

The Identification of Student's Behaviours of Digital Amnesia Syndromes and Google Effect in the Department of Library Sciences, State Islamic University of Ar-Raniry – Indonesia,

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Abstract

Scope: The rapid change of 21st century information and communication technology has influenced the behavior of information seekers among the Internet generation. This change has revolutionized the way businesses are operated by using internet applications that unconsciously produce high dependency. This dependence is believed to have a connection with the emergence of Google Effect and Digital Amnesia syndrome. In academic practice, where information technology is an important component, technology has also changed user behavior and interaction. Therefore, this trend invites deeper research to investigate the effects and behavior of this new technology-culture phenomena.

Objective: This case study was conducted to determine the behavior of students' syndromes due to Digital Amnesia and Google Effect as a result of long exposure to technology in their studies in the Library Science Program at Ar-Raniry State Islamic University, Indonesia.

Method: This paper presented the results of a survey study that identified 110 behavior syndrome students from digital Amnesia and Google's effects. To understand how the syndrome radically affects student learning; the data presentation was in the percentages distribution from the statistical application of SmartPLS3.2.9, quantitative data analysis commonly used in quantitative study.

Finding: Results revealed that the Google and Digital Amnesia Effect syndrome were experienced by the majority of participants. The majority of students (70%) claim to be more dependent on smartphones than ever before. About 84.5% of students use a smartphone as a reminder while 70.9% state that by transferring their memory to a smartphone. They feel their concentration is more increased when the device is with them. Then 78.2% of students stated that smartphones can help them understand lessons better, and 51% of students felt more motivated to answer questions and 59% expressed more confidence to discuss new things when smartphones existed. Interestingly, even though 73.6% of students felt confused with too much information and 78.9% were annoyed with many hyperlinks. Therefore, the authors still believe that the phenomenon of dependence on Internet use in the form of Google Effect and Digital Amnesia syndrome is a normal phenomenon in the technological-cultural era, respectively 69.1% and 88.1%.

Conclusion: These findings indicate that the Google Effect syndrome, and Digital Amnesia are global syndromes that occur every millennial generation that has a significant influence on studying such high dependency. So this finding is very useful for those who see technology with an impact on learning, especially universities

Keywords: Digital Amnesia, Google Effect, Syndromes, and Information Seeking

INTRODUCTION

The adaptation of digital technology in 21st century learning practices has not only revolutionized educational goals such as gaining certain core competencies but has also influenced various psychological behaviors of students (Collins & Halverson, 2018; Brynjolfsson & McAfee, 2011; De Freitas, Morgan & Gibson, 2015) . This digital technology makes it possible to revolutionize learning practices from conventional use to digital. Therefore, this technology is increasingly popular among students who are born and live as digital natives. This happens because learning in this digital day is mostly done in various models of information technology such as social media, network games, mixed media, and smartphones (Kuss & Griffiths, 2017). Using social media for example, learning is now more fun because it connects more people with more information even globally. As a result, more and more social media users are engaging themselves with opportunities to enhance their learning with people who have the same interests and priorities in learning.

More education institutions are now aware that the important of effective media to

improve learning results as they are allowing students to access a large numbers of contents using handy technology. This is in line with online literacy promoting the sophisticated strategic ability to find information, organize and manage, and creating new knowledge. Apart from positive results, many studies have proven that too much exposures a screen it also can result technology-culture syndromes such as vision problem, strained, eyes, neck and others (Lourenco, 2019). Other recent studies revealed that a huge influences on multiple impacts on digital generations especially the one that rely the memory to online technology (Anderson & Rainie, 2012). Therefore, this phenomenon is not only resulting efficiency but also effecting syndromes that can even drop the academic achievement.

Because digital technology services are created for many purposes, users need to know not only positive things but negative results. It should be made aware that the digital generation, technology is not only to enjoy luxury, infotainment, build relationships, social networks, but also to produce increased information and knowledge. When these functions are not properly communicated, dependency on this online network device can potentially be unhealthy behavior. In other words, applications cannot be handled carefully, their presence can affect psychological disorders. As a result, further research needs to investigate digital native experiences when exposure is high with internet tools. For this reason, the aim of this project is to identify student behavior from digital amnesia and Google's syndrome effect using technology during their studies.

At present, the majority of academics who are actively involved in digital utilities are higher education students. They instantly become a digital generation that is constantly working on big data on the Internet that enriches their learning. Then gradually they become individuals who depend on free online information (Van Deursen & van Dijk, 2014). Meanwhile, Ahn, Jun, & Kim (2015) believe that this dependency is to have a connection with the emergence of Google Effects and Digital Amnesia Syndromes. Although in business practice this phenomenon is considered harmless or as a consequence of life in the technological-cultural era. However, in an academic context where technology is a vital component, the behavior of this syndrome is seen as something that gets serious attention.

Techno-cultural phenomena usually experienced can be seen in two aspects; digital amnesia which refers to information that is ignored by storing it on a digital device provided or the information can be accessed again through an online network whenever needed (Kaspersky, 2015) and the phenomenon of Google's effect is that users do not store information in the device in their own memory because they believe that they will always be on Google search whenever needed (Sparrow et al., 2011b). The phenomenon of memory transformation is actually not new in the history of human life. The behavior of sharing memory with close people or partners has long

been practiced, which is scientifically known as the Transactive Memory Theory developed by Wegner. The premise of transactive memory is effectiveness and efficiency. In other words, this theory believes that it is impossible for people to remember everything they need to share memory with a device (Wegner, Raymond, & Erber, 1991).

In addition, high confidence in technology also has implications for the decline in human memory, especially for smartphones. Previous studies to test the impact of people's trust in technology where participants were tested to read and remember questions easily remembered. Some participants were asked to save facts on the computer while others were told that their notes could not be saved. Some participants from each group were asked to recall the information. The result is that participants who believe in computers have saved their work but experience worse memory loss than participants who believe data is not stored on the computer (Sparrow, Liu, & Wegner, 2011b).

To this day, dependence on smartphones is also increasing. (Han, Kim, & Kim, 2017). conversely the level of anxiety of people getting higher if away from smartphones with some negative effects and addictions. Therefore, this phenomenon of technoculture is increasingly gaining global attention on how the syndrome resulting from Digital Amnesia and the Google Effect is suffering from millennial students at the university. Because this is a global trend due to excessive use of smartphones, more studies on including Indonesia have not been able to show more anticipatory hazard characteristics, so it is deemed necessary for this study to identify the effects and syndromes of both information and communication technology applications in modern times.

METHOD

The Library Science Department Students of State Islamic University of Ar-Ranirry were involved in online survey using the Whatsapps application group. They were about 110 people (17%) of students registered to answer the question on their behaviors of digital amnesia syndrome and Google effect and how they perceived this phenomenon. The sampling technique was carried out by random for 5 days. After survey was completed, the data was analyzed using the statistical application AMOS under quantitative method. To illustrate how student's behaviors and syndromes after radically exposed in today's techno-cultural learning in higher educational environment, the case study presented identifying students behaviors.

RESULT

• Digital Amnesia among Students

The syndromes of smartphone owning among students are very high proving by 96.4% of participants bringing smartphone at all the times for communication and information purposes. They answered survey question, "I take my smartphone with me wherever and whenever I go to access whatever information I need instantly"

Key findings: up 70% students were highly dependent on their smartphones for study and

96.4% always carry smartphones, 84.5% of smartphone is for reminders, 70.9% is for memory saving and concentration, 73.6% was confused with content overload, 78.9% disturbed concentration with hyperlinks, 51% felt more motivated to study, 59% felt so confident in discussion, 78.2% helped understand learning material, and 59.1% perceived those digital syndrome and effect as a normal phenomenon.

The next trend is smartphone dependency phenomenon. These psychological aspects among students were also reised up with 39% of students felt panicked as their smartphones are lost with data stored in. In contrary, there is 10.7% felt calm over losing the smartphone as they put that information in their own brain. About 39% students choose question "I am more depends on smartphone now...While 34% students choose survey question as, "I depend more on smartphone now". The rest participants (24, 5%) choose the question, "I am okay before and now".

This findings revealed that having smartphone for students do not only for communication and information reason but also as smart friends for transactive memory (Cherkaoui & Gilbert, 2017). The tendency to store memory digitally is generally for effectiveness and efficiency option as its capacity for memory storage and information recall whenever needed. Refer to data obtained, 89% of students put trusted on their smartphone for helpful reason of memory in wide range of information. These 89% students put their option on this survey question, "I trust my smartphones to store data that I cannot do with my own memory"

• Google effect among students

The fact that Google has taken important part in modern education in enhancing educational efficiency, effectiveness, and productivity benefiting all academic communities (Chen et al, 2011). However, when the information is a big amount and learner memory may decrease as the Google risk. Such this negative influence on the learning brain, Durodolu (2016) supported that the Studies done on the Google negative impact done by the British Research Commission Library was also noted that

the input heavily with large information is a major problem on students learning memory lowering achievement.

Today's academic has integrated digital technological information into their course so that can accessed content from the Google search engine for various purposes. Due to the high quality and credibility of information is difficult for academic to assess; the Google Effect symptoms are quite high among students. The bar chart shows how these symptoms are experienced by students in my workplace. There was 44.6% put option of survey question was searching the information directly on the Internet. About 41% tried to recall their memory. The rest 8.9% consulted with trusted friends, and only 5.4% preferred library.

When asking students' perceptions about their involvement in new technology for learning, The answer is increasing compared to before. This trend is a consequence of the development more applications useful for learning. They generally consider their involvement in new media technology in the digital era as normal. In fact, Google Effect and Digital Amnesia are ordinary phenomena that are relatively harmless. The description of this question can be seen from the perception of students (62.1%) stated that phenomenon is normal. While the students' perception on the Google Effect phenomenon is slightly lower than the Digital Amnesia phenomenon, which is 74.1%.

DISCUSSION

In business context, the phenomena of digital amnesia are considered normal, it only brings impact to business rather to people. However, in learning context, it seem so complex that needs a deeper identification as it can effect motivation and ending up low achievement such as high dependence on technology can weaken the students brain and taking action independently. This syndrome of using much technology becoming students needs for information and communication supporting their courses. Therefore, it will be the problem when uncontrolled utilizing of the technology ranging from problems of addiction, abuse, to dependency.

Even there is no specific evidence of the correlation between too much use of technology and the level of literacy drop, the report done by Global Education Census 2018 survey was that Indonesian academics have brought smartphone and other devices in courses higher than many other academics. Other evidence also mentioned that more students are the top uses of ITC higher education courses (M. Q & Hussin (2010). This evidence is important to review as there is a contradiction between the high level of internet penetration by adolescents and the low level of literacy in Indonesia's digital generation.

CONCLUSION

Although these findings indicate that the syndromes of Google effects, and digital amnesia are global phenomenal, not harmful, further longitudinal research needs to be done to assess long- term effects, especially to assess whether high dependence on smart technology will strengthen or weaken students learning ability of the their brain and taking action dependently because the brain and memory are rarely activated.

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