Device Agnostic Personalized Learning
Presented by Tara Bruss and Andy Borne
PACER Simon Technology Center
4/28/2015

Today’s Session

- PACER Center & the Simon Technology Center
- Device Agnostic
- Technology Systems
- Student Engagement
- Organization
- Reading
- Writing & Creation
- Sources & Resources
  - Please complete the evaluation form before you leave.

Additional Handouts

Variety of informative handouts
Available at: www.pacer.org/publications/stc.asp
⇒ Presentation Handouts

PACER Center

- Not-for-profit organization
- Serving parents of children with disabilities
- Primarily staffed by parents of children with disabilities
- Over 30 different programs

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Simon Technology Center

The Simon Technology Center is dedicated to making the benefits of technology more accessible to children and adults with disabilities, through a collaborated effort involving parents, professionals, and consumers.

STC Services

- Information and Referral
  - Call us with your questions!
- Technology Lending Library
  - Open Tuesdays 12:00-7:00 and select Saturdays each month
  - Ship items to out state MN
- Free Consultations
  - Personalized meeting to explore technology
- Individualized Trainings
  - Personalized training on specific technology; $50/hour

STC Contact Information

PACER Center’s Simon Technology Center
8161 Normandale Boulevard,
Bloomington, MN 55437-1044

Voice: 952-838-9000
TTY: 952-838-0190
Web: www.pacer.org/stc
e-Mail: stc@pacer.org

Where to Find the STC Online

- PACER Center Facebook Page
  - www.facebook.com/PACERCenter?_fb_noscript=1
- Simon Technology Center Facebook Page
  - www.facebook.com/pages/Simon-Technology-Center/67317820730?v=wall&ref=share
- Simon Technology Center BlogSpot
  - www.simontechnologycenter.blogspot.com
Where to Find the STC Online Continued

- **YouTube**
  - www.youtube.com/pacercenter
  - Or search PACER Center

- **Twitter**
  - http://twitter.com/PACERSTC

- **Pinterest**
  - http://pinterest.com/simontechcenter/

New Resource: Center on Technology and Disability

- **Library**
  - A comprehensive and current collection of assistive technology information (documents, videos, and more)

- **Café**
  - Webinars, forums and Twitter conversations facilitated by assistive technology experts

Center on Technology and Disability

- **Learning Center**
  - In-depth professional and personal development e-learning opportunities on current assistive technology topics and trends

  - http://ctdinstitute.org/

  - https://twitter.com/CTDInstitute

  - https://www.youtube.com/user/ctdinstitute

Device Agnostic

Machine independent
Poll Question - Vote

Microsoft White Paper proposes there are 5 different models:
1. School Mandates a Device
2. School-defined single platform laptop, plus another device
3. School-defined multi-platform laptops
4. Student choice of laptop or tablet
5. Bring your own whatever connects to the Internet

http://tinyurl.com/p55cahg

BYOD - BYOT

Bring Your Own Device
Bring Your Own Technology

Considerations:
- The Model
  - Digital Divide
- Accessibility
  - Device
  - Files & formats
- Infrastructure
  - Internet capacity
  - Policies & procedures
  - Classroom management

BYOD – BYOT
Example Schools

Bring Your Own Device
Bring Your Own Technology

Example Schools:
- Edina Public Schools
eLearning²
  - edinaschools.org/Page/575
- Hanover Public School District
  - byod.hanoverpublic.org
- Georgia's Forsyth County Schools
  - www.forsyth.k12.ga.us/byot

Student Perspective

- What devices & tools are you seeing students using for learning purposes?
- How can these devices & tools be used to enhance learning?
**Built-in Accessibility: Vision**

<table>
<thead>
<tr>
<th><strong>Android</strong></th>
<th><strong>iPad/iPhone</strong></th>
<th><strong>Mac</strong></th>
<th><strong>Windows/PC</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Visual Magnification &amp; Fonts &amp; Cursor</td>
<td>Magnification • High contrast text • Large text • Color inverse • Color correction</td>
<td>Zoom • Full screen, or window • Contrast options • Cursor size</td>
<td>Magnifier • High contrast • Adjust colors • Large text/icons • Cursor thickness • Mouse pointer appearance</td>
</tr>
<tr>
<td>Screen Reading &amp; Braille</td>
<td>Talkback • BrailleBack</td>
<td>VoiceOver • Braille display support • Speak Screen • Speak Selection</td>
<td>VoiceOver • Braille display support • Text-to-speech</td>
</tr>
</tbody>
</table>

**Built-in Accessibility: Access**

<table>
<thead>
<tr>
<th><strong>Android</strong></th>
<th><strong>iPad/iPhone</strong></th>
<th><strong>Mac</strong></th>
<th><strong>Windows/PC</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Access Keyboard &amp; Mice Alternate Input</td>
<td>Bluetooth • USB, may require adapter • Switch access • Touch &amp; hold delay • Word completion</td>
<td>Bluetooth • Switch control • Guided Access • Assistive Touch • Predictive text • Third party keyboards supported</td>
<td>USB • Bluetooth • Switch control • Sticky keys • Slow keys • Mouse Keys • Onscreen keyboard • Word completion</td>
</tr>
<tr>
<td>Dictation/voice navigation</td>
<td>Google Now • &quot;OK Google&quot; • Dictation</td>
<td>Siri • Dictation</td>
<td>Dictation • Voice navigation • Speech Recognition • Voice navigation</td>
</tr>
<tr>
<td>Audio</td>
<td>Most are M4,T4 HAC compatible • Cochlear • Mono audio • Captions • Flash alerts</td>
<td>All are M4,T4 HAC compatible • Cochlear • Mono audio • Captions • Flash alerts</td>
<td>Captions • Screen flash alert • Mono audio</td>
</tr>
</tbody>
</table>

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Build-in Accessibility Websites

- Android
  - https://support.google.com/accessibility/android
- iOS (iPhone, iPad, etc.)
- Mac OS X
  - https://www.apple.com/accessibility/osx/
- Windows
  - http://www.microsoft.com/enable/

App Stores

- Windows RT
- Windows Phone:
- Amazon Kindle Fire
  - www.amazon.com/bnode=3427287011
- Android Google Play Store
  - https://play.google.com/store
- Chrome Webstore
  - https://chrome.google.com/webstore

Chrome

- By Google
- Web browser
- Cloud storage
- Chromebook
  - Operating system: Google Chrome
  - $199-1,299
- Chrome apps & extensions
  - https://chrome.google.com/webstore

Websites: Usable? Accessible?

Flash vs. HTML 5.0

Resize for small screen size “Mobile website”

Website functionality designed for touch screen?

Keybr.com, powertyping.com – does not work on a touch screen.
Educational Tools Compatibility Chart Download

http://tinyurl.com/pouq3xa

Chart Categories

- Reminders & Schedules
- Research & Sources
- Note-Saving & Note-taking
- Reading
- Writing
- Information Presentation
- Class Interaction
- Study - Learning - Practice

Category Legend

Chart Orientation
Student Engagement

How can we engage our students using digital tools?

QR Code Video

[Blank]
Digital Learning & Creation

• Video & Audio creation
• Blogs & Wikis & Social Media
• Digital poster boards
• Digital drawing and designing
• QR codes
• Geocaching
• Backchannel chatting
• Audio/Video talks or lectures
• Virtual Tours

Considerations

What tools and/or supports can help a student manage their time & tasks?

Considering the following:
• Teacher pushing out homework information: Teacher.io
• Task vs. event
• Break down tasks
• Student independence
• Reminders?
• Planner
  - Class planner vs. life planner
  - Electronic or paper?

Organization

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Reading

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What Materials?

- Textbooks
- Workbooks
- Classroom supplemental materials
- Fiction
- Non-fiction
- Research
- News articles and journals
- Personal interest reading

What Tasks?

- Decode
- Comprehend
- Dictionary
- Take notes
  - Study
  - Write reports

What Features?

- Text to Speech (TTS)
- Optical Character Recognition (OCR) or also Scan & Read
- Change TTS/audio settings
- Change visual appearance
- Annotations
- Dictionary
- Navigation

Formats and Files

- Digital Rights Management (DRM)
- Formats:
  - Audio
    - Human
    - Synthetic
- Digital Content
  - TXT
  - RTF
  - XML
  - HTML
  - PDF
  - ePub
Digital Accessibility

Digital does NOT always mean accessible

Indicators of Accessibility as defined by AEM at CAST:
“What are Accessible Learning Materials?”
www.aem.cast.org/supporting/palm.html

Searching for Materials

• Where can these materials be found?
  – http://aem.cast.org/supporting/acquisition-of-aem.html

Resources for Digital Materials

• National Center On Accessible Instructional Materials at CAST
  – http://aim.cast.org/learn/practice/acquisitiondistribution

• PACER Center’s Simon Technology Center

• National Library Service for the Blind and Physically Handicapped (NLS)

Resources for Digital Materials Continued

• Accessible Books eText Resources (Compiled by Carolann Cormier)
  – http://www.qiat.org/docs/resourcebank/Accessible_Books_etext_ResourcesbyCMC.doc

• Candida Martinelli website on eBooks
  – http://home.online.nl/cecilia.mccabe/instructions.htm
  – Resources are presented throughout the 6 online lessons; links found on left side menu
Sources of Specialized Formats

- Education services
  - State Department of Education
  - Post-Secondary: Student Disability Services
- Bookshare - www.bookshare.org
- Learning Ally - www.learningally.org
- State Services for the Blind - http://www.positivelyminnesota.com/JobSeekers/Blind_or_Visually_Impaired/
- American Printing House for the Blind - www.aph.org
- National Library for the Blind and Physically Handicapped (NLS) - www.loc.gov/nls/

Commercial Sources

- Publishers
  - Request purchase of accessible electronic versions
- Book stores
- Audiobooks
- Device/software specific sources
  - Amazon
  - Barnes & Noble
  - Blio
  - Google Play
  - iTunes, iBooks
  - Kobo Books
  - Sony

Free Online Sources

- Project Gutenberg
- Librivox
- Learn Out Loud
- Loyal Books
  - Previously: “Books Should Be Free”
- Internet Archive https://archive.org/details/tex
- Open source projects:
  - Creative Commons Open Professionals Education Network https://open4us.org/find-oer/
  - Wikibooks http://en.wikibooks.org/wiki/Main_Page

And more!

Free Library Sources

- WorldCat www.worldcat.org
- Local county library
- School library
- Virtual libraries www.cosla.org/profiles/
  - Electronic Library for Minnesota www.elm4you.org
  - Digital Public Library of America http://dp.la/
  - Library of Congress, Internet Archive, etc.
  - World Digital Library www.wdl.org/en/
Locally Created

- Optical Character Recognition (OCR)
- Creation of specialized formats
  - Text to audio conversion
  - Modify visual display of text
  - Convert to braille
- Be mindful of copyright law
  - “Publisher permission should be requested” -AEM.cast.org

Writing & Creation

What Tasks?

- Complete worksheets
- Complete tests
- Writing/creating reports
- Taking notes
- Spelling and Grammar
- Development of ideas
- Composition of ideas
- Editing of ideas

What Features?

- Dictionary
- Word Prediction
- Dictation
- Alternative keyboards
- Spelling and grammar support
- Form filling tools
- Change visual appearance
- Text to Speech
- Mind mapping
- Digital media creation tool
Alternative/Digital Canvas

- Digital text
- Digital worksheet completion
  - PDF
- Audio
- Video
- Images
- Websites
  - Wikis
  - Blogs
  - Other
- Poster board; paper or digital

Sources & Resources

Sources

- Microsoft BYOD White Paper
  - Microsoft Education Blog by Ray Fleming
    Nov 21, 2013

Sources

- Video: Some more Educational Uses for QR Codes, by Jarrod Robinson
  - http://www.youtube.com/watch?v=_X2AYmcoQkl&NR=1&feature=endscreen
- Video: Simply Said: Understanding Accessibility in Digital Learning Materials, by PACER Simon Technology Center & National Center On Accessible Educational Materials (AEM.CAST.org)
  - http://aem.cast.org/supporting/palm.html#.VS6sn5O_E2vE
Resources

• edTechTeacher
  – App Recommendations for Mobile Devices
    • http://edtechteacher.org/apps/
  – Tech Tools by Subject and Skills
    • http://edtechteacher.org/tools/
  – Research Resources
    • http://edtechteacher.org/tools/research/research_resources/

Resources

• TeachersFirst’s BYOD Dream Tools
  – www.teachersfirst.com/spectopics/dats.cfm
• Kathy Schrock
  – http://www.kathyschrock.net/
• Graphite
  – www.graphite.org
• Edudemic
  – www.edudemic.com

Thank you for attending!

Please complete workshop evaluation