Mobile Assisted Learning

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ABSTRACT
Modern technology has certainly changed the way of life we live. Genuinely speaking, technology plays an important role in every aspect of life. World is becoming more connected and mobile which will revolutionize education. Based on the recent global statistics on the use of mobile technology, the world is becoming mobile. People are using mobile technology to socialize, to conduct business, to search for information, etc. It has impacted different facets of life and redefined living. Currently mobile smart devices are single multi-purpose computing devices include multi-core processors, high resolution touch sensitive displays of various sizes, network connectivity, and are interfaced to a variety of sensors such as cameras, touch screens, and accelerometers which add potential to be used in education. Also, Mobile technology has achieved a tremendous place in academic circles as a way to enable learning particularly language learning. This technology is not confined by time and place. Researchers and learners understand the adoption of mobile technology and its influence in the modern use. This paper is an attempt to evaluate the learners’ satisfaction in the past and aims to promote the the long-term benefits of mobile learning. Specifically the study assessed how mobile phones facilitated the teaching and learning process, identified the mobile phone applications used for teaching and learning, determined the types of learning activities facilitated through mobile phones and assessed the common limitations of m-learning in India.

Key words: M-learning, Mobile Assisted Learning

INTRODUCTION
Technology is a gift of God. After the gift of life it is perhaps the greatest of God's gifts. It is the mother of civilizations, of arts and of sciences. - Freeman Dyson

Technology is a boon which has changed the way of life. Mobile phones are the most popular and most used devices. Mobile technology has gained increased focus in academic circles as a way to enable learning that is not confined by time and place. Mobile learning is a learning combining e-learning and mobile computer, and it allows the learners to understand and enjoy education learning at any place and time through mobile facilities. This enables education teaching to extend to learning outside of school. This is the first time in history that people around the world has the potential to learn from any location at their own convenience. There has been considerable interest in the use of mobile learning in education. A number of studies have been carried out at how mobile technology can be utilized to expose the benefits it affords both students and educators. To adopt this method, the education system has to allow mobile access to education. Although various definitions of an information society have been forwarded, the concept is generally associated with the proliferation of ICT skills. In particular, it was found that advanced skills in mobile technology and basic ICT skills both played significant roles in the intention to adopt mobile learning. Citizens are using the mobile technologies to complete everyday tasks and for informal learning by accessing information just in
time from the world largest library, the Internet. The most efficient way to achieve these goals is by using mobile technology to reach the people who were unreachable in the past. Some citizens in remote regions and in developing countries have mobile technology that they can use to learn. This will require that teachers be trained to use emerging learning technologies to educate citizens and the teacher role will change from lecturing to that of facilitator of learning.

LITERATURE REVIEW
This literature review takes into account studies from in India and around the world covering primary, secondary and tertiary levels. It also encompasses the more general theoretical literature, much of which is specific with regard to educational levels. At the same time, definitions of mobile learning are based on the technology rather than on the learning. Definitions reflect that mobile technologies can be used both inside and outside of the classroom for learning. A good example of a definition is “operate successfully in, and across, new and ever changing contexts and learning spaces”, which includes coming to understand “how to utilize our everyday life-worlds as learning spaces” (p. 6). In a sense, as they go on to point out, “the world has become the curriculum populated by mobile device users in a constant state of expectancy and contingency” (p. 25, with reference to Kress & Pachler, 2007). An important general definition is any learning that m-learning is often seen as a subset of e-learning, the fact that it depends primarily on mobile handheld devices makes it qualitatively different. By their nature, these devices lead to an expansion of the spaces and times of learning, with students learning outside the places of formal education and the hours of formal timetables (e.g., McCaffrey, 2011; Pachler, Bachmair, & Cook, 2010; Seppälä & Alamäki, 2003; Sharples, Taylor, & Vavoula, 2010). Another definition is delivery of electronic learning materials, with built-in learning strategies, on mobile computing devices to allow access from anywhere and at anytime. The uses can range from simple transmission of information from teacher to student to more specific use as cognitive tools inauthentic learning environments. Mobile learning has moved beyond the information access paradigm, enticing users to work as partners and collaborators in the co-construction of their collective wisdom and knowledge. “Mobile learning is the didactic response to the changes in culture, media structures and habit sand learning of children and young people” (Bachmaier et al, 2011). Bachmaier refers to the dominant media culture of everyday life, which is individualized, mobile and convergent and the increasing relevance of informal learning and decreasing reach of school-based learning. With mobile learning the gap between formal, informal and non formal learning seems to become less relevant. However, what is important is learning which occurs in different environments and under various circumstances. The ubiquity of mobile technologies that are already present in classrooms makes education less dependent on one-to-one technology projects that require governments or organizations to provide the devices (Isaacs, 2012). “Learning with mobiles started as an extension of the institutional e-learning built into courses and programs, but now it is just one more activity for individuals and communities on their mobiles.” Mike Sharples reviewed research into mobile learning worldwide tends to take on the flavour of the culture in various countries in which it is situated. According to (Huang et al, 2010), mobile learning applications can facilitate students not only learning contents conveniently but also interacting with others collaboratively anytime and anywhere. Hence, the development of m-learning as a new strategy for education has implications for the way students and tutors in educational institutions interact.

METHODOLOGY USED
This study was conducted at KSR College of Engineering in South India. Both the faculty and students were involved. The study involved teaching staff, Placement trainers and students. The authors interviewed sixteen educators, comprising teachers, teacher advisors, and placement trainers to include an element of teacher voice in the paper. The study also involved a total of 63 respondents including students and teaching staff. Simple random sampling procedure was employed in selecting sixteen teaching staff (12 from English dept. & 4 from Placement dept.) and 47 students were randomly selected and involved in the study. The section of this sampling technique enabled the most effective coverage of selected students. This sampling technique was adopted because it provides an equal opportunity for each element of the population to be selected. Structured questionnaire were used to
collect data from the 47 students while in-depth interviews and observations were employed in assessing the usefulness of mobile phones among teaching staff. Participants explored the functions of these devices extensively. People using pocket PCs and notebooks spent longer on their tour and had a more intensive experience than those using other devices. Young people, and especially young women, were particularly enthusiastic. They saw the devices as an extension of their personal diary or calendar, a place to write, note down appointments, play games and exchange messages. Our aim has not been to celebrate experiential learning, or to promote learning through informal knowledge sharing as intrinsically more valuable than institutional education. There has been considerable interest in the use of mobile learning in education. But, participants had to repeatedly ask for assistance from technical staff. Participants found it interesting to navigate the system and to understand its capabilities. This meant that the vast majority of participants knew very little to use the mobile.

REQUIREMENT FOR MOBILE LEARNING
The infrastructure, hardware, software, and systems for mobile learning are improving and costs are decreasing, thus it makes mobile technology more affordable and sustainable. When applying mobile learning in the classroom, proper methods must be taken into account. The exposure of ICT self-efficacy typically includes a exposure of prior experience with technology. Prior experience is the amount of time an individual has spent working with computers and the different applications they have learnt to use. Besides, mobile phones, pocket PCs and notebooks are the most popular devices. In addition to reaching students in low-resource environments, mobile learning is now reaching those with disabilities, special learning needs, and those living in secluded or nomadic communities. While many pupils may be more adept than their teachers in using technology, young students in particular need dedicated teachers to create rich learning environments that allow them to make effective use of the technology to acquire, create and display the knowledge that they are gaining. While technology gets better, faster and cheaper these trends will always be mediated by social, economic and political factors. (Traxler, 2012) Faculty must be aware that the devices should be fully charged in the early morning. So that we like to suggest that there is a strategy or responsibility by whom and when the devices are charged. These observations may be checked with a short checklist, which is highly recommended to use before starting a mobile learning lecture.

MOBILE AS AN AID TO LEARNING
It is important to note that in developing countries, the number of mobile-broadband subscriptions are more than doubled from 2011 to 2013 (from 472 million to 1.16 billion) and surpassed those in developed countries in 2013 (ITU, 2013). Moreover, mobile technology has become more user-friendly and powerful; they will be used more widely in future for learning. In a device-centric view, mobile learning is often equated with the mobile phone, the PDA, or more recently, the tablet computer/iPad. Mobile devices integrate a series of features used in various learning environments. Mobile features are being utilised for various educational practices include the use of Short Message Services (SMS), GPS, camera, browsing, downloading, blue tooth, Wi-Fi, voice calls and gaming. SMS System can be used to help students learn foreign languages and teachers can use SMS to communicate with one student or even one group of students. For instance teachers in higher education in UK have made use of SMS as prompt for course requirements, polling classes, pop quizzes to students and sending information about time table and reminding students about dates for examination (Ferry, 2009).

The technologies will become multi-purpose for learning and to complete other everyday activities such as socializing, doing business, etc. Quinn (2010) identified the 4 Cs (Content, Computer, Communicate, and Capture) of mobile learning which shows the value of mobile technology for learning. The mobile technology can be used to deliver the Content, including multimedia content. The teacher can use the computing power of the mobile technology to develop simulation and games and can prompt the learner for data and then process the data. The teacher can use the computing power of the mobile technology to develop simulation and games and can prompt the learner for data and then process the data. The learner can capture
information using the capture features such as camera, audio, GPS, sensors, etc. to capture information for learning and sharing. The Communication features of the mobile technology allow the learner to communicate with other learners and the teacher and to share information. The digital divide and its dire consequences are at its most conspicuous on the Indian sub-continent and around the globe.

A change in interpretation of mobile learning can be figured out, emphasizing “Mobile Assisted Learning” if a language is learnt it can be figured out as “Mobile Assisted Language Learning” learning with mobile devices” e.g. by creating authentic learning experience to solve real-life problems: Mobile devices are cheap and costly according to our need or level, portable, have no start-up time, require very little maintenance, and are easy to use. A high level of personal ownership of the leverage these benefits devices. Since learners can learn in their own communities, they are learning in context and they can apply what they learn right away. Many people around the world already use mobile technologies; hence, they are familiar with the technology so they can use the technology to access learning materials. The young learners today are very comfortable using mobile technology since they use mobile technology for a variety of activities. As a result, they will expect to have the option of access learning materials using their existing mobile devices. We learn across space as we take ideas and learning resources gained in one location and apply or develop them in another. We learn across time, by revisiting knowledge that was gained earlier in a different occasions and more widely, through ideas and strategies gained in early years providing a framework for lifetime learning. We move from topic to topic, managing a range of personal learning projects, rather than following a single curriculum.

**MOBILE REVOLUTION IN DEVELOPING COUNTRIES**

There has been an explosion of wireless communication, especially of mobile phones in the globe. Mobile-phone subscriptions are growing faster than Land-line subscriptions. The adoption of wireless communication technologies occurs for different reasons in different types of economies. For example, in countries with poor land-line infrastructure, wireless becomes a technological substitute for land lines. Even in countries with adequate land-line infrastructure, the competitive rate for mobile phone services is making them an economic substitute for land lines. We live in the developed world and we use mobile phones mostly for connecting with people, for entertainment, getting access to news/information etc. And although we realize the big impact they have made on our lives, we still cannot grasp the magnitude of the impact mobile phones have made, and continue to make, in the developing world. Mobile phones are a transformative technology that increases GDP and, quite simply, revolutionizes people’s lives. With mobile technology, learning is more learner-centered since learners can determine what they learn and they can readily access information from the Internet. As the student use the technology to learn, the system will determine their preferences and style and prescribe appropriate learning materials based on their style and preferences. For the teacher, the electronic learning materials can be updated easily since they are in electronic format and learners can see the updated learning materials right away. With the increasing availability of open education resources, learners will be able to access learning materials at no or minimal cost. A very important reason to implement mobile learning in the education system is because of the new generations of learners. Youths are an important driver of change: when their awareness of technology-mediated learning increases, attitudinal changes occur. (Isaac, 2012)

In this fast moving world, prior to the introduction of mobile phones, farmers, traders, and consumers had to travel long distances to markets, often over very poor roads, simply to obtain price and other information. Such travel imposed significant costs in time and money. Mobile phones, by contrast, reduce the cost of information and allowed traders to better respond to surpluses and shortages, thereby allocating grains more efficiently across markets and dampening price differences. Mobile phone coverage also increased traders’ profits and decreased the volatility of prices over the course of the year. In Bangladesh, a service called Cell Bazaar provides a mobile service equivalent of eBay or Craigslist.

In the Indian coastal state of Kerala, mobile phones reduced price differences across fish markets by almost 60 percent between 1997 and 2001. When markets work efficiently, identical goods have the same price. And hence, the fishermen’s profits increased by 8 percent, and consumer prices declined.
During this research, both teaching staff and students were asked to mention the types of mobile phones they owned; it was found that 71% of them replied that they own and use smartphones. 15% of them replied that they have a laptop. Hence, they use it for learning. It was identified that majority of those who owned smart phones knew the operating systems installed in their phones. Some of the operating systems installed in their smart phones included the Android, Research in Motion (RIM) Blackberry, Apple's iOS, Nokia Lumia, Samsung's Bada and Microsoft Windows (refer below for details). It was also found that 20% of student & faculty who own smart phones did not know the operating systems installed in their phones.

**VARIOUS OPERATING SYSTEMS USED BY LEARNERS**

- Apple's iOS 7%
- Android 15%
- Blackberry 7%
- Microsoft Windows 7%
- Nokia Lumia 8%
- Samsung's Bada 7%
- Do not know 20%

**VARIOUS SOCIAL NETWORKS USED BY LEARNERS**

It was be observed that most of the mobile Web 2.0 applications used by teaching staff at KSR College of Engineering is in one way or the other be adopted in the teaching learning process. In general observation, students and teachers spend a lot of time on Facebook that it is possible to post some academic issues and access some immediate response. Moreover, Facebook have several features which allow collaborations including uploading and downloading files. Other applications including Wikis and Youtube are known to be useful in teaching and learning.

- Facebook 16 (82%)
- Facebook messenger 8 (38%)
- Youtube 14 (71%)
- Skype 8 (38%)
- Wikis 14 (71%)
- Twitter 14 (71%)

**USAGE OF MOBILES FOR TEACHING LEARNING PROCESS BY FACULTY MEMBERS**

Teaching staff were asked whether they use their mobile phones for facilitating teaching and learning. It was found that 100% of the teaching staff made some calls and sent text messages for alerting students and communicating with colleagues on academic issues. Among the 16 staff who mentioned to access internet services through their phones, 50% mentioned to download useful materials through their mobile phones. Others, 25% mentioned to use smart phone learning applications to support the teaching learning process and 15% are using only to call the students and 10% did not prefer to use mobiles during working hours. It was important to note that all circulars in KSRCE were E-circulars. The % of responses given by faculty members is as follows

- SMS for alerting students 100%
- Calls for alerting students 70%
- Surfing (downloading scholarly materials) 76%
- Smart phone learning applications 54%

**ATTITUDE OF YOUTH TOWARDS MOBILE LEARNING**

Youth of today think that mobile facility is different from the conventional e-learning or, it is usable in different time and area. A mobile can be used as a tool and learning media for information exchanging and corporation when we communicate. Learners who possess mobile phone can acquire real and virtual information from their locations. Mobile with internet facility serves as independent usage to collect information and to share information. At this juncture, Learners can have their own mobiles; teachers can analyze and record each learner’s learning process, and then provide each learner a
suitable and personalized learning structure. Young participants in this group appeared to be the fully satisfied, using the system extensively, and adopting an easy and playful, interactive approach. The general feeling of these participants was that the trial provided an opportunity for an advanced learning. At the same time, Adult participants like faculty members had to ask doubts to the students for they are aware of using the devices for various usages.

FINDINGS & SUGGussions

The study found that mobile phones were used for teaching and learning purposes among both teachers and students. While perceiving the process of students’ mobile learning, it is understood that it can gain more understanding about students’ learning attitude and the change of self-efficacy when using mobile phones, all of which are helpful for combining mobile technology and teaching activities, as well as to serve as reference for material designing. Latest mobiles and context-aware technology can enable young people to learn by exploring their world, in continual communication with and through technology. Instant messaging, for example, enables people to create learning communities that are both contextual, in that the messages relate to locations and immediate needs, yet unbounded since the messages can be exchanged anywhere in the world. All teaching staff and students mentioned to use text messages and calls while few mentioned to have used some advanced learning applications. Very few did not use such applications as they were not supported by their phones, few did not know how to go about using them. Research has shown that the perceptions of students will play an important role in the success this venture, as it is the students who are using the technology in their learning. At the same time, education in the mobile age does not fully replace formal education, any more than the worldwide web replaces the textbook; rather it offers a way to extend the support of learning outside the classroom, to the conversations and interactions of everyday life.

CONCLUSION

This study was focused to establish some groundwork for further understanding of influences on the adoption of mobile learning. Support was found for some of the previous small-scale work done on mobile learning and new findings were also made. However, this was a cross-sectional study and longitudinal research is needed to establish the causality of relationships identified more firmly. Traditional education needs to be conserved while new world of global knowledge and mobile technology. It is recommended that before buying mobile phones people should try to study their specifications. The technology which exists in the hands of learners is to be used. Each device must serve a particular need in the learning process. They should be avoided if they don’t have a purpose in the learning process. Based on the need in the growth of mobile technology, gradually all humans will have to access to information and communication technology. New innovations are necessary around mobile learning pedagogies. There is no doubt that teachers must be trained to design and deliver education on a variety of mobile emerging technologies, including smart phones and tablets. As more learning materials become electronic and available in the globe, learners will be convenient in using wireless mobile technology.

REFERENCES


