Evidence-Based Approaches for Educational Use of Mobile Apps with Students with Autism

Karen L. Mahon, Ed.D.
President & Founder
Balefire Labs, Inc.

www.BalefireLabs.com

National Autism Conference
August 4, 2014

the situation
in the media

Using tablets to reach kids with autism

Tablet-Sized Teachers
IPads, Galaxys, and other devices are becoming staples of special-ed classrooms.

by Carl Robinson

Tablet devices help kids with autism speak up
Speech permitting, iPad, new promise in helping nonverbal children communicate

FIRST STUDY SHOWS PROMISE FOR TABLETS TO BECOME KEY TEACHING TOOLS FOR AUTISM

Tablets in schools

8 Million tablets currently being used in US schools
81% K-12 teachers believe tablets enrich education
>70% US school districts have substantial tablet deployments
trial & error

the problem
the goal

the solution
Learning Objectives

By the end of this workshop, each participant will be able to:

- Identify the top five most important quality criteria of educational apps
- Apply those criteria in evaluating an educational app
- Create an integration plan for an educational app
- Create a job aid for students working in pairs with an app
Agenda

1:00 - 2:15: Karen presents
2:15 - 3:15: Hands-on working in pairs (Karen roams)
3:15 - 3:45: Participant presentations
3:45 - 4:00: Wrap up

Effectiveness

Ease of Use

Application

Sweet Spot
Effectiveness

Ease of Use

Application

the solution

Effectiveness
- Feedback for Correct Answers
- Feedback for Errors
- Adapting Difficulty
- Error Remediation
- Mastery-Based
- High Rate of Relevant Responding
- Clearly Defined Learning Objectives
Effectiveness

- Feedback for Correct Answers
- Feedback for Errors
- Adapting Difficulty
- Error Remediation
- Mastery-Based
- High Rate of Relevant Responding
- Clearly Defined Learning Objectives

Rhyming Words
Math Drills Lite

Submarine Math
the solution

Effectiveness

- Feedback for Correct Answers
- Feedback for Errors
- Adapting Difficulty
- Error Remediation
- Mastery-Based
- High Rate of Relevant Responding
- Clearly Defined Learning Objectives

Letter School
Bunny Bus Lite

<table>
<thead>
<tr>
<th>Effectiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Feedback for Correct Answers</td>
</tr>
<tr>
<td>- Feedback for Errors</td>
</tr>
<tr>
<td>- Adapting Difficulty</td>
</tr>
<tr>
<td>- Error Remediation</td>
</tr>
<tr>
<td>- Mastery-Based</td>
</tr>
<tr>
<td>- High Rate of Relevant Responding</td>
</tr>
<tr>
<td>- Clearly Defined Learning Objectives</td>
</tr>
</tbody>
</table>
Grammar Pop

The Opposites
Effectiveness

- Feedback for Correct Answers
- Feedback for Errors
- Adapting Difficulty
- Error Remediation
- Mastery-Based
- High Rate of Relevant Responding
- Clearly Defined Learning Objectives

Whack-a-Bone
Kids Farmer Lite (S-)
Ease of Use

- Relevant Screen & Sound Use
- Learner Help Available
- Easy to Use Interface
- Age Appropriate Reading Level
- Performance Reports with Actionable Data

Cut the Rope
Handwriting Without Tears

Hands-On Evaluating
Effectiveness

Ease of Use

Application

Application

- Alignment to Common Core State Standards
- Accessibility
- Integration plan
  - use in different instructional arrangements
  - role of peers
  - extension of skills
Alignment to Common Core

Reading: Foundational Skills

Kindergarten
- Show Standards

Grade 1
- Show Standards

Grade 2

Phonics and Word Recognition
- CCSS ELA-Literacy RF.2.3 – Know and apply grade-level phonics and word analysis skills in decoding words.
- CCSS ELA-Literacy RF.2.3a – Distinguish long and short vowels when reading regularly spelled one-syllable words.
- CCSS ELA-Literacy RF.2.3b – Know spelling-sound correspondences for additional common vowel teams.
- CCSS ELA-Literacy RF.2.3c – Decode regularly spelled two-syllable words with long vowels.
- CCSS ELA-Literacy RF.2.3d – Decode words with common prefixes and suffixes.
- CCSS ELA-Literacy RF.2.3e – Identify words with inconsistent but common spelling-sound correspondences.
- CCSS ELA-Literacy RF.2.3f – Recognize and read grade-appropriate irregularly spelled words.

Fluency
- CCSS ELA-Literacy RF.2.4 – Read with sufficient accuracy and fluency to support comprehension.
- CCSS ELA-Literacy RF.2.4a – Read grade-level text with purpose and understanding.
- CCSS ELA-Literacy RF.2.4b – Read grade-level text orally with accuracy, appropriate rate, and expression on successive readings.
- CCSS ELA-Literacy RF.2.4c – Use context to confirm or self-correct word recognition and understanding, rereading as necessary.

- Hide Standards

Accessibility

- Visual Impairment
- Hearing Impairment
- Motor Difficulties
Integration Plan

Classroom Arrangements
- 1:1
- Working in Pairs
- Small Groups

Role of Peers
- Data Collectors?
- Coaches?

Skill Extension
- Component Skills
- Composite Skills
- Generalization
- Application
Hands-On Implementation

Presentations by Participants
What about YOU?

Free School Site License
Fall Semester 2014
Discount Code: NAC14SiteFall
(must enroll by 8/1/2014)
Evidence-Based Approaches for Educational Use of Mobile Apps with Students with Autism

Karen L. Mahon, Ed.D.
President & Founder
Balefire Labs, Inc.

www.BalefireLabs.com

National Autism Conference
August 4, 2014