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INTERNET LITERACY AMONG FEMALE UNIVERSITY STUDENTS IN MALAYSIA

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Abstract

Development in any society involves the participation of informed citizens of that society regardless of gender; and due to advances in new technology everybody, including women, should be empowered with high quality education, which in turn involves internet literacy. This article looks at the level of internet access and the use of internet among female university students in Malaysia. Data was collected from 200 female students selected randomly from four public universities in Malaysia. The results suggest that all the female university students have access to the internet at home and or the university, and they have good motivation for daily internet use, both for academic and non-academic purposes. However, regarding informational skills as a sub-division of skill access, they need some help to learn where they should refer to for certain information, especially for academic purposes, and how they should find, select, process and evaluate such information. To meet these challenges, universities could either organise long term course work or run short term workshops to develop the students' research skills and introduce the essential sources and tools for undertaking research in particular, and social interaction in general.

Keywords: internet literacy, motivational access, material access, skill access, usage access, women internet literacy.

Introduction

The conceptions of literacy have been discussed in the Digital Age under various titles and concerning different scopes and emphasis such as e-literacy (Martin 2003), cyber-literacy (Gurak 2001), digital literacy (Gilster 1999) or Web literacy (Reinhardt and Isbell 2002). Internet Literacy has become an important term due to the progress in digital technology during the last decades. This paper examines internet literacy in terms of internet access and use. However, first a definition of the term may shed light on the topic; what internet literacy means and which areas it covers. Hofstetter (2005) believes that internet literacy relates to the technical skills that are needed to discuss and negotiate with others and produce some messages on the internet. In his view, internet literacy is a cognitive and skill-based ability (Stordy 2012). While, Livingstone et al. (2005) view internet literacy as how young people use these technical skills; that is, this literacy is seen more as a social practice (Stordy 2012).

Warschauer (2003) also believes that people obtain and maintain the abilities of internet literacy to gain 'social inclusion in the present era.' The phrase social inclusion here is the reason for internet access and use while it does not explain which abilities one should possess to be called as an internet literate individual. Livingstone et al. (2005: 7) define internet literacy as 'the ability to access, understand, and create communications in a variety of forms.' This definition could be divided into three different dimensions. The first dimension is access which is the literacy to combine different forms of communication. In addition, access could be defined as concerning the "content" of the text through knowledge about hardware and software. The second dimension is "context" which means the literacy is about the context in which content is produced. And the third dimension is 'knowledge' about the social norms and values associated with the internet. Regarding the context, there are some factors that affect the final product: production context means awareness of the institutions and organizations that produce messages (Brown 2001); awareness of social and cultural context which is the ability to identify the values and viewpoints of media content producers (Thomas and Jolls 2004); awareness of economic context means the identification of the commercialization of media, for example to be able to describe the intended audience of a media (Rosenbaum 2007); and awareness of political context is to be able to understand the political influences which affect the shape of media content.

Internet literacy is considered a sub-division of media literacy which involves the ability to locate, organise, comprehend, analyze, evaluate and produce information (UNESCO 2010). All the definitions have a common idea of internet literacy to divide it into four clear areas of access and use, analyze, evaluate and produce media messages. In addition to the question of what internet literacy is and which areas it covers, the next question is why internet literacy is important. In general, the importance of internet literacy is increased due to modern progress in technology, which facilitates every dimension of people's life. Thus, there is a need to say that internet literacy is significant in education and as a support for traditional teaching, in gaining social inclusion (Warschauer 2003), and in all other aspects of life whereby its absence can lead to social inequality and digital divide in a society. The importance of internet literacy is the crux of this study's objective. The article applies the model developed by Jan Van Dijk (2008) to indicate important aspects of internet literacy and the areas female Malaysian university students are good or are inefficient at. Van Dijk (2008: 1) states that 'access is a prime condition of internet politics in the world.' Based on this assertion, he develops a model of internet literacy with four types of access.

The first type of access is called "motivation access" whereby to be included in society, people are compelled to have access to a computer and an Internet connection. However, there are people who do not have access to the internet due to reasons of an economic, social, or cultural nature. For instance, they are not interested in the internet, access may be very expensive, they are busy, or they do not have the skills required to work with the internet. The second type of access is "material access" which means to have physical access to the internet to obtain information or for purposes of communication. The third type of access is 'skill access' which relates to three forms of skills; operational, informational, and strategic skills. Operational skills are the abilities to work with software and hardware; informational skills are the ability to search, select, and process information in computer and network sources; and strategic skills refer to computer and internet usage for special purposes such as finding the required information. Finally, there is "usage access" that links closely with usage time or actual use of computers. This time is measured according to the time of using a computer and frequency of internet use during a week. Usage applications refer to the number and diversity of usage; and they are measured in terms of different applications such as education, email, reading online newspapers and magazines and so on. Broadband and narrowband use affect usage time as well as the type and range of applications strongly. Except for emailing and creative online

production, most internet users are relatively passive and just consumers. Activities such as creating a weblog or a website, leaving a post on an online bulletin board and so on can be considered active use of the internet.

Internet Access in Malaysia

About two-thirds of the world's population - nearly 4.6 billion people- lack Internet access (Intel Corporation 2012). According to Paynter and Lim (2001) the year 1995 was the beginning of the Internet age in Malaysia. Malaysian By MIMOS and Beta Interactive Services conducted the first Internet survey from October to November 1995 and according to this survey one out of every thousand Malaysians had access to the Internet (20,000 internet users out of a population of 20 million) (Beta Interactive Services 1996). This figure grew to 2.6% of the population in 1998.

Wagstaff (2010) also surveyed ten countries in Southeast Asia regarding the variety of news and information available to the public. According to this study, Malaysia has an excellent worksheet in providing opportunities for individuals with internet access. Malaysia has also progressed in communication technologies in recent years. In 1990, there was less than one computer per 100 people. In 2006, this figure decreased to 23 computers while in recent years, internet influence has doubled in this country because the government tried to increase internet access to 50 percent in 2010, while 90 percent of this access was in Kuala Lumpur (Internews Media Assessment, cited in Wagstaff 2010). Furthermore, Malaysia has increased its broadband connection in recent years; although, 'the quality of connection, including the speed is a little faster than those of the Philippines and slower than those of Thais' (Wagstaff 2010). According to data recorded in the Digital Marketing Year Book published in 2012 Malaysia with a population of 28.73 million in 2012, had 1772300 Internet users. In 1995, when the internet was introduced to Malaysia for the first time, only one in a thousand Malaysians had access to the internet. It was expected that the number of internet users in Malaysia would rise because the country is heading towards a culture of advanced information, communications and multimedia services. Based on the data provided by Wagstaff (2010), Malaysian citizens spend an average of 19.8 hours of internet use weekly. Internet use in terms of age is categorised as follows: the ages of 15-24 (38%), those aged 25-34 (26%), 35-44 (23%), 45-54 (9%) and 55+ (5%). In 2011, 45.8% of internet users were male, while 54.2% were female.

Regarding the areas of internet application in Malaysia, Weiss (2012) states that internet usage in Malaysia is not only for politics but mainly for entertainment. However, Wok, Tamam, Bolong, and Abdul Muati (2011) argue instead that Malaysian youth prefer online news and use the internet as an important communication tool to get political information. It is important to note here that internet access does not mean physical access to the internet, but rather the skills to use. This paper makes an attempt to address the internet access and use among female university students in Malaysia. The data obtained in this study is important for the following reasons. First of all it declares the probable deficiencies in the system of internet provision in Malaysia. The data are also important for agencies focused on 'women and development.' Here the sample was selected among university students who have the position and capacity to pass their internet literacy on to society.

Researchers have surveyed other aspects of women's internet usage in Malaysia. For example, Salman, and Hasim (2009) found that access to interpersonal and social networks have significant positive effects on sustainability of internet usage among the Malay women internet users. They concluded that two factors have a negative impact on sustainability of Internet usage, which are security and interruptions as well as the cost of hardware and maintenance. Fuad, Bohari, Wie Hin (2011) also investigated women entrepreneurs in information and communication technology (ICT)-related businesses in Malaysia. Their study focused on

the complexity of demographic issues among Malaysian women entrepreneurs. They found that ICT helped women entrepreneurs to be more competitive in the current environment of the business marketplace. In 2012, Stordy (2012) studied the information management of undergraduate students, their internet literacy and their internet-related practices. Following a constructivist qualitative methodology for 24 students and interviews with 17 academics, he concluded that the students were highly confident in the areas they associated with being Internet literate, including being able to find Internet sources; yet they cannot transfer these abilities to their performance in learning activities, coursework assignments or other university-related interactions.

Bob et al. (2013) studied about the patterns of new media use by Malaysian youth and analysed the social uses and practices of internet. These researchers found that Malaysian youth use television, mobile phone and computer/ laptops for internet connection, playing games, self-learning, social networking, self-expression and creative works, finding new knowledge and information, and downloading or uploading music or videos. However, according to these researchers, young people are not very interested in working on their own websites or weblogs, designing creative content and reading online news for participation in social and civic issues. This study confirms that new media are used by Malaysian youth, mainly for personal daily life needs, that 'there is a huge gap between what young people do with new media in real life and what they do in school' (2013: 7).

The only previous study related to media literacy in Malaysia is the one conducted by Abdul-Hamid and Mustaffa (2007). They believe that improvement in life quality and the advancement of women's empowerment in developing countries involves media literacy among women. They define media literacy as the access to and skills in using the computer, the internet, telecommunications, and electronic media. Their findings showed that their level of media accessibility, especially to fixed line telephone, cell phones, radio, and television is higher than the computer and the internet. The most important aspect of their study is that the majority of the respondents claimed that they are well-equipped with basic computer and internet skills (skill access) but many of them have no skills in advanced features of the computer and the internet.

Based on the definition of internet literacy and previous studies of ICT literacy among Malaysian women, this article makes an attempt to accomplish the following objectives.

Objectives of the Study

One of the objectives of the present study is to measure the 'internet motivational skill' (van Dijk 2008) of female university students. This first objective aims to establish the extent of their interest in accessing and using internet in/out of home because there are many people, who have access to the internet but do not know how to use it, or they do not want to use it, or even they are not permitted to use it. The second aim of the study is to make clear the "material access" by female students that is how many female students have access to information or entertainment, as well as software and hardware services available through the internet. The third objective of the study is to measure access to skill development which is the most important part of their academic and non-academic work involving internet application. The last aim of the study is to make a profile of "usage access" of internet among female students in terms of the amount and diversity of internet usage, how they connect to the internet, how much time they spend for the internet and how frequently they use it.

Methodology

Two hundred local female university students from four public universities in Malaysia, that is, University of Malaya (UM), Univeristy Kabangssan Malaysia (UKM), University Putra Malaysia (UPM) and Univeristy Technology Malaysia (UTM) were selected as respondents using the stratified random selection method and surveyed by a questionnaire made on the basis of Van Dijk's model (2008) discussed above. The only demographic variable considered in the survey was ethnicity—Chinese, Indian, and Malay. The data were collected over two weeks in April 2013.

Data Analysis and Results

The data collected from the questionnaire were analysed in a descriptive statistical form. Selected results are discussed as follows. The participants were asked about their motivation to access and use of the internet and about their "material access", that is access to computers and software and hardware services at the home and or the university. It was found that all the individuals in the sample had motivation to access the internet and want to use it (100%) and at the same time all of them had access to software and hardware services too (100%). The participants were asked about their skill access and its sub-divisions. The first sub-division of skill access discussed in Van Dijk's model is operational skill which means the ability to work with hardware and software. Regarding working with software, 81.67% of Malay students, 80% of Chinese students and 90% of Indian students confirmed that they are good at working with software. By contrast, on their ability to work with hardware it was found that 24.17% of Malay students, 33.34% of Chinese students, and 25% of Indian students had that ability. The second sub-division of skill access is information skill. In this regard, one item the respondents were asked was whether they used the internet to search for information for academic purposes which was considered both an informational skill and a strategic skill. The results indicated that 97.5% of Malay, 98.4% of Chinese and 100% of Indian students surf the internet for information. They were asked about their familiarity with information search engines. The results showed that 75.84% of Malay, 65% of Chinese and 80% of Indian students were familiar with search engines while the figures were 69.17%, 46.67%, and 60% respectively with regards to students' familiarity with databases. The respondents were also asked whether they check the date of the intended information. Of all the respondents, 79.17% of Malay, 63.34% of Chinese and 50% of Indian students confirmed that they checked the date of the surfed information. However, 52.5% of Malay, 71.66% of Chinese and 50% of Indian students never checked by whom and why certain information was developed. That is to say, they were never concerned with the information as a source of reference. One of the sub-divisions of informational skills are substantial skill which means to find, select, process and evaluate information in specific net sources for specific queries. The results found that 75.84% of Malay, 81.67% of Chinese and 70% of Indian students had this skill.

The respondents were asked about downloading and uploading information as an operational skill. In general, 90% of Malay, 100% of Chinese and 90% of Indian students downloaded information while the figures about uploading were significantly lower; in fact, only 71.7% of Malay, 66.7% of Chinese and 65% of Indian students uploaded information. The next question was about surfing the internet for non-academic information, particularly information about sports, live concerts or festivals. The results indicated that 86.67% of Malay, 81.67% of Chinese and 65% of Indian students surfed the internet for non-academic purposes.

On strategic skills the respondents were asked about email services. Of all Malay students in the sample, 95.84% said yes to this question, while this figure was 98.4% of Chinese and 100%

of Indian students. The figures on using the internet for telephone calling from websites like Oovoo or Skype were 53.34% of Malay, 48.34% of Chinese and 40% of Indian students. However, some of the students preferred to send SMS through the internet. The results indicated that 60.84% of Malay, 56.47% of Chinese and 70% of Indian students in the sample use the internet for this purpose. Another aspect of strategic skill of using the internet is doing 'e-operations' such as booking a ticket, e-shopping or paying bills. Of the total respondents, 67.5% of Malay, 66.7% of Chinese and 65% of Indian students gave a positive reply to this item. However, the figures related to using the internet to read e-books declared that 85.8% of Malay, 76.67% of Chinese and 100% of Indian students were interested in reading e-books online. Another item in strategic skills of internet literacy was to surf in advertisements. The data show that 70% of Malay, 48.34% of Chinese and 50% of Indian students in the sample surfed in advertisements. The next items in the online strategic skills are for chatting and playing games. The data indicated that 72.5% of Malay, 75% of Chinese, and 80% of Indian students used the internet for chatting. While 64.2% of Malay students 66.7% of Chinese and 80% of Indian students played games on the internet. The next item was to surf for news on the internet as a strategic skill. According to the data, 91.7% of Malay, 81.7% of Chinese and 90% of Indian students surfed the internet for news. The second part of the questionnaire included questions about "usage access" of Van Dijk's model. The first item in this category of access is usage time and frequency of using the internet per day. Internet use per day was asked with three choices of 1-2 hours, 3-4 hours and more than four hours. The data showed that 24.16% of Malay students used the internet for 1-2 hours a day, while this amount of time was spent by 20% of Chinese and 40% of Indian students. Meanwhile, 25.83% of Malay, 38% of Chinese and 30% of Indian students used the internet for 3-4 hours on a typical day. Regarding internet use for more than 4 hours a day, 50.01% of Malay, 42% of Chinese and 30% of Indian students gave positive responses. They were then asked about the frequency of internet use per week. The choices in the questionnaire were base on the Likert scale consisting of "always", "often", "sometimes", "rarely", and "never" choices. About 73.3% of Malay, 71.6% of Chinese and 80% of Indian students admitted that they "always" used the internet. Meanwhile, figures for "often" were 20%, 26.6% and 15% respectively. About 6.66% of Malay, 3.33% of Chinese and 5% of Indian students said that they "sometimes" used the internet. None of the respondents selected the other choices, "rarely" and "never".

The next item under "usage access" is broadband and narrowband connection of the internet. The data indicated that 80% of Malay, 73.33% of Chinese and 60% of Indian students used a broadband connection to use the internet while the rest of the students used narrowband connection. The respondents were also asked about the type of connection. Of all the respondents, 85% of Malay, 90% of Chinese and 90% of Indian students confirmed that they preferred to use Wifi for internet connection. The rest of the students used ADSL more than other ways of connection such as dial-up, Wimax, local network, or cell phone. They were also asked if they had ever taken any courses to learn how to use the internet and if so where. In general, 66.66% of Malay, 60% of Chinese and 70% of Indian students said that they had taken internet courses at the university they were studying or out of the universities such as at internet cafes. In addition, 1.6% of Malay, 3.33% of Chinese and 10% of Indian students admitted that they had self-studied how to work with the internet. The last sub-division of "usage access" is active and creative use of the internet. Here the respondents were asked if they had a weblog or they left comments expressing their ideas in others weblogs. Figures showed that 45% of Malay, 46.67% of Chinese and 45% of Indian gave a positive reply to this item.

Discussion and Conclusion

The purpose of this study was to create a profile of internet literacy among Malaysian female university students. This study adopted the model developed by Van Dijk (2008). Yielding results indicated that all the students accessed the internet at home or at the university and they had the motivation for internet use for both academic and non-academic purposes. Nearly the entire sample of students surfed the internet for information and they were good at informational skills; however, their familiarity with search engines and databases were not so good. In addition, the students were not good at checking the references of internet information and evaluating them.

Regarding the substantial skills as a sub-division of informational skill, there are more Chinese students who demonstrate this than Malay or Indian students. Results about downloading information were satisfactory, but the students were weak at uploading information. The respondents were asked about the internet application for non-academic purposes. Up to 90% of the students said that they use the internet for email, but less than 70% of them use it for calling or sending SMS.

The results about the students' strategic skills indicate that they use the internet for e-reading more than for 'e-operation' such as ticket booking. The results also show that two thirds of the students chat online, while the Indian students play games on the internet more than the Malay or Chinese students. About 90% of the students say that they read the news on the internet. Regarding usage, access in terms of time length and frequency of internet use, all of the students use the internet for at least 1 hour per day, so they selected the "always" choice as the frequency. The Malay students use the internet more than the rest on a typical day; while for the frequency of internet use, the Indian students are more active users than the others. Regarding broadband and narrowband internet connection, it was revealed that Indian students have less access to broadband connection than the Malay or Chinese students. About two thirds of the students had taken online courses in university or during their school years.

In general, the students have high levels of internet literacy in all its sub-divisions. However, they wish to improve their informational skills to search information, knowing which databases they can use for required information, and how to process and evaluate information they receive. These results rely on the students' self expression of their knowledge and skills. However, an experimental study will make clear their deficiencies in internet literacy, a topic for further work in this field. Since in the near future "internet literacy" will be the most important objective for educational institutionsso it is recommended that some long term curriculums and course works should be developed or short term workshops should be organised based on the students' needs, motivation, background knowledge and experiences before and after studying at the university to help them first of all understand their level of information literacy and then improve their abilities in that field for both academic and non-academic purposes. Students should learn how to do analysis of the information, critical thinking, identify sources for erroneous beliefs about information, use internet to express their ideas and their understanding of the world and connect to community towards a positive change.

Note

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