UNIVERSITI PUTRA MALAYSIA

ACCEPTANCE AND USAGE OF WEBCASTING AMONG USERS OF SELECTED CYBER CAFÉS IN KLANG VALLEY, MALAYSIA

TENGKU SITI AISHA TENGKU MOHD AZZMAN SHARIFFADEEN

ACCEPTANCE AND USAGE OF WEBCASTING AMONG USERS OF SELECTED CYBER CAFÉS IN KLANG VALLEY, MALAYSIA

By

TENGKU SITI AISHA TENGKU MOHD AZZMAN SHARIFFADEEN

Thesis Submitted to the School of Graduate Studies, Universiti Putra Malaysia, in Fulfilment of the Requirement for the Degree of Master of Science

March 2007

Abstract of thesis presented to the Senate of Universiti Putra Malaysia
in fulfilment of the requirement for the degree of Master of Science

ACCEPTANCE AND USAGE OF WEBCASTING AMONG USERS OF SELECTED CYBER CAFÉS IN KLANG VALLEY, MALAYSIA

By

TENGKU SITI AISHA TENGKU MOHD AZZMAN SHARIFFADEEN

March 2007

Chairman : Professor Musa Abu Hassan, PhD

Faculty : Modern Languages and Communication

The Internet is the world's largest interconnected network. With broadband Internet connection, the transfer of text, audio and video was made possible through the streaming technology. This resulted in the birth of webcasting technology in 1995. However, even though the technology has been available for more than ten years, there is a lack of information and research conducted on the technology, particularly on who are the early adopters, and what would be the most viable content for adoption. Hence, the aim of this study is to understand the usage of webcasting among users of webcasting. This study also aims for looking at the acceptance of webcasting from the perspective of the Technology Acceptance Model (TAM) and to analyze the relationship between perceived usefulness (PU) and perceived ease of use (PEOU) with the behavioral intention (BI) to use webcasting among non-users of the technology.

This study used the survey design and structured questionnaire as a means to gather data. A total of 221 respondents from a total of 15 cyber cafés in selected areas of the Klang Valley participated in this study. The respondents were selected using purposive sampling. The data was analyzed using the Statistical Package for Social Sciences (SPSS version 12). The statistical analysis used in the study consisted of descriptive analysis, Pearson's correlations and the multiple regression.

The results revealed the profile of webcasting users as male, young, students, educated with at least a diploma qualification but having no working experience. The most frequently used webcasting technology among webcasting users is the Internet radio. Since the technology is fairly new, the level of knowledge and skills in using the technology was moderate. The Internet is the most preferable source in becoming more aware of the technology.

There is also acceptance of the technology among non-users of webcasting; perceived ease of use and usefulness was found to have a significant relationship with behavioral intention. The study partly validated and strengthened the basic TAM theory; non-users had more intention to use the webcasting technology if the perceptions towards the technology were positive. Finally, the study also proved that even though the usage of webcasting is still relatively low, the future of webcasting as an alternative media proves to be encouraging due to the acceptance of webcasting among non-users of the technology.

Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia
sebagai memenuhi keperluan untuk ijazah Master Sains

PENERIMAAN DAN PENGGUNAAN PENYIARAN INTERNET DI KALANGAN PENGGUNA SIBER KAFE YANG TERPILIH DI LEMBAH KLANG, MALAYSIA

Oleh

TENGKU SITI AISHA TENGKU MOHD AZZMAN SHARIFFADEEN

Mac 2007

Pengerusi : Profesor Musa Abu Hassan, PhD

Fakulti : Bahasa Moden dan Komunikasi

Internet merupakan jaringan eletronik terbesar di dunia. Dengan adanya jalur lebar, pemindahan teks, audio dan video telah dipermudahkan dengan teknologi ‘streaming’. Ini telah menghasilkan kewujudan teknologi penyiaran Internet pada tahun 1995. Walaupun teknologi ini telah wujud lebih daripada sepuluh tahun, tidak banyak maklumat dan penyelidikan yang dijalankan tentang pengguna awal teknologi ini serta apakah jenis teknologi yang menarik untuk penerimaan pengguna. Oleh itu, tujuan kajian ini ialah untuk memahami penggunaan penyiaran Internet di kalangan pengguna teknologi itu. Kajian ini juga bertujuan untuk melihat penerimaan penyiaran Internet dikalangan bukan pengguna dari perspektif Model Penerimaan Teknologi (TAM) dan untuk mengkaji sama ada niat menggunakan teknologi (BI) bergantung kepada persepsi terhadap teknologi itu, khususnya sama ada ia berguna untuk kerja (PU) serta mudah untuk digunakan (PEOU).

Kajian ini menggunakan teknik kaji selidik dan soalan berstruktur telah digunakan untuk mengumpul data. Seramai 221 pengguna daripada 15 siber kafe terpilih di sekitar Lembah Kelang terlibat dalam kajian ini. Responden dipilih menggunakan teknik sampeling bertujuan. Data telah dianalisis menggunakan perisian Pakej Statistik untuk Sains Sosial (SPSS), versi 12. Analisis statistik yang digunakan dalam kajian ini termasuk analisis deskriptif, korelasi Pearson serta regresi.

Hasil kajian menunjukkan bahawa pengguna penyiaran Internet adalah kebanyakannya lelaki, pelajar, muda, dan berpendidikan dengan sekurang-kurangnya mempunyai sijil diploma tetapi tidak mempunyai pengalaman bekerja. Teknologi penyiaran Internet yang paling popular di kalangan pengguna merupakan radio Internet. Oleh kerana status teknologi ini yang masih baru, aras pengetahuan dan skil menggunakan penyiaran Internet adalah pada tahap sederhana. Internet merupakan sumber yang paling digemari bagi menyedari kewujudan teknologi tersebut.

Melalui kajian ini juga, terbukti bahawa terdapat penerimaan teknologi tersebut di kalangan bukan pengguna; tanggapan tentang kemudahan menggunakan teknologi tersebut dan bergunanya teknologi mempunyai hubungan yang positif dengan niat untuk menggunakan teknologi tersebut. Oleh itu, kajian ini telah membuktikan dan memperkukuhkan asas model penerimaan teknologi (TAM). Disamping itu, bukan pengguna akan lebih cenderung untuk menggunakan teknologi penyiaran Internet jika mereka mempunyai tanggapan yang lebih positif terhadap teknologi tersebut.

Akhir sekali, kajian ini membuktikan bahawa walaupun penggunaan penyiaran Internet masih di tahap yang rendah, ia mempunyai masa depan yang cerah sebagai media alternatif berdasarkan penerimaan teknologi tersebut di kalangan bukan pengguna.

ACKNOWLEDGEMENTS

In the name of Allah the Most Gracious and the Most Merciful

All praises and gratitude for the Almighty Allah SWT whose countless bounties have enabled me to successfully execute the completion of my research work, *Alhamdulillah*. There are no adequate words that could eloquently convey my sense of gratitude, but I would like to record my sincerest appreciation in writing to these particular individuals and organizations that were instrumental in helping me complete my thesis.

First and foremost, I would like to begin by expressing my most sincere appreciation and heartfelt gratitude to my supervisors. I must extend a special appreciation to Professor Dr. Musa Abu Hassan, chairman of my supervisory committee, who gave me numerous ideas and constructive tips of which I am intensely indebted to. Even with his packed and impossible schedule, he made sure he was available for consultation whenever I needed to see him, with good humor and patience. I am also grateful to Professor Dr. Md. Salleh Hj. Hassan, my supervisory committee member for his thoughtful comments and suggestions, which has significantly improved my thesis. I am certainly privileged and honored to have had the golden opportunity to work with both of my supervisors. Although I am mostly responsible for the work of this thesis, but the contents of this thesis reflects much of the excellent opinions, thoughts and valuable views of the above great scholars mentioned.

To my examiners, Dr. Ezhar Tamam, Dr. Narimah Ismail, Dr. Rahmah Hashim, as well as Dr. Siti Zobidah Omar and Dr. Jusang Bolong, my gratitude goes out to them for greatly improving my thesis based on their observations, apt recommendations and useful suggestions.

I must not fail to convey my special thanks to my mentor and colleague from International Islamic University Malaysia (IIUM), Dr. Saodah Wok, who had been amazingly generous with her guidance and suggestions in the areas that needed improvement. My sincere gratitude also goes out to the local councils of Dewan Bandaraya Kuala Lumpur (DBKL), Majlis Perbandaran Petaling Jaya (MPPJ) and Majlis Perbandaran Subang Jaya (MPSJ), who had generously aided my data collection process by providing me the required information I needed.

I must also communicate my special gratitude to my family: my dearest mother, Nik Pakhitah Abdul Rahman for her unfailing assistance, motivation, constant support and encouragement; my respected father, Tengku Mohd Azzman Shariffadeen, for his useful advice, guidance and practical ideas; and my only sister, Tengku Amina Munira, for generously assisting and supporting me in every way imaginable. To my brothers, Tengku Omar Zainal Abidin, Tengku Mohd Adib Saifuddin, Tengku Ahmad Naim Nuruddin and my sister-in-law, Norhana bte Idris, I am eternally grateful for their kind understanding and support during this challenging period of completing my research work.

My deepest affection also goes out to Sadry for his constant encouragement and his indefatigable confidence in my ability, which has been a source of inspiration. A sincere appreciation also goes out to my close friends, fellow classmates and colleagues; particularly to Nuraini, Emee, Marini, Aji, Raha, Siaw Ling, Abang Alwee, Abang Nerawi, Kak Zeti, Kak Aini, Shafizan, Abang Lazi and Kak Rozie. I am extremely indebted to all of them for their invaluable opinions and advice, sharing of materials and articles and for being a source of steady support. Finally, a note of thanks also goes out to all respondents in the study, without whom this study would not have been completed.

Without the help of my family, close friends and loved ones, I would definitely not complete this thesis successfully. Hence, I dedicate this thesis to all of you who have had played a major role from the beginning of my thesis writing up to the very end. It is my greatest anticipation that this thesis and work of research would serve as an aid to those who seek to understand the intricacies and complexity of user acceptance in adopting new communication technology. In the midst of the current technological craze surrounding the new developments of ICT, to understand the various processes involved in its acceptance and usage has definitely been most challenging and worthwhile. Hopefully, my work will be of benefit to others, *Insya-Allah*.

I certify that an Examination Committee met on 1 March 2007 to conduct the final examination of Tengku Siti Aisha on her Master of Science thesis entitled "Acceptance and Usage of Webcasting Among Users of Selected Cyber Cafés in Klang Valley, Malaysia" in accordance with Universiti Pertanian Malaysia (Higher Degree) Act 1980 and Universiti Pertanian Malaysia (Higher Degree) Regulations 1981. The Committee recommends that the candidate be awarded the relevant degree. Members of the Examination Committee are as follows:

Siti Zobidah Omar, PhD
Lecturer
Faculty of Modern Languages and Communication
Universiti Putra Malaysia
(Chairman)

Ezhar Tamam, PhD
Associate Professor
Faculty of Modern Languages and Communication
Universiti Putra Malaysia
(Internal Examiner)

Narimah Ismail, PhD
Lecturer
Faculty of Modern Languages and Communication
Universiti Putra Malaysia
(Internal Examiner)

Rahmah Hashim, PhD
Associate Professor
Faculty of Information Technology and Multimedia Communication
Open University Malaysia
(External Examiner)

HASANAH MOHD. GHAZALI, PhD
Professor / Deputy Dean
School of Graduate Studies
Universiti Putra Malaysia

Date: 14 JUNE 2007

This thesis submitted to the Senate of Universiti Putra Malaysia and has been accepted as fulfilment of the requirement for the degree of Master of Science. The members of the Supervisory Committee are as follows:

Musa Abu Hassan, PhD
Professor
Faculty of Modern Languages and Communication
Universiti Putra Malaysia
(Chairman)

Md Salleh Hj Hassan, PhD
Professor
Faculty of Modern Languages and Communication
Universiti Putra Malaysia
(Member)

_____

AINI IDERIS, PhD
Professor/Dean
School of Graduate Studies
Universiti Putra Malaysia

Date: 14 JUNE 2007

DECLARATION

I hereby declare that the thesis is based on my original work except for quotations and citations which has been duly acknowledged. I also declare that it has not been previously or concurrently submitted for any other degree at UPM or other institutions.

_____

TENGKU SITI AISHA TENGKU MOHD AZZMAN SHARIFFADEEN

Date: 18 APRIL 2007

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS

ABC	American Broadcasting Corporation
AOL	America Online
APNIC	Asia Pacific Network Information Centre
BBC	British Broadcasting Corporation
CCM	Companies Commission of Malaysia
CNN	Cable News Network
CSTV	College Sports Television
CV	Curriculum Vitae
DBKL	Dewan Bandaraya Kuala Lumpur
DVD	Digital Video Disc
FBMK	Fakulti Bahasa Moden dan Komunikasi
IACC	International Association of Cyber Cafés
IBM	International Business Machine Corporation
ICT	Information Communication Technology
IIUM	International Islamic University of Malaysia
IRC	Internet Relay Chat
ISP	Internet Service Provider
IT	Information Technology
ITU	International Telecommunications Union
JARING	Joint Advanced Research Integrated Networking
MCMC	Malaysian Communication and Multimedia Commission

MCB	Metropolitan Cemeteries Board
MIMOS	Malaysian Institute of Microelectronic Systems
MMU	Multimedia University
MP3	MPEG Audio Layer 3
MPPJ	Majlis Perbandaran Petaling Jaya
MPSJ	Majlis Perbandaran Subang Jaya
MSN	Microsoft Network
PC	Personal Computer
PDA	Personal Digital Assistant
PE	Perceived Ease of Use
PU	Perceived Usefulness
RTM	Radio Televisyen Malaysia
SPSS	Statistical Package for Social Sciences
TAM	Technology Acceptance Model
TRA	Theory of Reasoned Action
TV	Television
UK	United Kingdom
UPM	Universiti Putra Malaysia
USA	United States of America
VCR	Video Cassette Recorder

CHAPTER I

INTRODUCTION

Background of the Study

The Internet is the world's largest inter-connected environment. It is the most recent communication tool, whereby a user can transcend borders and have access to encyclopedias, television stations, radio stations, newspaper articles, bulletin boards, video arcades, the latest music videos and movie trailers, all at one stop. The growth of the Internet has reached phenomenal proportions and is perhaps the most important platform shift to hit the computing industry since the introduction of the IBM personal computers in 1981 (Keyes, 1997).

By 1995, some thirty million computers were linked throughout ninety countries in the world including Malaysia (Shamsul, 1995). The Nua Internet survey (2003) estimates that by September 2002, there are 605.60 million people worldwide who are logging on to the Internet. Nua is an Internet strategy, research and development agency that provides specialist, high level consulting to companies seeking to develop effective Internet strategies and to migrate their brand successfully online. In addition, the latest statistics by the World Internet Statistics (2006) website approximates that by March 31, 2006 there

are 1.02 billion Internet users worldwide; with 35.6% of Internet users coming from Asia, 28.5% coming from Europe and another 22.2% coming from North America.

Musa (2002) described the beginnings of the Internet technology in Malaysia. The Internet in Malaysia can be traced back to the formation of "RangKom" (Rangkaian Komputer Malaysia) in 1987, which provided the initial experience of information technology (IT) development, and had access via dial up lines to Australia, USA, Netherlands and Korea. The institution that was directly responsible for the establishment of Internet in the country was the Malaysian Institute of Microelectronic Systems (MIMOS), which was set up in 1985. The impetus of the Internet boom in Malaysia was the set up of Joint Advanced Research Integrated Networking (JARING) by MIMOS in 1991. JARING was subsequently linked to the Internet in 1992, via a satellite link to the United States. JARING provided Malaysia with Internet infrastructure, and became Malaysia's first Internet Service Provider (ISP) with thirty subscribers (Malaysia, 1996).

The Internet technology came out of the alpha stage between the years of 1993-1996 when it caught the imagination of early Internet adopters (Rahmah & Arfah, 1999). It was estimated that there were two million Internet users in Malaysia by the end of 1999 (Musa, 2002). By the year 2005, the number of Internet users in Malaysia has reached an estimated 10.317 million users, with a penetration rate of 13.2% according to the Malaysian Communication and Multimedia Commission website (MCMC, 2006). The

number of personal computers (PC) in Malaysia had also reached a staggering 4.2 million by the year 2003 (MCMC, 2005).

With Vision 2020, Malaysia has embarked on an ambitious plan to leapfrog into the information and communication technology (ICT) industry. Among the goals in Vision 2020 is to position Malaysia as a major ICT and multimedia hub, to enhance human resource development in ICT and to become a fully developed, matured and knowledge-rich society by the year 2020. To achieve this, various measures have been taken to maximize the potentiality of IT to accelerate the achievement of goals and targets of Vision 2020. The government has spent millions in building infrastructure to set up, improve and facilitate the usage of ICT among the public. For example, up until now, public campaigns are widely implemented by the mass media to encourage more Malaysians to use computers and the Internet in their daily lives. The government also allocated more than RM 1.44 billion for computerization projects from the year 1996 to the year 2000 (Musa, 2002).

The summary of the Internet growth in Malaysia and its major players is presented in Table 1, as cited in Musa (2002). There is no doubt that the Malaysian government has played a crucial role in providing adequate funding for the development of infrastructure in the ICT industry in Malaysia.

Table 1: Internet Growth in Malaysia

Year	Development
1987	RangKom was established
1991	JARING was set up and Jaring absorbed RangKom. Line used was X. 25
1992 (November)	International line of 64kbps to the US was installed
1994 (June)	JARING has 16 nodes throughout the country. Users from Singapore, Brunei and Thailand can get access to JARING
1994 (November)	Line of 2.048 Mbps was installed to connect Penang in the north and Johor Bharu in the south - Installation of permanent line of 2.048Mpbs (E1) to operate concurrently with 1.536Mpbs (T1) line for the second international Internet line. JARING has 21 nodes
1995 (December)	More than 1000 dial up lines for subscribers were created
1996	JARING has 40 nodes
1996 (November)	JARING A-Bone was set up to increase Internet access speed within Asian region. TM Net became the second ISP for Malaysia
1997	JARING introduced international roaming service to 150 countries
1997 (June)	Installation of 45Mpbs international lines
1999	JARING has 68 nodes
1999 (August)	JARING introduced SuperJARING, with an OC-48. Internet Backbone infrastructure with 2.5Gbps transmission speed, measures over 700 km
1999 (October)	Maxis Net became the third ISP for Malaysia
1999 (December)	Time Telekom became the fourth ISP for Malaysia
2001 (June)	Telekom Malaysia Berhad or TM Net has 1.05 million subscribers and captures 70% of the Malaysian market, and becomes the biggest ISP in South East Asia
2002	Seven ISPs in Malaysia offering both dial up and broadband connectivity. There is an estimated 7.8 million Internet users in Malaysia.
2003	Three ISPs (MIMOS Berhad/Jaring, Maxis Communication Berhad, and NTT MSC Sdn Bhd) established My6, a working group on IP services exploration.
2005	Estimated 10.3 million Internet users in Malaysia
2006	Estimated 11.1 million Internet users in Malaysia. The number of Internet subscribers in Malaysia is expected to reach 10 million within five years.

Source: Jalinan Jaring (1998) as cited in Musa (2002), ITU (2002), APNIC (2004) & World Internet Statistics (accessed 2006)