Abstract: The purpose of this study was to identify the educational functions of mobile learning. Based upon deducing from the definition of learning and special functions of mobile learning, four learning abilities enabled by mobile technology and six functions of mobile technology were founded. The learning ability could be expanded by mobile technology are remembering, sensing, assessing, and responding. Those educational functions of mobile learning are 1).user centered, 2).individual settings, 3).mobile, 4).durable, 5).network/communication, and 6).ubiquitous. These four abilities under those six functions together would contribute to the results of effective mobile learning. A conceptual model was also presented.

Key-word: Mobile Learning, Educational Functions

1. Introduction

The portability and instant communication properties of mobile devices influence the learning processes in interacting with peers, accessing resources and transferring data[1-8]. The short message and browsing functions in a cell phone provide users with timely and adaptive information access[8-11]. Although many studies of mobile learning indicate the pedagogical potential of mobile devices, the screen size, computational power, battery capacity, input interfaces, and network bandwidth are too restricted to develop acceptable functionality for the entire learning processes in a handheld device[1, 4, 12-22]. There is a need to re-conceptualize educational functions of mobile learning.
2. Theory Frame
Technology provides people the flexibility to solve the problems. The core problem of this study is how the mobile technology assists learning. For answering this question, two faces literature review were conducted. Those were:
- deducing from definition and
- illustrating upon the special functions[5, 9, 10, 23-27].

In figure 1, the educational functions of mobile learning would be deduced from both definition of learning and special mobile function of learning.

3. Mobile Learning
When dealing with mobile learning, it is useful to have a working definition of learning. Learning is like “thinking”: we all know what it is until we have to define it.

Let’s go back to basics and considered a very simple example of learning: how people learn to avoid rain. Very simply, if people walk in a rain without umbrella, he/she gets wet. The person remembers the experience and ‘learns’ that avoiding wet would be own benefit. Next time the learned experience could be referenced for conducting one’s behavior and learning new experience. From this simple example, the working definition of learning could be described as following:

‘An human being is said to have learnt when it has increased its options for applying, to a specific set of circumstances, new or different behaviors which the organism believes will be to its benefit[4, 28].’

4. Functions of Mobile Learning
4.1. Expanding Users’ Learning Ability
We can deduce from this definition that in order to learn, an organism needs the mobile technology to expanding the ability to:
- sense what is going on in the environment;
- assess whether its response to an event is beneficial or harmful;
- remember the event, its response and the consequences;
- respond with a different behavior.

Notice that phrases used: ‘increased its options’ and ‘ability to’. This is because learning is not always immediately followed by observable behavior learning is often stored for future use.
4.2. Distinguished functions of Mobile Learning

A first step in postulating a function of mobile learning is to differentiate what is special about mobile learning compared to other types of learning activity. An obvious, yet important, difference is that it starts from the assumption that learners are continually on the move.

People learn across space as they take ideas and learning resources gained in one location and apply or develop them in another. People learn across time, by revisiting knowledge that was gained earlier in a different context, and more generally, through ideas and strategies gained in early years providing a framework for a lifetime of learning. Learners move from topic to topic, managing a range of personal learning projects, rather than following a single curriculum. Learners also move in and out of engagement with technology, for example as they enter and leave mobile phone coverage.

To interpret learning as a changeable activity is not to separate it from other forms of educational activity, since some aspects of informal and workplace learning are fundamentally mobile in the ways discussed above. Even learners within a school will move from room to room and shift from topic to topic. Rather, it illuminates existing practices of learning from a new angle. By placing mobility of learning as the object of analysis we may understand better how knowledge and skills can be transferred across contexts such as home and school, how learning can be managed across life transitions, and how new technologies can be designed to support a society in which people on the move increasingly try to fill up learning into the interstices of daily life.

The mobile technology should provide distinguished functions for effective learning. Effective learning should be:

- Learner centered
- Personalised
- Situated
- Lifelong
- Collaborative
- Ubiquitous

The mobile technology could be used for those functions contributed to learning:

- User centered function
- Individual settings
- Mobile function
- Durable function
- Network/communication function
- Ubiquitous function

Computation technology, like learning, is ubiquitous: computers are embedded in devices such as photocopiers and televisions that perform human-oriented functions (including basic instruction and user guidance) rather than acting as general-purpose computing devices. They are also becoming more durable, in that although the hardware may last only for two or three years, personal software packages and storage formats (such as PDF for document, AVI for movie, and MP3 for sound) evolve through successive versions, with a large measure of backward compatibility. There are now opportunities for people to preserve and organize digital records of their learning over a lifetime.

Learning is being conceived as a personalized and
learner-centered activity, so too are new digital technologies offering personalized services such as music play-lists and digital calendars. Learning is now regarded as a situated and collaborative activity, occurring wherever people, individually or collectively, have problems to solve or knowledge to share, so mobile networked technology enables people to communicate regardless of their location.

5. Conclusion
The pedagogical difference promoted by mobile technology is that learning occurring in the field or while mobile. Therefore, mobile devices can be adopted to fill the gap between Web-based learning and ubiquitous mobile learning. Mobile learning could be applied not only formal education but also informal education.

Based upon the reviewing both definitions of learning and distinguished functions of mobile technology, a mobile learning function model was presented in Figure 2. Mobile technology should provide user the functions to expand learning ability in the way of

- remembering
- sensing
- assessing
- responding

In the figure 2, the remember acts as a core position. Old experience withdrawn from memory could be the fundamental components of learning. Mobile device could support memory function via both local storage and on-line storage. By integrating functions of sense, assess, and respond, learning newer experience could be accomplished upon the assistance of mobile technology. On the other hand, for contributing mobile learner’s learning, the mobile device should demonstrate functions supporting mobile learning. Those are:

- User centered
- Individual settings
- Mobile
- Durable
- Network/communication
- Ubiquitous

Together, user centered, individual settings, mobile, network/communication, and ubiquitous, all six educational functions establish an environment of mobile learning. Those educational functions make it possible to expanding mobile learning ability of memory, sense, assess, and respond. These four abilities contribute to the results of effective mobile learning.
Reference:
[9] G. Kurubacak, "Identify Research Priorities and


