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Internet Difussion in Muslim Community: A Case Study Among Sub-Urban Malays in Malaysia

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Abstract

This paper presents a study on the adoption and usage of internet by Malay Muslims living in a sub-urban area as an attempt to answer the following questions: what is the situation of ICT implementation in Malaysia, what is the nature and purpose of usage of the Internet by the Malay Muslims that warrant them a place as active users of ICT. This study used survey research method to obtain data from the Malay population in Kota Bharu. This study used purposive sampling focusing on the respondents who are already using the Internet. The data were analysed using SPSS 12.0 and the analysis was descriptive. It is found that newspaper has been the main source of information. This is followed by Internet. Email is the main purpose of using the Internet, and this is followed closely by reading newspaper and searching for information. Job related usage is the third main purpose of usage, and about half use the Internet for social communication. This study has lent support to the diffusion of innovation theory. From the study it is obvious the Malays are ready and quick in adopting new technology in this case ICT, into their lifestyle.

Keywords: Internet usage, Internet diffusion, Multimedia Super Corridor (MSC), High Speed Broadband (HSBB), Muslims and technology.

Abstrak

Makalah ini memaparkan satu kajian mengenai adaptasi dan penggunaan Internet dalam kalangan masyarakat Islam di kawasan sub-urban bagi menjawab persoalan: dalam situasi manakah pembangunan ICT berlaku, dan apakah sifat dan tujuan penggunaan Internet dalam kalangan masyarakat Melayu-Islam yang mewajarkan mereka dianggap sebagai pengguna Internet yang aktif. Kajian ini melakukan penyelidikan lapangan untuk memperoleh data daripada masyarakat Melayu di Kota Bharu. Kajian ini menggunakan kaedah 'purposive sampling' dengan memberi perhatian terhadap responden yang sudah pun menggunakan Internet. Data dianalisis dengan menggunakan SPSS 12.0 dan

analisis mengenainya adalah dalam bentuk deskriptif. Kajian ini mendapati surat khabar merupakan sumber utama masyarakat ini memperoleh maklumat. Hal ini diikuti oleh Internet. E-mel merupakan tujuan utama mereka menggunakan Internet, dan diikuti oleh tujuan untuk membaca akhbar dan mencari maklumat. Penggunaan berkait dengan pekerjaan adalah tujuan ketiga, dan kira-kira separuh daripada mereka menggunakan Internet untuk tujuan hubungan sosial. Kajian ini menyokong perlakuan difusi dalam teori inovasi. Daripada kajian ini, adalah jelas bahawa Orang Melayu bersedia dan begitu cepat dalam mengadaptasikan teknologi baru dalam kehidupan mereka, dalam kes ini ICT.

Kata kunci: penggunaan internet, difusi Internet, Multimedia Super Corridor (MSC), High Speed Broadband (HSBB), Muslim dan teknologi.

Introduction

Within the Muslim countries, the implementation of science and technology policy takes place at the national level. Most governments have established councils to oversee science and technology, drafted some sort of national plan, and made an attempt at implementation (Zahlan 1980). As in the case of Malaysia there is the National Information Council and several other bodies to see to the implementation of ICT. Hence, it is worth studying the impact of all the initiatives put in place by the government in relation to how the people have benefited from them. It is therefore vital to trace developments in Internet adoption and usage among Muslims, with particular reference to Malay Muslims in Malaysia, as it is the new technology of the 20th century. As in the case of Malaysia there is the National Information Council and several other bodies to see to the implementation of ICT. Hence, it is worth studying the impact of all the initiatives put in place by the government in relation to how the people have benefited from them. It is therefore vital to trace developments in Internet adoption and usage among Muslims, with particular reference to Malay Muslims in Malaysia, as it is the new technology of the 20th century.

In order to understand how innovation is adopted and use, it is important to comprehend the processes in the diffusion of innovation. Diffusion of innovation depends on several factors and process. There are several studies of diffusion and Rogers (2003) study on diffusion is one of the much referred studies on diffusion. According to Rogers diffusion is the process in which an innovation is communicated through certain channels over time among the members of a social system. Brown (1981) defines diffusion as the process by which change oc-

curs whereby innovation spread from one locale or one social group to another. As expressed in these two definitions, innovation, communication channels, time, and the social system are the four key components of the diffusion of innovations. Rogers (2003) described the innovation-diffusion process as —an uncertainty reduction process‖ (p. 232), and he proposes attributes of innovations that help to decrease uncertainty about the innovation. Attributes of innovations include five characteristics: (1) relative advantage, (2) compatibility, (3) complexity, (4) trialability, and (5) observability. In summary, Rogers (2003) argued that innovations offering more relative advantage, compatibility, simplicity, trialability, and observability will be adopted faster than other innovations. Rogers does caution, — getting a new idea adopted, even when it has obvious advantages, is difficult‖ (p. 1), so the availability of all of these variables of innovations speed up the innovation-diffusion process.

This paper presents a study on the adoption and use of internet by Malay Muslims living in a sub-urban community. Kota Bharu, chosen for this study, is a town in the north-eastern coast of Peninsular Malaysia in the state of Kelantan. The town is known as the cradle of Malay culture and "Serambi Mekah" (Corridor of Mecca) symbolising the influence of Islam in the life of the Malays in the state. The paper will attempt to trace the current development in ICT in Muslim countries with special focus on Malaysia and narrowing down to Internet usage by Malay Muslims. Hence the following are the research questions which the paper attempts to answer: a) what is the situation of ICT implementation in Malaysia? b) What is the nature and purpose of usage of the Internet by the Malay Muslims that warrant them a place as active users of ICT?

Developments in ICT in Malaysia

Bearing in mind that with the advent of the Internet, Muslims cannot afford to repeat similar mistakes as they did to other technological developments, Malaysia as Muslim country has made strides as far as the adoption and use of ICT and the Internet is concerned. This is obvious in various ICT initiatives by the government such as the Multimedia Super Corridor (MSC) and the newly launched High Speed Broadband (HSBB) (Salman 2010; The Malay Mail, March 2010).

The HSBB is a flagship project of the National Broadband Initiative. HSBB aims to boost the country's competitiveness. The na-

tional project worth RM11.3bil is a joint effort between TM and the government to develop the next generation high speed broadband infrastructure and services. Some of the initiatives include implementation of broadband community centres to provide broadband services to 615,000 households in 246 locations with an allocation of RM60 million; building of people's internet centres in 138 Information Ministry premises nationwide (This will see the offer of the broadband coverage to 400,000 users); e-kiosks will be provided at community centres and sub-district offices in 1,105 sub-districts in the country with an allocation of RM40; public cellular coverage whereby 873 new telecommunication towers will be built (This includes 278 telecommunication towers in Sabah and 257 in Sarawak); RM1 billion will be channelled from the Universal Service Provision (UPS) programme through the agreement of service providers to provide notebooks to underprivileged students in the country; TM has agreed to introduce broadband-netbook packages at reduced prices of RM38 (from RM50) and RM20 (from RM30) for USP areas.

Behind this development in ICT in Malaysia is the bill of guarantee which has been seen as responsible in encouraging the use of Internet. The bill of guarantee no. 7 states that the government will not censor the Internet. However, "this does not mean that any person may disseminate illegal content with impunity and without regard to the law". The lack of censorship does not mean that the government does not monitor abuse of the Internet. As we all know the Internet is a double edge sword.

Malaysia is experiencing a quantum leap in her effort to remain resilient as far as the National IT and Communications strategy is concern. This effort was nurtured during the era of Tun Mahathir, the then Prime Minister of Malaysia as Malaysia took the stance of engagement as opposed to containment (Maszalida Hamzah and Massila Hamzah 2001). Malaysians in general are responding to this effort and the Malays in particular have already embraced this challenge as evident in the adoption and use of the Internet among the Malays in Kelantan.

Methodology

This study used survey research method to obtain data from the Malay population in Kota Bharu, to ascertain the adoption and usage of internet. This study used purposive sampling focusing on the respondents who are already using the Internet. Three sampling components were

used and comprised of age, gender and occupation. The age component consists of three groups comprising 19-30, 31- 40 and 41+. To get equal representation of gender, the sample consisted equal number of males and females. For the occupation component the respondents were categorised into four groups viz. government servants, government linked companies, private businesses and students. A questionnaire was used to collect data for this study. A total of 365 answered questionnaires were completed three weeks later, out of which 357 were usable giving a return rate of 91.25%. The data were analysed using SPSS 16.0 and the analysis was descriptive.

Results

On the profile of respondents (Table 1) out of the total 357 respondents, 179 are males representing 50.1 % of the respondents and 178 (49.9%) are females. In terms of age, 95 (26.6%) of the respondents belong to the 19–24 age group and form the majority. This is followed by those in the 30-35 and 36-40 age groups, with each group having 15%. The age group with the least respondents is the 51 years and above which represents 7.1%. Majority of the respondents, 260 (72.8%), are employed. Of this percentage, 5% (18) are self-employed. Students make up 27.2% (97) of the respondents. The students comprise of matriculation, diploma, undergraduate and postgraduate students.

Academically, majority of the respondents, 44.5% have SPM (Malaysian School Certificate), followed by those with a bachelor's degree, 27.2%. This represents fairly educated respondents. The results also show that there is wide use of Internet across different educational backgrounds among the Malays in Kota Bharu.

In terms of household income, the average household income is RM3,000. This means the working respondents (260) can be categorized as belonging to the middle class in Malaysia (Tori 2003). The curve for the histogram (Appendix A) skewed to the right indicating a big difference between incomes resulting in a large standard deviation. The large standard deviation for monthly household income may be due to the large difference that exists within the respondents' monthly household income or outliers who might have inflated their monthly household income.

TABLE 1 Demographic Data of the Respondents

	Frequency	%
Gender		
Male	179	50.1
Female	178	49.9
Total (N)	357	100
Age		
19 – 24	95	26.6
25 – 29	37	10.5
30 – 35	54	15
36 – 40	54	15
41 – 45	52	14.5
46 – 50	40	11.3
51 and above	25	7.1
Total (N)	357	100
Employment Status		
Employed	242	67.8
Self Employed	18	5.0
Students	97	27.2
Total (N)	357	100
Academic Qualification		
PhD	2	0.6
M.A. / M. Sc.	28	7.8
Bachelors	97	27.2
Diploma	55	15.4
SPM (G.C.E.)	159	44.5
Others	16	4.5
Total (N)	357	100

TABLE 2 Monthly Household Incomes (Working Respondents)

Income (Ringgit Malaysia)	Frequency	(%)
Below 1000	9	7.3
1000 – 1999	32	12.3
2000 – 2999	68	26.2
3000 – 3999	49	18.8
4000 – 4999	23	8.8
5000 – 5999	20	7.7
6000 – 6999	23	8.9
7000 – 7999	7	2.7
8000 – 8999	10	3.8
9000 and above	9	3.5
Total (Working respondents)	260	100

Source of Information

Newspaper is the main source of information with 96.1% of the respondents using it as a source of information. This is followed by Internet (92.4%). Television closely followed Internet with 90.5% and Radio is the fourth main source with 69.5%. This is an interesting discovery as Internet has over taken television and radio as source of information. This may be due to the dynamic nature of the Internet and its interactive nature.

However, when the respondents were asked to rank the sources of information, television overtook Internet as the second ranking for the respondents. Newspaper is ranked number one. It is interesting to note that Internet has overtaken radio in ranking as a source of information. It is also closed to the first and second ranking which are Newspaper and Television respectively as the scores revealed.

TABLE 3 Sources of Information

Information sources	Frequency	(%)
Newspaper	343	96.1
Internet	330	92.4
Television	323	90.5
Radio	248	69.5
Magazine	227	63.6
Book	199	55.7

Computer Ownership and Usage

Computer ownership among the respondents is very high as 91% of the respondents have their own computer. Of the 9% of respondents who do not own a computer, a large number (5.6%) use computer at the office. This is followed by 5.0% who use computer at the cyber café. As criteria for inclusion in the research, a respondent must use a computer and therefore all the respondents use computer.

TABLE 4 Places of Using Computer

Place	Frequency	%
Home	325	91
Office	20	5.6
Cyber Café	18	5.0
Library / Computer Lab	8	2.2
Relative's Home	8	2.2
Friends' Place	6	1.7
Neighbour's Home	3	0.8

Internet usage

More than two thirds of the respondents, 79% acquired their Internet usage skills through informal learning that is self taught and learning from friends. Some 46.2% of the respondents have Internet connection at home. Of the 192 (53.8%) respondents who have no Internet connection at home, 20.7% gave expensive monthly access as the reason for not having Internet connection at home. 21% said they have no telephone line. There are those who are afraid of their children being exposed to pornography and they form 12.9%. The lack of computer at home is also one of the reasons as 10.1% said they have no computer at home. This does not mean they have no computer at all. Some of the respondents, especially the students use their computers or laptops at college or university. Interestingly there are still respondents, 3.6% (13), who think it is not very important to have Internet connection at home.

More than half of the respondents, 52.6% (188) have been using the Internet for two to five years. 39.6% (142) have been using the Internet for six to ten years, while 7.6% (27) have been using it for more than ten years. On the nature of usage, 63.6% (227) of the respondents

said they have been using the Internet on and off, while 36.4% (130) said their usage has been continuous.

Majority of the respondents, 62.8% (224) use Internet one to two hours a day. 20.7% (74) use it three to four hours a day. Thus about 83% of the respondents use the Internet one to four hours a day. 27.1% (97) of the respondents use the Internet three to five hours a week. About one-third, 32.3% (115), of the respondents use the Internet six to ten hours a week while 13.4% (48) use it eleven to fifteen hours a week. Therefore, more than two-thirds (72.8%) of the respondents, use the Internet 3 to 15 hours a week.

Another interesting finding is on the future usage of Internet by the respondents. Some 41.2% (147) of the respondents said they will increase their usage, while 38.1% (136) said they are not sure. Some 17.6% (63) of the respondents said they will maintain their hours of usage and only 3.1% (11) said they will decrease their hours of usage of the Internet.

Of the six places where the respondents usually use the Internet, 63.3% (226) use the Internet at the office and computer laboratory at college or university (Table 5.5). 53.8% (192) of the respondents use the Internet at home, while 35.9% (128) use at Cyber Café.

TABLE 5 Usual Places of Using the Internet

Place	Frequency	%
Office/University/College	226	63.3
Home	192	53.8
Cyber Café	128	35.9
Friends' Place	52	14.6
Family outside your house	35	9.8
Neighbours' house	7	2.0

Email is the main purpose of using the Internet with 81.2% (290) of the respondents using the Internet for this purpose. This is followed closely by reading newspaper and searching for information, 79.3% (283) while work related usage is the third main purpose of usage with 62.2% (222) using the Internet for this purpose. The least purpose of usage is shopping online as only 16.5% (59) of the respondents use the Internet for this purpose.

TABLE 6 Purpose of Using Internet

Purpose	Frequency	(%)
Electronic mail (e-mail)	290	81.2
Reading Newspaper and Information Search	283	79.3
Work Related Usage	222	62.2
Education and Research	195	54.6
Social Communication (Chatting)	175	49.0
Electronic Government	169	47.3
Hobby/Games/Entertainment	162	45.4
Software Downloading	147	41.2
Health Information	145	40.6
Political and Religious Activities	143	40.1
Bill Payment	122	34.2
Holiday Arrangements	91	25.5
Money Transfer	72	20.2
Credit Card Payment	66	18.5
Online Shopping	59	16.5

Discussions

At the beginning of the 1990s, the leading economies of the world began to realize the importance of information and knowledge as valuable resources, both nationally and within organizations (Ogunsola 2005). Muslims are not left out in this information revolution. Thus the Malay Muslims of Malaysia are also active players in this recent and ever dynamic phenomenon, i.e. development in ICT. Internet usage in Malaysia began around 1992. The government provides the necessary support for the ICT initiative.

The Internet, which started with a simple browsing and e-mail experience, has now turned into a mechanism to creatively disseminate information. It has complemented the already existing mass media and as this study revealed the Internet has overtaken radio as a source of information next to newspaper and neck to neck or at par with television. For the Malays, the Internet serves as an alternative information source. Despite the introduction of the Internet not long ago, which was 20 years ago, most of the Malay internet users said, apart from news-

paper, Internet was the second main source of information for them. Interestingly, when the respondents were asked to rank the sources of information television overtook Internet as the second ranking for the respondents. Newspaper was ranked number one. Yet still, it is interesting to note that Internet has overtaken radio as the third ranking for source of information. This is a healthy development in the usage of the Internet among the rural or suburban Malays and attest to the fact that the Malays have indeed caught up with the developments in ICT and the Internet in particular. The reason for this may be attributed to the nature of the Internet which is seen as a store house of information where one can get information at the click of a button or mouse. Yet another reason is readiness of the Malays to adopt new innovation, in this case the Internet. This is an encouraging development as it saves the Malay Muslims from repeating the mistakes of their predecessors in shunning away technology, especially those developed by the west.

As a prerequisite for internet usage, computer ownership or access to computer is very important. This study revealed that 91 percent of the Malay respondents have their own computer. This is yet an indication of the level of use of ICT by the Malays

The acquisition of Internet usage skills among the respondents was also taken into consideration. The results showed that more than two thirds of the respondents acquired their internet usage skills through informal learning that is self taught and learning from friends. This shows the initiative and the enthusiasm among the Malays to adopt new technology.

The suburban Malays are widening their use of the Internet to cover various aspects of their lives ranging from education to work usage. As the study revealed use of the Internet for work and education among the Malays is noticeable. This finding is similar to Sexton et al. (2002) that job-related use of the Interne is an important characteristic that should influence use of the Internet.

Despite the worries about unwanted and immoral content in the Internet, only very few Malays have no internet connection or do not allow the use of internet at their homes. These small numbers of Malays were afraid that their children might be exposed to pornography, hence did not want to have internet connection at home. Though the number of this people is very small, it is still important to pay attention to the pornographic issue. This support Gallander's (2001) claim that families, especially Muslims, are worried over the issue of pornography as

far as their children are concern. As we know the respondents of this survey were Malay Muslims.

The trend in usage of the Internet among the Malays as long as hours of usage are concerned indicates they are moderate to heavy users of the Internet. It is also evident from the study that the future use of the Internet among the Malays is likely to increase as about half of the respondents said they will increase their usage of the Internet in future. This is yet again another indication that the Malays have come to terms with development in Technology, especially ICT and this further help in the efforts by the government to get Malaysians to join the ICT bandwagon.

Another development in ICT usage among the Malays is the increasing use of Internet as a communication tool whereby email use has largely replaced postal service, telegrams and fax and this fact is congruent to the observation of certain scholars and observers in ICT (Ahmad 2010). Though this is not surprising as email was one of the first services that were made available on the Internet, yet the Malay internet users need to be commended. What this means is that the Malays in this part of suburban Malaysia have moved in tandem with the developments in ICT use in Malaysia as gone were the days when we relied heavily on the postal service for our communication needs.

Furthermore, the use of internet as an information source over the years has seen the Malays moving to the Internet to read newspapers online. This is evident in the percentage of the respondents who read newspapers online, which is about 80 percent.

The use of the Internet for work by the Malays is also notable as about two thirds use the Internet for this purpose. This attest to the fact that over the years since the introduction of the Internet we have seen the gradual adoption of the Internet into the lifestyle of the Malays though they live in smaller cities and towns considered to be rural or suburban in nature.

However, only a mere 16.5 percent of the Malay respondents use the Internet for online shopping. Looking at the nature of the Malays, especially those living in small towns, a lot of reasons might be attributed to this. Perhaps the sub-urban or rural Malays have not yet got used to the culture of online shopping or they don't think online shopping is secured. Furthermore, from observation, the Malays by nature are known for going shopping offline at supermarkets with the whole family as a way of spending time together.

Conclusion

This study has lent support to the diffusion of innovation theory (Rogers 2003). According to the theory, innovation which is perceived to be better and has added advantage than the existing innovation will be adopted and used by society. In the case of this study, the Malay community has found the internet suitable and have adopted the internet in their daily activities using it for different purposes. From the study it is obvious the Malays are ready and quick in adopting new technology in this case ICT, into their lifestyle. This is obvious from the various usage of the Internet by the Malays. Muslims can no longer afford to repeat the mistakes of the earlier generation who in one way or the other shy away from technology invented by the West. The steps taken by the Malay Muslims in embracing ICT are in the right direction. It is a proof that Malay Muslims are active users of technology and they are responding to the call for Malaysians to get connected to the Internet and become active participants in using ICT. One may ask what would be the next stage in the use of the internet by the Malays. Having access to the internet, in other words bridging the divide, may not necessarily means there will be no more gaps or divide in the subsequent usage of the technology. Therefore, efforts must be made to go beyond access to bring about added value in usage and subsequently digital inclusion.

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