

# Chapter 12

## Mobile Devices in the Classroom

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### ABSTRACT

*Mobile Learning plays a vital role in the field of education technology. Technology changed from time to time from traditional method of teaching to e-learning and then now moved to m-learning (mobile-learning), but the concept of education remains the same. In this chapter the objective is to review the benefits and challenges of using mobile devices (m-learning) in class room in the field of educational technology. The term educational technology is the combination of education and technology. Technology changes from time to time with the development of digital technology, but education remains the same.*

### INTRODUCTION

The analogy used for understanding the term educational technology is washing machine, in this washing is treated as education and machine is treated as technology as it changes from time to time, in olden days we were using semi load type washing machine now it is changed to full load washing machine. Likewise, in ancient times traditional method of teaching is followed with black board teaching method, after that traditional method teaching is moved to electronic learning (e-learning) with the help of electronic books, electronic journals etc., E- Learning gives a new pathway to learn at home instead of classroom teaching. Now, e-learning is moved to mobile learning (m-learning) with the help of tablets, laptops and smart phones. M-Learning moves a step ahead of E-Learning by providing virtual classrooms

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(Chet Hosmer et al. 2011). The term educational technology is also known as Teaching Technology, Instructional Technology, Behavioral Technology and Instructional Design Technology.

The main objective of education is to make the Teaching Learning Process (TLP) more effective and also to make the students learn themselves with their own thinking habits and make them to propose good research ideas. Every student has different learning styles. In Educational Technology learning styles are classified into: Active Learning, Cooperative Learning and Problem-Based Learning. To improve the TLP we have adopted to new learning technology i.e. m-learning. Electronic Learning or e-learning is defined as the process of learning or delivery of learning with electronic devices. Mobile Learning is the subset of E-Learning. The only difference between e-learning and m-learning is the use of mobile devices in m-learning. Mobile Learning or m-learning is defined as the process of learning with personal electronic devices such as laptops, mobile devices, tablets and handheld computers (Crompton. H, 2013). M-Learning is also used in distance education at the time of inconvenience where learners are treated as m-learners (Crescente et al., 2011). Mobile Learning (figure 1) is convenient to students because it can be accessible from anywhere and at any time portable technology (Trentin & Repetto, 2013).

M-Learning provides strong portability by replacing text books and notes to e-books. It allows the students to get out from the traditional class room setting to virtual technology i.e. learn from anywhere and at any time. Now-a-days mobile devices are used for learning other than making calls, Short Message Service (SMS) and playing games (El Hariry, 2015).

In this chapter, we are going to see what educational technology is and what are the terms that are used to define the term educational technology, category of educational technology, Learning methods and its types. After that it is moved to what is e-Learning and Mobile Learning, what are the benefits and challenges are there in E-Learning and Mobile Learning Technology. And the use of mobile devices in classroom, role of mobile devices in enhancing the learning environment, application of mobile devices in a learning environment, classroom response systems, benefits and downsides while using mobile devices in classroom, application of mobile learning in smart classes, Mobile Learning in education, QUALCOMM, mobile learning technology for 21<sup>st</sup> century classroom, mobile learning in school subjects, future research directions in the area of mobile learning.

## **BACKGROUND**

Educational technology is a common term used in K-12 education and also in higher degree programs, it includes learning theory, computer based training and online learning. The following aspects are considered for describing the intellectual and technical development of educational technology:

*Figure 1. Mobile Learning (M-Learning)*



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