Mobile Learning in Developing Countries

Other

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Version: Version of Record

Link(s) to article on publisher’s website:
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M-LEARNING APPLICATIONS

TEACHING AND LEARNING

M-learning can complement other teaching methodologies or replace them, and can be utilised in the same way as other methods. It can also be used as non-student and peer-assisted support, such as:

• Practical case, feedback and simulations
• Maintenance and guidance.

SUPPORTING STUDENTS IN THE CLASSROOM

• Supporting students across the nation.
• Course administration and management.
• Institutional quality assurance.

Some negative aspects of learning include the possibility students may feel:

• Pressure to achieve an answer to a question.
• That location or technology monitors their movements.
• That devices which belong to others, banks and others may also monitor their privacy.

• That requiring people to develop and perform for an audience

TRANSMITTING CONTENT

Students, teachers, banks and families. Web pages and computer-based learning packages from teacher to students are given: M-learning offers a range of content transferred, but delivered in smaller packages, such as:

• Daily or weekly task lists, reminders and calendars.
• Multiple choice quizzes with immediate feedback.
• Knowledge and over-riding in time frames.

• Follow-up visits to selected websites.
• Glossary, vocabulary information.
• Courses of different duration.

An alternative to subject-specific packages is the use of mobile devices, or “transmitting the content.” Thus, a content-driven task is adequate for those content involved in technology that require a timely survival across computer networks and technical standards. The goals are the same: maximising the potential of all students, so long as the content is used.

Quality assurance is key to all innovations and integrates multiple validating techniques for technology supported learning. This process will be facilitated by the learning design of other types of learning, rather than replacing them completely.

SHARED DISCUSSION

Use case discussions, seminars, books and families. Web pages and computer-based learning packages from teacher to students are given: M-learning offers a range of content transferred. Students in large numbers are required as resources and information.

M-learning can provide:

• Continued access to other students within their online community.
• Data collection for projects.
• Motivation and guidance.
• Pastoral care, feedback and remediation.
• Course administration and management.
• Supporting students across the institution.
• Motivation and guidance.
• Pastoral care, feedback and remediation.

CASE STUDIES

University of Wolverhampton, United Kingdom

Using mobile devices to support staff and disadvantaged students in teaching, learning and administration. How can a partnership support and develop the learning and teaching experiences for disadvantaged students?

M-learning, like its predecessor, can provide a timely survival across computer networks and technical standards.

MOBILE LEARNING IN DEVELOPING COUNTRIES

Worldwide and increasingly for developing countries, the m-learning revolution has been the most discussed focus of the m-learning community, with both researchers and practitioners promoting the value of mobile learning for education and training. Mobile learning is of great importance for education and training development given the widespread availability of mobile devices and the relatively low start-up costs of mobile solutions that can be easily deployed in remote areas in low-income settings.

Mobile communications is seen “essential for a traditional discussion group moderator, an e-mail or an information officer’ to maintain the mobile learning process.

FURTHER MATERIALS

BOOKS


MOBILE LEARNING IN DEVELOPING COUNTRIES

Witten and researched by

John Trotter, Learning and Teaching Research Fellow, Centre for Learning and Teaching, University of Wolverhampton, U.K.

Agnese Rubulotta-Hulme, Senior Lecturer in Educational Technology, Institute of Educational Technology, The Open University, U.K.

The Knowledge Series is a topical, start-up guide to distance education practice and delivery. New titles are published each ye ar.

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Commonwealth of Learning, 500 West Georgia, Vancouver, BC V6B 3J9 CANADA

Phone: 604.687.7711 Fax: 604.687.7720

www.commonwealthknowledge.org

A TOPICAL, START-UP GUIDE TO DISTANCE EDUCATION PRACTICE AND DELIVERY

M-learning: A Handbook for

Instructors

Helsinki, Finland: IT

University of Helsinki

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A TOPICAL, START-UP GUIDE TO DISTANCE EDUCATION PRACTICE AND DELIVERY
M-learning is an “anytime, anywhere” way to learn that enlarges access to education for all

INTRODUCTION
M-learning, also known as mobile learning, on-line learning, adventurous, spontaneous, “anytime, anywhere” way to learn and accessible educational and workplace training. It is often considered a convenient, fast and cost-effective solution, especially for workers with limited mobility. M-learning can be delivered through various means, including mobile devices such as smartphones, tablets, and PDAs.

ACCESSIBILITY AND USABILITY
M-learning has developed widely in Europe, the United States and parts of East Asia, currently in English medium, and various areas of significant poverty, eg, in the UK and US, it has been embraced by the public and businesses alike. M-learning has been driven by the desire to provide lifelong learning opportunities, and the demand for knowledge. In particular, the advent of mobile phones has accelerated the pace of development of m-learning. Mobile phones are educationally interesting because they offer:

1. Cheaper, comparable functionality with desktops or laptops.
2. Several communications channels on one device, for example, text messaging, email, instant messaging, and voice calls.
3. Personal Digital Assistants (PDAs), and palmtop or handheld computers.
4. Access to Internet resources.
5. Writing and selecting can be carried out on a larger screen; others, encouraging discussion, for which mobile phones are ideal.

IMPLICATIONS OF HANDHELD TECHNOLOGY
When considering the usability of a mobile device, consider its intended use. For example, some may want to use a mobile phone to take notes, while others may want to use a larger screen. Some may want to install extensive electricity power-savers, while others may prefer to use a mobile phone with less storage. Consider:

1. Portability; mobility; and the use of the device in different environments.
2. Rooting, legal issues, and the possibility of using proprietary software.
3. Compatibility, and the ability to use the device in different conditions.
4. The need for the device to be able to communicate with other devices.

IMPLEMENTATION STRATEGIES
When selecting a mobile device, consider the following:

1. The device should be able to communicate with other devices.
2. The device should be able to communicate with other devices in different environments.
3. The device should be able to communicate with other devices in different conditions.
4. The device should be able to communicate with other devices in different circumstances.

POWER SUPPLY
Power supply can sometimes be a problem, especially with older or low-tech models. Older models may not have a battery, but can be powered by a USB cable. Newer models may have a battery, but may not have the ability to charge. It is important to consider power supply when selecting a mobile device.

M-Learning and the choice of available devices.

MOBILE SYSTEMS AND CELLS
Handsets at all prices

1. Are about the same weight as a mobile personal assistant.
2. Have several communication channels.
3. Have a built-in computer.
4. Have a small size and weight.

Handset technology

1. Can be complicated, especially among multiple users.
2. Can be expensive, but the average user can afford it.
3. Can be used in a variety of contexts, including in the classroom.
4. Can be used in the classroom, including in the classroom.

NETWORKING AND CONNECTIVITY
M-learning has developed mainly in Europe, the United States, and in parts of East Asia, primarily in an English medium, and in environments where wireless internet access is available. M-learning has developed mainly in Europe, the United States, and in parts of East Asia, primarily in an English medium, and in environments where wireless internet access is available. M-learning has developed mainly in Europe, the United States, and in parts of East Asia, primarily in an English medium, and in environments where wireless internet access is available.

SOFTWARE PROGRAMS
Handheld and mobile software is generally cheaper than desktop software, and is available in stores, and online, and on the internet. It is important to consider power supply when selecting a mobile device.
M-learning can complement other teaching and learning methods or replace them

INTRODUCTION

M-learning is an anytime, anywhere way to learn that enlarges access to education for all

M-learning devices are key to creating an inclusive m-learning environment. This guide focuses on the use of handheld computers or smartphones—m-learning devices are lightweight and handheld, including:

- Personal Digital Assistants (PDAs), or pocket-sized handheld computers.
- Mobile phones, also called cell phones or tohpphones.
- Canadian mobile phones, which are cheap and widely available, alongside other wireless communication devices, and handhelds, which are more expensive and scarce, along with desktop and laptop computers.

Several communications channels are of interest, for example:

- Wireless, voice, and messaging.
- Cheaper, compatible functionality with desktops or laptops.
- Wireless access to basic information, multimedia education over the Internet.

Mobile devices can be used in seven key roles:

- M-learning: for education, management and training.
- M-Research: for data collection in real-world situations.
- M-Communication: for voice and other messaging.
- M-Information access: for obtaining information and knowledge.
- M-Collection: for gathering data and code.
- M-Administration: for keeping track, managing information and data.
- M-Identification: for personal identification, authentication, data entry, and storage.

Usage and accessibility

M-learning has developed widely in Europe, the United States and some East Asian countries, particularly in English medium, and various economies of scale, such as mobile technology and mobile services. An advantage of mobile learning has been the specific design of mobile learning, with specific features of mobile technology and mobile services.

Adapting course content for m-learning usability can be:

- Short-term pilot projects that reward and support innovative teachers, and the time needed to test, and not too much data.
- Local support, staff development and resources for implementing m-learning, including local training.
- Sustained, timely and accessible staff development that addresses the needs of teachers and the institution.
- With the correct installed software, both Pocket PC and Palm OS cannot be changed or upgraded.

As small images and small text are more difficult to read, handheld devices should use more text-heavy. Some institutions have a limited ODL budget, which narrows the choice of available devices.

INTERNATIONAL STANDARDS

Reliability in learning is best achieved when the learning environment is consistent with the learning outcome. The learning environment should be as consistent as possible with the learning environment. The learning environment should be as consistent as possible with the learning environment.

Commonality of experience

Avoiding the use of proprietary software for synching between multiple devices. Using CD-ROMs or similar software for synchronisation between multiple devices.

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M-learning is an ‘anytime, anywhere’ way to learn that enlarges access to education for all

INTRODUCTION

M-learning has developed widely in Europe, the United States and parts of East Asia, commonly in English medium, and various versions of myriad, such as mobile media and audio books, that form in effect a very short lesson. Substantial efforts have been advanced on the subject of learning and teaching, specifically relative to mobile devices, student and subject, and the specific role of learning devices and media. M-learning is a means of enhancing learning opportunities, to develop and deliver courses that can be delivered at a distance, and to the extent possible, to deliver them in a more engaging and interactive way. The handheld is inherently portable, and can be used in a variety of settings.

USABILITY AND ACCESSIBILITY

M-learning can complement other learning activities and support is new and challenging. This guide focuses on the use of handheld computers or smartphones. Mobile phones, also called cell phones or handphones, are about the size and weight of a small personal stereo. They are usually about the size and weight of a small personal stereo. They are usually about the size and weight of a small personal stereo. They are usually about the size and weight of a small personal stereo. They are usually about the size and weight of a small personal stereo. They are usually about the size and weight of a small personal stereo. They are usually about the size and weight of a small personal stereo.

MOBILE SYSTEMS AND THEIR HANDHELD COMPONENTS

M-learning can complement other teaching and learning methods or replace them

SECURITY

Inexperienced or older computer users, and users from diverse cultures, may find it difficult to use mobile devices, and to install applications suited to their specific needs, but students can integrate education with other personal activities, and overcome dexterity.

IMPROVEMENT STRATEGIES

Some handhelds, smartphones and mobile phones allow:

• To use widely available and cheap disposable batteries, others, proprietary
devices or “peripherals” using a cable, usually supplied with the handheld.

• To exchange documents with desktops and laptops, preserving the
source community.

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• To exchange documents with desktops and laptops, preserving the
source community.

INFORMATION STORAGE AND MEMORY

Some handhelds, smartphones and mobile phones allow:

• To use widely available and cheap disposable batteries, others, proprietary
devices or “peripherals” using a cable, usually supplied with the handheld.

• To exchange documents with desktops and laptops, preserving the
source community.

SOFTWARE PROGRAMS

Handheld mobile and handheld software is generally cheaper than desktop software, although some devices are programmed to be used by only one person at a time.

OPERATING SYSTEMS

Minority systems:

• Palm, developed specifically for handhelds.

• Synaptics, designed for smartphones.

• Microsoft Windows for Pocket PCs.

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M-LEARNING APPLICATIONS

TEACHING AND LEARNING

M-learning can complement other teaching and learning methods or replace them, and can enable as well as enhance other methods. It can also be used for non-student and peer-student support, such as:

- Personal care, feedback and information.
- Maintenance and guidance.
- Supporting students in the classroom.
- Course administration and management.
- Institutional quality assurance.

Some negative aspects of learning include the possibility students may feel:

- Pressure to achieve, but not the feedback they need.
- That location influences technology's measurement of their movements.
- That devices when involving people, contacts and to control。“ordon their privacy.
- That regrouping their professional development and a professional "e-moderator” must be facilitated by a teacher, as a guide. Although technology use, especially in education, offers a range of content transmission choices, but delivered in smaller packages, such as:

- Daily or weekly tasks, reminders, and tutorials.
- Multiple choice quizzes with immediate feedback.
- A manageable overview of their tasks.

Following links to selected websites.
- Glossary: useful information.
- Concepts or definitions for revision.
- That devices which hold appointments, tasks and contacts may jeopardise their privacy.
- That location-aware technology is monitoring their movements.
- That devices when involving people, contacts and to control.“ordon their privacy.

MOBILE LEARNING IN DEVELOPING COUNTRIES

Workplace education

M-learning can provide:

- That devices which hold appointments, tasks and contacts may jeopardise their privacy.
- That location-aware technology is monitoring their movements.
- That devices when involving people, contacts and to control.“ordon their privacy.
- That location influences technology's measurement of their movements.
- That devices when involving people, contacts and to control.“ordon their privacy.

WEBSITES

- Mobipocket.  www.mobipocket.com
- Mobile Learning Applications.  www.mlearningapps.com
- American Management Association (AMACOM).  www.amacombooks.com
- A Topical, Start-up Guide to Distance Education Practice and Delivery.  www.open.ac.uk/deep
- Centre for Learning and Teaching, University of Wolverhampton, United Kingdom.  www.wlv.ac.uk/cted
- Technology Standards Committee, Working Group 12: Project to define current software.  www.paragon.co.uk/mags/pdaessentials.html
- RepliGo: Multi-format document reader software.  www.cerience.com
- BiblioPalm, Biblioscape Research Information Manager: Reference management software.  www.biblioscape.com
- Documents To Go: Office programme package.  www.dataviz.com/products/documentstogo
- Picsel File Viewer: Multi-format document and file reader software

CASE STUDIES

University of Wolverhampton, United Kingdom

Students of some disciplines, such as teaching, law, nursing and computing, spend many courses in placements gaining practical experience. Here m-learning can provide:

- Continued access to course and reference material in the workplace.
- Contact and access to online materials, without the need to be on campus.
- Access to databases for course content.
- Support for personal information management in a new workplace.

FURTHER MATERIALS

90000

- Agnes Kukulska-Hulme, Senior Lecturer in Educational Technology, Institute of Educational Technology, University of Wolverhampton, United Kingdom
- John Traxler, Learning and Teaching Research Fellow, Centre for Learning and Teaching, University of Wolverhampton, United Kingdom
- Aneesa Salmon, 3 Way Net: Learning object creation software.
- PakXPress, 3 Way Net Inc.: Learning object creation software.

MOBILE LEARNING IN DEVELOPING COUNTRIES

Written and researched by

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M-LEARNING APPLICATIONS

Teaching and Learning

M-learning can complement other teaching and learning methods or replace them, and can be utilized in face-to-face or online methods. It can either be non-student and peer student support, such as:

- Practical case feedback and information
- Maintenance and guidance.

- Supporting students outside the classroom
- Course administration and management
- Institutional quality assurance.

Some negative aspects of learning include the possibility students may feel

- Pressure to be on time
- Difficulty in writing
- Their location may influence their moving around them.

They also want to avoid appointments, book and contact in any particular area. Thus,

- Training programmes and professional development comprise its skills.

TRANSMITTING CONTENT

Laptops, notebooks, handsets and tablets. Web pages and computer-assisted learning packages from teacher to tactics can be delivered in smaller packages, such as:

- Daily or weekly class notes, reminders and calendars.
- Multiple choice quizzes and immediate feedback.
- Knowledge and learning in short terms.

- Following links to selected references.
- Glossary, reference information.
- Concepts of definitions revision.

An alternative to supplementary packages from digital devices, or "revert" the content, is to develop content that complies with the standard with self-education that makes possible the distance between students and teachers. The new media makes it possible for the students to have both the knowledge and the opinions of the teacher, rather than replacing them completely.

SHARED DISCUSSION

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Further MATERIALS

Books


- Palmtop User Information Management Software. www.biblioscape.com/bibliopalm.htm
- RepliGo: Multi-format document reader software. www.cerience.com
- Hands High Software: Educational software. www.handshigh.com
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