

INTERNET ADDICTION AND CYBER ETHIC ISSUES AMONG STUDENTS FROM SECONDARY SCHOOL IN MALAYSIA

¹SULAIMAN, KRISTY ELITY, ²CHOON KEONG, TAN

^{1,2}Faculty of Psychology and Education, Universiti Malaysia Sabah (UMS), Kota Kinabalu, Sabah, Malaysia
E-mail: ¹kristy.elity@gmail.com, ²cktanums@gmail.com

Abstract- This paper aims to examine the level of internet addiction and its relationship with cyber ethic issues among students from a secondary school located in a rural area in Malaysia. This paper focuses on identifying the level of internet addiction among students and determine the relationship between internet addiction with the four (4) main issues in cyber ethics: Privacy, Accuracy, Property, Access (PAPA). A total of 275 respondents were randomly selected regardless of factors such as gender, age, and computer knowledge using paper-based questionnaire. The questionnaire consists of 19 items to test the level of internet addiction and 20 items to gather information on cyber ethic issues. Data was then analyzed using Statistical Package for Social Sciences (SPSS) 24 which uses descriptive statistics (frequency and percentage) to define the level of internet addiction among students and using the Pearson correlation test to determine the relationship between internet addiction and the cyber ethic issues. Results shows that there is a significant difference on internet addiction level among mild, moderate, and severe. A percentage of 13.82% students are in mild level of internet addiction, 76.36% are in moderate level of internet addiction while only 9.82% are in the severe level of internet addiction. Finally, it was depicted that there was a significant positive relationship between internet addiction and Accuracy, Property and Access whereas there was a negative relationship between internet addiction and Privacy.

Keywords- internet addiction, cyber ethics, PAPA

I. INTRODUCTION

In accordance with the advancement of internet usage, cyber ethics has been heavily debated especially in education sector. As communication through the internet has become an essential part of daily life, there is no doubt that new ethical issues could arise. These new ethical issues could be positive or negative and can affect academic environment. Jamil and Shah (2011) mentioned that “technology facilitated in terms of management, communication, administration, coordination, development, collaboration and distribution of learning activities”. There was notable transformation in teaching and learning mechanism and increasing source of information. As such, ethical issue towards computer use is likely to emerge into the academic environment.

In this modern era, the usage of internet among students has been pervasive. Based on statistics taken from Internet Users Survey 2016 by the Malaysian Communication and Multimedia Commission (MCMC) in year 2016, internet users from education sector are proven to be influenced by the level of education. The percentage of Internet users by education attainment is dominated by secondary school with 37.1% followed by tertiary (34.3%), and primary school (8.7%). From this result, it is evident that most internet users come from secondary school and this may lead to cyber ethics issues. A previous study on computer ethics in Malaysia focuses only on accuracy, privacy and pirating of intellectual property (Masrom, Ismail, Anuar, Hussien, and Mohamed, 2010) within the business perspective. With the current rapid changes in technology and ethical issues that arise, people and society have become more

aware with their surroundings. The study concludes that the three computer ethics issues (accuracy, privacy and pirating of intellectual property) need to be taken seriously (Masrom et al., 2010).

Most recent studies on computer ethics have been debating about the attitude and perception towards computer ethics (Masrom and Ismail, 2008; Musa and Ismail, 2012; Inonu, Cumhuriyet, and Dokuz, 2011; Jamil, Tariq, and Shah, 2013). All these studies were done in various academic organizations with different levels of respondents around the world. According to Faryadi (2011), cyberbullying events can prevent students from getting good results in their studies. The same study states that 13% of its respondents were emotionally suffering because they were victims of cyberbullying. It was also reported that 85% of respondents that experience cyber bullying leads to emotional and psychological stress. Other than that, 16.6% of the respondents told that they were being bullied within their university. According to the study, a large part of the respondents agreed that cyberbullying could affects students’ academic performance.

This paper solely focuses on investigating the level of internet addiction and the relationship between internet addiction and cyber ethic issues among students in Malaysia.

II. LITERATURE REVIEW

2.1. Internet Addiction (IA) Issues

A study in Thailand by Wanajak K. (2011) conclude that the amount of time spent on the Internet among secondary school students in Chiang Mai, Thailand is related to gender, availability of Internet access at home, using the Internet alone, as well as attending

private institutions of learning. Internet addiction in turn correlates with the amount of time spent on the Internet per week with the mean time of 29 hours per week an indicator of Internet addiction.

A study about Internet addiction by Kapahi et.al (2013) focuses on Internet usage amongst Malaysian youth that mostly went to college and or university concludes that this narrow segment of the society is susceptible to Internet addiction. This study uses online survey method with a modified Internet Addiction Test (IAT) to gather data with 203 participants took part in the survey. Result shows there is a high risk of internet addiction among Malaysian youth especially those in the age range of 18 – 25. Even though the addictive behaviour may not harm anyone but it is always depending on the individuals' intention, action, and self-discipline especially ethical behaviour when using the Internet.

According to a statistic reported by Malaysian Digital Association (MDA) in 2016, Malaysians spend an average of 5.1 hours a day on the internet, 2.8 hours a day on social media and 47% Malaysians access websites from their mobile phone. It is also reported that Malaysians spend an average of 18 hours using internet each week, which comprises of 7.2 hours on watching online videos while 10.6 on TV. 42% of Malaysian netizen watch TV content and movies via the internet and 80% stream or download online video content every month (MDA, 2016). These statistics shows that many Malaysians are prone to do either unethical or ethical behaviour online.

2.2. Cyber Ethics Issues

PAPA was discussed by Richard O. Mason in year 1986 in his article published by Management Information Systems Research Center, University of Minnesota. This framework has been used widely by researchers especially in topics related to computer ethics. PAPA presents four main issues in cyber ethics: Privacy, Accuracy, Property, Accessibility. Mason mentioned that privacy is referring to what information about someone or their acquaintance can be revealed to others? If it is to be revealed, what is the condition and safety of the information? In a recent study, privacy is explained as the protection of data by an individual who could decide to hold data privately and to make decisions whether to share it and be assured that data shared are kept safe (Woodward et.al, 2011). Accuracy is the issue that was triggered by privacy. When an information is shared, the individual who shared it could alter the information. This issue spotlights on who is responsible for the authenticity and trustworthiness of information and determining who is responsible for the inaccuracy of information. Invalid information can be an advantage to those benefitting from it and could damage other people lives (Mason, 1986). Property is the concern about intellectual property rights. Mason questioned who owns the information and what are the cost of exchange of information?

Other than that, he also highlighted about transmission channel that could be used to transmit the information. Kuzu (2009) claimed that this issue was the most debated about ethical issue. Once information is produced, the capacity for it to be replicated is high and this confirms that intellectual property can be easily invaded (Mason, 1986). Access refers to the accessibility of information. According to Mason (1986), literacy is the most important approach to access any information. Literacy in this manner comprises of three main things; An individual must have intellectual skills that enable the individual to deal with information, for instance, reading, writing, reasoning and calculating; An individual must have access to the information technologies that store, convey and process information; An individual must have access to the information itself. This issue has to do with the privilege or right of an individual to access the information (Mason, 1986).

Mobile and wireless devices have assisted students to search for information they want anytime and anywhere. Hosny & Fatima (2014) claimed in their study that there is a need for students to be aware of the seriousness of that unethical behaviour. A study by Jamal et.al (2016) aims to highlight the current situation of cyber ethics that is dominant among internet users. It was evident in the study that there is a positive attitude towards the whole concept of cyber ethics. On another perspective, a study in South Africa reported students are aware about software piracy is but feels that it is not unethical to copy software from the Internet. The students also understand that using technology to cheat in academic is not right and should not be done (Cilliers, 2017).

III. RESEARCH HYPOTHESES AND INSTRUMENT

3.1. Research Hypotheses

There are two (2) hypotheses in this paper:

H₁: There is no significant difference on internet addiction level among mild, moderate and severe.

H₂: There is no significant relationship between internet addiction and cyber ethics issues.

3.2. Instrument

Survey method using questionnaire was used in this study to collect data. The instrument used in this study is a questionnaire modified from a published paper titled Cyber ethics and Internet Behaviour of Malaysian Primary Education Students (Masrom et.al, 2013) with 20 items and the Internet Addiction Test (IAT) by Young (1998) with 19 items.

275 respondents were randomly selected without regard to factors such as class, gender, age, and computer knowledge. Data that was gathered will be analyzed using Statistical Package for Social Sciences (SPSS) 24. Statistical method used to analyze the data

are descriptive statistics to test H_1 and correlation testing to test H_2 .

IV. RESULTS AND DISCUSSION

4.1. Demographics results

The result on respondents' demographic include gender and age. Result shows that male students represent 52% for a total of 143 students and female students represent 48% for a total of 132 students. Meanwhile, 14 years old represent 21.1% for a total of 58 students, 15 years old represent 13.5% for a total of 37 students, 16 years old represent 41.8% for a total of 115 students, and 17 years old represent 23.6% for a total of 65 students. Table 1 shows the demographic result.

Table 1: Demographics Result

Variable	Description	Percentage (%)
Gender	Male	52.0
	Female	48.0
Age	14 years old	21.1
	15 years old	13.5
	16 years old	41.8
	17 years old	23.6

4.2. Findings on Hypotheses Testing

The level of internet addiction was determined according the criteria of determining levels by Torrance, Ball, and Safter (1992). The score range was categorized as 1 - 32 are in mild level of internet usage, 33 - 63 score in moderate level and 64 - 95 score in severe level as shown in Table 2.

Table 2: Internet addiction level and score

Internet Addiction Level	Score
Mild	1 - 32
Moderate	33 - 63
Severe	64 - 95

Table 3 shows the result of level of internet addiction according to gender. It shows that 91 (63.6%) male students are in mild level, 51 (35.7%) male students are in moderate level while only 1 (0.7%) male student in severe level. Meanwhile, for female students, 69 (52.3%) are in mild level, 62 (47%) are in moderate level, and 1 (0.8%) is in severe level.

Table 3: Level of internet addiction according to gender

	Male		Female	
	Frequency	%	Frequency	%
Mild	17	11.9	21	15.9
Moderate	113	79.0	97	73.5
Severe	13	9.1	14	10.6
Total	143	100	132	100

Result in Table 4 shows that the highest percentage is from mild level with 13.82% (N=38) followed by moderate level at 76.36% (N=113) and lastly severe level 9.82% (N=27). According to Young (1998), those in mild level of internet addiction are an average online user that may surf the Internet longer periods but are still able to control their usage. The students in the moderate level of internet addiction

described that they are experiencing either occasional or frequent problems because of the use of Internet and they should consider the full impact of Internet's usage in their life. Lastly, those in severe level of internet are those who facing significant problems in life due to their use of Internet.

Table 4: Summary of level of internet addiction

Level	Frequency	%
Mild	38	13.82
Moderate	210	76.36
Severe	27	9.82
Total	275	100

Correlation test was performed to determine the relationship between internet addiction and the cyber ethic issues (PAPA). Results shown in Table 5 shows that Internet Addiction is significantly and negatively related to Privacy ($r = -.103, p > 0.01$). Internet Addiction is significantly and positively related to Accuracy ($r = .193, p < 0.01$). Internet Addiction is significantly and positively related to Property ($r = .375, p < 0.01$). Lastly, Internet Addiction is significantly and positively related to Access ($r = .274, p < 0.01$).

Table 5: Correlations between internet addiction and cyber ethics issues

		Privacy	Accuracy	Property	Access
Internet Addiction	r	-.103	.193**	.375**	.274**
	p	.087	.001	.000	.000
	N	275	275	275	275

** Correlation is significant at the 0.01 level (2-tailed)

The summary of hypotheses testing is shown in Table 6. H_1 was rejected because there was a significant difference on internet addiction levels among mild, moderate and severe as shown in Table 4. H_2 testing shows that internet addiction does not establish relationship with privacy while accuracy, property, and access does establish positive relationship with internet addiction.

Table 6: Summary of hypotheses testing

Hypotheses	Conclusion
H_1 : There is no significant difference on internet addiction level among mild, moderate and severe.	Rejected
H_2 : There is no significant relationship between internet addiction and cyber ethics issues. IA Privacy → IA Accuracy → IA Property → IA Access →	Rejected Accepted Accepted Accepted

CONCLUSION

In conclusion, the results of internet addiction indicate that most students in the moderate level of internet addiction justifies that the level of internet addiction is not in a critical level. However, it is recommended that students are being educated about the effects of internet addiction. This paper also revealed that internet addiction affects several cyber ethic issues (accuracy, property, access) and it is also recommended that cyber ethics awareness should be emphasized in schools through campaigns or seminars. Outcome of this study is important to give additional information to existing literature on internet addiction and cyber ethics in education environment. The limitation of this study was the sample is only from one public school in rural area. Future research can improve the study by taking samples from several public schools to generalize the result.

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