

- Social Skills Sampler, Cost: Free
 - Direct Instruction in Functional Social Skills
- ACT for Dummies, Cost: \$9.99
 - Test Preparation





Interactive Websites

- FCAT sample tests
 - http://fcat.fldoe.org/pdf/sample/0910/reading/E_L517300_10_Rdg_TB_WT_r2q.pdf
- Self paced activities which generate scores
 - Online Grammar Quizzes
 - http://www.cengage.com/devenglish/discipline_content/grammarquizzes.html
 - Create your own quizzes
 - http://www.vocabtest.com/create_test.php

Interactive Websites

- Pun quiz
 - <http://www.ibeatyou.com/quiz/4ea06b/the-pun-quiz>
- ACT practice test
 - <http://www.actstudent.org/sampletest/>
- Multiple Meanings
 - <http://www.manatee.k12.fl.us/sites/elementary/samoset/Resources/ps4mm2.htm>
- Subject-Verb Agreement
 - http://grammar.ccc.commnet.edu/grammar/cgi-shl/quiz.pl/sv_agr_quiz.htm

Interactive Websites

- Identify feelings from choice of pictures
 - <http://www.do2learn.com/games/feelingsgame/whoisafraid.htm>
- “wh” question words
 - <http://www.bradleys-english-school.com/online/multiplechoice/whquestion.html>
- Listening Comprehension
 - <http://www.esl-lab.com/>

Summary

- Based on the positive outcomes reported by the SLP who used the iPad provided by UCF CARD and the multiple iPads from SCPS, this technology can provide a wide variety of easily accessible materials to target speech and language needs for students with ASD.
- The increase in motivation and decrease in negative behaviors for students with ASD is an added benefit to introducing technology as a teaching tool for more SLPs.
