

MOBILE LEARNING TECHNOLOGIES FOR 21ST CENTURY EDUCATORS: OPPORTUNITIES AND CHALLENGES

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Abstract:

Mobile learning is turning into progressively universal that highlights the potential want for mobile learning ways that support education establishments to navigate increasing economic process and fast technological modification. In line with this trend, this paper emphasizes the importance of considering human factors once developing mobile learning applications opportunities and challenges featured within the gift generation.

Keywords: *Mobile Learning, eLearning Technologies, m-Learning Challenges, Mobile Learning Applications.*

1 INTRODUCTION

Mobile learning began and shows the opportunities to the student as well as professional [1]. The education system using Enterprise Resource Planning (ERP) is the new platform of Education system and efficiently manages student information efficiently along with automating processes for the stakeholder. It also helps teachers, students, parents, the administrative staff to use data in an organized and well-mannered structured.

Mobile learning, conjointly known as m-Learning, is education or coaching that has conducted on and delivered through transportable devices like smartphones and tablets. Mobile learning could be a broad term accustomed talk over with any teaching and learning that happens with the utilization of mobile devices and platforms. Mobile learning devices would go with electronic gadgets like mobile phones, tablets, laptops, etc. The introduction of the non-public laptop sparked a revolution that had students

and lecturers increasing the employment of electronic devices for his or her learning and teaching experiences.

As time passed, mobile devices that were plenty of transferable became fashionable. This resulted in students learning shows on their pill, look Associate in Nursing educational video, taking a multiple-choice quiz on their mobile phones, or perhaps change of integrity large on-line open courses with thousands of alternative students everywhere the globe to stay learning. Mobile learning in addition permits for plenty of modern teaching methodologies a bit, like the employment of dynamic content and experiential learning to be implemented plenty of merely at intervals the area.

This implies that faculty rooms are experiencing modern teaching in

d of wishing on recent and old-style teaching ways that will not be as effective – all because of mobile learning. The mobile learning is comparatively new, analysis shows that it leads to higher retention, reduces coaching times, and boosts productivity than a lot of ancient coaching model. Higher retention happens once mobile learning is bestowed as a complete delivery technique or as a part of an integrated learning program. As an example, one world drug company achieved a fifty-three P.C. improvement in information retention among employees' members by exploitation mobile learning to introduce a spic-and-span product [2].

2 RESEARCH BACKGROUND

The term mobile learning outlined is any activity that enables people to move, communicate, or produce info in an exceedingly type of ways in which is generated on a hand-held device. Though mobile learning technologies could seem sort of a new conception, actually, it is not new in the least. The method called E learning was introduced within the early 60s. The core premise of E-learning involves “learning mechanisms through communications systems, sometimes networked, and takes advantage of modern information technology” [3].

This includes all forms of learning from the classroom to virtual, to web-based. Media can take on many different forms that include video, audio, animation, text, or images.

The new learning technology for mobile devices is often remarked as M-learning because it provides people the chance to be told anytime, anywhere. The most varieties of technology that utilize m-Learning area unit tablets, smartphones, and private information assistants (PDA). M-Learning has become a necessary part of learning each in and out of

the schoolroom within the twenty first century. Jonathan poet (2015) given in his article, Mobile Learning Technologies for twenty first Century schoolrooms that 21st-century students have modified radically. Poet refers to students within the technological age as digital natives as they are exposed to and have access to many technologies than ever before. It is terribly clear however, student's area unit far more engaged in learning once mistreatment the newest technological gadgets. It not a matter of scholars wanting this technology at intervals the schoolroom, however a necessity [4].

The current education system has not always been attuned to the latest advancements because of lack of funding and resources available to them. This is changing in the grand scope of how learning is disseminated. Mobile learning technologies are enabling education systems to tap into this phenomenon and take learning to new levels than was ever thought possible.

3. CURRENT DEVELOPMENT

A recent study of mobile learning targeted on but well participants-maintained coaching material. Some learners attended a live lecture et al listened to a podcast deployed through a mobile device. The podcast viewers showed significantly higher retention, marking on the average nine out of a hundred over the live lecture participants [5]. Mobile learning additionally saves time. It has been shown to supply a similar information transfer and assessment results as a space or ancient on-line learning however during a shorter amount.

Evidence suggests mobile learning can significantly increase the training speed and productivity of a workforce. The Merrill Lynch GoLearn initiative provided an already mobile and online-learning-savvy

workforce new training via mobile devices [6]. The primary goal was to determine the effectiveness of mobile learning. The experiment also compared mobile learning with the effectiveness of traditional online learning and explored what further uses and come back on investment the company might get from employee smartphone use beyond simply accessing email. Merrill had deployed 3 compliance courses exploitation ancient computers and mobile devices. In a follow-up survey, 99 percent of participants who used a smartphone aforesaid the mobile format supported their learning, and all indicated they were willing to undertake training that is more mobile. More than 75 percent of these same learners identified convenience, timesaving, and training with no distractions as key advantages of mobile learning.

The survey put together provided strong support for having the flexibility to be told on the go as an advantage of mobile learning. Participants UN agency used a smart phone rumored finishing the coaching during a big variety of locations. The smartphone users finished courses on the common forty-five the faster than the normal laptop users. most significantly, learning effectiveness failed to degrade once workers trained on their mobile devices; the common take a look at score rivaled that found among the traditional computer-based on-line learning management cluster. rock bottom line for Merrill had was its GoLearn experiment created a estimable four, 270 hours of extra productivity by providing work on mobile devices [6].

4 TYPES OF MOBILE LEARNING

4.1 Bite-Sized Learning:

The shift toward micro-learning and creating learning that can be digested in bite-sized “chunks” has been a heavy influencer of mobile, even though

this concept exists largely due to the shift to mobile itself. Mobile learning stands to become the first suggests that delivering this kind of learning. Mobile additionally makes delivering of the many sorts of content attainable (videos, slideshows, copy, instructional guides).As videos, slideshows, and chatrooms become a bigger part of learning; the demand for mobile learning will only increase.

4.2e-Learning:

e-Learning has, in many ways, revolutionized learning, and with coaching and development programs incorporating technology into their programs, mobile learning has become a pay attention. this is often most helpful within the university space, producing corporations that need anytime access from anyplace, and enormous firms that require out define procedures and directions which will be accessed from several members of the corporate.

4.3 A Millennial-Dominated Work Force:

Mobile learning appeals to the millennial workforce and future staff United Nations agency will be raised on technology. With this generation and people that follow being raised with instant-access to info, the ability to pick up any device and get answers in seconds will be key. Social platforms like Twitter, Vine (RIP), and YouTube have vastly changed how individuals get their information and seek out learning and entertainment.

4.4 Responsive Design:

Responsive style means the interface can adapt to multiple device sizes, whether it is a desktop computer, laptop, smartphone, or tablet. Responsive style goes hand-in-hand with mobile learning, and will only become more important as learning trends continue to shift toward mobile learning courses should be responsive to be easy [7].

5 ADVANTAGES OF MOBILE LEARNING

Learning on the go: Today learners do not want to learn at their office desk. The biggest advantage of mobile learning is its innate capability to offer anytime-anywhere learning on the go.

5.1 Multi-device support:

By definition, mobile learning styles support all devices learners would like and use constant courses run seamlessly across laptops/desktops and tablets/smartphones.

5.2 Flexibility to learners:

Mobile learning offers tremendous flexibility to learners to choose the device they wish to learn on, when they want to learn and most significantly, at the pace they can consume and assimilate.

5.3 Interesting design formats to learn from:

Mobile learning features design formats that are popular with learners and create better retention and recall. These include formats we often use on our smartphones (videos, animated videos, interactive videos and so on).

5.4 More options to create engaging learning:

Microlearning has changed the format of training delivery. It is increasingly used to offer both formal training and as part of the ecosystem to promote informal learning. Microlearning nuggets can be optimally consumed on mobile devices. Similarly, you can integrate Mobile Apps for learning in your overall strategy. The main advantage of mobile learning Application is convenient and have the bear to connect the internet connection at anywhere when in need. It also helps in distance learning it is the benefit of technology. While using Mobile learning application it is crucial to connect with the internet [7].

According to Viberg [8], observe ten crucial rules to operate a system designer while designing mobile learning. Choice of technology, roles, cost, equipment management, collaborative services or application, and security issue, support for teachers, system usability and administrative. The disable learners will also grasp the opportunities 'from this technology. Mobile Learning Application is the most ongoing topics in the Educational sector it's a new technology like ERP and there have been many studies on these topics. However, there is a need to examine mobile learning on ERP and to understand the facing problem as well.

6 DISCUSSION & CHALLENGES

Research indicates that m-learning offers in depth blessings to create and support creative, cooperative, and communicative learning environments [9]. The implementation of the economical m-learning project, however, at intervals tutorial surroundings remains a challenge due to the advanced surroundings that embody management, education, technological parts, and socio-cultural issues. The following sections address and discuss variety of the challenges obligatory by the implementation of m-Learning comes, these are:

- **Management and Institutional Challenges**
- **Integration to Technology Challenges**
- **Technical Challenges**
- **Style Challenges**
- **Analysis Challenges**
- **Cultural and Social Challenges**

6.1 Management and institutional challenges:

Managements of instructional establishments got to outline a transparent policy, and technical and pedagogic support, to travel for wide-scale implementation of m-Learning. A lack of support and institutional policies were cited as institutional

obstacles. One in every of the foremost crucial challenges facing the tutorial establishments, once implementing m-learning project, is managing the amendment among the establishment. Managing such amendment can have an effect on processes, activities, and elements, in addition to individuals like managers, call manufacturers, content designers and developers, employees, students, and instructors, of the tutorial establishment. The principles of amendment management have to be applied properly so as for the amendment method to succeed beginning with in-depth and before coming up with [9].

The goal of the change management is to change the attitudes and behaviors at intervals the educational sector at utterly completely different| completely different levels that feature different structure and individual layers. Adopting a bran-new m-learning strategy may well be a significant change and naturally, people resist it, therefore, victimization the change management techniques will support moving towards the new era with confidence.

6.2 Integration to Technology challenges

It is difficult to properly integrate technology into their wider instructional activities, and heavy thought should tend to teach and learning methods. The most drivers of innovation of m-Learning shouldn't be simply deploying technology; there should be AN integration of pedagogy and new methodologies that reach instructional goals. To develop booming mobile instructional applications, style pointers and new ways for the training method should be followed, and, it is vital to think about the method problems to develop acceptable pedagogic models. Important efforts and steps are created to produce methodologies and techniques to integrate mobile devices into teaching and learning practices [10]. Dahlstrom and Bichsel, urge researchers to appear at pedagogic insights,

which will facilitate instructors to higher embrace mobile technologies.

6.3 Technical challenges

It's stressed by McGrail, 2012 [11], that to accomplish this, mobile learning needs a booming integration between instructional content and technology to attain instructional goals and to produce a booming teaching and learning atmosphere.

Alhazmi and Rahman [Alhazmi AK & Rahma AA, 2012] argued that the technological options of mobile applications like quality and interactivity are essential to with success integrate this technology into wider instructional settings [12].

6.4 Style challenges

It is vital to know that mobile devices are equipped with numerous options such as Camera, location, recording, sensors, search, media player, calculator, calendar, etc. Understanding these capabilities of mobile devices can facilitate designers to explore the potential of mobile learning, which might really support informal and social learning models. Designers of m-Learning applications got to perceive the 3 styles, that is educational style, that is that the instructional style of the application; interface style, that is that the clear to the user; and screen style, that is that the style of the graphics and therefore the visual show. (Al-Hunaiyyan, 2000) [13] pointed that the additional stress the developer puts in these styles, the additional helpful and purposeful the applying is going to be. It is essential for educational designers to style e-learning courses effectively for mobile devices; he found out that m-Learning ought to be viewed otherwise from that of e-learning, thanks to mobile characteristics like the screen size, screen orientation, mobile storage and memory, and network information measure.

6.5 Analysis challenges

Udell declared that the user's interface for mobile should be consistent and stressed to stay applying easy once planning interfaces on mobile devices. M-learning applications should be easy and intuitive. Additionally, the organization of components and media on the mobile screen can doubtless influence the convenience and quality of learning, and has a vital impact on learners' psychological feature load. Smart screen style attempts to impose consistency on the layout of the screens, and therefore the content of knowledge displayed on the screen is extremely vital indecisive the success of a user's interaction with the system. It is vital to think about the number of pixels obtainable not off course users' devices. This can facilitate in providing the most effective quality of pictures, and better resolutions on users' devices [14].

6.6 Cultural and Social challenges

Mobile learning challenges according to (Kirkwood, 2014) [15] the primary challenges of mobile learning application modification the society and to boot it's a district of fixing inside the educational sector. according to Viberg (2015) [8], a system designer is to look at ten necessary rules throughout coming up with mobile learning, Cost, system usability, choice of technology, roles, instrumentation management, support for lecturers, administration, collaboration services or application and security issue.

Conclusion

The motivation in following this study is to concentrate on the mobile learning applications and challenges faced by an individual in the mobile learning process. In a day-to-day life technology, playing a prominent role in everyday aspects mobile applications must concentrate on the multi-language

applications so that all individuals without any problems can utilize them.

The other major side to concentrate on is anti-phishing tools so that mobile applications or any third party should not steal the privacy of an individual.

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