

Influence of Smartphone Use on the Academic and Social Development of School-Going Children

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ABSTRACT

Advancement in digital technology has led to extensive use of smart phones. Technology addiction is a rising problem nowadays. Most of the children are becoming addicted to smart phones. The aim of this study is to find the impact of smart phone on children. The study reveals many negative changes that have occurred in children's behaviour and psychology. Victims of blue whale game are evidence of this fact. Children have become lethargic due to lack of physical activities as they are always busy with their smart phones. Their behaviour has changed, they tend to get irritated and fall prey of depression easily.

Key words: *Smartphones, psychology, behaviour, academics, health*

I. INTRODUCTION

Smartphones are the new generation of mobile phones, they have emerged over the last few years and already have conquered the market. Smartphones with their mini keyboards are not just phones, but have computer functions as email, calendar and address book, and office programs for reading and editing. The multimedia phone features such as camera, video, sound recordings or podcasting is advanced and can compete with specialized equipment. Smartphones can be customized with new software, and the variety of these programs is increasing. The social communication platforms (like Facebook, Twitter, Instagram, WhatsApp, etc.), GPS functions and games are especially popular [1].

Today Smartphone's enable consumers, advertisers and publishers how to better engage, socialize using the ubiquitous experience this advanced platform by leveraging it's of the firm. The focus of income statement is on the operating revenues and expenses. User groups of financial reports for decision-making require data related to all easy to use and availability characteristic.

Smartphone abuse to addiction is becoming more problematic nowadays because most students whether higher learning students or low level students are more addicted to applications found on smartphones so that they download and run numerous applications with smartphone even without Internet connection. The aim of this study is to know how the school going children of age group 6 – 12 years are using the smartphones and then find out the impact of smartphones on them.

II. BACKGROUND

With the advanced technology nowadays, smartphone is viewed as a important device and an integral part of the Malaysian society. According to last year analysis smartphone penetration has increased to 63% in year 2013 from 47% in 2012, while tablet penetration has increased almost three times to become 39% from 14% [2]. However, often use of smartphone can become a habit or dependency of student and indirectly affect their lifestyle. There are several general aspects of lifestyle have been categorized, such as health, education, psychology, socialization and security, in which may be in the positive side or the negative side.

Smartphones nowadays are much more formidable than the PCs that 10 more years ago, people are now using the smartphone to check news feed, status update and photo posting as well [3]. Microsoft-Intel Alliance as the long dominated of PCs also faced pressure to get into the market of mobile device. Soon, PCs may be replaced by

smartphone as smartphone seems to have a optimistic growth in the future although there is still million sales of PCs in every year.

Scientists issued the earliest reports that low level exposure to RF radiation of smart phone could cause a wide range of health effects, including behavioural changes, effects on the immunological system, reproductive effects, changes in hormone levels, headaches, irritability, fatigue, and cardiovascular effects. In addition, research of World Health Organization suggested this behaviour is similar to a compulsive-impulsive disorder, whereby an inability to access the services are associated with negative health consequences, including withdrawal and depression and other negative repercussions such as social isolation and fatigue [4]. According to [5], smartphones can also contribute to the deterioration of our eyes, squash our spines, give us saggy jowls, damage our hearing, damage our sleep cycle and cause dark circles under our eyes.

Meanwhile, in term of education, [6] indicated that smartphone has provided society to be exposed towards huge amount of educational and learning purposes due to internet availability and increasing demand of smartphone. Regarding the survey [7], majority of the adults think that smartphone usage contributes a positive impact towards the youth's education. Students with the help of technology are able to access educational programs [8]. For instance Dell has launched Youth Learning (an alphabetization initiative) which support the learning programs. Besides that, smartphone provides a basic human need to help students relieve their boredom and decompression between tasks [9]. However, there is some negative impact of smartphone dependency on education. Over dependency of smartphone can leads to addiction, means although there is no real need's communication, still hope to have constant communication with outside through social network [10]. According to the The Times of India: [11] experts said that our memory will be reduced and cognitive thinking will be killed when using the smartphone although it makes the life more convenient and easier. People now depend much on the search engine through smartphone cause them to become poor thinker and getting more lazy than before.

For impact onto psychology, based on another research of [6] conducted, there is a positive impact onto human psychological, smartphone is used for reduction of tension work life. Spending more than seven hours a day using smartphones and experiencing symptoms such as anxiety, insomnia and depression when cut off from the device is considered as addiction [12]. Students who are addicted to smartphones not only distract themselves from studies, but also damage their interpersonal skills. According to [6], addiction to smartphones affects our quality of sleep as well as creates friction in our social and family life.

For lifestyle of socialization, the survey shows that students have several strong socialization motives for using the mobile phone to contact both family and friends [13].

For impact of smartphone on security, [6] stated that safety of children can be known by parents with the availability of Internet connection through a Smartphone. Furthermore, by setting up password security, it can protect the sensitive data inside the smartphone and also restricts access in case the smartphone was lost or been stolen. According to [14] the data leakage from smartphone may affected our assets throughout such as personal data, corporate intellectual property, classified information, financial assets and etc. If smart phone user lost the smartphone, for example, every information like address, e-mail, log data in web browser, SMS (Short Message Service) and etc. can be exposed if there is no appropriate security solutions [15]. Next target for criminal attacks likely will be smartphone and social networking site. According to WhoCalledMyPhone.Net [16], 24% of smartphone users check their phone while driving, which can directly cause accidents or fatal accidents.

III. METHODOLOGY

The methodology employed in this study involves both secondary and primary data collection methods. Secondary information sources used for the present research include the journals, magazines and internet sources. A well-structured and administered questionnaire was prepared and distributed to the parents for data collection as primary source. Data for 100 students of the age group 6 – 12 years have been surveyed for the purpose of data collection. The data was collected based on convenience methodology. The data collected were analyzed through percentages in which the data were presented in table formats which were obtained using Excel.

IV. RESULTS AND DISCUSSION

Following table 1 shows the results and findings obtained from primary data collected through questionnaire.

Table 1: Summary of Questionnaire.

Sr. No.	QUESTIONS	ANSWERS	
		YES	NO
1	Do you have a smart phone?	100	00
2	Does your child use your smart phone?	100	00
3	The smart phone usage by your child is more than 2 hours?	95	05
4	The reasons for your child to use smart phone are online games, what's app chat, status update on facebook, you tube videos, etc.	100	00
5	Does your child listen to you while he/she is using your smart phone?	12	88
6	Does your child prefer spending time with smart phone rather than doing outdoor activities?	92	08
7	Does use of smart phone has created any differences in the social behaviour of your child?	86	14
8	Does use of smart phone by your child is responsible for his/her low grade academic performance?	74	26
9	Does long use of smart phone affects your child's health?	79	21
10	Does use of smart phone reduces the creativity of your child?	83	17
11	Do you think many a time your child wastes his/her valuable time with smart phone?	96	04
12	Does use of smart phone has reduced the real human contact of your child i.e. with his/her friends?	91	09

The results has revealed that the smartphone bring negative results or progression on children' performance academically. So there is a need to evaluate and understand better the use of smartphones for learning students because students make their choice and preference on which mobile application to use. It is also seen in the above table that almost 95% of the respondents agreed that they tend to use smartphone for about 3 – 5 hours per day on social communication sites like Facebook, twitter, Instagram, WhatsApp and the like without considering that those time spent on social network could have been used on academic related works and hence yield good results at the end of semester examinations.

V. CONCLUSION

In short, smartphone has contributed positive impacts to human, but too much dependent on smartphone also cause negative consequences. Hence, our study will put more effort on the impacts of smartphone dependency into lifestyle. Smartphone brings impact to various fields such as business, health, education, psychology, socialization and security as well. However, during our research, the target of study area is among school going children. The study reveals many negative changes that have occurred in children's behaviour and psychology. Victims of blue whale game are evidence of this fact. Children have become lethargic due to lack of physical activities as they are always busy with their smart phones. Their behaviour has changed, they tend to get irritated and fall prey of depression easily.

REFERENCE

1. Lusekelo Kibona and Gervas Mgaya, 2015. *Smartphones' Effect on Academic Performance of Higher Learning Students. A case of Ruaha Catholic University-Iringa, Tanzania. Journal of Multidisciplinary Engineering Science and Technology*, 2(4): 777-784.
2. Afrizal. (2013, September 5). *Malaysia's smartphone penetration rises by 16%. The Sun Daily*. Retrieved March 2, 2014 from <http://www.thesundaily.my/news/820932>
3. Mogg, T. (2012). "Smartphone sales exceed those of PCs for first time, Apple smashes record". *Digital Trend*. Retrieved from <http://www.digitaltrends.com/mobile/smartphone-sales-exceed-those-of-pcs-for-first-time-apple-smashes-record/>
4. WHO. (2011). *Mobile Phone Use: A Growing Problem of Driver Distraction. Journal of WHO*, pp. 1-50.

5. Coleman, C. (2013, July 21). *How your mobile can give you acne...not to mention asaggy jaw and sleepless nights*. Daily Mail. Retrieved March 18, 2014, from http://www.dailymail.co.uk/femail/article-2372752/How-MOBILE-acne-mention-saggy-jaw-sleepless-nights.html?ITO=1490&ns_mchannel=rss&ns_campaign=1490
6. Sarwar, M., & Soomro, T.R. (2013, March). *Impact of smartphone's on society*. European Journal of Scientific Research, 98 (2), 216-226. Retrieved March 18, 2014, from <http://www.europeanjournalofscientificresearch.com/>
7. King, R. (2012). *Mobile devices have positive impact on education, survey says*. Retrieved from <http://www.zdnet.com/blog/btl/mobile-devices-have-positive-impact-on-education-survey-says/68028>
8. Font, S. (2013). *How smartphones narrow the achievement gap in education*. Retrieved 23 March 2014, from <http://mobileworldcapital.com/en/article/78>
9. Knight, S. (2012, September 26). Retrieved March 17, 2014, from <http://www.techspot.com/news/50310-smartphones-cure-boredom-but-is-that-necessarily-a-good-thing.html>
10. Lee, C.-s. (2012). *Smartphone addiction: disease or obsession?* Retrieved March 18, 2014, from Korea Times: http://www.koreatimes.co.kr/www/news/opinion/2012/11/298_117506.html
11. Gehi, R. (2013, December 3). *Your smartphone is destroying your memory*. The Times of India. Retrieved 23 March, from <http://timesofindia.indiatimes.com/life-style/health-fitness/health/Your-smartphone-is-destroying-your-memory/articleshow/19412724.cms>
12. Nam, I. (2013, Jul 23). *A rising addiction among youths: Smartphones*. Wall Street Journal (Online). Retrieved March 18, 2014, from <http://eserv.uum.edu.my/docview/1411097432?accountid=42599>
13. CHEN, Y.-F. (2007). *The mobile phone and socialization: The consequences of mobile phone use in transitions from family to school life of U.S. college students*. Journal of Cyber Culture and Information Society, pp. 1-152.
14. BullGuard Security Centre. (2013). *Eight ways to keep your smartphone safe: Mobile Security*. Retrieved March 23, 2014, from <http://www.bullguard.com/bullguard-security-center/mobile-security/mobile-protection-resources/8-ways-to-keep-your-smartphone-safe.aspx>
15. Smith, M. (2011). *A Practical Analysis of Smartphone Security*. Salvendy (Eds.): Human Interface, Part I, pp. 311-320.
16. Darrell, R. (2013). *The impressive effects of smartphones on society (infographic)*. Bit Rebels. Retrieved March 18, 2014, from <http://www.bitrebels.com/technology/the-effects-of-smartphones-on-society/>