

Mobile Learning: An Innovation in Education

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Abstract: The myriad knowledge of sciences and technologies has eventually led to innumerable inventions and innovations in all the spheres of our lives solely for one purpose: To make lives simpler, easier and faster. In the field of education, implementation of these wonder inventions has witnessed its transition from policy makers and teachers to students. In the same fashion, teaching and learning through the so-called E-learning has moved on to M-learning. In fact, mobile learning has become a portable and confirmed method of supporting performance among the students paving way for explorations and new possibilities. Mobile device plays a crucial role in building a well-balanced society. While it is portable, cheap and affordable for all levels of learners, it offers room to the learners to discover their abilities according to their learning styles and lifestyles anytime, anywhere. In the fast developing world, M-learning technology in the education system will no doubt emerge as one of the best innovate approaches for the teaching-learning experiences.

Keywords: M-learning, e-learning, gadgets, teacher, learners, learning styles, technology, education

Introduction

The word “technology” is derived from the Greek word “Technico”, which means to carry out or doing things and “logia” means science. So, technology is the science of doing things. It can be defined as “the application of scientific knowledge to the practical tasks of life.” Here the real knowledge of physic science was put into application for the invention of technologies by physicians (Engineers). It was invented for other purposes to make the work done simple, faster and easier in the fast developing countries globally. Later the philosophers, psychologists, scientists, great leaders and educationists realized and experimented to use in the education field. They were moved with great idea and took advantage of using in the field of education system in 1980s and gained it momentum in 2000 onward. In those days, the computer, printers, other devices, wireless, telephone and internet were used in the school office, education office and other offices for administrative purposes only. Slowly it emerged into the classroom. The electronic devices had really added the spicy tastes in the real classroom scenario, motivating

both teachers and learners in teaching-learning process. The teaching technology has advanced and valued, instructional technology has become systematic and skilled in giving clear instruction either in written or verbal form and the behavioural technology has cramped its classroom behaviour of both teachers and its subjects to lower level by creating conducive learning environment with advanced and sophisticated additional recourses in placed accelerating an individual performance and overall performance in great zeal.

With the advancement of technology, the word “e-learning” came into existence in 1999 after the operation of computer-based technologies (CBT) systems seminars. The innovative idea happened to strike in human brain regarding “online learning” and “virtual learning.” It demarcated as “A learning system based on formal teaching but with the help of electronic resources is known as e-learning.” The instruction of learning could happen inside/outside confined glasshouse. Such operational workstation with net links form foremost constituent of electronic learning. These methods are known as linkage, enabling to transfuse artistry and wisdom in learners. The schooling benefitted larger society in the communities of disparate levels at distinctive timeframe. The learning systems encompass commonalities with improvement and whirlwind growth in digital world. The outlining of processors laid the absolute foundation of the ideal resolution in addressing the educational problems according to the needs and demands of current scenario of the fast-changing world. In the maturation of revolutionary life, most of us got addicted to varieties of advance and sensitive digital equipment such as smartphones, iPhones, tablets, laptops etc... globally. The highly usage of that equipment played a significant role in the classroom teaching-learning process. A hard copy books are interchanged by the educational e-learning materials like e-books, e-libraries, chips, drives, disks etc... Wisdoms are shared via net round the clock (24/7) anywhere at any time without any difficulty at faster rate.

Physical presence was an idealistic within four walls; any type of learning was questionable since it doesn't lead exposure and additional gain of knowledge where learning has been destitute. E-learning is a rapid growing industrial technology in the 21st century arena along with the mobile learning is gaining its momentum; its effects can be traced back to early 1980s and before. The electronic devices got more advanced and shifted to digital technology as per the need of the society. These digital technologies have advanced applications that could function on various ways and means. Technology has been very progressive over times that reduce topographical barriers by bridging usage of advanced and sophisticated devices which

gives the feeling of real classroom scenario to young hearts of all levels. It builds the capability in sharing materials of different kinds in different layouts such as videos, slideshow, word documents, pdf and so on. Administrating webinars (live online classes) and interconnecting to facilitators/tutors/lecturers through chat in different apps are possibilities accessible to operators.

Today, in the developed and fast developing countries, the mobile phone is also rationalized to be use in the classroom learning for the benefit of the pupils besides communication purposes. At this juncture, the smartphones of digital systems are floated in the market and are verge of using at climax.

Mobile Learning

Mobile phone is updated version of cellular or cell phones. Cellular denotes the communication technique principally the Advance Mobile phone Service (AMPS) which are distributed in geographical sections or segments known as chambers (cells). Such segmentations are purposefully maximized in the utilization of imperfect figure of transmission frequencies. The linking or discussion entails its identifiable adoring incidence rays. Different conversations or communications are made using similar incidence rays of the cells.

Mobile as a microelectronic telecommunication equipment frequently denotes the cell phones, phones or cell phones. This device links with codeless communication grid over radioactive motion or satellite transmissions. All kinds of telephone dispense audio message, Short Message Service (SMS), Multimedia Message Service (MMS), but digital advanced telephone provides grid facilities like net accessing, emails, entertaining events, audio, recorder, video recorder, banking, ptm, recharge, WiFi, various social media apps, calculator, radio, online newspaper, online shopping apps, Google maps, Microsoft apps, print option, , share it, upload , download and lot many. Even the features like camera, torch, hotspot, settings, play store, WiFi, Bluetooth, Locations, Mute, Flight mode, Power saving, Mobile data , tools and many others are inbuilt in the smartphones of present generation.

Significance of mobile learning

In the modern era, the present generation will solely depend upon the utilization of digitalized and sophisticated electronic devices, appliances, and equipment such as mobile phones, in teaching-learning process in developing the complex theoretical concept to confirmed skills

with practicality to be applied in real life situation from different modalities, methodologies and strategies, making valid performance and discussions making remarkable paradigm shift of ones learning knot in the field of wisdom enhancement and self-actualization. The more we realize on mobile technique, shouldn't be the concern on mobile structuring but must be discussed and emphasized on single primitive technique to address the significance of mobile learning. The following includes:

Mobile Usage Continues to Rise

Internet browsing from smart phones and tablets increased drastically. Technology supports learning, performance and changes in human behaviour.

Mobile Require Different Skills

It provides opportunity in learning professional for upgrading their multiple skills to utilize as applied skills in more effective and efficient manner.

Continues Evolution of Mobile

It helps in understand the changes around the world, contextualization, and adaptation according to space and time.

Mobile Open New possibilities

It helps to explore, understand and apply new possibilities in any situations of learning in life.

Mobile Changes the Learning and Performance

It provides titanic occasion for transformation of nonattendance to initiate instructions and performance conservation into novel direction in futuristic world.

Connection of Conversation

Join the conversation and find new possibilities with proper direction in learning and performance strategies.

Features of m-learning

The mobile was used to build the concept and contextual learning outside four walls to have hand on experience through exploration of project, field trip and other learning for professional enhancement. Some of the important features are:

- Highly portable and available for use.
- Support individual learning for professional growth and skill based ability.
- To control circumstances and regain knowledge.
- Available anywhere and anytime for communication with others.
- Adaptable to the context, abilities and wisdom.
- Insistent in accomplishing resources and knowledge for learning
- Accessible in change of technology.
- Useful in communicating, referencing, working and learning;
- Portable and user friendly

Some of the fulfilment of learner's adaptively have to be realized while other has become noticeable; markedly assist for collaboration and teamwork.

Mobile System and Network

The first mobile phone was invented by Leonid Kupriyanovich, an engineer from Moscow, USSR in 1957 to 1961. It used to weigh 70g and could fit on a palm. Later a series of modification has been carried on by his successors and finally reached to the present status of the mobile phone. In those days, the mobile phone and other telephonic devices was operated on analog system since it was designed to function in the wave form. Today the mobile phone has undergone series of design and developed in the system operation which would ultimately attract the customer in the market. It showcases its smartness and outreaches its performance since it is designed on digital system which functions on radiations. The advance operating system of mobile technology was outlined in early continual generation. The "0G" facilities like MTS kept improving on technology and service delivery to meet the desire and demand of the users. The 1st generation 1G was analogue cellular network that functioned on analog network. The 2nd generation 2G was digitalized cellular network; the 3rd generation was 3G

operating on broadband provision to formalize the art. Finally, the 4th phase 4G operates on native-IP network. So, all the advanced and digitalized phones supports and operates on various generations like 2G, 3G and 4G and the generation of network will keep on upgrading.

Mobile the effective Communication device:

In olden days, the communication was done through the exchange of letters either formally or informally, near or far. During emergency, the person was sent directly to drop the message or deliver the letter. The person has to travel all the way at on risk with lots of difficulty and hardship through thick dense forest and swollen streams protecting from wild animals. In those days, there were not many educated people and often misinterpreted the information which spoils the relationship amongst themselves. The rapid development in the field of scientific research and technology led to various innovations where the useful and portable devices are invented serving many purposes in high regard by the modern society at present. This device was purposefully discovered for communication to communicate with people. It also connects the people worldwide bringing close relation in nature through they are far apart from each other at any geographical locations. It has removed all the human barriers such as race, region, creed, caste and religion and so on. Quinn (2000) defined that learning simply happens in the application of learning tools such as digital processors (use of portable, codeless processor systems and other communicating equipment), electronic studying (e-learning- knowledge streamlined in processing information and communications technology). Nowadays mobile device plays greater role in communication, education all the people for effective communication with broader exploration on social media. People can either make crank call or text messages where the responses are received with a second. Both literate and illiterate are able to use the system as per their ability and need basis. Most of their officials are done from the home or work place as per the need of urgency. It has cut down the travel expenditure at minimal fulfilling all the needs within short span of time at anytime and anywhere.

Mobile the effective and portable Learning device

Mobile can be considered as a mini computer that is very handy and user friendly to all levels of age. It holds almost same system equivalent to actual computer and less string capacity. But the computer and laptop remain in the office whereas the mobile phone can be carried to anywhere as we go at any time. We can access to it at any time without any difficulty so that the learning can take in 360 degree round the clock. Even the young children of all grades from

lower kinder garden to high school generated all the learning materials and other information from the mobile. It acts as a facilitator to the learners in absence of teachers. Children who are accustomed of using the mobile can do lot many in it. It has various apps and options that help learners learning and upscale their performance for success. It has browsers to browse the learning materials. The information can be fetched from any webpages as per the users convenient. It can be downloaded and uploaded. Even the learners can visit the teaching sites done by the teacher's expertise of the world in different pedagogies with easy understanding of the concepts without huddles. Baran (2014) conducted a study on technology-based knowledge in education institutes proving that mobile is an attractive and portable learning device that is blended in education context for rapidly growth and greater impact in the usage of various approaches, strategies and pedagogical assistance in the education settings. It determined its implications in the field of expansion of digital based knowledge and experiences in educational institutes that includes program directives of integrating learning. It has all facilities where children's boredom can be removed and replaces learning through various recreational activities during and leisure time. So the time is used so meaningfully by all levels of people in the community.

Mobile the source of knowledge

The smartphones and iPad are designed in different portable sizes that are handy to users. Some are designed in android and whereas other are designed in window system. It can be of touch screen or manually operating system. Most of the phones and iPad have multi network connecting system including WiFi. All the smartphones, tablets and iPads have specific designed software but the operating system remains more or less. But the screen of tablet and iPad are much bigger than the smartphones. They hold various mobile apps making very convenient. Those devices are very useful and applicable in our real teaching-learning field. The teacher can plan his/ her lesson accordingly using information from online source. Even the teaching-learning materials such as images like 2D and 3D, video, lesson plans, teaching aids, work sheets, simulations for science experiments, evaluation techniques, methods, supplementary readers and references, assessment, techniques are available online where the teacher can make his or her teaching very fruitful as per their need. The advanced teaching methods are available at different sites. It also helps in making the difficult concept into simpler meaning and easy understanding. The source provides rich content stuffs for teachers who lack content knowledge. With quality teaching, rich content knowledge and transformed pedagogy,

it not only grows the professionalism but also enhances the skills and values of lesson delivery system fulfilling the need and aspiration of the 21st century learners. Even the learners' get lots of solved model questions and other designed challenging tasks for own practices to promote independent learning. It acts as an immediate source to the teacher during confusion so that no wrong information is passed to the learners. Such type of teaching-learning will not only take place inside the classroom but also can take place beyond the four walls as per the teacher and learners choice. So learning has no fixed place at the juncture. The learners are motivated and enjoyed different teaching modes. Melhuish and Falloon (2010) conducted a study on m-learning with the iPad. It was found that iPad provides stimulating dais to customers in engrossing and crafting content through collaboration and interaction process by assisting learning of learners in gaining knowledge, synchronous compositions and e-leaning literatures. It was proven to be effective in carrying out innovative practices with strong evidence of any tasks or assessments but the limitations relay on the devices it-self. Peng et al. (2009) conducted a study on universal information structure: m-learning as a theoretical framework. It was found that the artistic learning from mobile must be readdress in understanding by the practitioners with formation of conceptual context of pervasive gen after developing curricula, theories and proper instructional guidelines in realistic field based implementation and evaluation for accelerating the performance in future. Jengetal (2010) conducted a study on the effect of mobile application in scholarship schemes. It proved that the effect of mobile application on interaction process must incorporate pedagogical and technical strengths of m-technology in learning environment. It includes milieu mindfulness, a pedagogic technique that enhances erudition setups collaborating social grid of mobile learning model. Chen, Kao and Sheu (2003) conducted a study on a mobile learning system to support bird watching learning. It aimed to construct an outdoor m-learning using up-to date wireless mobile ad-hoc network through dual formative evaluation to explore the possible roles of scaffolding for bird watching activities after offering the mobile learning device to see the benefit from the mobility, portability and individualization through investigation. Its improved children's learning beyond expectation. The learning take place beyond the boundaries through mobile learning but the traditional way of was fixed which was fenced around. The learners didn't get chance to exhibit their talents independently and get chance to explore different learning techniques of their own. It has doomed their performance resulting to poor outcome at the end. It provides direct interaction with environment, providing hand on experience in practicality with skilled based learning which can be applied in real context.

Mobile the source of Innovation

Mobile has become the source of innovation to all individuals. Through this device, the teachers and learners form learning groups. It can be in subjects or in particular grades, social groups where they can discuss their problems in any subjects. Even they can pose the problems if necessary. The subject lights are shown by the peers who are expertise in particular subject or the subjects or any other teacher clear doubts. They can also do webinar conferencing or video conferencing over the phone for face to face interaction. Both synchronous and asynchronous learning will take place in any forms of learning styles at individual levels. For up gradation of qualification and professionalism, there are lots of online certificate courses available for teachers, students and other office goers in different time periods using internets. They need to register and appear online only. The reading materials and e-content books, journals, magazine, articles, dissertations are available in soft. Kuzulska-Hulme et al. (2009) investigated on mobile learning as per European perspective. It says that the theoretical perspective of m-learning must be digital future through strategic planning for the application of INTERNET allowing wireless technologies based. Mobile learning will face the new challenges arising from learning activities over multi-dimensions of computer-generated and somatic context, measuring official and casual learning. It requires technical blend of pedagogical and sociological expertise to make wisdom of learning direct emerging style of mobile and blended learning. Traxler (2007) conducted a study to define, discuss and evaluate mobile learning. In the study, it was focused to explore the various learning styles, strategies and pedagogies to be designed and incorporate the evaluation techniques in the mobile learning in the informal situation. Since the system is new and immature, it was difficult to begin the informal (distance) learning through mobile since there was no appropriate tool, strategies or pedagogies put into place for proper guidance. The momentum between mobile learning and distance learning would gain automatically in future. It has partially meet the demand of informal learning but need to exercises with better possibilities of learning forum for online course doer from any locations with no geographical barriers in place. Then, the learning will happen as expected.

My Future Network

At present, the fourth generation 4G is playing the greater roles in building the nations by connecting people in various locations but often hindered by some barriers disturbing the flow

of network. Most of the remotes in nook and corners of the zones, often remains poorly connected and not fulfilling the need and aspirations of the people. In future, the upgraded network system of 5th generation 5G which will be known as cloud network will come into action with high speed connecting all place which left unconnected at this moment. The advanced technology of smartphones will emerge with simple operating system of high performance that will be cheap and affordable by all levels of economic background. The devices such as touch pad, PC, notebook, remote monitoring, remote servers, data base, mini note, and mobile etc... are slowly emerging the market. The device will definitely replace hard copy of note books and textbooks in the schools fulfilling the policy of no bag and books for learners. The learners will be freed from the yoke of carrying bags and books which results to complication in future. Most of the school offices and government offices will function under e-system and learning will be happening in e-system too.

Conclusion

The mobile phone is a lifelong partner to all individuals of different age levels, positions, and economic background. It never gets isolated even a single minute from anyone. So everyone loves and inspires it for use. The mobile device had played crucial role in building well-balanced society especially in understanding the information and gaining the wisdom. The m-learning systems and other approaches allow multiple disciplines and other content subject areas to be effectively transferred to learners through modern digitalized systems. By placing accurate learning device, different pedagogical strategies will emerge automatically in different forms in the education systems, making all learning simpler, easier and faster with concrete and accurate skills and practicalities to apply in real life situation. The present world demand the employees who can perfectly comprehend skills, abilities, knowledge and experiences practically of learnt wisdom but not the one who is well versed with theories and principles, failing to comprehend in reality. The education must meet the demand of the society. To address the burning trend, the educationist should design curricula on need base of the current scenario. The 21st century is known as the technology era and the present generation is native of the war zone of technology. So, the teaching-learning process must be embedded in inclination to digital, advanced and sophisticated technology devices to be effective in addressing the need of the learners. It must be reasonably priced to procure by all levels of learners. The free facilities must be provided to the learners to explore their ability of learning according in their lifestyles and learning styles. However, the reach of facilities in the remote

areas leads to imbalance life of the society with multiple issues in their hands. Even the busiest person could enhance his/her profession to height their career with the gain of new knowledge through up-gradation of their qualification. The utmost significant in education development happened after launching the internet. The use of advance technology like smartphones, different types of apps, text message uses internet to participate in various online communication, allowing learners to keep discussing on related topics of courses in promoting brotherhood sympathy, globally. This signifies the great paradigm shift in the field of education if our learning temples are well versed with Information Communication Technology.

With the rapid growth and development in the idealistic world, the m-learning technology in education system is modern and exciting which always bring changes as the need of the surrounding. The curriculum should be refined immediately with current-edges of information. It should comprise in inexpensive, skilful, handy, attractive, easy operating system, inspiring and knowledgeable to service providers to learn of their own without any time bar so that the results vary at wider extend with stipulated time frame. The importance of m-learning offers different **Learning Avenue** that is faster, cheaper and potentially better to all living humans. Now we can say “Life without mobile and internet is like a man without body parts.”

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