THE UTILIZATION OF SMARTPHONE ON ACADEMIC PERFORMANCE: A REVIEW

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Abstract
Smartphone is one of devices that can be used in education. It is because smartphone are enables the people to communicate each other, share information, searching information and getting an entertainment. Most of students in universities possess one or more smartphone as a communication device. The students in universities or school may use a smartphone as a medium to communicate with their parents, teachers and classmates for the academic purpose. However, the student are not realized either the smartphone give a positive or negative impact in their academic performance and what are the challenges they will faced when using of smartphone. In this research, we will identify the impact and challenges of smartphone on academic performance.
Keywords: Smartphone, academic performance, challenges, impacts, students, communication

1. Introduction

Nowadays, technology is getting really advanced and it is becoming an essential part of life. The most rapidly growing technologies in the world are smartphone. Smartphone also can be known as mobile phone or cell phone. According to Yu, Fuxin (2012), the smartphone can be defined as a phone that have operating system and can be connected to the internet. Smartphone was use as a communication channels, seeking information, multimedia function and other usage. There are variety named of smartphone manufacturers which are Nokia, Motorola, Sony Ericsson, Oppo, Apple, Huawei, Lenovo, Vivo and etc. Basically, smartphone used for making and receiving calls, Short Message Service (SMS), and Multimedia Messaging Service (MMS).

But, modern smartphone nowadays are already support a variety functions such as text messaging, multimedia messaging, email, internet access, bluetooth, business applications, games, camera, calendar, notes and other advance application (Kahari, 2013). All people around the world are used smartphone, but the people age around 60 years and above are less use of smartphone rather than people aged less than 25 years that are frequently use smartphone. It is very difficult to imagine our live without a smartphone as most of our work such as business, socialization, education and entertainment is done by using a smartphone. Some of them maybe use for seeking information and the others maybe use a smartphone for non-beneficial likes gamming, social media, chatting and so on. M.Grimus (2014) was revealed that girls are use the Internet in a greater variety of ways than boys at a younger age (9 - 15 years), but the boys are make broader use of the Internet at an older age (16 - 19 years).

Hence, smartphone have become a very important part of our daily lives because it is the most convenient way for people to communicate. As we can see nowadays, most of the student are more depends on smartphone in order to searching information, solve problem and making decision. The student will lack of critical thinking because it is easy for them to search all the information in Google by using smartphone rather than thinking by themselves. For example, if the teacher ask a student to make an essay. The student will search in Google, the example of essay about the topic that has been given and they will exactly copy paste the content in an essay.

In previous study by Soyemi, Oloruntoba & Okafor (2015), they found that most of the students are uncontrollable use of smartphone. It is because most of the student are more focused on chatting, music, social media and gaming during class or do their homework. They are difficult to live without a smartphone on their hand. The student will be less time to do a homework or sleep. It is because the students are chatting with friends until late night and drag their sleep time.

In previous study, there are many studies on benefit and effectiveness of smartphone (Chantrand, R, 2016; Sarwar & Soomro, 2013) but it is less of study on impacts and challenges of smartphone on academic performance. So, we decided to studies on impact and challenges of smartphone on academic performance for future reference.

The aim of this study is to identify how smartphone give an impacts on academic performance and To analyze the challenges of smartphone on academic performance. In order to achieve this objective, this research proposes a framework to determine the utilization of smartphone on academic performance. The remainder of this paper is organized as follows. Section 2 is literature review. Proposed framework is in Section 3. Final section contains some concluding remarks.

2. Literature Review

In this research, we identify the impact and challenges of smartphone on academic performance. For the impact of smartphone on academic performance, we identify on three aspects which are access on learning material, communicate for academic performance and concentration. The impact will be depends on how the student utilize it. While for the challenges of smartphone on academic performance, we focused on time consuming, technical problem and attitudes.

2.1 Impact of Smartphone on Academic Performance

In order to improve the student academic performance, the students are able to use a smartphone as a medium to access the learning materials anytime and anywhere they want. The student can learning from online material such as journals, blogs, social networks and others. The student also can improve their learning skills by downloading the application that is related with education. For example, the student can download a dictionary in their smartphone in order to learn the pronunciation of unfamiliar words in order to enrich their vocabulary. So, the student can improve their academic performance in term of pronunciation and vocabulary. Ebiye (2015) reveals that the medical student and staff used a smartphone for their academic purpose. They used

their smartphone to find medical information in the internet, and downloading an e learning material such as e-textbooks and e-journals. After downloading the learning materials, the student are not stick at one place to learn e-textbooks and e-journals because the smartphone can be used anytime and anywhere they want. The student also can get information through an internet in just a second instead of using book where they need to open one by one in order to learn and get information. As compared with Soyemi, Oloruntoba & Okafor (2015), they found that the social networks such as Facebook and Twitter can be accessed on student's smartphone where they are able to create a group in order to share link of information and gain knowledge. The students are able to learn and gain extra knowledge from the information that is share by their classmate. Hossain & Ahmed (2016), explore the use and perceptions of smartphones for academic purpose by students at Dhaka University. Most students used a smartphone as a tool for academic where they are able to access academic information through news, sports related information and social networking sites.

Communication also will give an impact in student academic performance. Without smartphone, the student will be difficult to perform in their academic. It is because the student will used a smartphone as a medium for them to communicate with teacher, parents and classmates. Through communication, the students are able to asking question and to have distance learning with their teachers or classmates. According to Sundari (2015), she found that smartphone are easily for the student to contact the teachers and classmates for study purposes. The student can used a smartphone in order to ask the teacher about their subject if they did not understand during class. Student also can use a smartphone for exchanging of useful information with their classmates. Nowadays, the student and teacher can make a Whatsapp group as a medium for them to communicate. Through the Whatsapp group, the teacher are more easily to organize course materials, grade assignments, reinforce learning objectives and interact with students. Sarwar & Soomro (2013), stated that the student and teacher used a smartphone as a medium for them to communicate each other either they are in the classroom or outside of the classroom. If the student on sick leave or miss class for other reasons, they can used a smartphone to asking their friends about the learning and homework on that day they are absent. So that, there are no reason for them to fall behind in academic lesson even though they are absent. Dukic, Chiu & Lo (2015), explore the use of smartphones in everyday life and learning purpose by Library and Information Science students at Hong Kong and Japan universities. They found that the smartphone enable the student to communicate quickly and efficiently with their friends. Most of them communicate through the mobile messaging application such as Whatsapp, Line and others because it is easier for them to reach their friend through these applications than by email.

Concentrations also are one of the impacts of smartphone in academic performance. When the student become addicted with smartphone, they will be lose of concentration in academic. Sundari (2015) found that the student will keep their smartphone in on modes in order to send and read SMS received during class. They also used a smartphone to make a voice call and answer call in the classroom. When their smartphone are not in silent modes, it will distract them during lectures where they

will keep replying the message. They will not concentrate on listening to the lectures which eventually causes a poor academic performance at the end of semester. Kibona & Mgaya (2015), was find out the impact of smartphone on academic performance of higher learning students in Tanzania. They revealed that when the student doing some homework at their home, they will regularly visit social network such as Facebook. They are not focused to complete their homework because they are become addicted with their smartphone. The student who addicted with smartphone will become panic and anxiety if they are misplaced their smartphone. This smartphone addiction may lead to the distractions of their studies and will dropout the GPA. Ezemenaka (2013), revealed the student who are used a smartphone during lecture may lack of concentration because they are more focus in chatting with their friends and browse the social network. When the students are browsing the social network, they will difficult to stop browsing and they will spend more time on it. This situation will bring a negative impact on their academic performance because they not pay full attention in classroom during their academic lesson.

2.2 Challenges of Smartphone on Academic Performance

The challenge of smartphone on academic performance is time consuming. Time consuming is someone who taking too long times to do something. Some individual was always with their smartphone especially students. It will affect their academic performance if they are always playing with their smartphone. Most of them were used the smartphone for other business that has not for learning purpose. According to Bolitho (2012) said that around 39% person was spend time with their smartphone for reply e-mail and SMS more time rather than consume their time for complete the assigned work compared to Jeong.H.S & Lee.Y.S (2015) said that the student who spend more time to the smartphone may encourage them to smartphone addiction. This situation may affect their academic performance if students continually were always with the smartphone every time without using it for academic purpose. Besides, it will affect their examination result which is getting worse. So, we need to encourage them to be discipline on time while dealing with smartphone.

The technical problem mightily occurred when dealing with the technological tools such as smartphone. This is because the smartphone mostly connected to the internet. So, it will expose to the technical problem. Chartrand (2016) said that there are technical problem with difficulty in connected the smartphone to the internet.So, the technical problem will be the challenge of smartphone on academic performance when the smartphone was facing the technical problem. This is because, the student's performance in classroom become inactive because they need to configure the technical problem first to make the internet connection become smooth so that they can access and retrieve the information.

Attitude was becomes a challenge of smartphone on academic performance. Attitude is people's behavior in daily life. Attitude also play a role when someone deal with the smartphone either they can be behave or else. For example, some people may be used the smartphone for non ethic likes access something bad might them be carefree attitude. So we need to pay attention to their activity when they used the

smartphone to avoid from become worse especially their parent's attention (Rabiu 2016). Besides, attitude can be categories with addiction in using smartphone. Mostly people around us were addicted with smartphone on 24 hours with social media, chatting, gamming and so on. According to Kibona & Mgaya (2015) said that student nowadays are more addicted to the social media on the smartphone rather than use the smartphone for academic. Addiction becomes a challenge for student in academic performance because they used the smartphone for the other site than complete their task in school. Hence, the students need to motivate to ensure their academic performance become flying with color rather than let them addict to the smartphone.

Table 1. Analysis of review.

Author(s)	Impact of smartphone on academic perfoemance	Challenges of smartphone on academic performance
Bolitho, (2012)		Time consuming
Buck,(2013)		• Time consuming • Privatization
Chartrand, (2016)		Technical problem
Dukic, Chiu, & Lo, (2015)	Communicate for academic urpose	
Ebiye, (2015)	Access learning material	
Ezemenaka, (2013)	Concentration	
Hossain & Ahmed,(2016)	Access learning material	
Jeong, (2015)		• Time consuming • Addiction
Jumuke, (2015)		Privatization
Kibona & Mgaya,(2015)	Concentration	• Time consuming • Addiction
McGrath, (2012)		Privatization
Sarwar & Soomro, (2013)	Communicate for academic purpose	
Soyemi, Oloruntoba& Okafor ,(2015)	Access learning material	
Sundari, (2015)	• Communicate for academic purpose • Concentration	
Rabiu, (2016)		Attitude

3. Proposed Framework

From the previous study, we found there are two variables in this topic. The variables are dependent variable and independent variable. Dependent variable is the variable that is affected by the independent variable. In this study, the dependent variable is the utilization of smartphone on academic performance while the independent variables are the impacts and the challenges of smartphone. Therefore, the impacts of smartphone are easy access learning material, able to communicate for academic purpose and lose of concentration. The challenges of using smartphone are time consuming, attitude and technical problem. Thus, the variables were presented in the figure as below.
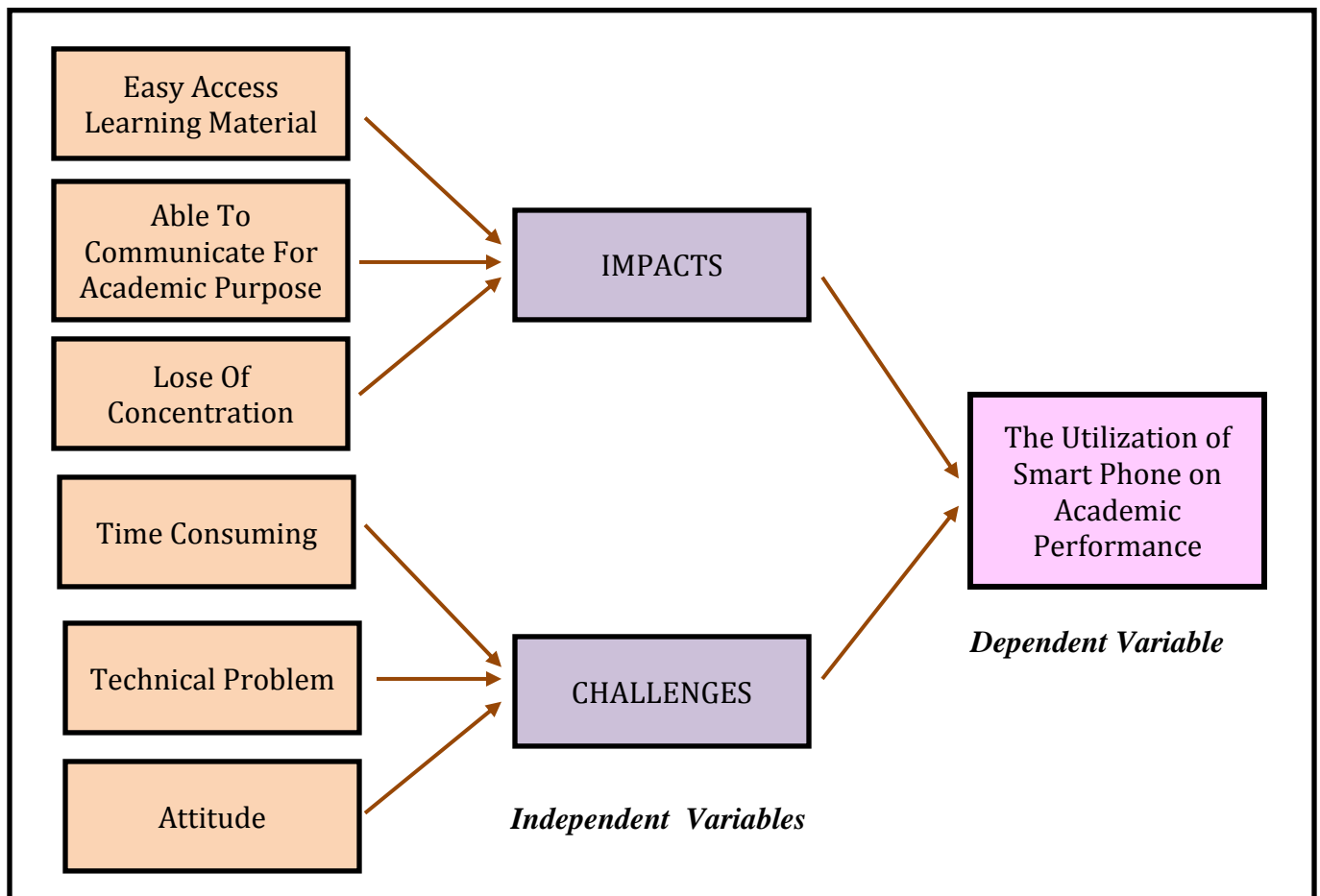

Figure 1. Proposed framework.

4. Conclusions

The smartphone is an effective device for student and teacher used for the academic purpose. Smartphone is effective tools because it is able to communicate each other, get an entertainment, access information and social networks. Every student will get a different impact on smartphone. It is because the impact of smartphone are depends on how they utilize it. The smartphone can give positive or negative impacts on academic performance. With the small size, the users are able to use a smartphone anywhere and anytime they want. The smartphone can become helpful tools for studies and can be hurtful sources of distractions. Unfortunately, the research also found that there are having several challenging in using smartphone on education performance. The challenging in using a smartphone on education performances are time consuming, student attitude and technical problem. In addition, we need to take an action on to overcome this challenge while using the smartphone especially in education performance. It is because to ensure that the student's performance on their education become more success.

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