M-learning

The current and future status of M-learning

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Abstract - M-Learning has improved the quality of e-learning by making the learning process student-centred. M-Learning will be an open environment where each student has his/her own gadgets which are connected to the internet. A student can easily learn and practice in this kind of environment. This project aims to discuss how M-learning is different from e-Learning, its benefits, challenges, current and future status in India and also proposes an approach to implement it. The web application it introduces is called as "TECHNOWEB". It also aims to learn about many contexts through social media using personal gadgets.

Keywords - M-Learning, E-Learning, Education, Mobility, web services.

I. INTRODUCTION

Education and training are the processes by which the smartness, wisdom, knowledge, and skills of one generation are passed on to the next generation. Education and training are done in two forms: conventional education and distance education. Mobile learning also called as "M-Learning" is a current way to offer learning process using mobile devices, such as handheld, tablet computers, smartphones and mobile phones which include any form of content or media that is available on personal gadgets.The term M-learning or mobile learning has a different meaning in different communities like e-learning, distance education which focuses on learning about different content with personal gadgets. It has many different names, like M-Learning, U-Learning, personalized learning, learning while mobile, ubiquitous learning, anytime / anywhere learning, and handheld learning.

M-learning puts the control of the learning process in hands of the learner itself which increases participation and flexibility of learning process. The students who used this process for learning felt that they were able to learn more using their e-books. It is the 'mobile' aspect of mobile learning which makes it different from other types of learning. M-learning focuses on the ability of learners to interacting with new technologies, and learning that reflects how society and its institution supports the new way of learning that helps to increase the mobile learner's

population. This is just because mobile devices has the ability to learn from anywhere and supports a way of thinking of learners. Today, many devices are portable and people can easily access them because they are easy to handle as well as easy to carry.

A. How is that different from e-learning?

E-learning explains the educational information over the internet. This forms e-learning a portion of technological based learning. It also includes the number of educational activities over the net of which mobile learning is just a sub part of the digital way of education. Many authors view mobile learning as a progression of e- learning which is a new stage of distance education.

B. Differentiating e-learning from mobile learning

Subject	E-Learning	M-Learning
Place	Lecture in classroom	Learning anywhere, anytime
Student and instructor communication	Passive communication	Instant communication
	Face-to-face	Flexible
Accessibility	Travel time to reach to internet site	No travel time with wireless internet connectivity
Location	In class or computer	Any location
Assignments and tests	Standard test for dedicated time	Individualized tests that can be taken 24/7

C. A Conceptualization of Mobile Learning

Mobile learning sense only when a student can learn from anywhere and anytime. This shows the mobility of learning and significance of mobile learning. Traxler (2007) and other advocates of mobile learning define mobile learning as wireless and digital devices and technologies, generally produced for the public, used by a learner as he or she participates in higher education. Other definitions of mobile learning are the mobility of learning as well as mobility of learner which shows that student can learn any new technology and language from anywhere and anytime. This is the new phase of learning which is completely new in terms of technological as well as the social sphere of human life.

II. M-LEARNING IN EDUCATION

Mobile learning solves many of our problems in gaining the Knowledge. Devices such as smartphones, tablets etc. help us to gain knowledge and improve our skills that are must for nowadays in an industrial world. It helps a student to gain access to digital content and personalized assessment helps them to face any problem while working in the industrial world. We just need to connect our devices with 3g/4g/Wi-Fi wireless connectivity which is essential to access the content. As noted by Irwin Jacobs, the founding chairman of Qualcomm, Inc., “always on, always connected mobile devices in the hands of students has the potential to dramatically improve educational outcomes.” wireless technologies is a new way to provide content as well as to access them wherever a student is located. It improves, enables, empowers learning way to transform learning environment of a student. but unfortunately, not many students has access to a computer and the internet because of the affordability issue. even the hardware cost is high which is not possible for the school to provide the personal computer to every student. However, the smartphones are easily available as well as cheap in cost as compared to laptops; PC's which gives them the opportunity to learn.

Mobile devices and technologies which are necessary for supporting content, as well as phone by which improving education system becomes easy, are as follows:

- E-book
- OutStart, Inc.
- Handheld audio and multimedia guides, in museums and galleries
- Handheld game console, modern gaming consoles such as Sony PSP or Nintendo DS
- Personal audio player, e.g. for listening to audio recordings of lectures (podcasting)
- PDA, in the classroom and outdoors
- Tablet
- UMPC, mobile device , camera phone and Smart Phone

M-learning contributions in learning process :

- It is student-centred.
- It is a new option for information delivery
- It increases collaborative learning.

Challenges faced by M-learning :

- Inadequacy of learner confidence, training or technical difficulties with mobile.
- Lack of institutional support.
- Interoperability problems with LMSs.
- Security and privacy issues.

III. M-LEARNING IN INDIA

The development of any country highly depends on the way or method they adopt to educate their people as well as for their future generation. In India, M-learning was initiated by the IBM. It has proven the boon for those students who cannot get education easily. so, they can get the direct education by sitting at home at any location. the concept of mobile learning (learn through mobile devices) came as blessings for the Indian education system as India is a developing country where education is must for everyone, especially in the field of secondary education. According to the recent study, Indian user on an average spent 3 hours and 18 minutes every day on their phones. So, if they can spend this amount of time on their phones then why not to use these hours to educate them.

A. M-Learning Future in India

M- Learning has come as a new future of a learning environment. This came in India in mid-2000's when voice input and voice recognition came into the market for a wireless device this makes M-learning more user-friendly. By using this, teachers, students, and any learner can learn anything from anywhere. M-learning should be confined to devices that can easily carry by women in her handbag and by men in his pocket. Therefore "M-learning provide education and training on the mobile phones, tabs, palmtops etc. " which is easily carried by his or her.

B. Technical and delivery support for mobile learning include:

- 3GP For compression and delivery method of audio-visual content associated with Mobile Learning
- GPRS mobile data service, provides high speed connection and data transfer rate
- Wi-Fi give access to learner or instructor to interact and learn via the internet
- for sharing and storing file we can use cloud computing

III. IMPORTANCE OF MOBILE LEARNING

Teachers who bring the M-learning programs and techniques have added the value to the Education system in favour of M-learning

- .It is always important to change according to time, bringing new technologies to class so that we can cope up with new trends and demands of the industrial world.
- Books and notebooks are heavy as compared to pen drives, cd drive etc. which is easily carried by the student.
- Mobile learning can be used to enhanced the learning activities that are taken by the students]

IV. PROJECT INTRODUCTION

In this project, we develop a web application and android application "Technoweb". In this user learn different programming languages like c, c++, java, android, python etc in one platform he/she cannot have to go to multiple platforms to access the content.

Steps for using Technoweb are as follows:

1. First, all user have to register in the application through signup
2. after successful signup, the new wizard is open on that contents are shown
3. Then you have to select the option and go for it like
    - study mode
    - handbook
    - practice quiz
    - quiz

Description about processes:

A. *Login*

Login form provides verification facility to the user. Once you fill up all credentials of the signup process after that you are an authenticate user of the application. Only an authenticate user can access the content of an application. A new user can easily register in the application just by clicking the signup button. If the already registered user enters the wrong username and password or any of them is incorrect then Error dialog box is shown on the window with the message “you entered wrong username and password".

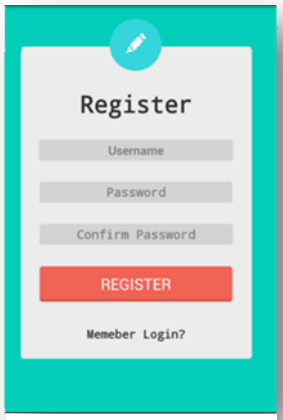

Fig.1 mobile app snapshot for registration

B. *Study mode*

After successful login the main form is open on that you will get an option which asks you about your choice of study mode, practice, quiz etc. this form basically asks about your choice if you choose study mode then new wizard is open in that you get different languages on the basis of your choice you will choose one language at a time. After choosing the language you will see the content related to that language.

Fig. 2 Mobile app snapshot Selection of Language

C. *Quiz selection*

After successful access to the content, you can easily understand the questions ask in the quiz section. In this section, you get a multiple choice question. With the help of next button, you can navigate questions easily. After completing the quiz you can submit by using submit button.

Fig. 3 Mobile app snapshot Quiz selection

V. MATHEMATICAL REPRESENTATION

- System S = M-learning System
- System S ={C , E ,Z, H, Output} [C = Courses , E=Exam , Z = Quizzes , H =Homework]

  *Courses C ={S’, L} [L= Language]

  - S’Є C Where, S’={v , t}[v = video , t = text] if System S consist of consist of Course C
- Output = {(S’^ L)}
  - L Є C [L= Languages] Where L = {‘C’ ,’java’, ‘Android’}
- If Course C consist of Language L

  Output {(S’^C) OR (S’^Java) OR (S’^Android)}

  *E Є C [E=Exams] Where E = {e1,e2,…..en}.

- If System S consist Exam E
- Output = {E}

  If exam = submit

  Let, F (M) = ∑ei [M= Marks]

If F(M)<=10 then

R = Fail. [R=result]

Else

R=pass

Output = {R , M}

- Z = Quizzes Z∈S

  Z = {zL1, zL2}

  [zL1 = level 1 for basic, zL2 = level2 for Intermediates]

  If System S consist of Quizzes Z

  Output = {Z}

  If Z= submit

Let, F(M)= ∑ei [M=marks]

If F(M)<=10 then

R= Fail.

[R= Result]

Else

R= pass

Output ={R, M}

VI. FUTURE

The future of mobile learning largely depends on the ability to accept by the users. users in developing countries have the need of mobile which is easily accessible as well as affordable like the developed countries have. the main significance of m- learning is making education easily available to those who do not have direct access to the classrooms. By giving this kind of environment we actually give them the opportunity to learn and innovate something new. In E-learning Environment many students face troubles while accessing the internet as well as there is an affordable issue with this. So, M - learning environment is cheaper as compared to E-learning. All the contents of new Programming languages are updated time to time as per requirement.

VII. CONCLUSION

Mobile learning or M-learning helps us to learn through mobile devices. M-learning enhanced the learning process by making it student centred. It gives the control of the learning process in hands of student itself by improving flexibility and collaboration. In mobile learning, we can overcome lots of problem face in the education system by giving them to learn from anywhere so they can learn as well as innovate something new. The environment is easily accessible from anywhere. M-learning gives students, teachers and any learner exposure to digital contents and personalized assessment which is very important for the industrial world.

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