The Relationship between Social Media Addiction and Academic Performance based on Personality Characteristics

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ABSTRACT

As social media become more popular among society members, issues related to social media also increases especially addiction. The objective of the study is to determine the relationship between social media addiction and academic performance based on personality characteristics: Neuroticism, Extroversion, Openness to experience, Agreeableness, and Conscientiousness. The data was gathered from the distribution of questionnaire among students of the of Bachelor Information Technology and Bachelor of Science (Information Technology) programs. A total of 72 respondents had delivered their feedbacks for this study. The findings indicate that all the personality characteristics (Neuroticism, Extroversion, Openness to experience, Agreeableness, and Conscientiousness) have positive relationship with social media addiction. However, the addiction did not affect the academic performance since most of the respondents obtained the latest Cumulative Grade Point Average (CGPA) between 3.00 to 4.00.

Keywords: Social media addiction, personality characteristics, academic performance.

I   INTRODUCTION

In today's world, social media is considered as a powerful communication channel whereby almost every person uses it as a platform to socialize in the cyberspace. Simply by creating a social media account, an individual can immediately communicate with others regardless of their locations as long as there is an established internet connection. Statistics show that the number of social media users increases each year. As of January 2018, it has been reported that there are 4.021 billions global internet users and this represents 53% of world total population (Global Digital Snapshot, 2018). This portrays a very significant increment when compared to the number of users in January 2017 which was at 2.307 bilions, that is an increase of nearly 74.3%. The statistics revealed that nearly 79.5% of these are active social media users of various platforms including Facebook. Such increment signifies that the social media is getting more popular among users worldwide from year to year. In Malaysia alone, the Internet World Stats (2018) reported that the number of Facebook users is nearly 87.8% of the total number of Internet users. This shows that Facebook has become one of the significant online media for socializing. This fact is also supported by the statistic that indicates, on average, more than 11 new users register as new social media user in a second last year. This figure has significant contribute to the annual growth of social media users by 33% in South East Asia (Global Digital Snapshot, 2018).

Among the popular reasons of using social media are to keep in touch with friends and relatives, fill up spare time, share photos or videos, and be up-to-date with current news and events (McGrath, 2015). Despite the benefits that social media could potentially provides in terms of creating and establishing networks of friends, users should also be cautious of its potential harms due to the uncontrolled and inattentive use. Therefore, users should be more prudent in using social media applications as to avoid potential harms. These include the overuse and misuse of the media, which may lead to the declining in individuals' quality of life.

As social media use is becoming more popular among members of the society, issues related to it tend to vary and grow with time. Among the negative effects of social media usage are breach of privacy, cyber-bully and addiction. The addiction of social media has become a growing concern (Ceranic, 2013). Regular checking of e-mails and participating in social media are considered as more addictive than smoking cigarettes and consuming alcohol (Halverson, 2012). Furthermore, there was a news report pertaining to the effect of social media dependency on mental health which relate to selfie addiction (Stein, 2014). Once an issue is being reported in the media, it receives public attention and that gives indication that such issue may immensely become prevalent. Hence, this sparks the interests among researchers in looking into these in the light of getting some understanding on the issues, and ultimately proposing potential solutions for implementation. Among the many issues, this paper focuses on social media addiction and looks into its potential effect on users.

The results on various studies on social media addiction indicate that such addiction can happen to anyone regardless of age, gender, academic

qualification and personality characteristic (Johnson, 2016; Chowdhry, 2016; Udorie, 2015; Stein, 2014; Sherman, 2011). In addition, there are also studies that look into the relationship between social media addiction and academic performance (Hasnain et al., 2015; Skiera et al., 2015; Thuseethan & Khutanesan, 2012; Mahmood & Farooq, 2014). The studies point out that social media addiction does affect the academic performance of a student either in a negative or positive way (Hasnain et al., 2015; Mahmood & Farooq, 2014). As such, it is interesting to understand why such thing happen. Hence, we look into whether or not the users' personality characteristics relates to such results.

Even though there are many studies that relate social media addiction and academic performance based on personality characteristics, there is still a gap that needs to be narrowed. It is found that most of them tend to focus on specific types of social media (Mahmood & Farooq, 2014; Balci & Gölcü, 2013; Sherman, 2011). Therefore, this study focuses on determining the relationship between social media addiction and academic performance based on the Big Five Factor model which was originally developed by Goldman (1990) and adopted by many since then including those that studied on the relationships amongst individuals' characteristics, social media addictions, and their motivations (Mahmood & Farooq, 2014; Sherman, 2011; Ross et al., 2009). The model comprises of five personality characteristics: Neuroticism, Extroversion, Openness to experience, Agreeableness, and Conscientiousness.

II   LITERATURE REVIEW

There are many definitions of social media as mentioned in the literature. One of the definitions referred the media as a group of Internet-based applications that build on the technological and ideological foundations of Web 2.0 which allow the exchange and creation of user-generated content (Kaplan & Haenlein, 2010). Cambridge Dictionary defines social media as websites and computer programs that allow people to communicate and share information on the internet using a computer or mobile phone. Another definition of social media refers to a wide range of Internet-based and mobile services that allow people to participate in online exchanges, contribute user-created content, or join online communities (Dewing, 2012). Therefore, the social media can simply be defined as a medium for people to communicate and interact with one another regardless of where they are as long as there is an established internet connection.

Similar to social media, the word addiction also has many definitions. American Society of Addiction Medicine (ASAM) defined addiction as a primary chronic disease of brain reward, motivation, memory, and related circuiting and the characteristics of addiction are the inability to consistently abstain, impairment in behavioral control, craving, diminished recognition of significant problems with one's behavior and interpersonal relations, and a dysfunctional emotional response (http://www.asam.org/quality-practice/definition-of-addiction). The Centre for Addiction and Mental Health in Canada defined addiction as when there are presence of craving, loss of control of amount or frequency of use, compulsion to use, and use despite consequences, or known as 4C's – craving, control, compulsion, and consequences (https://www.camh.ca/en/health-info/mental-illness-and-addiction-index).

Nevertheless, the specific meaning of social media addiction is still quite vague. Mostly, the definition of social media addiction are derived from the definition of addiction of social networking addiction. However, the term social media and social networking does have some differences.

Social media is a very broad term that encompasses several different types of media, a place where a user can disseminate information to other people, allow everyone to share content that other people can share with their online connections, and a vehicle for communication (Cohn, 2011). Social media is a form of electronic communication through which users create and share information such as ideas, personal messages, and other contents (Schauer, 2015).

On the other hand, social networking is about engagement by creating relationships, communicating with readers (the social networking users), building their followers and connecting with online audience (Burke, 2013). Basically, social networking is all about developing and maintaining personal and business relationships especially through online (Schauer, 2015). Cohn (2011) regarded social networking as mutual communication whereby many strong relationships exist as a result of going online.

As such, it can be concluded that social media and social network are among the available online communication means. They differ in the sense that communication in social media is more private, whilst social networking is more public.

Despite the lack of agreed definition on social media addiction, researchers have developed various scales as efforts to get better understanding on the concept. Fro instance, a research team from University of Bergen in Norway developed a scale related to social media addiction known as Bergen Facebook Addiction Scale (Andreassen et al., 2012). The scale

was developed with the view that Facebook addiction is a specific form of Internet addiction. The developed scale has been used widely by many researchers targeting at assessing various aspects of Facebook addiction by looking into the evaluation of the addiction through the usage of Facebook (Ashraf *et al.*, 2016); Jafarkarimi *et al.*, 2016; Ryan *et al.*, 2014; Eroglu, 2016; Marino *et al.*, 2017).

Apart from that, social media addiction also relates to individuals' personality. Previous study has found that Extroversion and Neuroticism personalities are positively correlated with Facebook Addiction while Agreeableness and Conscientiousness personalities are negatively related to Facebook Addiction (Mahmood & Farooq, 2014). Another study found that a person, who scored high in Neuroticism bound to be addicted to Facebook compared to the extrovert (Sherman, 2011). This proved that whatever personality it is, there is a chance for the individuals to be addicted to social media.

Based on the previous explanation, it is not impossible for a university student to become social media addict. The may indirectly affect his or her academic performance. The more of a student being addicted, the higher the chance of their academic performance to get impaired or worse (Al-Menayes, 2015; Hasnain *et al.*, 2015; Owusu-Acheaw & Larson, 2015; Thuseethan & Kuhanesan, 2012). Nonetheless, it is evidenced from other studies that social media sites help to enhance the academic performance of students (Munkaila & Iddrisu, 2015; Al-rahmi & Othman, n.d.) through interaction with peers and teachers (Al-rahmi & Othman, n.d.).

III RESEARCH METHODOLOGY

The conceptual model used in this study is an adapted model developed by Mahmood and Farooq (2014). As this study focuses on social media addiction, a slight change was made to the original conceptual model in order to suit the purpose of this study. The conceptual model being used in this study is illustrated in Figure 1.
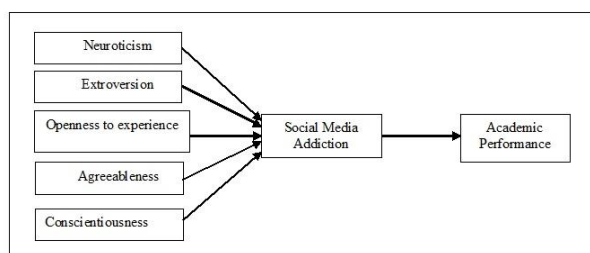

Figure 1. The Conceptual Model of The Study
Source: Shanayyara Mahmood and Umer Farooq (2014)

This conceptual model consists of independent and dependent variables. Neuroticism, Extroversion, Openness to experience, Agreeableness and Conscientiousness are the independent variables and Social Media Addiction is the dependent variable. These variables are investigated to measure the relationship between personality characteristics and social media addiction. Besides, Social Media Addiction also acts as the independent variable in order to measure the relationship between social media addiction and academic performance and the Academic Performance as the dependent variable.

In order to obtain the required data, the population taken for this study comprises of students of the Bachelor of Information Technology (BIT) and Bachelor of Science (Information Technology) (BSc.IT) programs from School of Computing, Universiti Utara Malaysia (UUM). The total number of active students from both programs is 578 students. Thus, based on the total number of the BIT and BSc.IT students, the sample needed for the study is approximately between 265 and 274 as suggested by Sekaran and Bougie (2009). Once the population and sample were determined, the questionnaires were randomly distributed to 270 BIT and BSc.IT active students. Unfortunately, only 72 students give back their responses. Even though the data obtained did not correspond to the suggestions made by Sekaran and Bougie (2009), these 72 respondents still can be used for analysis since the data obtained is the highest response rate achieved by the researcher (Denscomble, 2010). The analysis was performed using the IBM SPSS Statistics.

IV FINDINGS

The demographic profiles of the participated respondents include gender, nationality, age, last semester Cumulative Grade Point Average (CGPA) and social media account(s) owned by the respondents. The respondents for this study are 15 males and 57 females representing Malaysian (63) and foreigner (9). Majority of them (43) are between the age of 22 and 24 years old. Twenty seven respondents aged between 19 and 21 years old and two aged between 25 and 27.

As mentioned earlier, the latest semester CGPA of the respondents was collected based on open-ended questions. The CGPA was categorized based on First Class Degree (3.67 − 4.00), Second Upper-Class Degree (3.00 − 3.66) and Second Lower Class Degree (2.00 − 2.99) (Graduation Rules for Bachelor Degree, n.d.). After conducting data analysis, it was found that 59 respondents has latest semester CGPA between 3.00 until 3.66, five respondents have latest CGPA of 3.67 − 4.00 and eight respondents with latest CGPA of 2.00 − 2.99.

The respondents were also questioned on the number of social media account that they have. The

analysis indicates that most respondents (22) own more than five social media accounts at one time whilst only four (4) with one account. Those with two, three, four and five accounts are three (3), 15, 16, and 12 respectively. The overall results are summed up in the Table 1.

Table 1. Demographic Profile of Respondents.

Personal Information		Frequency	Percentage (%)
Gender	Male	15	20.8
	Female	57	79.2
Nationality	Malaysian	63	87.5
	Non-Malaysian	9	12.5
Age	19-21 years	27	37.5
	22-24 years	43	59.7
	25-27 years	2	2.8
Latest semester CGPA	2.00 - 2.99	8	11.1
	3.00 – 3.66	59	81.9
	3.67 – 4.00	5	6.9
Social media account/accounts own by respondents	1	4	5.6
	2	3	4.2
	3	15	20.8
	4	16	22.2
	5	12	16.7
	More than 5	22	30.6

Figure 3 shows the academic performance of the respondents as measured using their previous CGPA. As can be seen from the figure, eight (8) respondents have CGPA between 2.00-2.99, fifty-nine (59) between 3.00-3.66, and five (5) between 3.67 until 4.00.
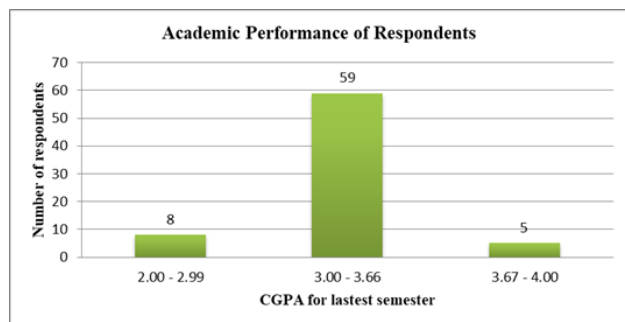
Figure 2. Academic Performance of Respondents.

Table 2 shows the Pearson correlation between personality characteristics (Neuroticism, Extroversion, Openness to Experience, Agreeableness and Conscientiousness) and social media addiction. The correlation coefficients or known as r-values for each of these personality characteristics are .176, .049, .192, .000 and .094, respectively. From the result, it is clearly shown that all the r-values for the relationship have positive value and this indicates that the relationship between personality characteristics and social media addiction is a positive linear

correlation. Moreover, all the r-values are between 0.00 - 0.19. Therefore, the relationship between these variables fall in the very weak category (Pearson's Correlation, n.d.).

Table 2. Pearson Correlation of Personality Characteristics and Social Media Addiction.

	N	E	O	A	C	SMA
Neuroticism (N)	1					
Extroversion (E)	.369**	1				
Openness to Experience (O)	.5.35**	.576**	1			
Agreeableness (A)	.193	.565**	.242*	1		
Conscientiousness (C)	.282*	.383**	.207	.450**	1	
Social Media Addiction (SMA)	.176	.049	.192	.000	.094	1

*p<.05 **p<.01 **Correlation is significant at the 0.01 level (2-tailed)

As mentioned earlier, the academic performance of the respondents was measured by using their lastest semester CGPA. Based on the analysis, only eight (8) respondents have CGPA between 2.00-2.99, whereas 64 between 3.00 to 4.00. Hence, it can be concluded that social media addiction does not really affect the academic performance of the respondents as most of the respondents' CGPA scores fall between 3.00 to 4.00.

V   DISCUSSION

Based on the analysis, it is proven that social media is gaining attention and popularity among university students as most of the respondents in this study have at least three social media accounts at a time, instead of one or two accounts only.

Based on the first personality characteristic analysis, Neuroticism is found to have a positive linear relationship with Social Media Addiction as the r-value is .176. This signifies that if a person scores high in Neuroticism personality, the chance for a person to be addicted to social media is also high. However, the relationship is considered as very weak. This result is similar to the previous study conducted by Andreassen et al. (2013). The weak relationship between Neuroticism and Social Media Addiction can be relate to the respondents emotion stability. All the respondents may be in a good condition during the data collection period which leads to emotional stability. If their emotion are unstable, they may tend to be more engaged with social media in order to get rid of their problems (Mahmood & Farooq, 2014).

The second personality characteristic is Extroversion. The Extroversion has a positive linear relationship with Social Media Addiction as the r-value obtained is .049. This relationship indicates that if the Extroversion scores increase, the social media addiction also increases. Again, this relationship is considered as very weak. This result is parallel to that of the studies from Sherman (2011) and Andreassen et al. (2013). The relationship between Extroversion and Social Media Addiction is very weak because the respondents in this study may not really enjoy social situation via social media. Through social media, an extrovert obviously cannot feel the presence of crowd. In addition, the extrovert may also prefer to talk with others face-to-face rather through the media. By doing that, the extrovert may feel more satisfied.

The third personality characteristic is the Openness to experience, which also presents a positive linear relationship with the Social Media Addiction. As the r-value obtained is .192, the relationship is considered as very weak. This finding is supported by the study conducted by Mahmood and Farooq (2014). However, the finding differs from those by Sherman (2011) and Andreassen et al. (2013), who found found that Openness to experience has negative relationship with Social Media Addiction (Andreassen et al., 2013; Sherman, 2011). In this study, the weak relationship between Openness to experience and Social Media Addiction may be caused by the information provided in the social media. For example, the contents of the social media accessed by the respondents may seem dull because the personality is often associated with seeking newness characteristic. However, it is not limited to the information only. The user interface of social media can also be taken into a consideration. The users may seem bored with the current user interface, which may lead to the reduction of time taken in using the social media.

The r-value of the relationship between the fourth personality characteristic, Agreeableness and Social Media Addiction is .000, which suggests a positive relationship. This relationship contradicts the one established in the previous studies (Andreassen et al., 2013; Mahmood & Farooq, 2014). Even though the finding has shown a positive result, it is not good due to the characteristics in the Agreeableness personality. Among the characteristics that belong to the Agreeableness person are, trust in other individuals, honest and straightforward communication, unselfish and cooperative behavior, compliance rather than disobedience, humanity and modesty,

tender, and sympathetic (Moss, 2016; Costa & McCrea, 1992). Based on the characteristics of the Agreeableness personality, it seems that the possibility of an Agreeableness person being exposed to fraud in the social media is high.

The fifth personality characteristic is Conscientiousness. From the correlation analysis between Conscientiousness and Social Media Addiction, the r-value obtained is .094. Again, the relationship is a positive linear correlation. However, this result is totally different from the previous studies (Mahmood & Farooq, 2014; Andreassen, 2013). This indicates that those who are comfortable to follow socially prescribed norms for impulse control, goal-directed, able to delay satisfaction, planful, competent, more prone to order and structure, motivated to achieve goals, dutiful, disciplined, considerate and deliberate, and are to follow norms and rules (Jackson et al., 2010; Robert, n.d.; Moss, 2016; Costa & McCrea, 1992) are also deemed to engage with social media addiction. This proved that individuals practicing regular life are also not excluded from social media addiction.

Based on the above findings, the overall personalities (Neuroticism, Agreeableness, Openness to experience, Agreeableness, and Conscientiousness) show that there is a positive relationship towards social media addiction. The findings of this study provide new contribution in terms of its positive relationships that has never been provided by previous studies, which highlighted that the overall personality characteristics have negative relationship with social media addiction (Błachnio & Przepiorka, 2016). The overall findings also indicate that regardless of any personality characteristics, a user has an equal chance of being exposed to social media addiction. Moreover, one of the possible reasons of having positive relationships between all personality characteristics and Social Media Addiction is human relations. Therefore, without strong human relations may lead to an urge to engage with social media.

In terms of academic performance, as mentioned earlier, it was measured through the CGPA provided by the respondents. The results show that most of the respondents (56 of 72 respondents) obtained CGPA between 3.00 to 4.00. Thus, it can be concluded that the social media addiction does not affect the academic performance of the students. This result differs from the previous studies (Hasnain et al., 2015; Owusu-Acheaw & Larson, 2015; Thuseethan & Kuhanesan, 2012) whereby the social media addiction does affect the

academic performance because of the last minute examination preparation. During that hectic week, it is impossible for the students to keep on hanging to the media. By doing it, they can give more attention towards their revision.

VI CONCLUSION

In general, this study has managed to meet its objectives. As mentioned earlier, the main objective of the study is to determine the relationship between social media addiction and academic performance based on five personality characteristics: Neuroticism, Extroversion, Openness to Experience, Agreeableness, and Conscientiousness. All of the personality characteristics (Neuroticism, Extroversion, Openness to Experi-ence, Agreeableness, and Conscientiousness) show positive relationships with social media addiction. Even though the relationship is very weak, the presence of addiction towards the social media addiction is still there. Thus, there is a tendency for individuals to become more addicted to the social media.

This study also found that social media addiction does not really affect the academic performance of the students even though it is proven that there is a tendency for the student to be addicted to the media. This can be taken into account as an indicator for the possibility of its occurrence in the future. Hopefully, this study will help the university authority to take any relevant precautionary measures before it is too late.

Although this study focuses on social media in general, the results obtained are not much different from the previous studies which focused on specific social media (Mahmood & Farooq, 2014; Sherman, 2011; Blachnio & Przepiorka, 2016; Andreassen et al., 2013). This proved that regardless of the social media types used by the user, there is always a chance for a user to become addicted to the media.

VII RECOMMENDATION

The findings of this study indicate that there is a positive relationship between personality characteristics (Neuroticism, Extroversion, Openness to experience, Agreeable-ness, and Conscientiousness) and social media addiction among degree program students. In the future, the upcoming research may focus on master or doctorate program students since postgraduate students are also exposed to the social media addiction such as Facebook (Zeinab et al., 2014). Furthermore, the comparison between the Information Technology (IT) students and non-IT students can also be made. Future study may also compare the personality characteristics, social media addiction and academic performance of the IT students and non-IT students as this study only focuses on IT students. Finally, as this study measured the academic performance based on the latest semester CGPA, it is suggested that future research measures the academic performance from other perspectives such as student participation in class activity and outcome of course learning. This may provide new insight regarding the relationship between social media addiction and academic performance.

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