Significance of Mobile Applications in Education System

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Abstract— In this Natural world scenario, everything is performed in computerized manner, but recently it is moving from Computer World to Mobile World for trading and commercial purpose. Many small applications are developed and executed via mobile. Likewise computer learning system is slowly moving down and changing into mobile learning system. In field of education, it would become next generation blackboard. It is very beneficial for Students to get knowledge in their desire field. Usage of mobile is very flexible and cheaper too. This paper supports M-learning, at the same time this paper examines certain Main issues related with the effective implementation of Mobile phones in all levels of education (like primary, secondary, higher-level) as well as types of education (formal, informal). It provides suggestions to address certain challenges that would help in the implementation of Mobile Phones in education. Explains about influence of mobile App development in the field of education with some proposing future works.

Keywords—M-learning; Mobile Phones; Mobile App

1. Introduction

Mobile is such a platform through which information can reach quickly. Comparing with PC (personnel computer) data consuming of mobile is very less. Hence present scenario gradually converting into mobilizing from computerising. Many companies are giving equal preference to creating apps with website. Even many companies are running through apps. This revolution can highly influence education system also. To made education system easier and flexible mobile can use as a tool. Mainly education system is categorized in two categories namely formal and informal. The traditional regular teaching in schools and colleges is in the purview of formal Education. Other ways of getting education are included in the category of informal education. In this both types mobile can use to implement learning in different types such as passive learning & active learning.Passive learning occurs when students use their senses to take in information from a lecture, reading assignment, or audio-visual. This is the mode of learning most commonly present in classrooms whereas active learning involves the student through participation and investment of energy in all three phases of the learning process (input, operations, and feedback). This type of learning is more apt to stimulate higher cognitive processes and critical thinking.

This paper examines mobile application for different kinds of education types and its role in merging of active learning & passive learning as one ie. M-learning. Then it explains challenges of M-learning with proposed solutions. It also explains scope of apps in this field.

2. Mobile Application for Formal Education

Mobile Phone applications are becoming indispensable parts of contemporary culture, spreading across the globe through traditional and vocational education. The education system can be formally divided into three parts namely primary (including nursery and pre-primary), High school or secondary level (High and senior secondary levels) and the college or higher level (including college, university levels).In all these levels of education Mobile phone can be utilized for better teaching learning process. Using multimedia applications available in Mobile phones can result in the increasing retention rates, because people remember 20% of what they see, 40% of what they see and hear, but about 75% of what they see and hear and do simultaneously.Mobile phone has the potential to remove the barriers that are causing the problems of low rate of education in any country. It can be used as a tool to overcome the issues of cost, less number of teachers, and poor quality of education as well as to overcome time and distance barriers.There are various types of Mobile phones and applications available which can be utilized for the knowledge creation and dissemination in the modern world. Mobile phones having Radio, T.V, Internet and many other hardware and software applications can be utilised. The use of Mobile Phones in education not only improves classroom teaching learning process, but also provides the facility of M-learning.

A. Primary level

2010-2020 is decade of innovation. Reasoning and critical thinking skills are necessary for innovation.Foundation of these skills can be laid only at primary level of education. Students who enter school are very curious, creative, and capable of learning many things. At this level, statement "Picture is worth than thousand of words" is very much true in case of teaching – learning process. Students studying at this level take much interest in cartoons. They understand more through animated pictures. Hence if the same environment is created in schools for teaching kids at primary level may

bring drastic changes in the education scenario. Nursery students can be taught by showing pictures, animals, fruits etc. With the help of Mobile and its peripheral devices, like T.V screen and computer students at this level are able to grasp a lot by hearing voices or sounds and animated motion of various animals. Language learning is also taught at this level.

To know a new language at this age is easier as compared to other levels. Mobile phones can be used to teach phonetics and pronunciation. Lessons, poems & lectures by eminent scholars stored in mobiles can easily be shown to the students time and again. Parents also can store good & useful lectures in any field in their mobile phones and can show those to their children. Such type of teaching and learning retains for long time in the minds of the children. Infrastructure needed for such environment is only a computer capable of mobile attachment and with T.V tuner card for running cable T.V programmes on the computer. A latest mobile or smart phone with latest educational applications is required for it.

B. High level

At high school level subjects like History, Geography, Political science, Physics, Chemistry, Biology, Physical education etc. are taught.

Lessons in these subjects can easily be taught by showing small movie related with the subject to create interest among the students. Internet is basic tool which can be utilized by teachers and students to find any information on any topic. Instead of showing complete movie, serial or programme, relevant part of that may be stored in mobiles and can be shown to the students of a class by attaching that mobile with the computer or Television. Such teaching –learning makes the environment very interactive and is liked by students.

C. College level

At college level various facilities like computers, Multi Media (MM) Electronic Board, MM projector and other peripheral devices related with teaching learning process are easily available.Various applications running on mobile are also very helpful and provide good knowledge to the students.Soft skill oriented apps can help students in improving their English and communication skill so that they can be placed well in reputed Multinational Companies (MNCs).

Certain lectures of eminent personalities are also can be stored through Apps. All such important and relevant lectures must be stored and must be available in format that can be accessible through mobile phones to teachers and students of affiliated Higher Education Institutes (HEIs).

3. Mobile Applications for Informal Education

The use of mobile technology is good for informal learning where learners can access information and learning materials from anywhere and at any time. It includes distance education and other open learning systems.

There are so many universities and institutes providing facility of distance education. As mobile technology becomes more ubiquitous, there will be more use of mobile technology for informal learning. As soon as events happen around the world, users of mobile technology will be able to get up-to-date information on these events using mobile devices.Once the students are enrolled, a unique number is generated called reference number and it is provided to the particular students. In such an environment Mobile number of all the students is must. And for providing information to the concerned students regarding its second instalment of fees, Personal Contact Programme (PCP) details, dare sheet, fee details etc. can be provided immediately to the students with the help of mobile phone.

Once the database having mobile number is created many of these functions can be done instantly. Short message service (SMS) of Mobile phone may be utilized for this purpose. After fees for admission is deposited the SMS must ensure the students that his fees have been deposited at right place for the particular course. With the help of such practices a lot of paper work can be saved and helps the environment making it pollution free. Moreover the enrolled students can be given username and password for using various online services through mobile phones. Instead of providing hard copy of study material, online study material in mobile readable form must be provided to enrolled students. Fees payment through mobile system must also be available on the portal of concerned University or Institute.

4. Challenges of M-Learning

Use of Mobile phones in education requires major shift in the way content is designed and delivered. New technologies cannot be imposed without enabling teachers and learners to understand these fundamental shifts. M-learning is any educational interaction delivered through mobile phones and can be accessed as per student's convenience from anywhere. Certain in built softwares in mobile phones like dictionary, geolocation, geography, data access, readers and maps can be utilized and adapted for educational purposes.

M-learning hardware may include mobile phones, handheld PCs, tablets, the iPad, and notebooks, as well as devices such as the iPod touch that are able to run mobile applications. Mobile phone is not utilized fully due to

various challenges. Mobile must be available and it must be accessible at demand. In the present scenario the following are the major challenges in the m-learning.

- Major challenge for educators and trainers is how to develop learning materials for delivery on mobile devices.
- A lot of information available online may dissuade student learning. Students can feel isolated in absence of classroom like environment.
- Compatibility and interoperability of software and educational applications is also of great concern.
- Cost of smart phones and data plans is out of reach for some students.
- Small screen size and keys are difficult to use effectively, also there is additional strain on battery life imposed by mobile apps can be frustrating.
- Inbuilt M-learning softwares are rarely available. Reproducing the existing applications in mobile format can increase the workload.

5. Proposed Solutions

The first and foremost solution is the need to change the mind setup. As the word mobile is heard everyone starts thinking about its facilities except its educational utility and tools. Mobile phone is thought just as medium of communication, for listening phone calls, songs and viewing and capturing photos.

- Accessibility issue can be resolved due to diminishing cost of mobiles and increasing number of applications in the education field.
- Nominal fees must be taken from students to use the resources.
- Cost is no longer an issue as prices of mobile phone and smart phones are decreasing at great speed and numbers of services are increasing day by day.
- Specifically education purpose oriented mobile phones can be designed.
- Learning material must be developed in format that may be easily displayed on mobile phones.
- Accessibility of device to every citizen who need it for getting education must be increased.
- One educational application designed for NOKIA mobile phone may not properly for SAMSUNG or other company device.
- Application developer software developer for mobile phone must keep in mind its general application so that an application designed for Mobile X may run properly for Mobile Y also and vice versa.
- New Mobile devices have compatibility to attach with LCD, T.V and computer hence screen size at the important times for showing to whole class would not be a great problem.

6. Scope of Mobile App in Field of Education

In the internet so many education apps are available. They are providing knowledge through games & puzzles. Some apps providing videos of different lecturers. But with an app we can do more than that. With mobile apps if we can develop old education system like Vedic maths& science. It will be the revolution. Since it was such an easy method of solving complicated problems in maths & science, it is very helpful for students. To teach moral values through stories is old Panchatantra method can effectively applied through apps. Mobile is such a platform for students to meet the perfect teacher of his passion.

Here education is not only professional degrees but also arts. If a student of rural area is passionate about an art like painting through mobile applications we can make him to talk with his teacher who can teach him better ways in that. Like that we can bring teacher and student from different areas under one roof and we can reduce distance between them.

7. Conclusion

New type of devices are emerging day by day and diminishing distinctions between phones, PDAs, e-readers, and other types of hardware. Future mobile technologies may be able to present textbooks, create data base, aid in library utilisation, and foster contextual learning. It is duty young developers to create more useful apps in this field and make more people educated. It is also duty of youngsters to bring ancient educating system through apps. The future is near where mobile is treating as next gen black board. With passionate young minds it will come soon.

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