Internet Usage Pattern and Types of Internet Users among Malaysian University Students

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Abstract: University students are the important asset of a nation as they will contribute to the prosperity and growth of a nation. They are considered as digital natives as they are the natural users of the internet and mobile devices. However, they can be easily influenced by the heavily usage of the internet devices in this digitalised environment. Hence, there is a need to investigate the ways in which internet are used among students since its misuse may lead to the disruption of nation building. Thus, this study aimed to explore the types of users and patterns of internet usage among the university students in Malaysia. This study conducted a survey involving 214 respondents among students using a self-report questionnaire. Data were analysed using simple statistic methods. The study revealed that the majority of the students were excessive internet users. They spend between 1-6 h.With respect to the patterns of using internet three aspects have been investigated which are the location, time and purpose of using the internet. Further, the online platforms for entertainment and socializing were also investigated. It is found that university students tend to spend between 1-6 h daily accessing the internet. The most common location accessing the internet is at home. Further, although their main purpose of accessing the internet is for education, entertainment and online gaming seem to be prevalent. The popular online platform for the purpose of education is YouTube while the popular platform for socializing is Facebook. It is concluded that their internet usage patterns can contribute to internet addiction. These findings provide valuable insights for policy makers to take appropriate measures to curb internet addition among younger generations.

Key words: Internet usage patterns, internet users, university students, platform, Malaysia

INTRODUCTION

The internet technology has facilitated borderless connection in various fields such as education, entertainment, social interaction and commerce. People worldwide have been using digital technologies for the purpose of being connected with people all over the world. They can now communicate easily via computer and mobile technology such as mobile phones, tablets, smartphones and other electronic devices usage. The unlimited space and time connectivity provided by the internet has enabled users to access the internet easily. They can access to a large pool of information sources of internet with fast, user-friendly and unlimited access with less time and money. According to internet live statistics,

there has been a high penetration rate of internet population globally from 20 million of internet users in 2011-3 billion of internet users in May 2015. Although, the internet has been recognized as a facilitator for the many developments globally the internet also has some negative impacts. One of its obvious problems is that its excessive use can lead to internet addiction, especially among the young generations. As such it is pertinent to find ways to tackle this problem before it becomes uncontrollable.

University students are considered as the largest and the most frequent users of internet-based technology. Sharifah found that a high percentage of internet usage is the university students which is 88% compared to other groups. This group of users is also known as the digital

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natives as they have been growing up with the digital technologies throughout their life. The increases usage of internet among university students is also contributed by the advanced development of network construction in universities that emphasizes on learning, entertainment and research (Anwar, 2014). Growing within the rapid development of internet-based technology the internet-based technologies have become part of their life. A number of studies stated that young generation from 18-25 years are facing a high risk to internet addiction problem (Canbaz *et al.*, 2009). Thus, it is important to identify their level of using internet as well as the pattern of internet usage so that proper measures can be taken to curb the problem of internet addiction.

University students are considered as an important asset of a nation as they are the generation that will contribute to the prosperity and growth of a nation in future. As such, it is crucial to safeguard the development of the university students so that they can contribute productively to the nation. In this regard, they can become addicted to internet if no precautionary actions are taken to avoid them from becoming addicted. Several studies have investigated the internet usage pattern among university students based on their interest for the purpose of identifying whether the use of internet can lead to harmful effect to its users (Adekunmisi *et al.*, 2013). Wassem argued that the internet addiction has been a new threat to Malaysian people as it has the possibility to lead to academic impairment, social interactions problem behavior and health deteriorates.

This study advocates that preventing the problems of internet addiction is better than solving the problems of internet addiction. Specifically, this study serves as a proactive measure to prevent the university students from being involved in harmful impacts of excessive use of the internet. In this case, this study aims to identify the types of internet usage and the pattern of internet usage among university students in Malaysia.

Literature review: As the internet becomes an important medium for communication and seeking information and the ease of connectivity facilitated by the advanced development of the broadband facilities, there has been an increase in the use of internet among university students worldwide. Several studies have reported that university students are among the highest users of internet in comparison to the other groups of internet users in Malaysia (Bankole and Oludayo, 2012; Omotayo, 2006). With respect the use of internet based on different gender, Ul Haq and Chand (2012) concluded that there is a different gender pattern among

the face-book users as the number of male students is higher than the female student users in socializing with friends online.

Emphasizing the student's usage of internet, this study focuses on three main aspects of using the internet namely the time spent the purpose and the location of accessing the internet. The rest of this section discusses the existing knowledge related to these aspects.

Time accessing the internet: There have been quite extensive studies that investigate the time spent for accessing the internet. Most of them have different finding regarding to the duration of internet usage among students. Vijaykumar claimed that 48% of the respondents browsed the internet for 2 to 3 h a day. While, Adekunmisi *et al.* (2013) highlighted that the university students become internet literate by browsing the internet daily. Further, Bankole and Oludayo (2012) asserted that more than half of the university students spent time accessing the internet from 1-5 h/week with the average time spent of 4.6 h. While, Xi and Yeo (2013) warned that the students who spend online from 19-68 h/week will confront with negative consequences.

Purpose of accessing the internet: It is common among university students to use the internet for education purpose namely to communicate with classmates as well as to complete their assignment, class work, research and to prepare for their tests and examination. Adekunmisi *et al.* (2013) found that most of the students use internet for emails, webpages, search engine for seeking information, chatting for communication and other related academic activities. In addition, Mishra (2009) claimed that the majority of the students use the internet for research and most of them use google search engine. Further, Christos stated that students use the internet for accessing MSN, forums, YouTube, pornographic sites, chat rooms, advertisement sites. They also use search engines such as Yahoo and Google, email, blogs and online games.

Besides using the internet for academic purpose, university students also use the internet for their personal interest. Investigating the use of internet among university students in India, Vidya Mavila stated that the most common online platforms accessed by the students are the social network and the email, respectively. They also argued that students use the internet as a way to escape and adapt to developmental stressor. The main reason is the lack of parental monitoring as they are away from their parents while studying at the university. Another reason for them to excessively use the internet-based technology is that

they are confronted with many psychological and environmental factors (relationship problems with family or peer, internet facilities and many others).

Several studies have investigated the impact of using internet among students. Kubey *et al.* (2001) asserted that users who use internet heavily for social purposes have the potential to affect their academic performances as they tend to spend long hours on the internet which later makes them feel tired and miss their class the next day. Scott supported Kubey's assertion by showing a significant association between the heavier web browsing and poorer academic result of South Africa university students.

Location of using internet: Several researchers (Omotayo, 2006; Otunla, 2013) argued that there are limited studies on the location where students access the internet. Omotayo (2006) claimed that most of the African university students access internet mainly through cybercafe. They cited slow server as the main difficulty to access internet at other places. Additionally, Otunla (2013) stated that half of the respondent access the internet through their mobile phones followed by the laptop.

Based on the discussion above this study focuses on the types of internet users and the patterns of using the internet namely the time, location, purposes of using the internet. Most of these studies have been contextualized within the countries with advanced ICT technology such as USA, China, Korea and India but there are very limited studies conducted on the Malaysian university students. Recognizing the aspiration of the Malaysian leaders to achieve a first class human capital by 2020, it is timely to ensure that problems of internet addiction among the university students can be prevented. Thus, an understanding of internet usage pattern among university students in Malaysia is crucial as it provides insights on possible ways to curb the problems of internet addiction that may disrupt the inspiration of the nation to develop a first class human capital.

MATERIALS AND METHODS

This study describes the method of research adopted by this study. This study is framed within the context of Malaysian higher education focusing on the use of internet among university students. Specifically, this research focuses on three aspects of usage, namely the location, time and purposes of using the internet. Further, the types of internet users were also investigated. The following describes the method of this research.
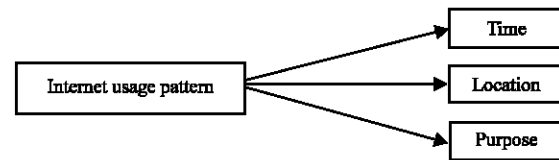

Fig. 1: Research framework

Research framework: Drawn from the literature review, the three types of internet usage which is the focus of this study are the time, location and purposes of using the internet. The framework of this research is shown in Fig. 1. The purpose of investigating the patterns of usage is to identify whether the university students whether their usage of internet cause them to become internet addicted.

Participants: A total of 214 undergraduate students from a particular university completed the survey questionnaire. This university is a small public university located in the Southern region of the Peninsular of Malaysia. The majority of the students in this university are Malay students from the East Coast of the Peninsular of Malaysia. The sample comprises students from various faculties and they were students from 1st to 4th years of ranging between 20-25 years old.

Instrument: A set of questionnaire has been developed to investigate the types of internet users and internet usage patterns among the university students. The questionnaire consisted of three sections: The first section aimed to profile the background of the sample namely, the personal background, education background and family background. The second section focused on identifying the user's level of internet addiction. The IAT instrument established by Young (1998) and validated by Widyanto and McMurran (2004) was utilized. This measurement consisted of 20 statements in which students have to respond based on 5-level likert scale: 'never', 'rarely', 'occasionally', 'often' or 'always'. The third section focused on the internet usage pattern and it has two parts: in which each part contains statements with 5-level likert scale.

Data collection: This survey was conducted for five months between January and May 2015. Prior to the fieldwork, a pilot study was conducted with 50 students. Based on the pilot study a Cronbach's alpha of 0.86 was achieved indicating that the questionnaire is reliable. The questionnaires were distributed to 250 university students but only 214 responses were received. The questionnaires were distributed during their class sessions and they took about 30 min to complete the survey. Prior to distribution

of the survey questionnaire, students were given a briefing on the purpose of the survey and advised to be honest in answering the question. They were also reminded that information about them is treated confidential.

Data analysis: The data were analyzed using Statistical Package for the Social Sciences (SPSS Version 19). Data has been analyzed by using SPSS procedures which consists of examining descriptive statistics such as the frequency and mean.

RESULTS AND DISCUSSION

This study presents the findings of this study and it is divided into three parts, namely the student's background, types of internet users and internet usage pattern. The internet usage pattern are described based on time spent, location and the purposes for using internet.

Students background: This study was conducted in a particular university involving 214 respondents. The characteristics of the sample based on the personal background and education background are presented in Table 1 and 2, respectively.

Based on Table 1 there was a slight equal distribution between gender in which 115 (53.7) were male students and 99 (54.3%) were female students. Additionally, the majority (87.9%) of the students were within the age group of 20-25 years old. The majority of them were (71.5%) Malay students followed by Chinese with 23.8%. Indian students comprise 2.3% while others only 1.9%. This indicates that the the majority of the internet users were Malay students whose aged is between 20-25 years old. There is an equal balance between gender.

With respect to their education background the students were mainly from engineering background (82.2%). This is followed by students from social science background (2.3%) while 15% of the respondents from other educational background. They were also mainly first year students (69.2%), followed by 26.6% second year students. Only two students were final year students. The majority (79%) of the respondents have achieved an average of academic performance. 17.3% of the sample were categorised as excellent students while only 3.7% were had poor academic achievement.

In summary, this group of students can be described as mostly from engineering background. They had <2 year experiencing higher education background and the majority of them had average academic performance.

Table 1: Personal background

Background	Number	Percentage
Gender		
Male	115	53.7
Female	99	46.3
Age (years)		
<20	26	12.1
20-25	188	87.9
Race		
Malay	153	71.5
Chinese	51	23.8
India	5	2.3
Other	4	1.9

Table 2: Education background

Background	Number	Percentage
Course of study		
Engineering	176	82.2
Social science	5	2.3
Business	1	0.5
Other	1	15.0
Year of study		
First	148	69.2
Second	57	26.6
Third	7	3.3
Fourth	2	0.9
Academic achievement		
Excellent	37	17.3
Average	169	79.0
Poor	8	3.7

Table 3: Types of internet users

Internet addiction level	Total scores (points)	Number	Percentage
Average internet user	20-49	50	23.2
Excessive internet user	50-79	158	73.8
Addicted internet user	80-100	6	2.8

Types of internet user: This study also investigated the different types of internet users. The purpose of this investigation is to determine whether the university students have problems with internet. In his case, an established measurement developed by Young (1998) was utilised and the users of internet can be categorized into three categories which are the average internet user the excessive internet user and severe internet addiction (Meti, 2014).

Table 3 shows the distribution of different categories of internet users. The average internet users are identified as users who have some degrees of control over their usage of internet. The excessive internet users are those users who have the strong tendency to become addicted while the third category is users who could not control their usage of internet and suffer negative impact of internet usage. In this case, precautionary actions need to be taken to ensure that this group of users does not transform into the addicted internet user.

Based on Table 3, 23.2% of the users was categorised as average internet user, 73.8% was identified as excessive user while 2.8% was identified as addicted internet user. This shows that the majority of internet users were excessive users, implying that they have the potential to move to the next level that is the addicted
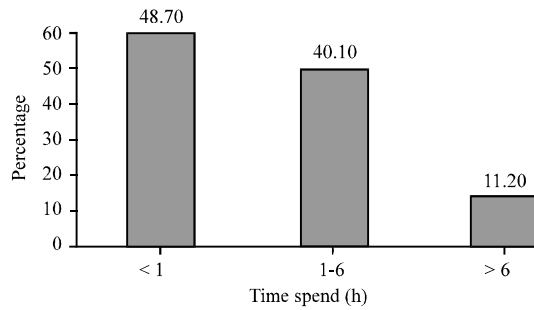
Fig. 2: Time spent on internet daily

Fig. 3: The use of internet based on location

internet user. This finding supports the studies conducted by Bankole and Oludayo (2012) and Omotayo (2006). These studies indicate that university students as the excessive internet users. In this respect, interventions are needed to ensure that the excessive internet users do not fall into the third category.

Internet usage pattern: In this study, the internet usage pattern is characterised based on three aspects: the time spent on internet the location of internet access and the purpose of internet usage. The findings related to this usage pattern are presented.

Time spent on internet daily: With respect to the time spent on the internet daily the user's usage pattern was categorised based on three categories: <1, 1-6 and >6 h daily. The findings related to the time spent on internet daily are shown in Fig. 2.

Based on Fig. 2 the the highest percentage (20%) of the users spend 1-6 h on internet daily followed by the 16.5% of the users spent >6 h/day and only 4.5% of the users spent <1 h/day. This implies that internet has become part of the daily lives of the users as they spent on internet a maximum of one quarter of the day. This situation needs attention as the longer time they spent on internet daily there is a strong possibility that this group of users has a tendency to be addicted. This assertion is based on the existing studies that assert users who spend >5-7 h/day have the strong tendency to be addicted to internet (Xi and Yeo, 2013).

Location of internet access: The location of internet access was categorised into eight types which are the library, computer lab, cyber cafe, home, restaurant, shopping malls and others. Figure 3 shows the usage of internet based on this location and it shows that users tend to use internet mostly at home (33.3%). This is followed by the restaurant (13.8%), computer centre (9.4%), library (9%), computer laboratory (8.6%), shopping malls (7.9%) and other places (7.3%). The location that
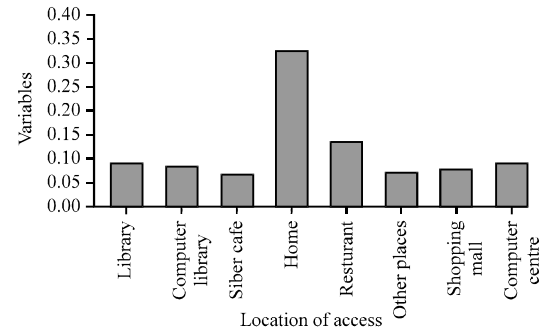
they least use internet was at cyber cafe (6.8%). This finding indicates that the internet-based technology is becoming part of the everyday practices of the users. Besides accessing to internet at home they also access the internet at the restaurants and other public places such as the shopping malls. Due to the dispersed type of location to access the internet it can implied that users access the internet via their smart phones (Otunla, 2013). Further, users are more prone to use smartphone due to its small size and its accessibility (Nath *et al.*, 2013). Accessing internet at cyber cafe seems to be the least popular location as this location is a paid internet access. This implies that users tend to access the internet at a free spot rather than the paid location.

Purpose of using the internet: The purpose for using the internet was also investigate and for the purpose of this study the purpose for using the internet was categorised into six categories which are education, playing online game, seeking information, entertainment, business and social. The internet usage based on purpose is shown in Fig. 4.

As shown in Fig. 4, 30% of the respondents use the internet for seeking information, 23.2% of the respondents use internet for entertainment, 19.4% of them use internet for education, 18.5% use internet for online gaming and 15.9% use internet for socialising. Only 8.3% of the respondents use the internet for business purpose. Considering that the respondents were students it is logical that majority of them use the internet for seeking information and the least of them use internet for business. An alarming finding is that the online gaming is the third highest usage of internet. This issue needs further investigation since there in an increased concern on students spending a lot time online gaming leading to their lack of focus on their study. Further, it is participated that students who use the internet for online gaming have strong tendency to be addicted as they are addicted to online gaming.
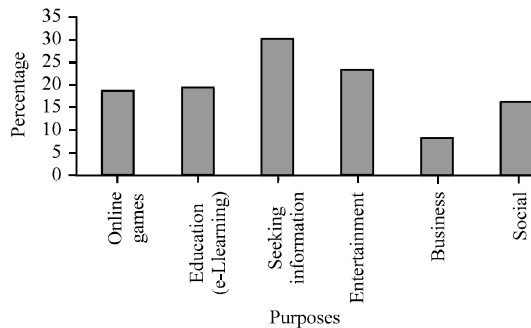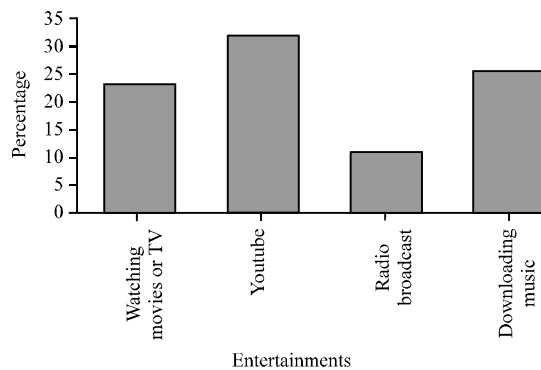
Fig. 4: Purpose of internet usage

Fig. 5: The use of internet for entertainment

Platforms accessing the internet: This study further investigates the different platforms used to assess the internet. In particular the study investigates the platforms used for entertainment and socializing.

Platforms for entertainment: Figure 5 shows four different purpose of usage with respect to entertainment, namely watching movies, watching Youtube, listening to radio broadcast and downloading music. The highest category of usage was watching YouTube (32.5%) followed by downloading music (26%) and watching movie (23.4%). Listening to radio broadcast is the least percentage which is 11% only. This pattern indicates YouTube has become the mostly visited platform followed by downloading music. This finding is consistent Christos who claimed students are addicted because they are prone to use internet for entertainment purpose such as YouTube, blogs, MSN and many others. Vidya Mavila also highlighted that the students who involve in unproductive activities related to entertainment for a long time may result in being addicted to internet.

Platform for socializing: The use of internet for social purpose was also categorized into six categories which are Facebook, Blog, Twitter, Instagram, Skype and others. As shown in Fig. 6, 31.1% of the students accessed Facebook, followed by 23.4% of the students accessed
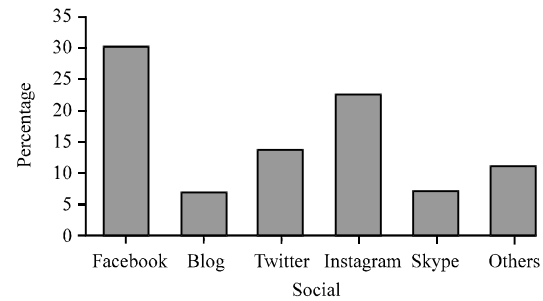

Fig. 6: Internet usage pattern based on social platform

Instagram. 14.3% of the students accessed Twitter while 7.4% of the students accessed Blog and Skype. This finding indicates that the most popular social platform among students were Facebook followed by Instagram. On the other hand, Twitter and blogs are not a popular social platform. This finding is related to with Kubey that stated students who often spent until late night on social purpose. Ahsan also asserted that male students who are more likely to participate in Facebook usage face a strong possibility of academic deterioration.

CONCLUSION

This study aims to describe the type of internet users and the pattern of using internet of university students in a Malaysian university. In summary, this study identified that the majority of the students were categorized as excessive internet users although, only very insignificant number of them were identified internet addicted. Considering the majority of them were excessive internet users, precautionary actions need to be taken to ensure that they do not transform to internet addicted users.

With respect to the patterns of using internet three aspects have been investigated which are the location, time and purpose of using the internet. Further, the online platforms for entertainment and socializing were also investigated. It is found that university students tend to spend between 1-6 h daily accessing the internet. The most common location accessing the internet is at home. Further, although their main purpose of accessing the internet is for education, entertainment and online gaming seem to be prevalent. The popular online platform for the purpose of education is YouTube while the popular platform for socializing is Facebook.

Considering the rapid development of the technology that facilities the use of internet-based technologies such as the mobile phones the investigation of the internet usage pattern can be used as guidance to plan proactive strategies or actions to prevent internet addiction. Additionally, the findings provide valuable insights for policy makers to take appropriate measures to curb the internet addiction among younger generations which are the asset of the nation.

LIMITATIONS

It is important to note that the sample of this study is limited to university students of a local university and majority of them were students with engineering background. Further, this study is limited to simple descriptive statistical analysis aiming to provide a profiling of the use of internet among university students. In this case, an inferential statistical analysis may provide further valuable insights on the usage pattern of internet among users. It is important to note that generalizing this finding to the population of users of internet is very limited. For future work, researchers intend to conduct a larger sample consisting of students from other disciplines as well.

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