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The Rosen Centre
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Mobile Learning in the Military



Marcus Birtwhistle
Research Analyst
Mobile Learning Team
Katmai Gov't Services



Jason Haag
Research Analyst
Mobile Learning Lead
The Tolliver Group, Inc.

What is Mobile Learning?

Definitions

First...What is Learning?

ADL Mobile Learning

Definitions

“Learning is acquiring new, or modifying existing, knowledge, behaviors, skills, values, or preferences and may involve synthesizing different types of information.”

“Human learning may occur as part of education, personal development, schooling, or training.”

Wikipedia

Definitions

Learning that takes place within a teacher-student relationship, such as in a school system.

Formal Learning

Definitions

Most of what people learn (or retain and put into use) is learned as part of doing their work, not through formal training.

Copyright charlie borland

Informal Learning – @charlesjennings

“Only 20% of what’s learned on the job actually comes from formal learning.”



Jay Cross

Definitions

“INFORMAL LEARNING occurs through the experience of day-to-day situations.”

Informal learning is the unofficial, unscheduled, impromptu way people learn to do their job. Learning is adaptation. Taking advantage of the double meaning of the word network, to learn is to optimize the quality of one's networks. We learn from one another.



Informal Learning – @JayCross

70: 20: 10 Learning Framework

- 70% from real life and on-the-job experiences, tasks and problem solving (day-to-day activities)
- 20% from feedback and from observing and working with role models
- 10% from formal learning or training



Morgan McCall, Robert W. Eichinger, and Michael M. Lombardo at the Center for Creative Leadership

Definitions

- ✓ Learning (Formal and Informal)

What is Mobile?

Definitions

“It is okay to use cell phones at this time, but personal computers may not be used.”



FAA or Delta

Definitions

“It is okay to use cell phones at this time, but personal computers may not be used.”



FAA or Delta

How Do You Define Mobile?



Laptop Computer



Jitterbug



Smartphones



Gaming Phones



eReaders



Handheld Touch Screen Devices & Tablets

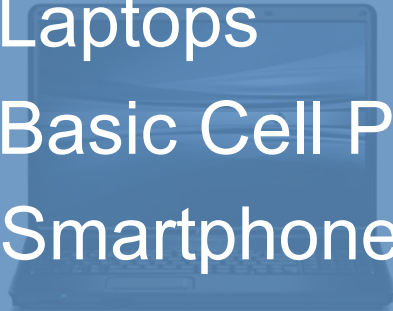


Netbook / Micro Laptop / Macbook Air

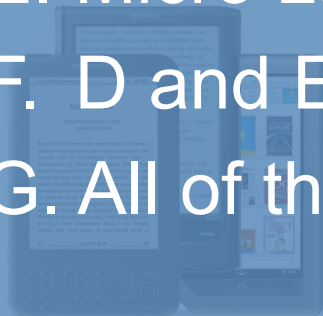
Which Devices Are Included?

How Do You Define Mobile?

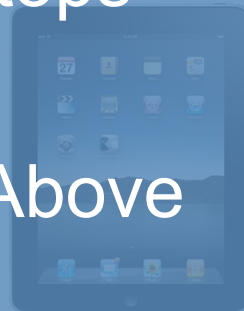
- A. Laptops
- B. Basic Cell Phones
- C. Smartphones Only
- D. Smartphones and Tablets
- E. Micro Laptops
- F. D and E
- G. All of the Above



Gaming Phones



eReaders



Handheld Touch Screen Devices & Tablets



Netbook / Micro Laptop / Macbook Air

Poll Question

Definitions



*Mobile
Learner*

Mobile
Device

Learner-centric or Device-centric?

Definitions

“Mobile learning should be restricted to learning on devices which a lady can carry in her handbag or a gentleman can carry in his pocket (Keegan, 2005).”

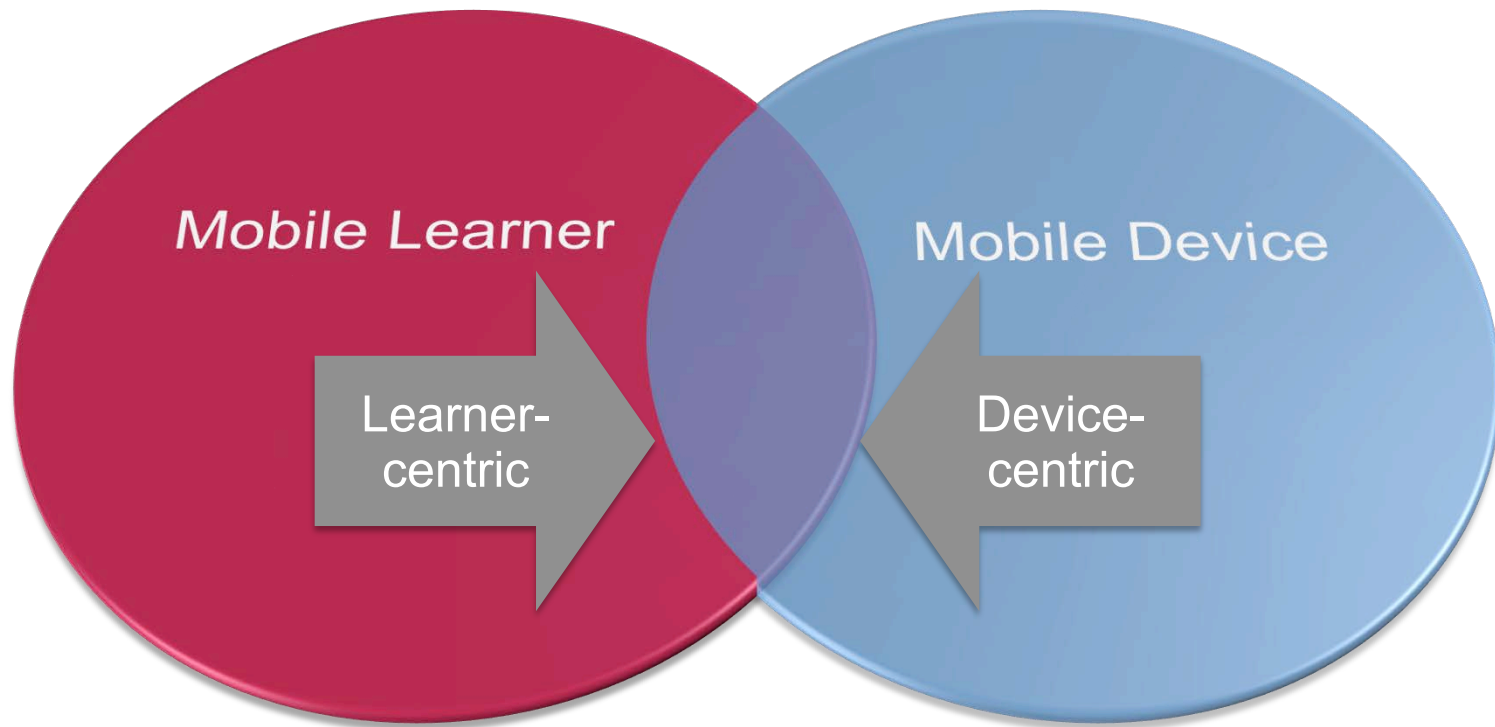
Desmon Keegan

Definitions

“ Mobile learning is where a learner can be physically mobile while at the same time remaining connected to non-proximate sources of information, instruction, and data communications technology.”

Gary Woodill

Definitions



Learner-focus + Device-focus = Ubiquitous Learning

ADL Describes, Not Defines

“Leveraging ubiquitous mobile technology for the adoption or augmentation of knowledge, behaviors, or skills through education, training, or performance support while the mobility of the learner may be independent of time, location, and space.”

ADL Mobile Learning Team

What have you learned on your mobile device(s)?

- A. Completed a course
- B. Used a search engine
- C. Geographical travel information
- D. Never learned anything
- E. Don't have a connected device

Learning with mobile technology for the adaptation, augmentation of knowledge, behavior, or skills through education, training, or performance support while the mobility of the learner may be independent of time, location, and space."

Poll Question

Leveraging Mobile for Learning

- Battery life
- Connectivity
- Cost (Less of a factor)
- Data charges
- Device ownership
- Screen size
- Security & BYOD
- Technology changes

Concerns & Challenges

The Mobile Landscape Survey (2011)

- Security
- Compatibility
- Personal Accountability
- Organizational Policy
- Ownership / Life Cycle Management
- Assessment & Testing
- Data at Rest & Records Management
- Connectivity & Band-width / Coverage
- User experience / Usability

Top Concerns & Challenges

What is the most important to your organization?

- A. Cross-platform development
- B. Acquisition Strategy
- C. Access Speed, Connectivity & Band-width
- D. Security (Identity, MDM, Data at Rest, BYOD)
- E. User experience / Usability

Poll Question

What is the most important to you?

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Poll Question

Recent News

- Created new challenges for IT department:
- Employees found forwarding company email to personal address
- Disabled file transfer programs such as Dropbox, iCloud (use internal company approved apps only)
- Turns off Siri & configure so that memory can be erased if stolen
- Fewer and fewer IT departments will own their employees' equipment.

IBM Faces the Perils of 'Bring Your Own Device'

May 21, 2012 by Brian Bergstein for Technology Review

4

142 307 56 245 10 5

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MIT Technology Review Like 19k Follow @techreview 52.4K followers

Ads by Google

Cloud Computing - Is your business ready for cloud? Find out with BMC™. Free BMC Paper! www.go.BMC.com/Cloud

When IBM loosened its restrictions on the smartphones and tablets its employees could use for work, the company got a lesson in IT management of the kind it usually sells to clients.

In 2010, like many large companies in recent years, IBM adopted a "bring your own device" policy, meaning that employees who want to work outside the office don't have to use a smart phone provided by the company. Although IBM still gives BlackBerrys to about 40,000 of its 400,000 employees, 80,000 other workers now reach internal IBM networks using other smartphones and tablets, including ones they purchased for themselves.



BYOD Challenges - IBM

What is your BYOD Policy?

- A. We have a BYOD policy and I use it
- B. We have a BYOD policy, but I don't participate
- C. Working on a strategy, but not ready
- D. No plans for BYOD at this time
- E. We will never have a BYOD policy

Poll Question

New Government Strategy – May 2012



Mobile Focus

- Update and implement policies to procure and manage devices, applications and data in smart, secure and affordable ways
- DHS and DoD will work with NIST to develop a security baseline within 12 months
- Improve Priority Customer-Facing Services for Mobile Use
- GSA - six months to stand up a govt-wide contract vehicle for mobile & wireless services
- Chief Information Officers Council:
 - must issue a **BYOD** plan by September
 - must create a “*shared mobile app development program*” for both internal and public facing apps
- Core open data initiative – make APIs to present raw gov’t data to public
- Fed CIO will issue government-wide policies for streaming data from APIs within three months (all federal IT systems must follow within 1 year)
- New Innovation Center to be led by Gwynne Kostin (GSA)

www.whitehouse.gov/digitalgov/html5

ADL & TSWG CTML Summit



Key Take-aways

- Mobile devices provide the same types of risks as conventional computers
- “Bring Your Own Device” (BYOD) is possibly the only way (currently) to keep up with technology
- Army Marketplace (<http://www.marketplace.army.mil>) is where official Army apps have been validated; provide pointers to the commercial app stores
- Apps can be created using web standards (HTML5) and delivered to both web and native platforms from single source
- Over 100 gov apps available through GSA: <http://apps.usa.gov>
- Findings from several Gov and DoD mobile initiatives were shared (some are here at iFest)

Highlights

ADL & TSWG CTML Summit



Key Take-aways (cont'd)

DISA:

- Created STIGs for Apple, Android, BlackBerry
- Creating an app development and deployment process for unclass/FOUO capacity for now
- Goal is for a centralized DoD MDM strategy and to get new devices certified on network within 90 days
- Working on DoD enterprise App Store (Beta version end of this year; operational by Summer 2013)
- Working on BYOD policy and support; apps in sandbox (long-term)
- Working with NSA on classified for future

Highlights

Mobile Initiatives

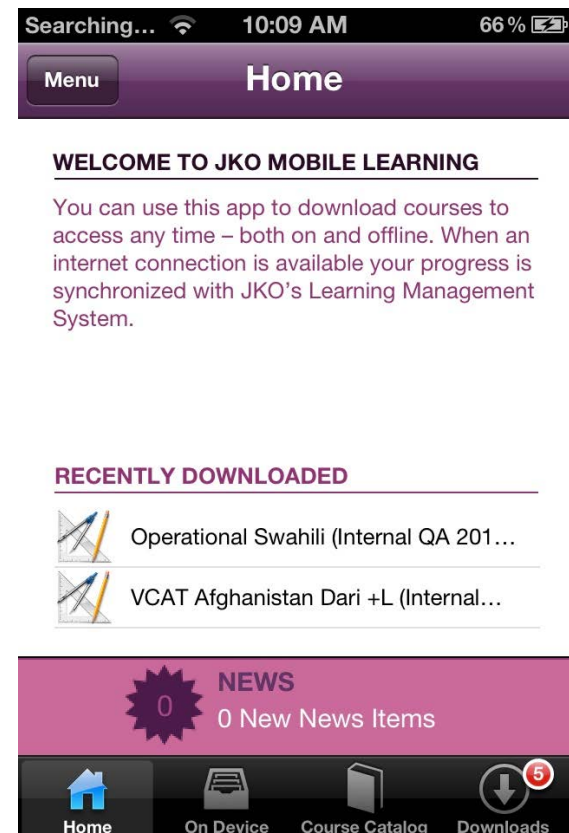


- CIO / G6 Connecting Soldiers to Digital Applications (CSDA) (2009)
 - training, administrative, and operational or tactical
- Apps for Army Challenge (2010)
- Army SCoE Mobile (over 72 Apps)
 - JMAC for Marines
 - EOD for Navy
- Army FA53 Apps (in-house)
- DAC Ammunition Multimedia Encyclopedia (AME)
- Army Training Network (ATN) 2GO

Army

Mobile Initiatives

- CWP MoLE transitioned into Global Aid App, and JKO Mobile App
- MoLE App provides tools and resources to support humanitarian medical operations.
- JKO – Learning Content Management System (LCMS)
- Students assigned PINs with full profile
- Courses associated with PINs communicate to JKO Mobile app and LCMS student profile
- Students can take courses on the LCMS or via JKO mobile



JKO Mobile

Mobile Initiatives

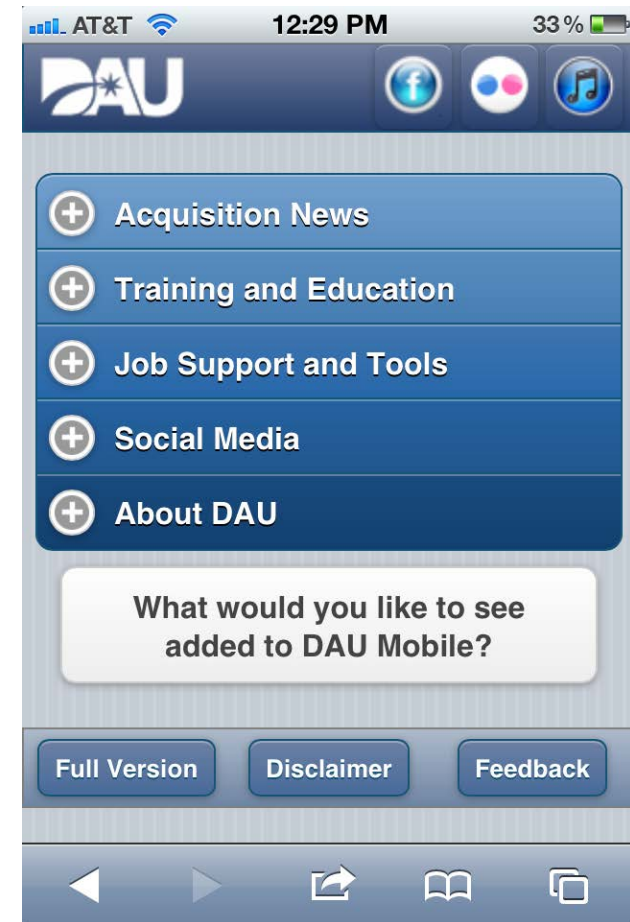
- 82nd Training Wing (TRW) Pilot Study at Sheppard Air Force Base
 - Mobile devices used to augment instructor-led training (classroom-based training) for the Aerospace Ground Equipment (AGE) Apprentice course
- Air Mobility Command:
 - Consolidated 90lbs of paper used for flight manuals to 1.5 lbs
 - Total Annual MAF-wide cost Avoidance: \$5.825 M
 - ePubs Distribution -16,000 purchased for MAF aircrew

Air Force

Mobile Initiatives

Mobile Informal training at the point of need for the 130,000+ Defense Acquisition workforce:

- Leverage existing delivery tools/sites
- Ensure system and product are mobile ready
- Big demand to put courses on iPad
- Sliderule app was developed to assist and replace paper slide-rule that served as performance support
- Use jquerymobile (very successful)
- Device agnostic [ie mobile web) - frees you to focus on content, not technology



DAU

Opportunities

“Humans more easily remember or learn items when they are studied a few times over a long period of time (spaced presentation), rather than studied repeatedly in a short period time (massed presentation)”

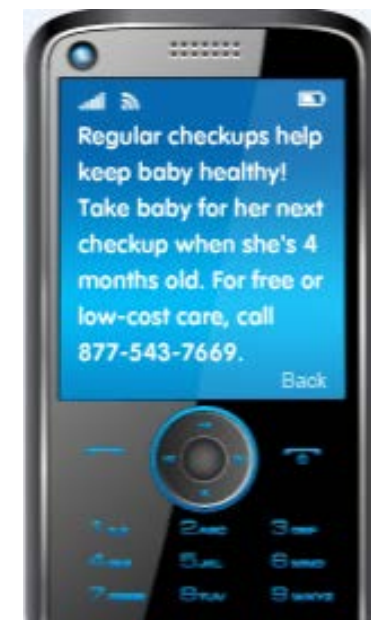


The Spacing Effect - Hermann Ebbinghaus

Spaced Learning Example



- Promotes maternal and child health
- Free SMS text messages each week, timed to their due date or baby's date of birth



Text4Baby.org

Opportunities



Interactive Response Codes

Opportunities

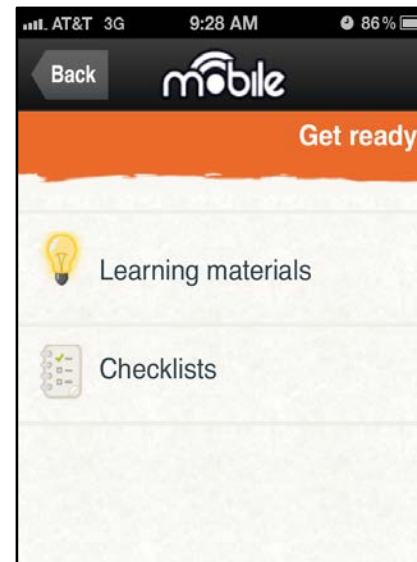
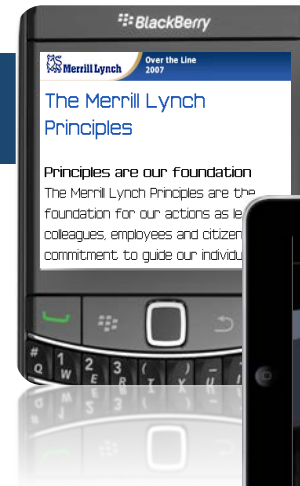
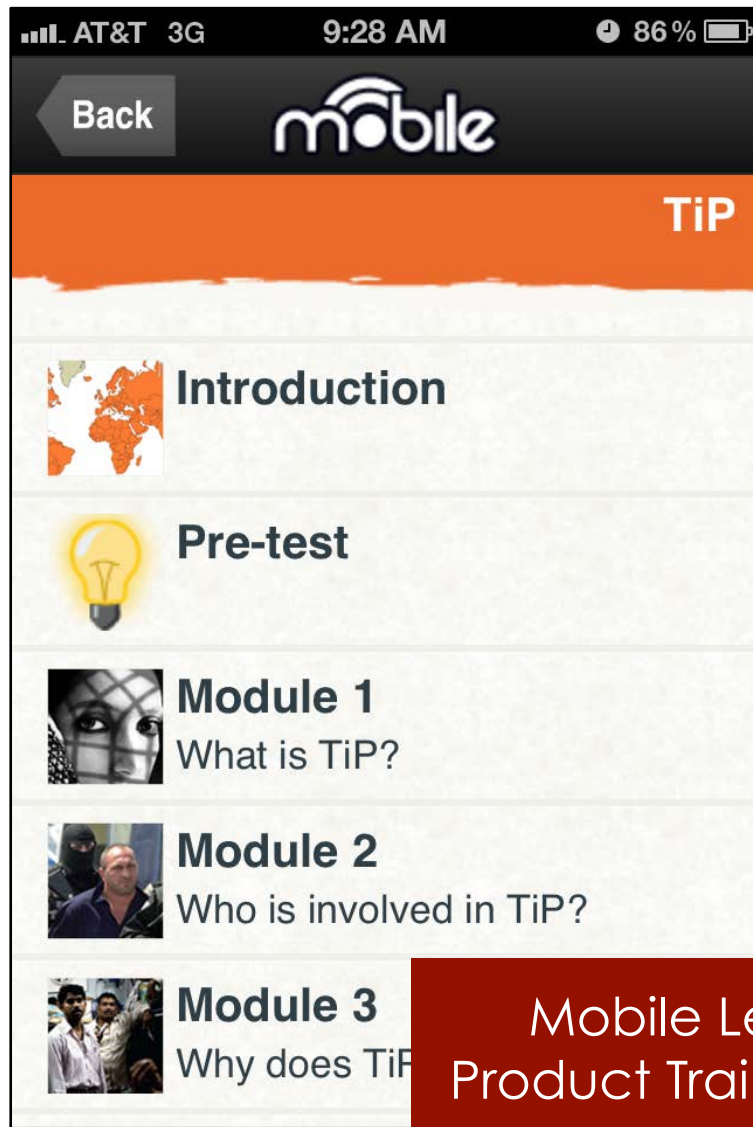
- Start a class
- Link to a website
- Link to an online course
- Distribute or share files
- Augment text books
- Write a review
- Play audio file
- Link to Apps
- Help & Tutorials
- Communications
- Update Twitter



Build Your QR Codes! <http://qrcode.kaywa.com/>

Interactive Response Codes

Opportunities



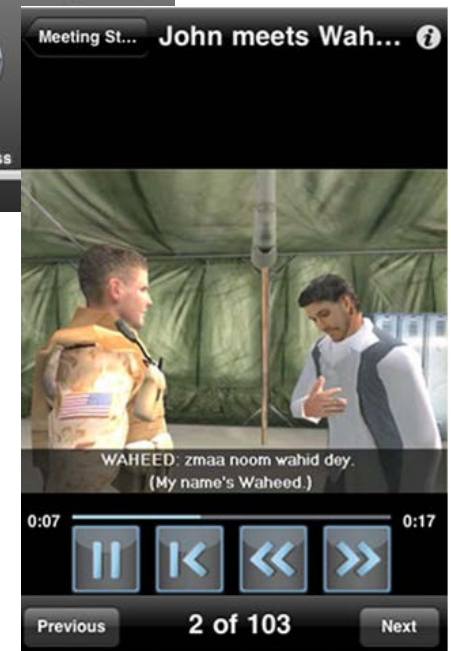
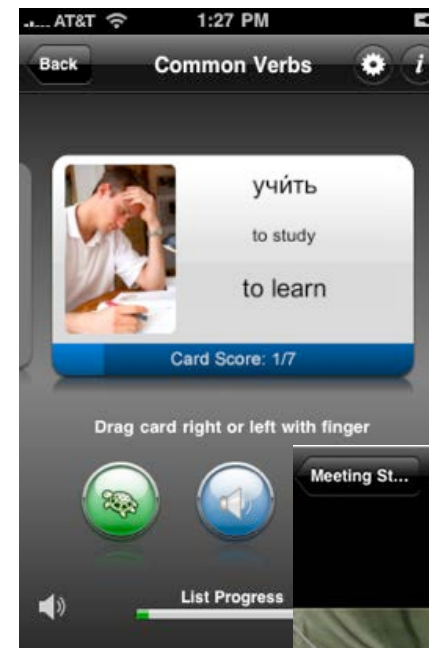
Mobile Learning Courses (Compliance Training, Product Training, Mandatory Training, Crisis Response)

“Think Outside the Course”



Judy Brown @JudyB

Opportunities



Language & Cultural Training

Opportunities



eBooks

What do you use as your primary ebook reader?

- A. iPad (Apple)
- B. Kindle (Amazon)
- C. Kindle Fire (Amazon)
- D. Nook (Barnes & Noble)
- E. TouchPad (HP)
- F. Playbook (BlackBerry)
- G. Android-based Tablet (Android)
- H. I don't have an eReader device or I don't use them to read eBooks

Poll Question

Opportunities



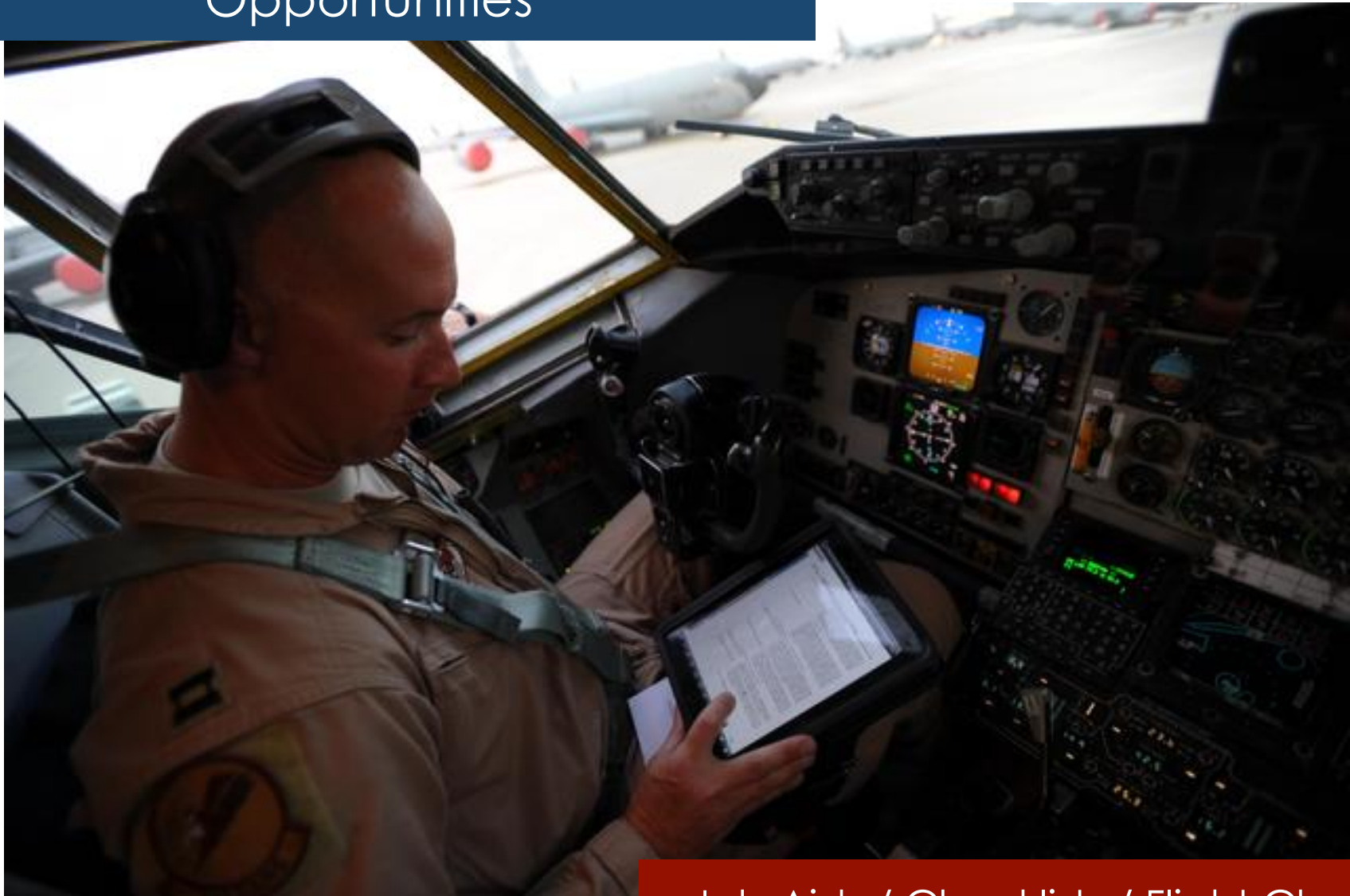
Classroom Augmentation & Blended Learning

Opportunities



Performance Support

Opportunities



Job Aids / Checklists / Flight Charts

Opportunities



Location-based & Contextual Learning

Opportunities



Augmented Reality

Opportunities



Game-based Learning & Simulations

Resources

ADL Mobile Learning Newsletter


Welcome to the Advanced Distributed Learning (ADL) weekly report on news and findings. Due to increased requests, this newsletter is now open to all. Please subscribe using the link below.

Mobile Learning...

- ★ How To Develop Your Own Mobile Learning Tools - <http://edudemic.com/2012/07/05/how-to-develop-your-own-mobile-learning-tools/>
- ★ Overcoming the Course and Control mindset hurdles - <http://www.c4ipt.co.uk/2012/07/05/overcoming-the-course-and-control-mindset-hurdles/>
- 5 Smartphone (Mobile Learning) Concerns - <http://eduwithtechn.wordpress.com/2012/07/05/5-smartphone-mobile-learning-concerns/>
- Always a need for "Back to Basics" - <http://www.mobilelearningedge.com/2012/07/05/always-a-need-for-back-to-basics/>
- Before You Go Mobile: 28 Mobile Learning Questions to Ask [Vendor] - <http://www.mobilelearningedge.com/2012/07/05/before-you-go-mobile-28-mobile-learning-questions-to-ask-vendor/>
- Great Video about using Mobile Devices in the Classroom by @mseideman - <http://www.classroom-by-mseideman.com/2012/07/05/great-video-about-using-mobile-devices-in-the-classroom-by-mseideman/>
- How Technology is Changing Students Study Habits - <http://www.educatorstechnology.com/2012/07/05/how-technology-is-changing-students-study-habits/>
- Learning in the New Era - <http://justthrasia.com/learning-in-the-new-era/>
- M-learning: What's the big deal? - <http://clive-shepherd.blogspot.com/2012/07/05/m-learning-whats-the-big-deal/>
- Mobile Changes Everything? - <http://blog.learnlets.com/?p=2698>
- Mobile learning offers growing opportunities - <http://www.hrmasia.com/news/2012/07/05/mobile-learning-offers-growing-opportunities/>
- Mobile Learning Recap: Sharing Innovations [K-12 video] - <http://www.blogtalkradio.com/innovations/2012/07/05/mobile-learning-recap-sharing-innovations-k-12-video>
- Mobile Users: Get Ready, Get Set - Learn! [Vendor] - <http://blogs.cisco.com/2012/07/05/mobile-users-get-ready-get-set-learn-vendor/>
- New App Links Students and Teachers on iPads - <http://thejournal.com/articles/2012/07/05/new-app-links-students-and-teachers-on-ipads/>
- This Week in mLearning Podcast - A Review of Articulate Storyline [Episode 5] - <http://articulate-storyline-episode-5/>

News Stories of Interest...

- ★ How Mobile is Rapidly Evolving the World - <http://www.forbes.com/sites/michael-horowitz/2012/07/05/how-mobile-is-rapidly-evolving-the-world/>
- 3,997 Models: Android Fragmentation As Seen By The Developers Of OpenSignal - <http://www.opensignal.com/2012/07/05/3997-models-android-fragmentation-as-seen-by-the-developers-of-opensignal/>
- A Smart Phone that Can Sniff out Sickness? - <http://www.technologyreview.com/2012/07/05/a-smart-phone-that-can-sniff-out-sickness/>
- Betting Everything on Mobile - <http://www.technologyreview.com/business/2012/07/05/betting-everything-on-mobile/>
- Ericsson could turn you into a human USB connection next year - <http://www.reviews.com/2012/07/05/ericsson-could-turn-you-into-a-human-usb-connection-next-year/>
- Google Patent Suggests New Direction For Project Glass Augmented Reality Interface - <http://www.patentgenius.com/2012/07/05/google-patent-suggests-new-direction-for-project-glass-augmented-reality-interface/>
- Half of U.S. cell phones are now smartphones - <http://money.cnn.com/2012/07/05/half-of-u-s-cell-phones-are-now-smartphones/>
- Hey, How About a Smartphone App to Track Vet Benefits? - <http://www.nextgov.com/2012/07/05/hey-how-about-a-smartphone-app-to-track-vet-benefits/>
- IDC: developers embracing HTML5 - <http://www.mobilebusinessbriefing.com/2012/07/05/idc-developers-embracing-html5/>
- Mayo Clinic launches first free app specifically directed at patients - <http://www.medicinenet.com/2012/07/05/mayo-clinic-launches-first-free-app-specifically-directed-at-patients/>
- Mobile Web Usage Growing Faster Than Ever Before, says Latitude - <http://www.mobilebusinessbriefing.com/2012/07/05/mobile-web-usage-growing-faster-than-ever-before-says-latitude/>
- New research shows 6 countries are the clear leaders in smartphone adoption. Do you know which ones? - <http://googlemobileleads.blogspot.com/2012/05/new-research-shows-6-countries-are.html>
- No Terminator-style overlays in first batch of Google Glasses - http://news.cnet.com/8301-1035_3-57434191-94/no-terminator-style-overlays-in-first-batch-of-google-glasses/
- Report: Google planning revamped Nexus strategy - <http://www.mobilebusinessbriefing.com/articles/report-google-planning-revamped-nexus-strategy/23877>
- State of the Appnation - A Year of Change and Growth in U.S. Smartphone Use - <http://www.appnation.com/2012/07/05/state-of-the-appnation-a-year-of-change-and-growth-in-u-s-smartphone-use/>
- Tablet, Smartphone Use Increasing Worker Productivity: CDW - <http://www.cdwr.com/2012/07/05/tablet-smartphone-use-increasing-worker-productivity-cdw/>
- Telework will play a big role in government digital strategy, federal CIO says - <http://www.federalCIO.gov/2012/07/05/telework-will-play-a-big-role-in-government-digital-strategy-federal-cio-says/>
- The Mobile Trend: 10 Things to Know - <http://www.businessinsider.com/the-mobile-trend-10-things-to-know-2012-5>
- The tablet revolution is coming: Working anywhere without compromise - <http://www.zdnet.com/blog/mobile-news/the-tablet-revolution-working-anywhere-without-compromise/7878>
- The Ultimate Mobile Web Infographic - <http://www.socialmedia.biz/2012/05/17/the-ultimate-mobile-web-infographic/>



ADL Newsletter for Mobile Learning Newsletter Archives

Newsletter Index

July 2012:

- #107 - July 23, 2012
- #106 - July 16, 2012
- #105 - July 9, 2012
- #104 - July 2, 2012

June 2012:

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- #102 - June 18, 2012
- #101 - June 11, 2012
- #100 - June 4, 2012

May 2012:

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- #98 - May 21, 2012
- #97 - May 14, 2012
- #96 - May 7, 2012

April 2012:

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- #94 - April 23, 2012

<http://ml.adlnet.gov>

ADL Mobile Learning Guide (App)



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[Mobile Apps](#) > ADL mLearning Guide



ADL mLearning Guide

Office of the Under Secretary of Defense for Personnel and Readiness (OUSD P&R)

iPhone

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Android

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Mobile Web

[mlearn.adlnet...](#)

The purpose of the ADL Mobile Learning (mLearning) Guide is to provide a universal resource on all topics pertinent to mobile learning. This resource is intended to provide you with an introduction and will explore the following topics about mobile learning: the basics, planning, learning content, development options, and design considerations. This app was developed by the Advanced Distributed Learning (ADL) Initiative's Mobile Learning Team. ADL is sponsored by the Office of the Under Secretary of Defense for Personnel and Readiness (OUSD P&R). This is an official app of the U.S. Government ADL Initiative.

Tags: ADL, Advanced Distributed Learning, mLearning, mobile devices, mobile learning

<http://apps.usa.gov/adl-mlearning-guide/>



Resources

[Planning](#)[Examples](#)[Best Practices](#)[Learning Content](#)[Development Options](#)[Design Considerations](#)[Mobile Learning Tools](#)[Resources](#)[Glossary](#)[About](#)[Team](#)[Sitemap](#)

Tools Available

Many authoring tools can deliver content to mobile devices. The tools provide this capability by using a mobile device screen template and output files that work with the mobile device operating system.

However, tools are emerging that are specifically designed for mobile learning; for instance, providing authoring capability for audio learning content (e.g., spoken word, podcasts) along with associated interactive assessments and surveys. Other tools are optimized to provide e-learning content through the phone's web browsing capability.

There are several e-learning content authoring tools on the market that offer a mobile-friendly output version of your content. However, some of them are designed to run within their own platform and stand-alone portability isn't always possible. Some of these support SCORM output. Some of the tools that we've seen only target one screen size. This is not a definitive list of authoring tools.

Contents

[1 Tools Available](#)[1.1 Authoring Tools](#)[1.2 Mobile Management](#)[1.3 Mobile Solutions](#)[1.4 Other](#)

Authoring Tools

- [Achieve Labs LearnCast](#)
- [BlackBerry Pushcast Software](#) (formerly Chalk Pushcast)
- [dominKnow Learning Systems' Claro](#)
- [Emantras MOBL 21™](#)
- [eXact learning solutions eXact Mobile](#)
- [Harbinger Group's Raptivity](#)
- [MentorMate iC](#)
- [OutStart Hot L](#)
- [Xyleme Pastiche \(not ready\)](#)
- [Rapid Intake's mLearning Studio](#)
- [ReadyGo Mobile](#)

<http://mlhandbook.adlnet.gov>

ADL Resources – <http://ml.adlnet.gov>

- ADL Mobile Learning Weekly Newsletter (Ongoing)
- ADL Mobile Learning Guide - App (Ongoing)
- ADL Mobile Learning Handbook (Ongoing)
- The Effectiveness of Mobile Course Delivery (2011)
- Mobile Learning Literature Review - TSWG (2012)
- Mobile Learning Vendors - TSWG (2012)
- Interagency Mobile Working Group (2012)
- Mobile Access to Supplemental Learning Objects (2012)
- Assessment of ISD Principles, Agile Methods, and Pedagogical Models for mLearning (2012)
- Next Generation SCORM for Mobile & Experience API ("Tin Can API") (2012)
- Mobile Decision Support Tool (2012-2013)

Activities, Research, Deliverables

Credits & Attribution

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<http://creativecommons.org/licenses/by-nc-sa/3.0/us/>



Share Alike!

Credits & Attribution

Credits

- <http://www.defenseimagery.mil>
- <http://www.flickr.com/photos/adactio/6153558098/in/set-72157627691092806>
- <http://www.recreation.slco.org/sorenson/fitness/images/teamwork.jpg>
- <http://qrcodepress.com/wp-content/uploads/2011/02/QR-Codes->
- <http://www.freakingnews.com/images/adv-images/corporate-training.jpg>
- <http://www.incrediblethings.com/home/come-up-with-a-million-dollar-idea-with-thought-box/>
- <http://internettime.pbworks.com/w/page/20095947/The%20Book>
- <http://www.sealund.com/blog/wp-content/uploads/2011/07/image0011.jpg>
- <http://www.bctmod.army.mil/pic/motorPool/motorPool.html>
- http://www.wired.com/images_blogs/dangerroom/2012/07/airforcephone.jpeg

Respect!

Questions / Discussion



A screenshot of a mobile application interface for sending a new message. The dialog box has a title bar with the text "New Message" and a "Cancel" button. Below the title bar, the "To:" field is populated with "Audience". The main body of the dialog is a large, empty light blue rectangular area. At the bottom, there is a text input field containing the placeholder text "Any Questions?????", a camera icon to its left, and a green "Send" button to its right.

New Message Cancel

To: Audience

 Any Questions????? Send

adlmobile@adlnet.gov

Thank You!



@ADLmobile

Jason Haag

Mobile Learning Team
SETA Support Contractor
The Tolliver Group, Inc.
jason.haag.ctr@adlnet.gov

Marcus Birtwhistle

Mobile Learning Team
SETA Support Contractor
KATMAI Support Services
marcus.birtwhistle.ctr@adlnet.gov

Let's Connect!