

# The Influence on Mobile Learning: Mobile Learning Contents, Higher Education Institutes, and Communication Technology

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**Abstract**— In the present era, mobile learning has secured a better position in modern technology base learning paradigms. It surpasses other conventional learning methods because of ubiquity, mobility, attractive content, facilitated connectivity, and institutional engagements. The main objective of this study is to identify how mobile learning content, higher education institute, and communication technology factors influence learners and teachers when using sustainable mobile learning in higher education. Through the literature review, we developed three separate impact models i.e. mobile learning content, higher education institute, and communication technology with separate impact factors. We used pre and post usage survey questionnaires of 60 teachers and 60 learners to evaluate these models. Primarily, they were asked to fill the pre-usage questionnaire with their initial mobile learning experience. Then, they were allowed to use the modified Moodle mobile app and asked to fill the post-usage questionnaire. The results reveal that the most significant influencing factors are, ease of use in mobile learning content, and facilitating conditions for higher education institutes and communication technology models. Finally, we can conclude that users prefer to have easy to use mobile learning content with better service facilities in higher education institutes and communication technologies.

**Keywords**— Mobile learning, Higher education, Mobile base teaching, Teacher perspectives, Learner perspectives

## I. INTRODUCTION

Over the past decade, mobile learning (m-Learning) has been developing and m-Learning has received much attention because it facilitates the learner and teacher to pursue academic activities from a distance, on the way, or anywhere, at any-time [1]. On the other hand, the modern smartphone serves as a multi-purpose gadget that can act as a high-end mini-computer, telephone, or high-end camera which is ideal for learning. Today the number of smartphone users have grown unexpectedly and has now surpassed half of the world's population [2]. Also, the development of m-Learning apps are improving day by day. Similarly, plenty of free online courses offering mobiles, enable websites available (i.e., www.edX.org, www.mooc.org). They offer learners thousands of free courses in various disciplines in a bearable and bendable way to qualify the latest talents and to improve livelihood. A massive number of learners converge to these study programs as they are flexible in terms of time and location [3]. In-state or private sector higher education institutes (HEIs) are also now offering such online courses by considering factors such as technology advancement, the flexibility of learner and teacher, and shortage of time available for learner to pursue studies [4]. Some HEIs offer study programs in dual-mode which enable the learner to do academic activities both in class (i.e. lab experiments, exams, etc.) and out of class (i.e. joining video, chats, etc) in a flexible

manner [5]. Hence, learning through a mobile device is a challenge for the learner. Similarly, providing teaching services through a mobile device is a challenge for HEIs as well. This is because, mobile applications require the need to comply with various factors such as screens size (i.e. smartphone, tabs, etc.), mobile platforms (iOS, Android, etc.), learner's satisfaction, learning items (i.e. video, audio, etc.). Therefore, various learner and teacher influencing factors in mobile learning content need to be considered at the app development stage. Moreover, HEIs need proper delivery of content and they have to consider various facts when providing teaching services to learners. Such as change the strategies suitable for off-campus learners, methods of conducting exams, what facilities should be given to learners and staff, their infrastructure capabilities and further improvements, staff development, etc. [6]. Furthermore, communication technology is the other vital factor as m-Learning is dependent on the internet facility other than the devices. Both learner and service provider require an optimal data connection for effective learning [7]. The main objectives of this study are investigating influencing factors for learner and teacher to (i) use mobile learning content, (ii) get service from HEI in m-Learning, (iii) use communication technology in m-Learning.

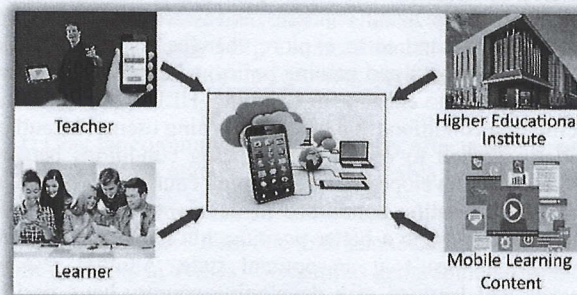


Fig. 1. Models association diagram

## II. LITERATURE REVIEW

In m-Learning, mobile learning content is important for providing maximum service to learners. Therefore, researchers have been doing various studies to fulfill the various gaps in m-Learning and adopt emerging new trends. M-Learning applications provide various facilities for learners to carry on academic activities. These facilities can be grouped as facilitating conditions. In literature, various researches can be found associating with the facilitating conditions. Multimedia can be incorporated with content as an education tool. User interest, experience, and performance are prioritized when creating multimedia content for mobile devices. The learners' interest affects learning achievements [8]. Edutainment is considered as a new approach in m-learning