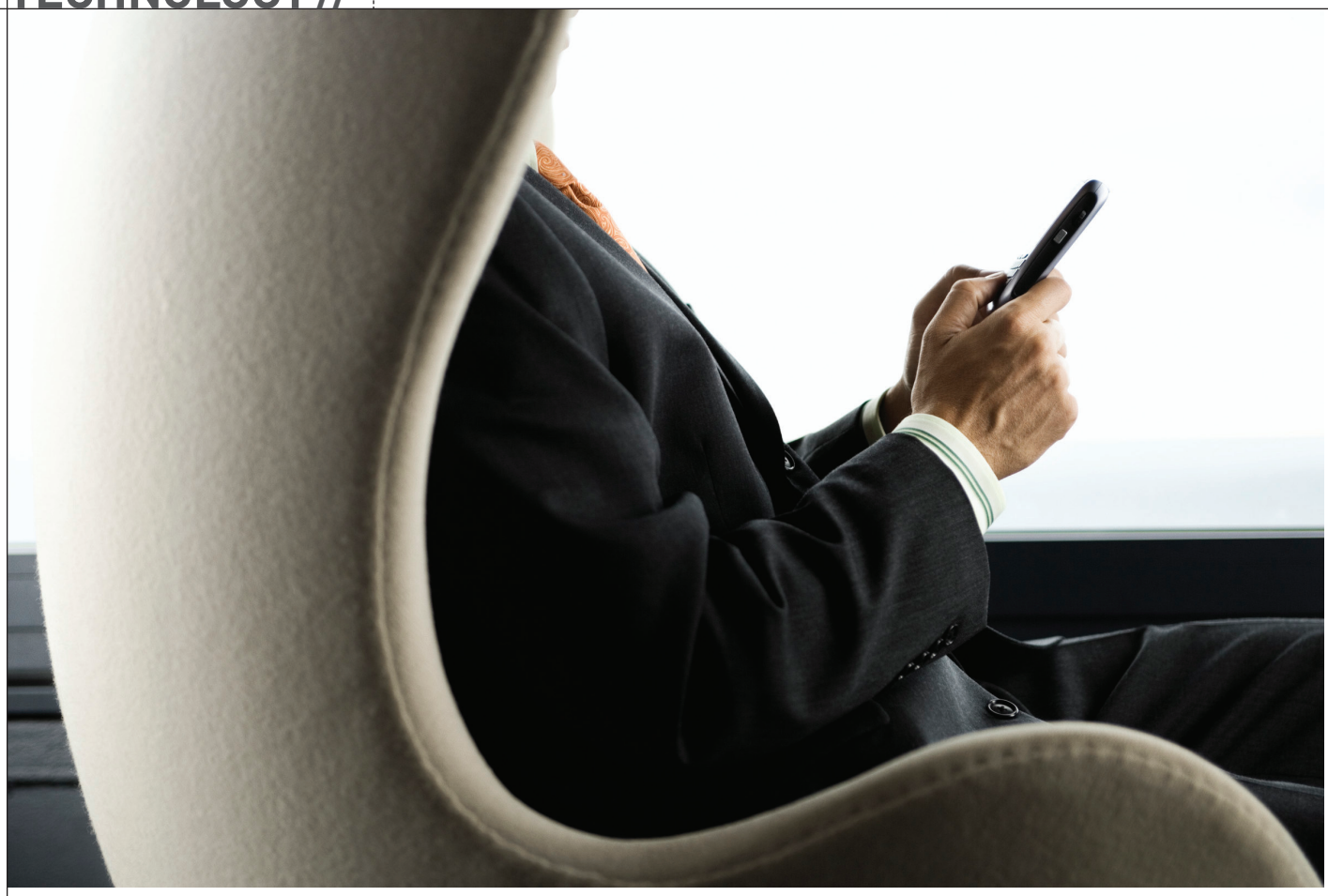

Can You Hear Me Now?

By Judy Brown

Is mobile access to learning and performance support a part of your learning architecture? If not, you may want to re-evaluate.

We use mobile devices to access email and voice mail, check out local traffic, and find the nearest shopping mall. So why not use those same devices for learning? E-learning brought us anytime, anywhere learning. Mobile devices bring us access to everywhere, all-the-time learning.

Mobile learning is "the exploitation of ubiquitous handheld technologies, together with wireless and mobile phone networks to facilitate, support and enhance and extend the reach of teaching and learning."

There are differences between mobile learning and e-learning. Mobile learning is generally shorter in duration and designed for instant use. It can be personalized and include data collection or user-generated content. Mobile learning is not about devices, but capabilities. It's about the experience, not the technology.

Mobile learning is inexpensive when compared to traditional learning (and even some forms of e-learning). It is as far-reaching as there are people with mobile devices; it is only growing bigger and more important each and every year. Effective usage can bring us closer to improved personalized learning by delivering the right materials to the right person at the right time and place.

Mobile learning comes in various forms including short courses. It can reach back to physical course materials in the form of audio or video capture, job aids, study aids, test preparation, updates, and alerts, and open up access to coaches, mentors, or reference materials. At Handheld Learning 09, futurist Ray Kurzweil noted, "Mobile phones are

Photo by Veer

misnamed. They should be called 'gateways to all human knowledge.'"

"The tipping point has been reached, and mobile learning has entered the wide-adoption phase," noted Sam Adkins, Ambient Insight's chief research officer in the Fall of 2009.

Who is doing what?

The first thing that comes to the minds of most trainers is the delivery of courses. This has proven to be successful by many organizations, mainly for compliance courses in the financial sector. Both Merrill Lynch and Accenture have been open about their very successful mobile learning initiatives.

Merrill Lynch was one of the first companies to come forward with their pilot mobile learning project in 2007. Kristofor Swanson, global HR mobile strategy lead at Merrill Lynch, stated, "Using BlackBerry smartphones to deliver learning has been so effective that participants now take their courses in about 45 percent less time—saving about four to six hours in lost productivity per annum. These employees have also scored higher on competency exams than their colleagues studying in a traditional online format." This initial pilot has now expanded and is being rolled out to about 50,000 BlackBerry devices in 2010. Compliance courses are being taken locally on mobile devices with all of the SCORM and tracking calls reported back to the LMS upon connection.

Accenture likewise has deployed SCORM compliance courses successfully on mobile devices on topics such as data privacy, imports and exports, and financial regulations. Initially deployed on the BlackBerry, which was the most prominent model in use, these courses now also are on the iPhone and Windows Mobile devices. Interestingly user satisfaction ratings average 4.4 on a 5.0 scale—compared to a 4.0 learner satisfaction rating for the computer-based versions of the same compliance courses. Unfortunately, many other companies have not been as forthcoming in sharing their experiences because they regard mobile learning as a competitive advantage.

An interesting initiative is the partnership between Louisiana Community and Technical Colleges and Pearson to expand instructional opportunities to the unemployed and underemployed to access LCTCS courses using mobile devices. Addressing a shortage of workers qualified to fill more than 90,000 jobs, this is a new initiative to provide additional opportunities for students to convert any downtime to productive time spent improving their knowledge and skills.

Another example of course materials delivered via mobile phones is a two-year Hairdressing Training curriculum, which won Britain's best handheld learning award in 2007. This is an interesting topic and one that is not immediately evident for mobile delivery, but it makes sense when you think about it. An example is available at htmob.mobi/demo.

> Your learning content through your LMS might already be usable on mobile devices. If not, the issues will likely be the use of frames or Flash content. Most devices today in the United States do not support Flash, but Adobe plans to change that for all but the iPhone in 2010.

Perhaps an even more powerful use of mobile devices is for job aids or decision support from face-to-face or online class materials, recorded lectures, or other resources. Currently the largest learning uses of mobile devices are in the healthcare industry and in language learning.

Epocrates offers up-to-date medical and drug performance support and reference software for the iPhone or iPod Touch, BlackBerry, Palm, and Windows Mobile. They also offer free short mobile courses across multiple specialties from University of Pennsylvania, University of Virginia Health System, Massachusetts Medical Society, and other providers for CME/CE credits on the go.

Transparent Language, a New Hampshire-based company, emphasizes a "declarative first" approach to language learning, and provides their suite of language tools in both audio and video format on iPod Touch and iPhone. A recent helpful and innovative option available using this application is to select to see the word or phrase being used live in the specific language via current Twitter comments.

Onboarding, or new employee orientation, is one part of the workplace that is seeing a growing use of mobile devices with important contacts, maps and directions, policies, and other information of interest to new staff available immediately.

Sun has put together mobile learning product tutorials and even soft skills training for use on iPod Touch or iPhone devices and has integrated an Amazon-type rating system to identify the most

Mobile Learning Needs

A great way to begin a conversation on mobile learning is to ask the question, "When is mobile delivery appropriate?" using the Five Moments of Learning Needs identified by Conrad Gottfredson:

- When learning for the first time?
- When wanting to learn more?
- When trying to remember?
- When things change?
- When something goes wrong?

Discussions usually begin addressing the last three items, but move into areas when mobile is also appropriate in the first two needs. This is definitely a great icebreaker for discussions of mobile learning with your training team and with your learners.

Types of Mobile Learning

- e-Learning (Lite)
- Performance support
- On-the-job support
- Access to information, education, and reference
- Podcasts
- Updates and alerts
- Forms and checklists
- Collaboration
- Coaching
- Mentoring
- Social networking
- Assessment
- Quizzes
- Tests
- Surveys and polls
- Certification
- Innovation
- Games and simulations
- Location-based
- Augmented reality
- User-generated content

valuable training. They have also successfully encouraged employees to contribute content they have developed.

Colleges and universities are beginning to adopt mobile learning for captured lectures and study aids. The most noteworthy of these being Abilene Christian University, which deploys iPhone or iPod Touch devices to all incoming freshmen and integrates them throughout the campus including as response devices in classrooms.

How do I get started?

As with any other new initiative you need to do your homework. What devices do your learners already use and what do they need on the job?

Whatever devices learners carry today, they will most certainly be different tomorrow. Clearly environments where all users have the same type of device are the easiest to implement mobile learning initiatives. In every situation you will need to determine whether to deliver your mobile learning content through an application specific to a device, through a browser, or through a platform that provides a player application for various devices—thus avoiding separate development of content for each device.

Your learning content through your LMS might already be usable on mobile devices. Check out your content at ready.mobi or validator.w3.org/mobile to learn what needs to be changed to make your existing content available. It may already be mobile ready. If not, the issues will likely be the use of frames or Flash content. Most devices today in the United States do not support Flash, but Adobe plans to change that for all but the iPhone in 2010.

Tools

Existing authoring tools may also support mobile content delivery. Products such as SumTotal ToolBook and Trivantis Lectora offer the capability to save content for use on various mobile platforms. Adobe products also have mobile templates and support for mobile deployment. Even LMSs are now beginning to address mobile delivery. The best advice is to check with your existing vendors on their plans and capabilities.

Additionally there are specific tools available such as RIM's Mobile Chalkboard; Mobile Study, SimpleLeap's Cram, or Study Cell for flash card–type study aids; and Poll Everywhere or Turning Technologies ResponseWare for interactive responses.

Specific management and delivery platforms that have player applications for various mobile operating systems are available from OnPoint Digital's CellCast or Intution's Rubicon.

For a quick prototype to propose a project, there are some free tools such as mobiSiteGalore, which I used to create crisisresponse.mobi. This was developed a couple years ago from available content as an example performance support tool. There are 32 pages and it took less than three hours to complete.

Future considerations

Already implemented overseas, or in academic labs, are several capabilities that have great promise to increase mobile learning opportunities. These include 2D codes, biometrics, context awareness, Femtocells/Picocells, Long Term Evolution, Machine-to-Machine, Near Field Communication, projection chipsets, sensors, and spaced learning. Cloud computing also removes complex processing requirements and the need for applications to "live" on the device itself.

Today, location-based learning in museums or tours is taking place, as well as augmented reality overlays on screen for local identification and information, such as from the Layar browser or Google Goggles. Mobile broadband is here as well with 3G delivery and with 4G mobile broadband already in Scandinavia and coming to the United States in 2010.

At a recent event at MIT Google, CEO Eric Schmidt asked the question, "Why do we teach the old way since all the world's information is literally on this phone or equivalent to a phone device that you carry around with you?"

Forrester estimates that 73 percent of the workforce will be considered some sort of mobile worker by 2012. What are you doing today to address their needs?

Judy Brown *has been following mobile learning since 1996 and is currently a member of ADL's Immersive Learning Technology Team concentrating on mobile learning. She also manages mlearnopedia.com; www.judybrown.com.*

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