

Capabilities and Effects of Mobile Technology in Improving the Quality of Education

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ABSTRACT

Among the variety of communication devices, the mobile phone is undoubtedly the most widely used and most common technology. This communication device with the facilities which it has established in the field of sending written texts, photos, internet connection and etc., today has become an integral part of life. Accordingly, the main purpose of using a mobile phone learning application is to provide unlimited access to students and users. This means that users for learning do not need to be in a specific place, or they do not have to study or attend a virtual class at a specific time. The role of learning via mobile in education is being mobile and easy to use. In this article, an attempt was made to examine the capabilities and effects of mobile phone technology in improving the quality of education. The results showed that participatory activities, time's freedom in accessing stored texts, changing the students' beliefs about their abilities and performance, and motivating from capabilities and effects of mobile technology in the educational process and teacher teaching.

Keywords: Mobile phone, Quality of education, Students.

Introduction

Mobile phone, as one of the new and effective communication technologies, now has an active presence among adolescents and young people and in educational environment challenges many traditions and teaching of traditional education (Mousavi and Jamali, 2011). The existence of the young generation in any society creates various needs and opportunities for society which their solution and their usage require the existence of some tools and facilities which have high levels of utilization of new communication devices (Hajizadeh Meymandi, 1392). Confirmation of the superiority of electronic methods in the field of education has further revealed the weaknesses of traditional teaching methods. The traditional or face-to-face teaching method has been criticized with issues such as passive learning and lack of attention to the participation of self-learners, ignoring the differences and needs of learners, lack of attention to problem-solving and critical thinking. And has been accompanied by important consequences, which are emphasized by the present research such as academic burnout, decreased motivation, feelings of inefficiency, etc. (Panjaburee et al., 2010). Mobile phone technology is a powerful supporting tool for learning (Pynoo et al., 2011). The advances of mobile phone technology has made easier the access has enabled teachers to support learning in and out of the classroom (Mac Callum & Jeffrey, 2014). Mobile phone technology is consist of the combination of a wide range of tools and practical applications that students no longer need to sit in the classroom to learn, and can move away from traditional learning approaches and to new learning methods step. The integration of mobile phone technology in teaching and learning has expected to have a positive

impact on the performance and experience of learners and teachers (Maniyan & Sohrabi, 2015). In traditional learning patterns, it was thought that school is the only center of learning; while in new learning patterns, schools can be considered as a center for production and creation of learning (Larkiyani, 2012). In the information age, teachers can teach their students how to learn instead of teaching by lecturing method, teach them how to search, find relations and combine them. On the other hand, nowadays new communication methods and spaces have been provided which can make possible, learning process outside the classroom (Zamani et al., 2013).

Discussion

Mobile learning is a developed branch of electronic learning which, in comparison with other types of electronic learning, provides learners the possibility of accessing learning content with greater ease. This matter is clearly recognizable due to the extensive communication and interaction capabilities of used tools and devices in mobile phone learning which brings to their users (Tutty & Martin, 2014). In definition of mobile learning, it should be said that in mobile learning, sending and transmitting the learning theme through mobile devices such as laptops, pocket computers, mobile phones, or other mobile devices that allow learners to accompany inclusively and facilitate its performance at any point of the learning process (Traxler, 2010). Kusnekoff et al. (2015) acknowledged if mobile phones are in line with educational goals, they can have a positive effect on students' learning process. In the following, learning capabilities are presented through mobile phones, technology acceptance, and affecting trends on the quality of education via mobile phones.

A: Ability to learn via mobile phone

Learning via mobile phone is generally defined as learning tools that occur through mobile phone devices. These learning tools have the ability to move with learners (Karimzadeh, 2009). In other words, they reduce the limits of learning spaces through mobile phones by creating flexibility in them; therefore, it is important because access to learning materials is available anywhere (Mac Callum & Jeffrey, 2014). The learning ability anytime and anywhere, is the feature of electronic learning which has become a reality with the advancement of wireless technology and mobile learning. Mobile learning is, in fact, a model of electronic learning which is done through mobile technologies such as mobile phones, audio systems, electronic books and etc. (Tutty & Martin, 2014). Among the various tools of this field, the mobile phone has become very attractive to teenagers due to its unique features. Studies predict that in the year 2021 the first device that will be connected to the internet by users will be mobile phones. According to Karzan (2014), mobile phones are very popular among users due to their attractiveness. Most of the time, students are often in the classroom physically, but mentally they are somewhere else; this chance is such that education is faced the challenge of how to take advantage of this attractiveness in education (Quoted by Kusnekoff et al., 2015). Due to the excessive growth of the use of this device, it is necessary to study the effectiveness of its use in educational fields.

B: The acceptance of technology

Research has shown that a large proportion of teachers still resist the integration of technology into the classroom (Cazares, 2010). Two specific aspects of the impact teachers' and students' acceptance of technology have been consistently found. The first aspect is related to the level of teachers' beliefs about the influence of new technology in education. In particular, the perceived value of new technologies (usefulness) and the effort to understand learning with the use of new technologies (understanding ease of use) play an important role in the acceptance of technology. The second important aspect is about the skills of teachers and students to use digital technology and the needed skills to integrate into teaching (self-efficacy training) (Hwang et al., 2011).

Phelps & Ellis (2012) argued that there is a large difference between teachers' perceptions in their learning ability to create an effective and ideal schedule. In particular, they often see technology as a threat. The feeling of anxiety may be due to the fact that teachers' skills in new technology are not sufficient to meet the needs of students, and this factor can cause teachers to feel anxious and incompetent in front of students, and as a result, this inadequacy feeling can make teachers feel insecure and reluctant and resist against the integration of new technology into their classroom teaching methods. In addition, this negative

attitude can lead to teachers' doubts about the usefulness of information and communication technology in teaching and learning (Phelps & Ellis, 2012).

C: Affecting trends on the quality of education via mobile phones

Mobile learning is an activity that is inherently motivating for students; because it provides them to control over learning goals, acquisition, enjoyment, communication, learning in conditions, and continuity of contents (Laurillard, 2007). Roblyer and Doering (2010) believe that the integration of new technologies in a way that is meaningful for students and be in line with their motivations and goals creates more motivation to learn. In other words, to ensure full access to new communication technologies, the needs of individuals must be understood, and the best choice for this purpose is the synchronization of technologies (Zareyi Zavaraki & Jafarkhani, 2012). The principles of educational design which are used in the development of multimedia content are not suitable for the development of mobile technologies' content (Song & Meyer, 2013). Therefore, adapting technologies for proper use requires redesigning programs (Sparrowhack & Hild, Translation of Zareyi Zavaraki and Velayati, 2014).

One of the reasons for increasing academic progress motivation can be the motivation of mobile phone technology as an attractive and interactive medium in students' education. Mobile learning is an activity that motivates students. Students learn control over learning goals, acquisition, enjoyment, communication, learning, and continuity of contents through mobile learning (Laurillard, 2007). And if the integration of new technologies be meaningful for students and aligns with their motivations and goals, it will create more motivation for learning (Roblyer & Doering, 2010).

Perhaps the main motivational reason for the use of mobile technology in education is portability, ease of use and availability of mobile phones for students, accurate organization of educational content, and its segmentation into small units. Jalilifar and Mashhadi (2013) have stated that learners can regulate their learning behaviors by selecting, structuring, and creating environments that play a role in successful learning through being active, purposeful, and motivated in the learning process. MMobile phones easily provide these incentives for students. Bradley et al. (2009) believe that content segmentation has educational benefits for all learners; because it removes much useless information that is not necessary for learning purposes.

Among the benefits of using educational software and mobile learning in education is a change in students' beliefs about their abilities and performance; in a way, users who use this technology have a more positive attitude towards learners who do not use it (positive self-efficacy) in solving problems, which its result is increasing of pleasure and motivation to progress for learning (Zamani et al., 2012).

The research results indicate that electronic learning methods since they are mostly based on the interests and ability level of users, can have a positive effect on their level of self-efficacy. For example, Pourhasani (2013), in his research entitled assessing the effectiveness of learning methods via mobile phone in academic achievement and students' attitudes and comparing it with common teaching methods, founds that; the method of learning through mobile phones increases learning power in users and changes their attitudes. This change in students' attitudes makes them more self-efficient and prevents them from academic burnout.

Also, research findings have shown the effectiveness of education through mobile technologies. The research results of Abedini and Mokhtari (2015) have shown the mediating role of educational use of mobile phones in the relation between types of help and performance in the English language. It has also been observed that a variety of aids play a mediating role in progress motivation in the English language and educational use of mobile phones. The research of Sarani and Ayati (2014) about the effect of using the mobile phone (SMS- Short Messages) on learning of English vocabulary and students' attitudes showed that the teaching method with the help of mobile phones and using SMS has a greater impact on students' learning of English vocabulary words. Also, Atadokht et al. (2013) showed that the rate of using mobile phones among high school students is relatively high (88.7%), and this rate is higher in male students (98.4%) than girls (81.7%). In addition, there was a significant difference between the motivation of students who used mobile phones and those who did not. Hussein et al. (2015) conducted a case study on the impact of mobile learning on blind students using touch screen mobile phones applications. The result of this study showed that for most of the students who received the educational materials of course through

YouTube (with Android application), their YouTube learning rate was as good as the group that received the educational materials through Brail. Also, Suwantarathip and Orawiwatnakul (2015) conducted research entitled using exercises with the help of mobile phones to support students' vocabulary skills. The result of this study showed that vocabulary learning by students in the experimental group was better than the control group. The experimental group learned the words better than the control group. In another research, Taleb et al. (2015) examined the effect of mobile learning on mathematics learning. The results of their research showed that, according to teachers, mobile learning increases students' motivation towards mathematics. There is also a positive and significant relationship between the use of mobile learning and students' participation in learning mathematics. Also, in a study by Lin (2014), he examined the effectiveness of an extensive English-language reading application with the help of mobile devices. In this study, which is compared between online learning by a tablet and a personal computer, the results showed that not only the group that used tablet had a better performance; but also had more pleasure feeling of learning than the group with the personal computer. In another study, Guerrero et al. (2011) conducted a study entitled using mobile learning tools to improve Grammar skills. While emphasizing the usefulness of mobile tools in learning, they achieved that mobile devices improve grammar skills and other language skills in more than 70% of students.

Conclusion

Due to the increasing speed of new knowledge production and development of communication technologies such as mobile phone, which provides related resources and data to each subject without time and space limitations at the disposal of learners, and considering the many positive aspects of its use in schools and the necessity of adaptation to changes, the proper utilization of this new technology, is felt more than ever. Mobile technology is one of the appearances of information and communication technology that, similar to other communication technologies, has entered the field of education and has been mentioned as mobile-based education. This communication tool has been able to change the traditional method of face-to-face teaching and provides a new definition of teaching; it has also paved the way for learners to learn at home, at work, and in travel, and has overcome many limitations and inefficiencies. The use of mobile technology in education affects motivation, cooperation, information sharing, availability, and interaction of learners and provides opportunities for learners, teachers, and school. Mobile phone communication technology encourages and interacts between the learner and teacher thus it can be effective in improving and efficiency of learning. Therefore, learning through mobile phones is important because it provides access to different learning materials and contents at any time and place. Eaching through mobile phones provides an open and friendly environment in which students can easily interact with each other and lead to more learning, and this learning will create the next motivation. As a result, teaching via mobile phone has provided a context which many educational ideals, such as independent learning, self-directed learning, learning in any place and time, universal acceptance of learning, the right to choose contents according to interests, more realistic recognition of students' individual differences and etc. becomes more achievable. Therefore, in line with the obtained results, it is suggested that the position and role of new technologies in the educational system be determined and managers and teachers are prepared for proper use in schools and a suitable cultural Webster for its proper use in the educational process to be provided. It is also suggested that a positive attitude towards learning by mobile phone and its role in the effectiveness of educational programs and the quality of education be created. On the other hand, students and parents should be introduced to the culture of using mobile phones as an educational strategy and provide the necessary information to learners to use it. In addition, it can be used the specialized forces for designing and producing educational content that being consistent with the progress of the day and emphasize on reforming the structure and direction of country's educational systems in accordance with the new conditions and requirements of science and technology. Mobile phone educational functions show the fact that today's world is trying to apply the educational system in accordance with today's needs.

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