FUNDAMENTALS OF M-LEARNING

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ABSTRACT

E-learning and M-learning is an evolution in education system in this technological era. M-learning provides efficient and portable way of providing education to the learner. Mobile learning, or "M-Learning", offers modern ways to support learning process through mobile devices such as Mobile phones and tablets. of M-Learning can be define as any sort of learning that happens when the learner is not at a fixed, predetermined location, or learning that happens when the learner takes advantage of the learning opportunities offered by mobile technologies. This document introduces the subject of mobile learning for education purposes. It provides impact of M-learning in education system and evolution of M-learning from the E-learning. The main purpose of this paper is to describe the current state of mobile learning, benefits and challenges.

Keyword: -*M-learning, Mobile learning, Mobile education*

1 INTRODUCTION

In the era of Information and technology every aspect of life is affected with technology. The environment around world is changing rapidly due to exponential development in technology. Field of Education is also changing due to advancement of technology. E-learning is a concept which embed education with technology. Mobile learning or M-Learning is a part of E-learning. Although M-learning is subset of E-learning there are certain differences between these terminologies. M-Learning can be define as "any sort of learning that happens when the learner is not at a fixed, predetermined location, or learning that happens when the learner takes advantage of the learning opportunities offered by mobile technologies" (MOBIlearn., 2003). Which means, with the use of mobile devices, learners can learn anywhere and at any time (Crescente and Lee, 2011). Mobile learning is considered to be the ability to use mobile devices to support learning. M-Learning mainly focuses on mobility of users. Mobile learning is a part of E-learning which supports mobile computing. Mobile learning has special benefits of mobile device which provides portability to the user. M-learning is an effective method for engaging learners on their own terms. Common learning materials which could be delivered to M-learning are text (e.g. E-books, PDF), audio, and video (podcasting)[1]. Podcasting supports the communication between students and lecturers. The current tendency is [2] to define podcasts as "Podcasts are audio, video, text, and other media that can be played on the computer or downloaded to MP3 player". So [3] characterizes podcast services in terms of usage, publishing and dissemination and conclude podcasts could be video, audio, and mime types which in most cases refer to text such word and pdf.

2 MOBILE LEARNING

An exponential development of technologies has increases the interest of technology towards people's need. While technological devices and usage of these were subjected to specific environment or location in the past, environment and location now have their independent specialties [4]. M-learning is an evolution from the E-learning. M-learning provides portability to user so that user can learn things remotely through their mobile devices. M-learning provides user learning materials in form of text, audio or video. Keegan defines M-learning as running education through Personal Digital Assistant [PDAs] and mobile phones. Because of development of today's technology mobile learning provides significant update in education field. The most important advantage of M-learning to E-learning is accession by student to demanded information independent of time and environment [4]. Although E-learning provides traditional educational method, M-learning is more compelling due to its portability.

DIFFRENCES BETWEEN E-LEARNING AND M-LEARNING

Most authors minds M-learning as an evolved form of E-learning but there are some difference between them. Although applications of M-learning are seen as evolution of E-learning basic terminologies are different.

Table -1: Difference between E-learning and M-learning

	E-learning	M-learning
Aim	Understanding and retention of specific subject in depth	Provides instant accessibility of information
Approach	Methodological way of learning	Quick knowledge distribution
Place	lecture in classroom or internet labs	learning anywhere, anytime
Medium	Computer or laptop	Mobile devices like Mobile phones, tablets, PDAs
Structure	Formal Structure	More Flexible Structure
Teaching changes	more text and graphics based education	voice, graphics and animation based education
Teacher-Student Communication	Asynchronous, scheduled and time delayed	Synchronous and instantaneous
Student-Student Communication	Face-to-Face	Flexible
	Audio- teleconference common	Audio- and video-teleconference possible
	e-mail-to-e-mail	27/4 instantaneous messaging
	private location	no geographic boundaries
	travel time to reach to internet site	no travel time with wireless internet connectivity
	dedicated time for group meetings	Flexible timings on 24/7 basis
	poor communication due to group consciousness	Rich communication due to one-to-one communication, reduced inhibitions
User Access	Anywhere at anytime	Static and to be accessed at user terminal
Duration	Longer and broader course with detailed description	Designed to completed in small interval of time
Design	Detailed information, Space for complex graphics, more media and interactivity	Small modules, Large buttons and simple navigation

4 BENEFITS OF M-LEARNING

M-learning gives easy access to learner wherever, at whatever time, making it more helpful to learners. It provides instant access to user. M-learning supports collective learning, permitting learners at various areas to contact their companions or others groups to talk about and learn. Training at the workplace mostly consists of verbal and desktop communication, but adapting mobile learning can bring several opportunities to engage the learner on a digital and social level outside of the work. With mobile learning, learners are able to learn in their own style, at their own pace. Mobile learning can fit different learning styles as it allows learners to do the following: Reading, learning through videos, listening to podcast. Research on Internet. The content provided in M-learning is bit-sized, with provided flexibility user can understand and complete course which eventually provides better user experience.

5 CHALLENGES OF M-LEARNING

M-learning has major issue of connectivity. User can have problem using learning material due to connectivity issues in mobile devices. M-learning contains bit-sizes modules so that available information to the user is very limited. Limitation of Mobile devices also affects the quality of M-learning. Capability of mobile devices becomes major constrain to provide information in user friendly design. Small screen of mobile device is problem for learner to learn the subject properly. Another problem of M-learning is battery life of mobile devices. Major feature of M-

learning is portability so the mobile devices has to be portable. Devices may become outdated quickly and students have to keep combating obsolescence.

6 CONCLUSIONS

M-learning plays important role in modern day education system. M-learning provides easy and portable way for learner. M-learning standouts as a great resource to provide better learning, as long as the limitation of M-learning kept in mind while designing one. Mobile technology provides flexibility in the learning programs. The development of mobile technologies has provided important advantages in works of experts as well as for those in need of data. Taking everything into account, the improvement of mobile technology and their continuous advance have raised the interest in M-learning and have contributed much too each field of education.

7 REFERENCES

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