Mobile Apps for Students with Disabilities: Webcast

May 7, 2013

- The webcast will begin at the top of the hour.
- There is no audio being broadcast at this time.
- If you need assistance, contact Blackboard Collaborate: 866-388-8674.
- An archive of this webcast will be available on the WCET website next week.
Mobile Apps for Students with Disabilities: Webcast

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• Welcome.

• Thank you Blackboard Collaborate!

• If you have technical issues:
  • Call 866-388-8674

• Use the chat box for questions.

• Archive, PowerPoint, and Resources available next week.

Megan Raymond, WCET
Mobile Apps for Students with Disabilities: Webcast

- **Moderator**
  - Megan Raymond
    - WCET

- **Speaker**
  - Robbie Melton
    - Tennessee Board of Regents
“For people without disabilities, technology makes things easier.

For people with disabilities, technology makes things possible.”

This webinar is being presented to assist educators in finding mobile app resources for those with special needs from PreK- Careers.
Understanding:

- The apps presented in this webinar are apps that have been identified, recommended, piloted by teachers, students, parents, and clients.
- The prices of Apps presented are subjected to change in terms of their prices. Those that are presented free at the time of this webinar might not be free afterward OR those that cost might be free. (*Contact app developers).
- The companies and organizations that developed the presented apps have not offered any financial contributions for presenting their products.
- This webinar was designed to provide a showcase of several mobile apps that are enhancing the education of those students with special needs.
- Due to the time for this webinar and due to the vast number of Apple Apps in this area and the number of iPads in special education classrooms the references to mobile apps will be limited to Androids, Windows, and Blackberry.
Responsibility

- To be **OPEN** to new technologies and content with the potential of assisting ALL students.
- To **SHARE** with educators mobile apps with the potential to assist those with special needs.
- The **TEST** out apps and devices with the potential of serving as assistive technology tools.
- To **REPORT** and contact the developers of apps regarding problems with the app (content, technical, etc.).
The Impact of Mobile Devices and Apps in Assisting ALL Students (especially those with Special Needs: PreK - Careers) with Learning

ADA Standards for Mobile Devices and Apps

Mobile Devices as Assistive Technology Tools
  • iOS (Apple) Devices
  • Android Devices
  • Windows Based Devices
  • Blackberry Devices

Showcase and Resources of Mobile Apps for Students with Special Needs
  • Visually Impaired
  • Hearing Impaired
  • Physically and Health Impaired
  • Learning Disabled
  • Speech and Communication

Questions & Answers

All Resources located in online LiveBinder: wcet.wiche.edu
Mobile Apps and ADA Standards

- Mobile Apps (including mobile web apps) are generally covered by the same requirements for access by people with disabilities that apply to non-mobile software and web applications. If your organization is subject to U.S. laws such as the Twenty-First Century Communications and Video Accessibility Act (CVAA), Section 508, or the Americans with Disabilities Act (ADA) these laws may apply to your mobile content.

- The following U.S. laws may apply in part to your mobile apps:
  - Section 508
  - The Americans with Disabilities Act
  - The Twenty-First Century Communications and Video Accessibility Act

- W3C WAI Addresses Mobile Accessibility: [http://www.w3.org/WAI/mobile/](http://www.w3.org/WAI/mobile/)

This entry was posted by Jonathan Avila on January 11th, 2013 and is filed under ADA, Laws and Standards, Mobile, Section 508, SSB BART Group, WCAG
The U.S. Dept. of Justice and Dept. of Education have written a joint letter to colleges and universities warning them that e-reading devices violate the Americans with Disabilities Act. "Many e-readers have text-to-speech functions, but those don't apply to menus, which means that a blind person would still need help using the device," said a spokesperson.

How the iPad Can Save Accessibility from martytdx
http://www.slideshare.net/martytdx/how-the-ipad-can-save-accessibility
iOS Feature: VoiceOver:

- Able to read the contents of the screen so that a person with visual impairment disability can understand and navigate.

- VoiceOver can read in 36 languages. You can also connect Braille via Bluetooth:
  - includes built-in voices that speak 36 languages including Arabic, Chinese (Cantonese), Chinese (China), Chinese (Taiwan), Czech, Danish, Dutch, English (Australia), English (Britain), English (Irish), English (South African), English (United States), Finnish, Flemish (Belgian Dutch), French (Canadian), French (France), German, Greek, Hindi, Hungarian, Indonesian, Italian, Japanese, Korean, Norwegian, Polish, Portuguese (Brazil), Portuguese (Portugal), Romanian, Russian, Slovak, Spanish (Mexico), Spanish (Spain), Swedish, Thai, Turkish.
Wireless Braille Displays

- You can use a refreshable braille display that uses Bluetooth wireless technology to read VoiceOver output in braille.

- In addition, braille displays with input keys and other controls can be used to control iPhone when VoiceOver is turned on. iPhone 3GS or later work with many of the most popular wireless braille displays.

- View a list of supported braille displays

VoiceOver features an innovative new virtual control called a “rotor.” Turning the rotor—by rotating two fingers on the screen as if you were turning an actual dial—changes the way VoiceOver moves through a document based on a setting you choose.

For example, a flick up or down might move through text word by word. But when you choose the “character” setting, each time you flick up or down VoiceOver will move through the text character by character—perfect when you’re proofreading or editing text.

https://www.youtube.com/watch?v=rxlxx6RXbs8
“While many iPhone applications let you zoom in and out specific elements such as images in Mail, or web page columns in Safari, Zoom lets you magnify the entire screen of any application you’re using to help you see what’s on the display. You can enable Zoom on: iPhone 4S, iPhone 4, and iPhone 3GS using iTunes when you’re setting up iPhone, for yourself or someone else, or later, using the Accessibility menu in the Settings application on iPhone. ” Zoom works everywhere, including the Home, Unlock, and Spotlight screens—even with applications you purchase from the App store.

A simple double-tap with three fingers instantly zooms in and out 200% and you can double-tap and drag three fingers to dynamically adjust the magnification between 100% and 500%. Even when zoomed, you can continue using all of the familiar flick, pinch, tap and other iPhone gestures to run your favorite applications.

https://www.youtube.com/watch?v=dVM2bzlPHik
Want to select text from websites, emails, messages, and more?

Speak Selection lets you highlight text in any application by double tapping it. Even if you don’t have VoiceOver enabled, Speak Selection will read you the highlighted text and give you formatting options like cut, copy, and paste. Turn on Speak Selection in Settings.

https://www.youtube.com/watch?v=chaLzNnuTV4
Siri and Persons with Disabilities

Siri is a personal assistant application available on the iPhone 4S, launched in October 2011. The application uses natural language processing to answer questions, make recommendations, and perform actions by delegating requests to an expanding set of web services.

- Siri will prove to be an incredibly useful tool for people with disability, as SIRI is much more than just voice recognition, not only does it translate audible sounds into text, but it understands your basic commands and questions.

- Citation: Disabled World News (2011-11-08) - Information on Siri the artificial intelligence on Apple iPhones including accessibility features for persons with disability: http://www.disabled-world.com/assistivedevices/apps/siri.php#ixzz2SNoXMA8o
Mono Audio: You can route both right and left audio into both ear buds at the same time. This feature can be helpful to people with unilateral hearing loss.

http://www.youtube.com/watch?v=xTj_hfTStgQ
Here are a few great resource and support sites for blind iPhone users:

- **AppleVis** – Empowering blind and low-vision users of Apple products and related applications
- **Sixth Mode Solutions** – iPhone Accessibility
- **Blind Apples Yahoo Group** – This group is for the discussion of Apple products and users who are blind
- **VisionAwareBlog** - What’s New in Accessibility with Apple’s iOS 6: Part 1 | Part 2

Music Link T-coil Inductive Stereo Ear Hooks

- Music Link offers a great alternative to conventional stereo headphones, providing people with hearing loss loud, clear audio without feedback and distracting background noise.

- Music Link can also be used with Smart/Music cell phones, such as iPhone, allowing the user to speak into the cell phone's microphone and read from the screen.

http://www.tecear.com/Music_Link.htm
TTY Support: Hearing Impaired

- You can use iPhone in TTY mode with standard teletype machines. Use of TTY requires the iPhone TTY Adapter, sold separately on the Apple Online Store.

- TTY customers can obtain telephone technical support by calling Apple’s support number, 1-800-SOS-APPL, using a relay service.

- TTY, also known as Text Telephone Device or Telecommunication Device for the Deaf (TDD), is a special device required at both ends of the conversation that enables people who are deaf, hard of hearing, or speech-impaired to use the telephone to communicate. TTY works by allowing people to type messages back and forth to one another instead of talking and listening.
Making Android phones accessible to people that are blind or visually impaired

YouTube URL: http://youtu.be/c9fYuasnWtU
“For a limited time, the carrier is distributing a free, customized version of Mobile Accessibility, an app that provides voice cues and assistance for completing many common tasks on Google-powered smartphones. Users will find the ability to place calls, send email and text messages, set alarms, browse the web, find their current location and more. With voice synthesis provided by Nuance Vocalizer, the app traditionally retails for $99 in the Android Market. To learn more about Mobile Accessibility Lite, check out the YouTube Video”

~Zachary Lutz

YouTube URL: http://youtu.be/zPxv1ARiQrU
Physical and Motor: iOS Setting Feature Accessibility – Assistive Touch

Assistive Touch

- Assistive touch lets you use your device if you are having difficulties touching the screen by creating custom gestures.

YouTube URL: http://youtu.be/f_aADB8k5nA
Windows 8 Accessibility Features

What’s new in Windows 8 Accessibility?

- One of the most exciting aspects of Windows 8 is the introduction of touch-only devices. With touch devices, you can directly interact with everything on your screen by touch, without using a keyboard or mouse, including managing accessibility options in the Ease of Access Center.

- With Windows 8 you can easily access the most commonly used accessibility options right from the sign-in screen. Select the Ease of Access button in the lower-left corner of your screen, or press the Windows logo key+U, to choose the settings for your PC that you want to have available each time it starts.

BlackBerry Screen Reader is designed to make BlackBerry phones accessible to the visually impaired. BlackBerry Screen Reader is compatible with the BlackBerry Curve 9350, 9360, 9370, 9320 and 9220.

Accessibility:

[Hearing/Vision/Mobility/Speech/Cognitive]


YouTube URL: http://youtu.be/OTi2-HCHz4E
Download for free at www.blackberry.com/screenreader
http://youtu.be/VmVowURLUPM
Behavioral Breakthroughs™ is an interactive training simulation created for parents and caregivers of children and adults who display challenging behavior.

Behavioral interventions based on the principles of Applied Behavior Analysis (ABA) have been shown to be effective in addressing the needs of children with autism, attention deficit hyperactivity disorder (ADHD), and other related disorders.

The simulation was created using game-based technology to provide an interactive environment in which parents and caregivers learn to effectively implement proven behavioral strategies and techniques.

The simulation displays realistic 3D images of a virtual child engaging in challenging behaviors. The user is required to choose an intervention based on principles such as positive reinforcement and extinction. The child’s behavior will become more or less agitated depending on the user’s timing and choice.

The goal is to provide parents and caregivers with an opportunity to learn and practice reinforcing skills they want to see increase and to use extinction to reduce rates of behaviors they would like to see decrease.

SIGN4ME

soundAMP R ($4.99)

- This app amplifies the world around you discreetly with iPhone and iPod touch to help improve hearing ability.

iTunes URL: https://itunes.apple.com/us/app/soundamp-r/id318126109?mt=8

YouTube URL: http://youtu.be/ulJ7cgmzXNc
iReadwrite App $19.99 (Learning Disabled Students)

- This easy-to-use reading and writing App runs directly on the iPad with no Wi-Fi or 3G access necessary. It includes powerful support features that benefit struggling readers and writers of all ages, especially those with dyslexia, dysgraphia, or other learning difficulties. The app even has a talking dictionary with associated images. All text can be read aloud. **For dyslexic users the app includes the OpenDyslexic font which maybe easier for dyslexics to read.**

- Text-to-speech/Word Prediction/Phonetic Spell Checker/Homophone

inClass (Free)

Verbally is an easy-to-use, comprehensive Augmentative and Alternative Communication (AAC) app for the iPad. Verbally brings speech to those without and enables real conversation with its simple, intuitive design. Just tap in what you want to say and Verbally speaks for you.

My Pain Diary: Chronic Pain Management

Parking Mobility (Free)

This wheel is focused on recommending apps for students with special needs who are included in a general middle school curriculum and is contributed by Cherie Pickering.

https://elearn.rodp.org/d2l/lms/content/preview.d2l?tId=25976700&ou=4719041
gFlash+ offers users a robust platform for creating, downloading, and manipulating flashcards in every subject under the sun. This latest release is jam-packed with new features including in-app access to premium content from leading educational publishers AND an innovative implementation of "box"-style flashcards. gFlash+ offers users a robust platform for creating, downloading, and manipulating flashcards in every subject under the sun. This latest release is jam-packed with new features including in-app access to premium content from leading educational publishers AND an innovative implementation of "box"-style flashcards.

**Free Features:**
- Fully functional card editor - create and edit your own card sets, right from within the app!
- No limits on the number of cards or card sets
- Fast Google Docs integration - create your cards in a Google Spreadsheet and then just download into the app
- Ability to download from and share card sets with the gWhiz Catalog
- Support of both Box and Classic Display Configurations
- Support for multiple choice questions
- Ability to include zoomable images and audio/video clips
- 5 star performance scoring - track your improvement!
- Cached images and sound clips for offline studying and faster display
- Convenient onscreen controls for sorting and screen layout
- Multisided cards with up to nine card "sides" easily added thru the Google Docs interface
- Reverse Q&A
- HTML support
- High quality iPad interface
- Complementary content from select publishers

All Disabilities: ** Connectivity Addressed (Several Apps Do Not Require Internet)

URL: http://www.spectronicsinoz.com/apps-for-special-education
Apps for Special Education by Spectronics

- Early Learning
- Reading, Writing, Speaking, Listening
- Mathematics
- Cause and Effect
- Visual Supports
- Social Stories
- Life Skills
- Positive Behavior support
- Classroom Organization

http://www.spectronicsinoz.com/article/apps-for-special-education#Mathematics
Areas of Assistive Technology Apps for the Person with Visual Impairments

- Shari Scott
  - Assistive Technology Consultant
  - Outreach, Tennessee School for the Blind
  *Doctoral Student: Tennessee State University

Shari Scott [sscotttsb@gmail.com]
Fleksy: Input or Typing

Fleksy is a state-of-the-art text input system so powerful that you can type without even looking at the screen. For the first time ever, sighted, visually impaired and blind people are able to quickly and easily type on touch screen phones and tablets. Developed for people with Visual impairments

- Complementary to VO
- Auto correct options.

http://accesstech.co.za/?tag=fleksy
Lumin: Lighted Magnification

- Lumin is an electronic magnifying glass for your iPhone or iPod. Not only does it magnify items, it can also keep a running history of images and can save or share these images with your friends via e-mail, Facebook, Twitter, and Instagram. Locked images can be magnified 10 times, or even more with ideal lighting, and can also be automatically mirrored to your Dropbox account. Lumin also controls the camera flash on your device, so you can illuminate and magnify dark, hard-to-reach places with ease.

- Uses the camera to display a magnified image
- Pinch to zoom features
- iPhone flash becomes LED flashlight for additional lamination
- Freeze images for upload

http://tidbits.com/article/12700
The Looktel Money Reader can recognize any supported bill when it is in front of the camera. The Money Reader will audibly say the denomination of the bill.

The Money Reader is can help visually impaired people quick identify the denomination of money anywhere.

YouTube: [http://youtu.be/__HMVXEZNeNM](http://youtu.be/__HMVXEZNeNM)
TapTapSee App  (Free) Visually Impaired

- TapTapSee can recognize almost anything that you can take a picture of. TapTapSee is designed for the blind or visually impaired so it requires VoiceOver to be enabled. With the app open simply point the device's camera at an object and double tap to take a picture. Then TapTapSee recognizes the image with amazing speed and accuracy. Keep in mind that you will need an internet connection for the app to work.

**iBlink Radio: Keeping Current (Free)**

- The free iBlink Radio application from Serotek Corporation offers radio stations, podcasts and reading services of special interest to people with visual disabilities; as well as their friends, family, caregivers and those wanting to know what life is like without eye sight.

  - iOS and Android
  - Radio stations, podcasts, and reading services

[http://globalaccessibilitynews.com/2012/01/02/iblink-radio-app-for-people-with-visual-disabilities](http://globalaccessibilitynews.com/2012/01/02/iblink-radio-app-for-people-with-visual-disabilities)
Evernote: Audio Recording  (free)

- Evernote
  - Audio, photo, or text information
  - Searchable by various characteristics
  - Cloud based
  - Accessible on PC, Mac and mobile devices
  - Automatic Sync

http://blindcaveman.wordpress.com/2012/05/28/virtual-notebook-evernote/
Color Reader
for Color Identification (Free)

- Identifies 18 basic colors
- Identifies the color of an object in real-time using the device's camera. Also displays the RGB values for the object and the best known-color match.
- Best for color blind
- Requires the flash camera for accuracy
- Simple application with voiced results

http://www.ebamboos.com/ColorReader.html

VisionSIM

- Simulations of 4 degenerative eye conditions
- Ability to “progress” the disease
- Braille Institute
- Great educational tool for the general public
- Free

Talk Assist (Free)

Work Skills Sampler (Free)

Free Resource App for Apps

- ViA
  - Braille Institute.
  - Allows users to search for accessible apps more efficiently.
  - Includes descriptive podcasts, tutorials, and reviews.
  - Searchable by category or new.
  - Encourages free exchange among visitors to the site.

Visual Recognition

- **TapTapSee**
  - Free

- **Viz Whiz**
  - Remote sighted assistance
  - Free

- **Digit Eyes**
  - Has a bar code recognizer
  - Free (full version $29.99)

- **LookTell Recognizers**
  - Photo library and bar code scanner
  - $9.99

Money Identification

- **Eyenote**
  - Federal Reserves’ temporary answer to the mandate to make money accessible
  - Camera feature identifies notes but not coins
  - Free

- **LookTell Money Recognizer**
  - Recognizes each bill as it enters the frame rather than individual pictures
  - $1.99
Scribd Apps for Special Education

- Authored by: Eric Sailers
- Updated: 10/11 by Eric Sailers, Mark Coppin, and Jennifer Marden
- Based on a list by Samuel Sennott, Eric Sailers, and David Niemeijer


iPad Adaptive Styluses for Individuals with Mobility Impairment

http://otswithapps.com/2012/11/18/ipad-adaptive-styluses-for-individuals-with-mobility-impairment/
The world's first Apple based dedicated AAC device is here!

The ComLink ProSlate 10™ is the world's first Apple based, full featured AAC device designed from the beginning to be a Dedicated Speech Generating Device that meets the assistive needs of our users with disabilities. Until now, people wanting to use an Apple as an SGD have had to settle for cobbled together hardware solutions and were on their own with regards to funding and support. The ComLink ProSlate™ is not only packed with features that make it a cutting edge and revolutionary AAC device, it is also backed by a company of AAC experts and clinicians that are committed to giving voice to people that we are very passionate about, our clients.

http://www.frs-solutions.com/products/comlinks/proslates/ProSlate_10
Nearpod: Classroom Teaching/Learning Management App

- All-in-one solution for the use of mobile devices (free)
  Nearpod has been chosen as the Best Collaboration Solution in the Ed Tech Digest Awards 2012 and the Audience Favorite at the 2012 LAUNCH Education and Kids Conference.

http://www.nearpod.com
I-Limb Ultra Revolution App Lets Amputees Program Own Bionic Hands.

http://www.huffingtonpost.com/2013/05/03/i-limb-ultra-revolution-app-bionic-hands-program_n_3210609.html
TBR Mobile App Quality Standards for Education and Workforce Development

- ADA
- Student Learning Styles / Diversity / Global
- Assessment / Monitoring / Tracking
  - 2+ Sensory Models
  - No cost to students
  - Peer Reviewed
- No Connectivity Issues (long term goal)
60,000+ Mobile Apps
125 Subjects / Disciplines
PreK- Ph.D. and Workforce
Quality Standards
Peer Review of Apps
Pedagogical of Teaching
Faculty and Staff Support

www.TBRMobile.Org
Mobile App Rubric:
https://www.research.net/s/TBRAppEvaluation
Mobilization Accessibility Management

Robbie K. Melton, Ph.D.

Robbie.Melton@tbr.edu

Associate Vice Chancellor
Tennessee Board of Regents
Office of Mobilization and Emerging Technologies
www.TBRMobile.org

www.TBRMobile.org
Questions from the Audience

- Please type your questions / comments in the Chat Area. Depending on time I will try to address all questions. If not, I will respond and the answers will be posed on the WCET website page.
- Please post any apps that YOU have found to enhance teaching, learning, and workforce development for those with special needs.

Thus together we will all benefit!

Thanking you all for serving as an advocate for those with special needs!

Robbie K. Melton

wcet.wiche.edu
Learn More and Stay Connected

- Visit the WCET’s Connect, Learn, Advance services on our website: http://wcet.wiche.edu/
- Become a WCET member: benefits extend to your entire institution:
  - News digests - academic, technology, and policy.
  - Listservs.
  - Free webcasts.
  - Exclusive member only resources.
  - No registration fee for preconference workshops at the Annual Meeting.
Learn More and Stay Connected

Join WCET today!
http://wcet.wiche.edu/contact-us/join-wcet
Additional Information and Resources

- Access to the resources discussed during this webcast, including the archive, will be available next week.
  - [http://wcet.wiche.edu/connect/webcasts](http://wcet.wiche.edu/connect/webcasts)
Thank you Blackboard Collaborate
Thank you Supporting Members for your commitment to WCET and e-Learning

- Boise State University
- Colorado State University
- Dow Lohnes, LLC
- Lone Star College System
- Michigan State University
- University of Missouri/Mizzou Online
- University of North Texas
- University of West Georgia
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