Explosive growth of Mobile Technology and its Potential Impact on Youth & Education

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ABSTRACT

In the present scenario, the mobile devices are available everywhere. Starting from the past decade, one of the most significant developments is the volatile escalation of mobile phones. Even the poorest countries have got the chance to extend their telecommunication network to the mass of their populations due to the mobile cellular technologies. With the invention of fixed telephones in the 19th century to mobile phones, there has been a drastic change in the pattern the people interacted and communicated with each other. With the influence of portable computing in the hands of everyone and anyone, it's the right time to consider use of mobile devices for education. This paper provides an overview of what is happening with mobile devices and what is the impact of mobile devices on education. It intends to inform as to why should we consider using mobile devices in education and what will its potential impact be on the stakeholders.
Keywords: e-books, e-learning, mobile devices in education, peer relationship

1. INTRODUCTION

The use of computers has helped man to almost anything possible. It has made task very easy. It also came up with many innovative ideas to use computers for teaching and learning in education. Portable computing power came in the form of laptops and net books. A connection to a network is required for Laptops and net books for Internet access, which is available at fixed locations in buildings or wireless access points, again at fixed and confined locations. Mobile devices have a network connection available almost (99.999%) of the time in almost every part of developed countries. Mobile devices network availability and penetration is happening at a remarkable rate in developing countries. In the beginning, the mobile phones were created for adults for business use. In the developing world, mobile phones are increasingly adopted and an increasing fraction of these phones feature multimedia capabilities for gaming and photos. Consumers are using cell phones instead of landlines and it can be seen by the fact that by the end of 2010 nearly 30 percent of households were wireless.

Telephone Engineers has explained that the telephone was made for the business world and not for the social conversation. Nowadays, for the young people, carrying a mobile phone has become a status symbol.

In comparison to laptops or net books, mobile devices offer a large number of advantages for education.

Table 1: Comparison of mobile technology with laptops

Point of Difference	Mobile Technology	Laptops/Net books
Weight	Light weight, hence makes access of content easy	Heavy weight
User interactivity	Touch screen interface increases interactivity with user	Not much user friendly as compared to mobile devices
Switching	Fast switching & Instant-on capability	Slow switching which leads to delays
Portability	Easy to port	Heavier, so makes it difficult
Cost to develop apps	Inexpensive for mobile platforms	Do not have free or low cost apps like mobile devices

In order to make educational opportunities accessible to rural children in places and times that are more convenient than formal schooling, mobile devices like cell phones are an ideal medium. These devices are a promising medium for out-of-school learning to complement formal schooling.

There are various applications for mobile technologies in education – from the ability to wirelessly transmit learning modules and administrative data, to enabling learners to communicate with lecturers. In order to increase access to

learning and enable institutions to develop learner and administrative support and learning opportunities, handheld devices are used.

2. MOBILE DEVICES AFFECTING THE STAKEHOLDERS AND EDUCATION SYSTEM

In the education system there are many stakeholders, that is, the education providers like schools, colleges, teacher training institutions and universities, or the teachers which may be class teachers, subject teachers, heads of departments, and principals, or the students belonging to primary, secondary, and tertiary, their parents as individuals, in school boards, and in school management committees, the ministry of education, the government politicians and their policies, and funding agencies. If the stakeholders want an advantage from the successfully deploying classroom program via mobile devices then there should be teamwork between all the stakeholders. To deliver education, many stakeholders are already struggling– let us look at what is required of them and how they are to be supported if we are going to use mobile devices in delivering education.

2.1 The Education Providers

There will be many economic rewards for the education providers when stakeholders move from using computers in education to the use of mobile devices. Education providers can expect improved student learning outcomes, pleased teachers, and happy parents. To start with: there will be no need to have dedicated computer labs, specific computer desks, chairs and computer lab space – which also means no IT support required, no IT staff needed, no servicing, repairs and maintenance of computers required. And hence all bills will be saved. However, subscription will be paid to the mobile phone network provider. In many cases students with mobile devices will already be subscribed to a network service provider, if not, then schools normally get subsidized packages or are totally subsidized by their governments. Mobile devices, now available in abundance, are cheaper and simpler to use.

With the help of mobile devices, the Education providers are now able to:

1. Spend staff training time on improving pedagogy.

2. Spend valuable student lesson time on using technology instead of wasting time learning to use technology first and then the lessons.

3. Spend less money on supporting existing technology and more on supporting its use in classrooms.

2.2 The Teachers

The most important part of education is teacher. Skilled teachers are lacking and therefore it is not easy to incorporate learning through mobile technology. Until and unless we do not have trained teachers who know how to use technology to improve their teaching activities, we cannot make much difference with the present generation of teachers and the learners. Along with this, there is a big need of politicians and parents who are focused on learning skills and its outcomes and not on the new mobile device technology. In the developing countries, no training is available for teachers to explain them about the use of technology and to implement it to improve student's learning.

2.3 The End Users

Without a doubt, mobile devices are an exciting way to interact with technology. One of the interesting set of users for mobile devices is the senior citizens. For them, using computers is very hard as it requires learning of several things remember them all. Suppose, if a user wants to word process a letter, then the user first had to learn the operating systems, then the word processing application, and then could do the letter. This seems to be very tough for them. But with mobile devices, they just have to remember just a few buttons like the green button for calling or the red button to end the call. With touch screen mobile devices and user friendly mobile interfaces it is easier for them to interact with. There are some adverse affects also of using mobile devices on teenagers. It can be explained below as:

3. SOME OF THE ADVANTAGES OF USING MOBILE PHONES ARE

- **Safety**-One can be in touch with their children, and know their whereabouts.

- If in danger, children can reach the authorities or a medical provider.

- Cell phones create a convenience that was previously unavailable. With cell phones, one can easily reach their kids for any reason.

- The children can reach in the event of an emergency, and vice versa.

- Main advantage can be seen as its use in education. It is discussed below in this paper where some successful examples of use of mobile devices have been described.

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4. DISADVANTAGES OF USING MOBILE PHONES CAN BE EXPLAINED BELOW AS

- Often, students forget to turn off their phones in class, and therefore ringing noises or text-message alerts disturb learning.
- Student mobile phone networks add to the spread of rumors and misinformation, which can be harmful during a widespread crisis.
- **Cyber bullying**-Mobile phones with a connection to the Internet can be even more of a distraction and can be used for cyber bullying.
- Phones can be used as cheating devices during exams.
- The long-term physical effects of cell phone use are still undetermined.
- Particularly for teenagers, it is very dangerous to use cell phones as all cell phone emit a type of radiation called an Electromagnetic field composed of waves of electric and magnetic energy moving together through space.
- **Health risks**- According to the guidelines of the department of health issues on the use of mobile phones by young people under 16, after the research it has been shown that even low doses of ionizing radiation can increase the risk of cancer. Leukemia which arises in the bone marrow, is the most sensitive radiation induced cancer and may appear as early as few years after radiation exposure.
- According to the recently published statistics by online-education.net, some data has been provided which shows that how it is common for students to use their mobile devices to cheat on tests and exams.

✓ 35% of teens admit to using a cell phone at least once to cheat at school.

✓ 65% of teens report that other students use phones to cheat.

✓ 26% of students report using smart phones to store information to look at during a test.

✓ 17% of students report taking pictures of test questions to send to other peers.

✓ 20% of students admit to searching the internet for answers during a test.

✓ 76% of parents believe that cheating by using cell phones occurs at their child's school.

✓ 25% of students do not consider the following acts cheating:

o Checking notes on a cell phone during a test.

o Searching the internet for an answer during a test.

o Texting friends with answers during a test.

5. SOME SUCCESSFUL MOBILE DEVICE TECHNOLOGIES CURRENTLY BEING USED IN EDUCATION

- **Worldreader-**It is currently working with 500 teachers and students across three grade levels in Ghana, in order to measure the impact of e-readers, and the results have been pretty remarkable.
- **Drona–A Mobile Learning Management System**: Along with providing m-Learning environment, it helps users to create their own mobile applications, according to their requirement. This project won the World Summit Awards (WSA) in the category of m-Learning & Education in the year 2010.
- **TeacherMate-**It is a handheld computer system which is designed to support the teachers. It was developed by Innovations for Learning, which is a Chicago-based nonprofit organization.
- **BridgeIT Project** in Tanzania provides access to digital video content in classrooms, teacher training and ongoing support, and learner-centered lesson plans and teacher's guides. It is a three year project running with support from private and public sectors involving 150 schools in 17 districts from 7 regions in Tanzania. It aims to considerably increase educational quality through the innovative use of cellular and digital technology**.**

▪**School of One-**It is running in New York highlighting so many of the possibilities related to "smart" teaching with mobile devices. This is an interesting example of using mobile devices in education.

▪**BBC Janala Project** –This is one of the interesting examples of use of mobile phones in education in developing countries like Bangladesh, where the BBC World Service Trust and BBC Learning English have implemented the Janala Project. It provides English language lessons to citizens via their mobile phones.

6. OPPORTUNITY OF MOBILE DEVICES IN EDUCATION IN THE UPCOMING FUTURE

- The mobile apps market will grow-up and we'll move from single task, short session apps to more sophisticated offerings.

- The obstacle to entry for creating and distributing e-Book content will become lower. More and more, teachers and communities will create their own e-Book content.

- Social reading is the forthcoming event that combines the reading of e-Books with social networking. When reading e-Books, users can connect to readers and friends, can ask questions and share notes.

- Since, mobile continues to develop, we can expect a consolidation of desktop and mobile systems and browsers resulting in better mobile web editing, more collaboration tools and support for a wider range of web technologies that support the use of mobile devices in education.

- Changing platform from textbooks to e-books and e-courses which in turn enable teachers to personalize instruction for each and every student.

7. CONCLUSION

The use of mobile phones has affected the youth to a large extent. Since it has become an unavoidable part of life. Technology is enhancing day by day. And therefore dependency on mobile phones is increasing due to its unique features. Mobile phones are not considered as a device for communication alone but it is considered as a media for entertainment. Also the use of mobile phones has enhanced e-learning but on the other hand, it has affected school premises by creating disturbances.

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