

Mobile Learning and the Future of Learning

Agnes Kukulska-Hulme

The Open University, UK

HETL: Dr. Kukulska-Hulme, let us start with a fundamental question: What is mobile learning? It seems that its definition has evolved to include not only technological, but pedagogical aspects, too. Is there something unique about mobile learning?

Agnes Kukulska-Hulme [AKH]: The use of mobile technology enables learners to make new kinds of connections between contexts; however this is not always the most suitable definition of mobile learning. Even though learners often support their own learning by using the technology to connect with others, or to make connections between learning episodes in different locations, *these are not necessarily the prime objective of mobile learning*. While some known definitions of mobile learning are reflective of specific research studies, a broader definition would include an emphasis on learner choice: learners can be more actively engaged in determining what, when, and how to study, that is, choosing their activities and the time and place to perform them.



With respect to the contextual aspect, mobile learning is not just about *connecting* contexts; rather it is about exploiting, or *creating contexts*. When we look at what learners are doing with mobile learning – it is clear that they take advantage of the convenience offered by having choice; or they take advantage of the specific context. Mobile learning can be taken to different places and then exploited to enhance its ‘learning’ component. In other words, the learner connects with the place where mobile learning occurs. These aspects of mobile learning are quite unique as they offer new ways to use

the features of the otherwise familiar mobile phone. For example, unique mobile applications that use augmented reality are already developed for smart phones and they provide a new type of context for mobile learning activities.

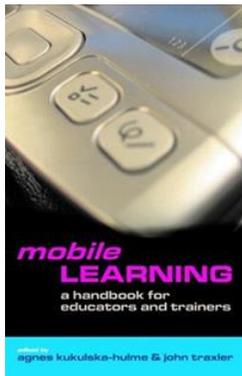
HETL: Dr. Kukulska-Hulme, mobile learning is a new paradigm, which was made possible by the emerging mobile technology. How does mobile learning compare to other types of technology-supported learning?

AKH: Mobile learning differs from other approaches in the pedagogical framing of the activity, as well as the type of software and the device used in the activity. A typical mobile learning scenario includes travelling from one point to another as part of the learning activity so an educational field trip is an example of a mobile learning application where the technology fits in very conveniently. However, such scenarios are quite familiar in education, and it is more difficult to ‘think up’ new scenarios.

New scenarios may be focused on people rather than solely based on technology. For example, these scenarios could be based on social experiences, and involving new types of participants and new types of resources. The traditional elements of pedagogical design will be present – learning objectives, resources, activities, outcomes, and assessment – but perhaps also new ones such as learner-generated content or collective intelligence. New features of the technology can be introduced to improve the learner experience, or enable experiences that would not be possible otherwise.

To develop highly innovative scenarios, one needs to have a good understanding of the opportunities offered by the technology. An excellent example is provided by the educational game ‘Savannah’ in which children played as members of a pride of lions in a virtual savannah (an augmented reality space in their school playground) . [2] The idea originated with and was developed by specialists who were deeply involved in the technology.

HETL: Dr. Kukulska-Hulme, as a practitioner of mobile learning, what are your views on how to deploy it pedagogically – what is the role of the student in mobile learning?



AKH: Students have to show us the way. They are often ahead of ‘us’ in using the technology. We need to tap into their knowledge – not only about technology but also about different ways of studying. Mobile learning provides more flexibility in terms of time, place, and resources and can adapt to their lifestyle. Previously, we as teachers were not interested in what learners were doing outside the classroom but now we have to take an interest and realize that a great deal of learning goes on outside the classroom also. It is not easy, and students do not always articulate their learning experiences and needs, so we need to find ways to ask the right questions.

Mobile technology can be used for capturing learner requirements, eliciting them from the class, or having students elicit them from one another. Learners also need to learn about themselves as learners. For optimal design, students will need to be aware of what learning is. If we agree that there is something unique in mobile learning, we need to know the best strategies for making the most of mobile learning.

HETL: Dr. Kukulska-Hulme, learner-initiated practice in the use of mobile device for learning sounds like a great idea. How are teachers going to cope with the fast developing technology, especially with the increasing student demand for mobile learning?

AKH: Mobile learning is a challenge for teachers. Teachers need to become life-long learners and be able to put themselves in the position of the learner. They have an important role in modeling the learning process. Teachers also need to learn to use the technology, because mobile technology is so personal. If one does not have personal experience, it is difficult to engage effectively with it.

Indeed personalization is a characteristic feature of mobile learning. And teachers need to develop strategies for collaborative learning, so that it is not all up to the teacher to ‘do’ the

teaching. Learners will find their own ways, especially the ones who are highly conversant with the technology.

HETL: Dr. Kukulska-Hulme, there are many ways to implement mobile learning in educational contexts. One of them is foreign language acquisition. Would you tell us more about that context?

AKH: Language learning is one of the key application areas of mobile learning, for a number of reasons. First, language learning is a life-long activity for many people. There may be many compelling reasons to return to language learning – for example career change involving a new requirement to travel and communicate in another language.

Mobile technology supports life-long learning very well. Both Internet-based resources and mobile applications are available to language learners, and it has become very easy for learners to use them. In some countries language learning applications are promoted by telecommunication companies who see them as a revenue gathering opportunity. Examples are studying English as a second language in Indonesia, or studying Spanish and Mandarin. [3] Mobile language learning is attractive because of its immediacy: often there is no need to go out and buy a book or anything else, the resources are already there or can be obtained very quickly.

HETL: Dr. Kukulska-Hulme, it would seem that learning a second language may have become easier with mobile technology. In the future, could mobile learning be a catalyst in the process of developing a truly multilingual global community?

AKH: Yes, it has become easier to learn another language. While language learning may be difficult for some, mobile technology can help them. For example, there are more opportunities to practice and receive feedback. It is also possible to become more active in defining one's personal language learning needs and problems by using a personal device to capture issues as they arise in interactions with target language speakers.

Mobile language learning has another unique feature in that the mobile phone can 'talk' on behalf of the person; it can become an extension of the person. This happens when a user plays something prerecorded, such as a sentence or a phrase, as part of a conversation. With mobile learning people are not going to necessarily master a foreign language, but it will go some way towards helping them to learn and communicate. The mobile phone can become a tool for learning about another culture as well.

HETL: Dr. Kukulska-Hulme, as a follow-up on the previous question, what is the place of mobile learning in other subjects and disciplines? What contexts would benefit most from using mobile learning?



AKH: Many disciplines could use mobile learning to their benefit. Science disciplines, for example, have always been at the forefront of using technology for learning – employing methods such as simulation, field trips, observation, and recording. Medicine- and the disciplines aligned with it (for example health

care) also benefit from mobile learning. Take for example a person who is diagnosed with diabetes. Mobile learning can help that person learn the skills needed to monitor and manage their condition on a personal level, to communicate with other diabetes patients, and to connect with professionals and peers. It is an evolving field with a huge potential.

Another discipline area is sports, both professional sports and everyday activities. As the mobile device is always ‘with you’, it can be used to capture performance data, and to motivate – for example by sharing achievements with others. Yet another area is mathematics in its practical application to the real world; or any area of learning where constant practice is necessary. However, practice-based and applied disciplines are not the only ones to benefit. Mobile learning can equally well support inquiry, theory-building, synthesis, critique and reflection.

HETL: Dr. Kukulska-Hulme, what can we do in order to make successful mobile learning implementations more widely known, and encourage others to adopt and develop them further?

AKH: Mobile learning needs to be demystified. We have to return the technology to learners and teachers, as in a sense it has been ‘hijacked’ by the research community. Research is sophisticated while mobile technology can be seen as just an everyday technology in the hands of its users – learners and teachers. It is important not to be ‘possessive’ about it, and give examples for everyday use – easy examples to start with.

There is a spectrum of possible activities – some not requiring a complex design, or significant resources. We need to identify the more feasible ones, before moving on. Also, it will be easier to adopt mobile learning if the inexperienced person teams up with someone else – working together will be much more practical.

Academics sometimes prefer not teams but informal groups. At the Open University for example, we have an informal group that meets once a month to share knowledge about new mobile applications. This works really well for us: not having enough time is a real problem so learning by sharing is an effective use of time, and has the appeal of a social activity. Informal groups are also effective because people can come and go as they wish, and can ask questions, which is more in tune with the way people prefer to learn these days.

HETL: Dr. Kukulska-Hulme, mobile learning is now a significant area of academic research, with specialized conferences and journals publishing scholarly results on the topic. How does research in mobile learning inform practice and policy development?



AKH: Research adds credibility to the introduction of new practices. It gives a sense of confidence about it. Research has a role in presenting a conceptual framework of the practice, so that practice can be understood and people can feel more secure about what is happening. Research also guides policy. We were trying to combine these elements in our recent project on best practices in mobile technologies for lifelong learning (MOTILL) . [4] We tried to find a way to interpret research for policy makers. We created a database of research that we analyzed for them in a way that they could understand. We had some good engagement and

positive feedback from policy makers in that project.

HETL: Dr. Kukulska-Hulme, a final question. It seems that universities could benefit from mobile learning. What do they need to provide in order to support it? Would mobile learning be disruptive to their current practice?

AKH: I can speak from the example of my own university: it comes down to adapting our curriculum to what learners want and need. For us, mobile learning is partly about attracting students – we know that many of them want to use mobile devices in their learning. Furthermore, mobile learners enrich the curriculum. The creation of the curriculum becomes a two way process. Learners add their distributed data and their global perspective.

However, mobile learning is disruptive because it changes traditional roles. Is disruption good or bad? It could be a threat to the status quo, but also it could be a positive influence – refreshing and revitalizing teaching, making it more attuned to what learners need. People attracted to mobile learning are initially people who like to experiment. If a teacher is not of this disposition, changing one's attitude may be really difficult. A great deal of change is going on in universities anyway so the introduction of mobile learning should be seen in the context of change. Success is not guaranteed and it may feel like a risky thing to do, but the potential rewards make it worth exploring.

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Bio



Dr. Agnes Kukulska-Hulme is Professor of Learning Technology and Communication and Associate Director (Learning and Teaching) in the [Institute of Educational Technology](#) at The Open University, UK. Her original background is in linguistics, terminology and second language acquisition, and for the past 16 years she has been working in educational technology. Professor Kukulska-Hulme has published widely in the areas of online learning, mobile learning, mobile usability, and mobile assisted language learning. Her recent work includes guest editorship of special issues of *ReCALL*, *Research in Learning Technology*, and *Open Learning*, all concerned with research and practice in mobile learning, as well as leading numerous projects investigating innovative practice with learning technologies in distance education and informal language learning. Professor Kukulska-Hulme is the current president of the [International Association for Mobile Learning \(IAmLearn\)](#) . [1]