

e-Learning: Exploring the application of e-tools**10.1 Understand the potential use of hardware, software, systems or materials for e-learning****10.1.1 Understand the terminology and functionality of selected e-tools****LEARNING OUTCOMES**

After working through this information sheet, the learner will understand some implications of mobile learning (m-learning).

Mobile learning

(m-learning) is the use of mobile or handheld devices, such as PDAs (Personal Digital Assistant), mobile phones, mp3¹ players and laptops in learning and teaching. Mobile technology is often much more affordable than larger classroom based equipment. Very often, students already have access to mobile phones or MP3 players, and are able to use them effectively. This technology can provide another avenue for content delivery, widening participation and reaching disengaged learners. The following extract from JISC (Joint Information Systems Committee) – "Innovative Practice with e-learning", describes how.

Widening Participation

Taking the technology to the learner may be the only feasible option where, for reasons of distance, disengagement with learning, or social or cultural disadvantage, learners cannot participate in mainstream provision. The advantages of mobile laptop, PDA or mobile phone schemes for hard-to-reach learners have been:

Raised self-esteem	Bite-sized, easily accessed learning increases participation and may encourage progression onto mainstream courses.
Targeted funding	m-Learning projects involving ICT and basic skills training have attracted project-based funding.
Creation of communities of practice	Learners who are isolated or dispersed geographically or culturally can gain support from contact via mobile devices with wider learning communities.
Wider reach	Provision of PDAs or third generation mobile phones for schoolchildren or young adults can cascade skills onto older family members.

¹ MP3 audio coding shrinks down the original sound data from a CD by a factor of 12, without losing sound quality

Anytime, Anyplace Learning

There are a number of reported advantages for learners using small portable devices, especially where they offer internet connectivity. These include:

Spontaneity	Learning activities take place when the learner feels ready, or can be used to fill 'dead time'.
Immediacy	Learning becomes possible at the point of need, regardless of location.
Increased access	Learning resources can be accessed from the workplace and in the field, while travelling, and during classes and lectures.
Portability	Communication with peers and tutors, and the capture, storage and retrieval of info in multimedia formats are possible from one device in any location.

Personalised learning

Handheld devices used in conjunction with an online personal space can provide a sense of ownership over learning, enabling the development of self-evaluative processes. Learning can also be adjusted to individual needs in other ways:

Differentiation	Activities with handhelds can be designed to differentiate between learning preferences.
Accessibility	For disabled learners, specific uses of handhelds can overcome barriers found in some mainstream learning activities.
e-Assessment	Mobile phones have been used to transmit and complete oral or SMS-based tests and quizzes at levels chosen by the learner.
Personal information management	Immediate access to email, timetable, tasks for the day, SMS messages from tutors and peers and to-do lists can improve time management and learning potential for many learners.

Taken from JISC – "Innovative Practice with e-learning", published on 23 January 2006. This good practice guide to embedding mobile and wireless technologies into everyday practice is available online. Case studies are included on a supporting CD-Rom, which can be downloaded at http://www.jisc.ac.uk/eli_practice.html. You can email publications@jisc.ac.uk for further information.

Examples of **m-learning** include:-

Using camera phones to record evidence for portfolios	http://www.learningtechnologies.ac.uk/materials/files/file10.pdf
Tutors using sms messaging to communicate to students.	http://sms.lycos.co.uk http://www.text.it http://ferl.becta.org.uk/display.cfm?resID=2982
BBC sms bitesize revision	http://www.bbc.co.uk/schools/gcsebitesize/mobile/.
Taking laptops with an internet connection to community venues.	http://www.elearning.ac.uk/innoprac/learner/gloscat.html
Creating .mp3 files which can be downloaded from a site or a VLE	http://epnweb.org/ http://www.podcasting-tools.com/

Mobile Phones

Mobile phones can be used by tutors to engage with students who are not currently available, and also engage students with a technology that they relate to and understand.

- To remind learners of deadlines, start dates etc.
- To send small bytes of knowledge; short texts with one fact outlined in them.
- To listen to audio files.
- To record evidence for e-portfolios, via a camera or voice record facility.

PDA

A PDA (palmtop computer) is a handheld device designed to manage personal information. Relatively cheap, Personal Digital Assistants are portable, and can have mini-versions of standard software programmes. If you use a PDA, you will be able to link it up to your desktop or laptop PC, and “synchronise” your data.

With a PDA you can do many tasks you normally do on a full size PC. PDAs include word processing, spreadsheets, storing your contacts, as well as more advanced tasks such as mobile internet and email, photographs or videos, and playing MP3s. The addition of a wi-fi card will allow connection to a network.

As PDAs are cheaper and more portable than laptops, they have begun to gain popularity in education. Although not widely used at the moment, they have potential for use in many areas, including community and work-based learning venues. They can have an impact on personalised learning, by allowing learners to progress at their own pace, and decide their own progression. Resources must be specially adapted for optimum display and functionality.

Uses

- To view web pages, or listen to audio files.
- To present animated learning resources, and deliver smaller chunks of learning.
- To record evidence for e-portfolios.
- To self-test in private or classroom.
- To take into the field, equipped with appropriate data or resources.

Podcasting

“Podcasting” refers to any software and hardware combination that permits automatic downloading of audio files to an MP3 player for listening at the user’s convenience. Part of the appeal of podcasting is the ease with which audio content can be created, distributed, and downloaded from the Web. Barriers to adoption and costs are minimal, and the tools to implement podcasts are simple and affordable. Podcasting allows education to become more portable than ever before, giving educators another way to meet today’s students where they live and learn—on the Internet and on audio players.” Educause, 2005

5 Steps to creating a podcast

Plan. What are you going to say? How are you going to say it? How long will it take to deliver? A 30 minute pod cast can produce a 20 megabyte file – which can take a long time to download.

Hardware. You will need access to a PC or Macintosh, and a microphone. A condenser microphone is best, (and should cost between £40 and £70). Don’t use the microphone on your computer or one that comes with it, they’re not really designed for quality recordings.

Software. There are some free programs available to record your voice, one of the most popular is Audacity, available from <http://audacity.sourceforge.net/>. The file format is a .wav, short for WAVE. It is a standard format for storing audio on PCs.

iTunes™. Once you have your .wav file, you will need to convert and compress it. Converting it to an MP3 file means it will play on hardware other than iPods™. Once you have imported your file into iTunes™ you can choose the conversion compression you want.

Publish. Now you need to make it available. iTunes™ music store has an upload area especially for pod casts, that’s free to use, or you can upload it to a website, intranet or VLE. This web address will be used to “feed” you .mp3 file into iTunes™.

Although called “Pod casts”, you don’t need an iPod™, they will play on a PC via Windows Media Player.

TASKS

1. How could you make use of mobile learning to enhance your teaching? Try to think of at least two examples. Does anyone else in your institution use it, and if so, how has it improved the learning for students?
2. Do you think it would be more suitable for certain groups of students, and if so which groups and why?
3. Can you audit your student groups to determine who has access to:- MP3 players, mobile phones, PDA's, Laptops etc.
4. Do you make use of **Weblogs** or **Wikis**? Use the Internet to find if any appropriate sites exist for sharing information and experiences in this way.
5. Does your VLE support SMS text messaging or blogs.
6. Are there any PDAs available at your institution for loan, and are you aware of the booking systems?
7. Which students would benefit most from using them, and why?
8. What part of your lesson would be most suitable for podcasting? Summary? Introduction?
9. Could you record an introduction or summary and upload to your VLE?

WEBLINKS

- Wikipedia has current information on podcasts and techniques.
<http://en.wikipedia.org/wiki/Podcasting>
- Have a look at <http://www.podcasting-tools.com/> for hints and tips.
- Use the web to research podcasting. <http://www.addysg.org.uk/ipodined/news.php>

CROSS REFERENCES TO OTHER INFORMATION SHEETS

- Unit 1
- Unit 10 – Hardware and software.