

M-Learning

Saiid Ganjalizadeh (ganjalizadeh@cua.edu)

“Mobile,” with respect to technology, means portable and personal. The use of mobile digital devices is not new. Since the release of the Walkman in Japan by Sony in 1979 until now, with the popularity of the Apple iPod, people have been using mobile devices for a variety of purposes. Mobile applications include text messaging, audio/video transmission, online banking and commerce – and also *m-learning*, or mobile learning. M-learning provides learners who are on the move with various opportunities to enhance their learning outcomes. Mobile technologies help students, teachers, employees, and customers become well educated and well informed – just in time and just enough.

Why Is M-Learning Important to Higher Education?

Mobile devices are popular because of characteristics such as portability, ubiquity, tangibility, instantaneous communication, and anytime/anywhere connectivity. These devices support short message service (SMS), used by many colleges and universities as an interactive mode of communication for point-to-point message delivery, voting, and assessments. Thus learners can access information through their mobile devices while they are in a bus or car, at a train station or airport, in a classroom, or at home. A recent study shows that the present generation of students embraces the use of wireless technology because it gives them more flexibility in accessing resources and more independence of classrooms, labs, and libraries

(<http://www.ewh.ieee.org/soc/e/sac/meem/vol02iss02/MEEM020204.pdf>).

After the shooting tragedy at Virginia Tech, several studies suggested that campuses improve their emergency plans by taking advantage of mobile technology. The majority of students on campuses have mobile phones. Campus and community officials are looking into how and to what extent, in case of emergency, a text message sent to cell phones could alert students and perhaps save lives. But cell phone communication on campus does not end with text messages. Other cell phone options – such as 911 emergency calls, GPS tracking, and photo transmissions – could be used by members of campus communities during an emergency.

How Is M-Learning Evolving?

Numerous studies have addressed the subject of m-learning in the past few years, especially in Europe. For example, in 2001 a three-year pan-European research and development program was launched, aimed at helping young adults aged sixteen to twenty-four who were considered most at risk of social exclusion in Europe (<http://www.m-learning.org/knowledge-centre/knowledge-centre.htm>).

In the United States, both the secondary school and the higher education sectors have widely adopted elements of m-learning technologies. In 2001, the University of South Dakota began issuing new students PDAs preloaded with calculators, reference books, course organizers, and word processors. MIT has used a PDA-based, peer-to-peer, augmented reality (AR) system to simulate a toxic spill on campus (<http://education.mit.edu/ar/>). Since 2003, Coastline Community College (CCC) has offered complete courses on handheld Pocket PC devices (http://military.coastline.edu/pocket_ed.htm). Some colleges and universities are giving incoming students iPods preloaded with campus registration forms, policies, maps, organizations, class schedules, and library hours. Many institutions are using MP3 technology to provide students with access to course information and lecture recordings: Duke University (<http://www.duke.edu/ddi/itunes/>); University of California at Berkeley (<http://webcast.berkeley.edu/>); Stanford University (<http://itunes.stanford.edu/>); UCLA (<http://oid.ucla.edu/webcasts>); Purdue University (<http://boilercast.itap.purdue.edu:1013/Boilercast/>). Podcasting lectures and putting them in learning management systems (such as Blackboard), so that students can download them before class, has become a routine task for many faculty, in order to save class time for more discussion. Finally, organizations and societies are using m-learning as well. For example, the American College of Physicians offers learning content through its PDA portal (<http://www.acponline.org/pda/>).

Conclusion

Academic institutions benefit from m-learning in many ways: just-in-time/just-enough content delivery, integration with social networking tools and learning management systems, assessment tools, increased efficiency in the use of time as well as in productivity, and reduced/eliminated barriers to learning. Furthermore, m-learning helps attract young learners and keep them interested in learning.

Issues surrounding the cost of hardware and software are no longer major concerns. The cost of hardware (cell phones, PDAs, high-speed processors, storage) is falling, due to emerging technologies. The cost of software is also lowering, since most applications (such as LMSs) and social software tools are Web-based. As a result, m-learning is anticipated to face a major and steady growth within the next few years.