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The Relationship Between Internet Attitude and Internet Addiction

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Abstract: Very limited studies have attempted to investigate the relationship between internet attitude and internet addiction. To this effect, this study reports a study aimed at investigating the relationship between internet attitude and internet addiction. Adopting a survey research method involving 128 students, the findings suggest that overall; the respondents of this study have positive Internet attitudes and are not experiencing Internet addiction. In addition, the findings indicate that there is a weak relationship between Internet attitude and Internet addiction.

Key words: Internet attitude, internet addiction, students, relationship, Malaysia

INTRODUCTION

In general, Internet is defined as a large network. Shelly *et al*. (2005) define Internet as a large network that connects the whole world. Olatokun and Ajiferuki (2006) stated that Internet is a vast network of computers that connects millions of people worldwide. Internet is a worldwide information network connecting millions of computers also called Net (Burke *et al*., 2005). Internet attitude is defined as people's evaluation, feelings and tendencies toward the Internet. However, Asan and Koca (2006) define Internet attitudes as conceptions Internet and the ways of thinking about the Internet and the World Wide Web. On the other hand, Spacey *et al*. (2004) describe Internet attitude as the affecting behaviour on the efficacy of the Internet and these attitudes are open to influence. Maisel defines the term Internet addiction as excessive, non-essential use of the internet that causes psychological, social or physical problems for the user. Young (2007) describes Internet addiction as a broad term covering a wide-variety of behaviours and impulse-control problem. Griffiths (2005) stated that Internet addiction is used to describe excessive Internet use; it has been referred to as the term Internet addiction disorder, Internet addiction syndrome and pathological Internet use and as with other addictions, Internet addiction features the core components of other addictive behaviour such as salience, mood modification, tolerance, withdrawal, conflict and relapse and can be defined as a repetitive habit patterns that increases the risk of disease and/or associated personal and social problems. Mining the literature unveiled that studies investigating Internet attitudes and Internet addiction has been very extensive. However, very limited studies have attempted to investigate both topics in one single study. It is because of this reason it is really unknown whether Internet attitude would contribute towards Internet addiction. Against this concern, this research reports a study that attempt to address this gap. Specifically, this study is aimed at ascertaining whether there is a relationship between Internet attitude and Internet addiction.

LITERATURE REVIEW

Types of Internet addiction: There are few terminology used to refer to Internet-related behaviours. Chou and Hsiao (2000) and Young (1996) used the term Internet addiction in their studies. Goldberg used the term Internet Addiction Disorder whilst Davis (2001) and Morahan-Martin and Schumacher (2000) used the term Internet pathological use and Scherer (1997) use the term Internet dependency in the discussion of their research (Table 1).

Previous studies on Internet addiction: Many original researches on Internet addiction are actually clinicians who are interested in conducting a survey on the Internet addiction issues because most of the studies relate Internet addiction with psychological issues. As stated by Young (2007) much of the literature explores the psychological and social factors underlying Internet

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Table 1: Types of Internet addition

Types of Internet addiction	Description
Cyber-sexual addiction	Cyber-sexual addiction is addiction to adult chat room or cyber-porn. This type of addiction may have determined Internet user to get access to pornographic websites despite the use of the most sophisticated parental control software
Cyber-relationship addiction	Cyber-relationship addiction is addiction towards building online friendships made in chartrooms or cyber-porn. To this type of Internet addict, online relationships in chat rooms become more important than relationships with family and non-Internet friends. Concerns that the individual may attempt to create serious relationship with wrong individual as there is no way of knowing the real person over the Internet
Net compulsions	Net compulsions consist of compulsive gambling, day trading or auction shopping. This type of Internet addict may have users participate in online gambling or do online shopping thus it can be very expensive
Information overload	Information overload involve compulsive Web or database surfing. This type of Internet addicts exist due to the amount of unbounded information available on the Internet. Some individuals may become obsessed with tracking down certain types of information and organizing it
Computer addiction	Computer addiction involves compulsive game playing or programming where individuals tend to play games at most of the time compared to other activities

addiction and often researchers identified Internet addiction as unrecognized clinical disorder that impact a user's ability to control online use to the extent that it can cause relational, occupational and social problems. In this study, he investigates the efficacy of using Cognitive-Behavioural Therapy with Internet addicts and the results shows that people would be able to decrease thoughts and behaviours associated with compulsive Internet use.

Chou and Hsiao (2000) studied Internet addiction in 910 Taiwanese college students. They were studied by using Internet-Related Addictive Behaviour Inventory (IRABI) and Young's Diagnostic Questionnaire (YDQ). The results show that 5.9% of these students were recognized as Internet addicted. In 2001, Wang (2001) conducted a study on 293 Australian college students using Internet Addictive Disorder Diagnostic Criteria (IADDC). The finding shows that 9.6% of the respondents were identified as Internet addicted.

From a survey done by Breakthrough in 2002, 14.7% of 1058 Hong Kong youths had two or more symptoms of Internet addiction which have been defined in Young's Diagnostic Questionnaire (YDQ). Johansson and Gotestam (2004) conducted a study on Norwegian youth using Young's Diagnostic Questionnaire (YDQ). The findings show that 10.66% of the respondents problematic Internet use. Sally conducted a survey on Internet addiction for undergraduates in Hong Kong. Four hundred and ten data samples were collected through questionnaires from undergraduates of eight local universities. Using Young's Internet Addiction Test (IAT), 18% of the respondents were identified as excessive Internet users, showing the prevalence of Internet addiction among undergraduates in Hong Kong. Results of statistical analyses show that academic performance is the most important predictor of Internet addiction followed by behavioural control, gender and attitude toward using the Internet.

Research conducted by Cao and Su (2006) suggests that Internet addiction is not rare among Chinese adolescents. A total of 2620 high school students from four high schools in Changsha city were involved in this study. The result from this study found that adolescents with Internet addiction posses different psychological features when compared with those who use the Internet less frequently. Kheirkhah *et al*. (2008) conducted study involved 1856 Internet user volunteers' from Mazandaran province cities in Iran and found that Internet addiction is frequent among northern Iranian Internet users.

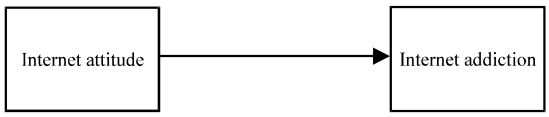

Fig. 1: Research framework

Research framework: The research framework for this study is shown in Fig. 1. Attitude towards Internet is defined as the independent variables while the Internet addiction is defined as the dependent variables. The framework is developed based on the research of Asan and Koca (2006) and Young's Internet Addiction Test (IAT). From the research framework, this study therefore proposes the following hypothesis: H1: Attitudes towards Internet is significantly correlated to Internet addiction.

MATERIALS AND METHODS

Research design is a process to design the research gather to requisite data and analyze the data to get the results. Research design is used to structure the research, to show how all of the major parts of the research project; the sample of groups, measures, treatments or programs and methods of assignment, work together (Trochim and Donnelly, 2001). As defined by Sekaran (2003), population refers to the entire group of people, events or things of interest that researcher wishes to investigate and sample is a subset of the population. The population in this study is the entire diploma students who studies under the

Universiti Teknologi Malaysia (UTM) franchised program in Institut Teknologi Perak, Malaysia (ITP) therefore the population consists of 314 students. The sample size for this study is 128 students. The respondents who participate in this study were selected randomly. The collection of data is done through survey questionnaires. Twenty questions were developed to examine on the students' attitude towards Internet. Interval scale is used to measure attitudes towards Internet in this study. The variables are tapped on five-point Likert scales; Strongly Disagree, Disagree, Undecided, Agree and Strongly agree. The questions were developed based on Asan and Koca (2006). On the basis of previous studies by Young's Internet Addiction test, twenty questions were developed to test the Internet addiction among the Diploma students in ITP. Interval scale is also used to measure Internet the level of addiction in this study. The variables are tapped on five-point Likert scales; rarely, occasionally, frequently often and always. Data were collected between 16-27 August, 2010. A total of 150 questionnaires were distributed to the diploma students under UTM franchised program. Excluding those surveys that were not returned back, the overall effective response rate was 85% that is 128 of 150. The participation rate was high due to data collection during lecture time.

RESULTS AND DISCUSSION

Relibaility analysis: Reliability analysis is a measurement on the consistency and stability of data (Sekaran, 2003). This study used Cronbach's alpha to measure the reliability. Cronbach's alpha is a reliability coefficient that indicates how well the variables in a set are positively correlated to one another and can be considered good if the reliability coefficient is near to 1 (Sekaran, 2003). If the reliability coefficient obtained is closer to 1.0, the internal consistency reliability of the measures used in the study can be considered good and reliability coefficient than has value <0.60 can be considered poor. The results show that reliability coefficient for the independent variable is 0.879 while for the dependent variables is 0.912. Thus, the consistency reliability of the measures used for the both dependent and independent variables in this study is considered to be very good.

Demographic profiles of respondents: Table 2 shows the demographic profiles of the respondents. Majority of the respondents are female which represent 55.5% and the remaining 44.5% are male respondents. The majority of the respondents were aged between 20 and 21 years which represent 49.2%. A total of 37.5% of the respondents were aged from 18-19, 11.7% aged from 22-23 and only 1.6% of the respondents aged 24 years old and above. Students need to complete the diploma courses in 3 years under normal circumstances. However, there are few cases where students have to extend their period of studies due to various factors.

Table 2: Demographic profiles of respondents

Factors	Frequency	Percentage
Gender		
Male	57	44.5
Female	71	55.5
Age group		
18-19	48	37.5
20-21	63	49.2
22-23	15	11.7
≥24	2	1.6
Program		
Business	35	27.3
Accounting	33	25.8
Engineering	25	19.5
IT/Multimedia	35	27.3
Experience in using Internet		
<1 year	9	7.0
1-3 years	40	31.3
4-6 years	50	39.1
≥7 years	29	22.7

In terms of program enrolled, most of the respondents are enrolled for diploma in Business Management and also Diploma in Computer Science (Information Technology and Multimedia) which represents 27.3% each. The 25.8% enrolled for diploma in Business Management (Accounting), 19.5% for diploma in Electrical Engineering (Mechatronics). As shown in Table 2, majority of the respondents in this study do have 4-6 years of Internet experience which represents 39.1%. Only 7.0% of the respondents have <1 year experience with Internet. These results correlate the facts that the respondents were born in the information age thus they have been introduced to Internet at early stage and become Internet savvy at young age.

Internet usage behavior: Table 3 and 4 show the Internet using behaviour of the respondents. It can be observed that most of the respondents agreed that they rarely used Internet for online gaming and this shows that online gaming is not one of the important factors for the students to use Internet. As shown in Table 3, only 13.3% of the respondents affirmed that rarely used Internet for e-Mailing. This shows that e-Mail is one of the factors for the use of Internet among diploma students under UTM franchised program in ITP. The findings also revealed that majority of the respondents rarely used Internet for online shopping and this is because the respondents are students and still studying. The majority of the respondents also stated that they always use Internet for the purpose of information search (41.4%). Only small percentage (1.6%) respondents rarely used Internet for

Table 3: Internet using behavior 1

Response	Online gaming (%)	e-Mailing (%)	On-line shopping (%)	Information searching (%)	Film/Video downloading
Rarely	33.6	13.3	76.6	1.6	12.5
Occasionally	31.3	25.8	13.3	10.2	14.1
Frequently	12.5	25.8	4.7	20.3	26.6
Often	9.4	14.8	3.1	26.6	19.3
Always	13.3	20.3	2.3	41.4	27.3

Table 4: Internet using behavior 2

Response	Online chatting (%)	e-Banking (%)	Bill payment (%)	Doing homework (%)	Music downloading
Rarely	12.5	64.1	76.6	10.2	10.9
Occasionally	10.9	14.1	12.5	16.4	8.6
Frequently	18.0	13.3	5.5	26.6	14.1
Often	28.1	7.8	4.7	21.9	27.3
Always	30.5	0.8	0.8	25.0	39.1

searching information. Most of the respondents in this study (27.3%) always use Internet for film/video downloading.

As shown in Table 4, the majority of the respondents pointed out that they always use Internet for chatting and this represent 30.5%. Most respondents also indicated that rarely use Internet for e-Banking purposes and this could be because that they were still students who have less necessity to use e-Banking services. In the same light, most of the respondents (76.6%) also responded that they rarely use Internet as a tool for bill payment. This is consistent with their status as students. Nonetheless, majority of the respondents (26.6%) frequently use Internet for their homework purposes. This is coherent with their status as students. From Table 2, most of the respondents (39.1%) always use Internet to down music.

Descriptive statistics of Internet attitudes: Table 5 shows the descriptive statistics of the Internet attitudes among respondents, sorted in descending order based on the mean score. Overall, the results show that the mean score for all positive worded items are well above the mid-value which is three. Likewise, for all negative worded items, mean score are all less than the mid-value. Based on these findings, it can be concluded that overall the respondents of the study have positive attitudes towards the Internet.

Descriptive statistics of Internet addiction: Table 6 shows the descriptive statistics of the Internet addiction among respondents, sorted in descending order based on mean score. Except for one item, all other items, show mean score less than three which suggest that the respondents in this study are not really addicted to the Internet. The only item that score higher than three is how often do you find that you stay on-line longer than you intended? which recorded a mean value of 3.37. Given that the Internet is a rich and comprehensive information resources which provides various information and on-line services, staying connected longer than the initial intention is considered normal and reasonable.

Table 5: Descriptive statistics of Internet attitudes

Questions	Mean	SD
Internet is a fastest way to reach knowledge	4.41	0.76
Internet is a way to provide learning for people in order to search	4.16	0.91
Internet provides easy life	4.13	0.76
Internet is a universal digital library	4.12	0.96
Internet creates tendency to people for getting prepared knowledge	3.96	0.94
Internet provides endless freedom to people	3.80	1.03
It is exciting to get information about Internet	3.74	0.97
It is enjoyable to chat at Internet	3.70	1.07
Internet is a digital place that creates close relationship among societies	3.66	1.02
Internet has a potential to be an effective training tool	3.64	1.01
Internet creates addiction	3.34	1.20
Having friends in Internet is temporary	3.33	1.13
Internet causes be far away from real life	3.28	1.11
Internet creates cultural dilemma	3.06	1.13
Internet is vital to enhancing exchanging cultures	3.01	1.06
Internet forces people to be alone	2.92	1.20
Chatting in Internet prevent to be socialized	2.87	1.11
Internet can provide stable friendship by doing chatting	2.83	0.97
Internet causes destroyed societies	2.74	1.15
Internet includes unnecessary, non-useful knowledge	2.70	1.27

Correlation between attitude towards Internet and Internet addiction: To correlation between attitude towards Internet and Internet addiction shows how the two variables are related to another. The correlation indicates the strength and the direction of the relationship between the two variables. For the purpose of this study, the Pearson correlation matrix is used because Pearson correlation coefficient is appropriate for interval-scaled variables (Sekaran, 2003) and this study uses interval scale to measure both independent and dependent variables. As shown in Table 7, the correlation is significant at the 0.05 level. The results from this study show p-value is 0.46 for both independent and dependent variables, shows that the results of this study are statistically significant. This also indicates there is a correlation between the two variables. Table 7 shows the

Table 6: Descriptive statistics of Internet addiction

Questions	Mean	SD
How often do you find that you stay on-line longer than you intended?	3.37	1.25
How often do you fear that life without the Internet would be boring, empty and joyless?	2.86	1.36
How often do you check your e-Mail before something else that you need to do?	2.75	1.33
How often do your grades or school work suffers because the amount of time you spend on the Internet?	2.60	1.17
How often do you try to cut down the amount of time you spend on the Internet and fail?	2.57	1.13
How often do you anxiously wait for the time you can start surfing the Internet?	2.55	1.27
How often do you find yourself saying just a few more minutes when on the Internet?	2.52	1.31
How often do you lose sleep due to late-night logs-in?	2.50	1.40
How often do you neglect your household chores to spend more time on the Internet?	2.27	1.11
How often do you choose to spend more time on-line over going out with others?	2.23	1.14
How often do others in your life complain to you about the amount of time you spend on the Internet?	2.19	1.24
How often do you become secretive when anyone asks you what you do on the Internet?	2.18	1.30
How often your personal relationships do suffers because of the amount of time you spend on the Internet?	2.12	1.20
How often do you form new relationships with fellow on-line users?	2.05	1.15
How often do you try to hide how long you have been on-line?	2.04	1.05
How often do you find yourself anticipating when you will go on-line again?	1.99	1.04
How often do you feel preoccupied with the Internet when off-line or fantasize about being on the Internet?	1.95	1.08
How often do you feel depressed, moody or nervous when you are off-line which goes away once you are back on-line?	1.94	1.21
How often do you snap, yell or act annoyed if someone bothers you while you are surfing the Internet?	1.88	0.99
How often do you skipped lunch or dinner because you too busy surfing the Internet?	1.70	1.06

Table 7: Correlation between the dependent and independent variables

Analysis	Addiction	Attitude
Addiction Pearson correlation	1	0.177*
Sig. (2-tailed)		0.046
N	128	128
Attitude Pearson correlation	0.177*	1
Sig. (2-tailed)	0.046	
N	128	128

*Correlation is significant at the 0.05 level (2-tailed)

Pearson correlation for both variables are at 0.177 which suggest that the two variables have weak relationship. The positive sign indicates that the direction of the two variables move together. In this study, the analysis of the correlation indicates that there is positively weak relationship between attitude towards Internet and the Internet addiction of the diploma students under the UTM program in ITP. This indicates that the stronger the students' attitude towards the Internet, the stronger they tends to be addicted to the Internet.

The conduct of this study has been to investigate the relationship between Internet attitude and Internet addiction among students. Based on the analysis of the collected data, it is found that the students are having positive attitudes towards the Internet. The results also suggest that the respondents of this study are not addicted to the Internet. Upon further analysis, it is found that weak relationship could be observed between Internet attitude and Internet addiction. Today the use of Internet in education is almost inevitable. In fact, most universities have integrated the Internet with their teaching and learning. Even when it comes to giving assignment to students, the educators would employ the Internet as the medium for either sending the assignment instructions or receiving completed assignment from students. On the students' part, the Internet would certainly be the first resource to refer whenever they want to start doing their assignment. Perhaps because of this reason, the students in this study show positive attitude towards the Internet. In the same light as all respondents of this study are university students whereby, most of their times are occupied with learning and studying hence, they don't have much free time that could lead towards becoming addicted to the Internet. As shown in the study, the findings suggest that there is a weak relationship between attitudes towards internet and internet addiction.

CONCLUSION

Evidently, this study provides empirical data regarding Internet attitudes, Internet addiction and the relationships between the Internet attitudes and Internet addiction among college students in Malaysia. These empirical data could be used by other researchers or academicians to conduct studies on similar topic. The research framework constructed earlier in this study could also be used by other researchers in other studies when investigating similar topic. This study has limitation that qualifies the findings. The primary limitation of this study is the sample on which this study was conducted. This is because the respondents for this study were limited to only diploma students under UTM franchised program in ITP. The respondents study under the same program within the same institution and lives among the same societal environment. As a consequence, it may affect the findings. Different group of respondents may have different attitudes towards Internet (Shen and Chiou, 2009). Thus, studies on different groups of respondents may affect the finding on relationship between the attitudes towards Internet and the Internet addiction in this study. The limitation of the studies has present

opportunities for future study. Future study may includes different group of respondents, perhaps includes the diploma students from UiTM franchised program in ITP or perhaps involves all diploma and certificates students in ITP. As discussed, the respondents in this study lives in the same environment and it might affect the findings. Further study on the Internet attitude, Internet addiction and the relationship between Internet attitudes and Internet addiction should be carried out for other higher learning institutions and also for respondents other than students, perhaps working adults in both public and government sectors. Further research should also include larger sample sizes to draw more accurate result in determining the correlation between the Internet attitude and Internet addiction.

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