Embracing Smartphones in Teaching: Enhancing the Learning or an Interference?

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Many educational institutions, especially higher education institutions, are considering to embrace smartphones as part of learning aids in classes as most students (in many cases all students) not only own them but are also attached to them. The main question is whether embracing smartphones in classroom teaching enhances the learning or perhaps represents an interference.

Background

A smartphone is a mobile phone that can perform many tasks and computations like a personal computer. It is a powerful handheld computer with an intrinsic connection mobile network. It is so handy and is becoming a multipurpose mobile device that can assist people to perform their daily as well as professional activities. Smartphones are used by many to access data and knowledge from the internet. In fact, some people develop knowledge by accessing a pool of information from the internet using their smartphones. Hence, smartphones can definitely be taken as to enhance education. Nowadays, students can also have discussions in social networks and can get quick answers from peers, lecturers or even experts.

The reliance on smartphones is becoming quite evident and the usage of smartphones amongst youth is rapidly growing. Students spend a lot of time online and most of them prefer connection to the internet using their smartphones instead of other devices. In our routine teaching, we noticed that students normally bring their smartphones in classrooms and lectures. In fact, some students capture the lecture notes or other notes written or given by their lecturers using their smartphone cameras. Lecturers can even turn smartphones to become learning aids in class. Some discussions or idea generations can be enhanced using a social network, which are accessible using smartphones, in a class to attract more participation from the students. However, smartphones can also create a serious disturbance during lectures if students play with them instead of paying attention to lectures. This leads us to the main question: do smartphones create better learning experiences or learning interferences?

The usage of smartphones for learning aid or knowledge sharing discourse is becoming a common practice. The basic principle of technology usage in learning is to support discourse in knowledge-building communities beyond the classroom patterns. Teachers need to restructure the teaching and learning process, in which the construction of knowledge is supported through several means and media, including smartphones and their facilities.

The proper use of smartphones in class may enrich students with multichannels of communications and interactions, promote multimedia in delivering contents, and may also perform multiple functions during a teaching time such as recording explanations from teachings, finding additional information required from the internet and having discussions through a social network. All the analyses and discussions could trigger improvements and open opportunities in enhancing classroom learning, especially in the context of developing countries.

Information Systems and Education

Information Systems in education have two main components, the technology component and the content component. Some notable parts of technological component are servers, laptops, smartphones or smart mobile devices, and Web-related technologies. Nowadays contents are delivered through the Web in educational support systems such as e-learning, mobile learning, and learning management systems. Consequently, with technology, rich and multimedia learning contents are accessible through the Web or Apps. In addition, interactions between lecturers and students as well as interactions among students to enhance learning can easily be done using available and affordable devices such as laptops, tablets or smartphones. This implies that nowadays technology heavily influences learning process, especially in higher education.

Education and Smartphone

Nowadays, both young and adults are dependent on smartphones. Younger generation has grown up with electronics and technologies surrounding them and has significant exposure to these digital devices. However, many educators do not fully utilize smartphones' capabilities for learning. Smartphones with their many existing features and future potential uses can enhance learning but hardly replace classroom or conventional e-learning methods. Hence, learning with smartphones can only be used as a complementary to traditional learning and e-learning. As most current students are digitally literate, they are referred to as digital natives, in contrasts with their teachers who are referred to as digital immigrants as most of them learn by adopting the digital world. In addition, smartphones in classrooms allow students to record video or audio, take pictures of teachers' explanations from the board or screen, and ask peers to share pertinent links to the class. Teachers can also allow students to read from their smartphones, share-interesting articles to others, and make silent e-group discussions. At the end of the sessions, the teacher can ask students to present their silent learning in the classroom.

Smartphones and Distractors

The problems of maintaining attention among students in class were also reported by a number of studies in which smartphones have been seen more as distractions in the classroom rather than learning aids, where students were normally asked to put them away or keep them on silent mode or simply turn them off.

This happens as many features of these phones were designed for entertainment and pleasure purposes. Therefore, teachers may think that smartphones may cause learning interference, rather than learning support. Some researches support the argument that smartphones are interferences in learning process. For instance, a student who spent considerable time playing with his electronic devices such as smartphones, decreased in self-reported understanding of course material and overall performance. Some lecturers were frustrated and even unplugged the wireless transmitter manually because their students engaged in non-academic activities via the smartphone without paying attention to the course. The majority of the students are accessing smartphone during schooling hours. Smartphone technology, with its pervasive acceptance and powerful functionality, would inevitably change peoples'

Smartphones: Learning aid or interferences?

Learning Aid	Interferences
•Convenience and Portable	•Distraction
•Comprehensive learning experiences	•Dependency
•Multi sources and multitasks	•Lacking hands-on skills
•Environmentally friendly	•Reduce quality of face-to-face interactions

behaviors and actions to keep up-to-date with it.

Another interference created by using smartphones can come from the small smartphone screen size that may cause physical problems and reduce focus for some participants. Facing the smartphone for too long may damage the eyesight and affect interference during teaching and learning. The other inconvenience is that the device can have malfunctions, become infected with a virus and also depend on batteries, which do not usually last long unless you have a power bank ready. There are also big chances of losing what is stored inside, such as photos, files, videos, notes, or other important materials which will highly be at risk if somehow that one device gets corrupted. Lastly, smartphones can also affect the sleep quality of students.

Teachers' Observations

Smartphone in class is very convenient and there are digital materials available instead of using textbooks in class. Teachers are encouraged to make learning more fun. The use of smartphones has made a student's life easy as with just a touch a student can get access to almost everything, including things related to their studies. Smartphones can be good devices to receive rich teaching contents and nowadays, smartphones are capable of handling multimedia contents. Smartphones can receive and generate multimedia information in a flexible and efficient manner. Thus, saving time, space and books with probably better outcome for both students and teachers.

Besides, smartphones are much smaller and lighter than laptops or desktop computers. In addition, many useful Apps can be downloaded and installed easily as operating systems for smartphone adopt the plug and play method. As a result, they become multi-function devices that can be used to perform many useful operations easily, including learning. Smartphones may become good educational aids as they enable students to perform various tasks conveniently. In other words, a student only needs a single device to do multiple tasks. Many tasks can be done with smartphones; taking photos of lecture materials, shooting videos and listening to lectures…All which can be achieved by using a single device, rather than owning multiple devices to complete the task.

Smartphones are no longer considered luxury devices and every youth would tend to own at least one. Smartphones have become popular devices to access the internet. From the earlier findings, it is suggested that teachers and educators need to know how to make use of smartphones in such a way that they can optimally be used as learning aids and mitigate all its potential interference for learning, especially in a classroom environment.

Furthermore, the curriculum and syllabus need to be redesigned and made adaptable with the use of a smartphone as an additional learning channel in a classroom setting. Finally, having online resources offers equity and accessibility to information for all students.

Conclusion

The use of smartphones in the teaching and learning process, especially in a classroom setting, is challenging. It certainly offers the benefits of rich contents deliverability, knowledge sharing, and dynamic learning activities where students can expect to experience multiple channels of interactions while training. It is highly advised for educators to embrace smartphones in their lesson plans and to integrate technology in their teaching methods. Alternatively, clearly stating rules and regulations in class prior to the start of the lesson, may help minimize the interferences that smartphones could unfortunately cause.