THE INTERNET USAGE AMONGST UNIVERSITI MALAYSIA SABAH STUDENTS: THE ROLE OF DEMOGRAPHIC AND MOTIVATIONAL VARIABLES

MOHAMMAD OSDREE BIN OTHAMAN

UMS
UNIVERSITI MALAYSIA SABAH

SCHOOL OF BUSINESS AND ECONOMICS
UNIVERSITI MALAYSIA SABAH
2007

THE INTERNET USAGE AMONGST UNIVERSITI MALAYSIA SABAH STUDENTS: THE ROLE OF DEMOGRAPHIC AND MOTIVATIONAL VARIABLES

MOHAMMAD OSDREE BIN OTHAMAN

UMS
UNIVERSITI MALAYSIA SABAH

A DISSERTATION SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE DEGREE OF MASTER OF BUSINESS ADMINISTRATION

SCHOOL OF BUSINESS AND ECONOMICS
UNIVERSITI MALAYSIA SABAH
2007

UNIVERSITI MALAYSIA SABAH

BORANG PENGESAHAN STATUS TESIS

JUDUL: PERANAN DEMOGRAFI DAN PEMBOLEH UBAH MOTIVASI TERHADAP PENGGUNAAN INTERNET DIKALANGAN PELAJAR – PELAJAR UNIVERSITI MALAYSIA SABAH.

IJAZAH: SARJANA PENTABDIRAN PERNIAGAAN (KEUSAHAWANAN)

SESI PENGAJIAN: 2006 – 2007

Saya, Mohd. Osdree mengaku membenarkan tesis Sarjana ini disimpan di Perpustakaan Universiti Malaysia Sabah dengan syarat – syarat kegunaan seperti berikut:

1. Tesis adalah hakmilik Universiti Malaysia Sabah.
2. Perpustakaan Universiti Malaysia Sabah dibenarkan membuat salinan untuk tujuan pengajian saya.
3. Perpustakaan dibenarkan membuat salinan tesis ini sebagai pertukaran antara institusi pengajian tinggi.
4. TIDAK TERHAD.

Disahkan Oleh:

ANITA BINTI ARSAD
PUSTAKAWAN KANAN
UNIVERSITI MALAYSIA SABAH

(Penulis: MOHD OSDREE OTHMAN)

(TANDATANGAN PERPUSTAKAWAN)

(Penyelia: Dr. Kalsom Abd. Wahab)
Tarikh: 10 Dec. 2007

Tarikh: 2007

(Penyelia: Dr. Fumitaka Furuoka)
Tarikh: 10.12.2007

CATATAN: Tesis dimaksudkan sebagai tesis Ijazah Doktor Falsafah dan Sarjana secara penyelidikan atau disertassi bagi pengajian secara kerja kursus dan penyelidikan, atau laporan Projek Sarjana Muda (LPSM).

DECLARATION

The materials in this thesis are original except for quotations, excerpts, summaries, and references which have been duly acknowledged.

MOHAMMAD OSDREE OTHAMAN
PE2006-8149
13th JULY, 2007

UMS
UNIVERSITI MALAYSIA SABAH

ACKNOWLEDGEMENT

Firstly, I am grateful to God for giving me the mental and physical strength to complete this project on title "The Internet usage amongst Universiti Malaysia Sabah Students: The role of demographic and motivational variables". God is great.

Secondly, I would like to thank Dr. Kalsom Abd Wahab, which is my supervisor. She has given me all the guidance and helping hand to completing this project. Without her help and patient, may be I would not complete this project. Also not forget my co-supervisor Dr. Fumitaka Furuoka whom given full guidance on the SPSS parts.

Thirdly, I should thank to few of my friends whom have help me so much for this project. There are Mr Dorius, Ms Siti Nursyida, Ms Fazlin Natasya, Ms Wilma and of course the rest of my classmates that share the idea and give helping hand for this project. I salute them for their help. Also not forgotten the respondent and the help from the staff UMS itself. I am really glad that they give a helping hand doing this assignment.

Last but not least, I must thank to my beloved parent for understanding and giving me the space to finish up this project and also for their mental support to me. I can say that they know nothing about this assignment but their love is more than enough as their moral support. Without their support I would not archive this success.

UMS
UNIVERSITI MALAYSIA SABAH

ABSTRACT

THE INTERNET USAGE AMONGST UNIVERSITY MALAYSIA SABAH STUDENTS: THE ROLE OF DEMOGRAPHIC AND MOTIVATIONAL VARIABLES

The Internet has spread through to our daily lives, and also the world of education is no exception. The days where students are truly rely upon teachers and the textbooks for learning resources are gone. Now day teachers have smoothen the progress of learning where students are encouraged to use multiple sources especially from the Cyberspace. This study determines the relationship between motivational variables (intrinsic and extrinsic), demographic variable and the Internet usage (frequency and actual usage). Previous study found that student's especially male students display the higher usage of Internet activities and also in terms of age differences was negatively related to any Internet activities especially to messaging and downloading activities. This study done shows that perceived usefulness is the important driver for Internet usage. For perceived ease of use was positively related to browsing and downloading activities while perceived enjoyment was positively related to all Internet activities expect for downloading.

Keywords: Internet usage, perceived ease of use, perceived usefulness, perceived enjoyment, adoption, Intrinsic and Extrinsic Motivation, Demographic, Internet, Students.

UMS
UNIVERSITI MALAYSIA SABAH

ABSTRAK

Penggunaan Internet telah berkembang maju seiring dengan kehidupan harian manusia kini dan tidak terkecuali di dalam bidang pembelajaran jua. Zaman di mana para pelajar yang bergantung kepada buku-buku teks serta guru-guru sebagai sumber bidang ilmu kini semakin berkurangan semenjak adanya pembelajaran melalui Internet. Pada zaman ini para guru atau tenaga pengajar telah mempertajamkan program pembelajaran di mana para pelajar di galakkan untuk mencari serta mengguna pelbagai sumber terutamanya daripada penggunaan ruang siber. Penyelidikan ini dilakukan untuk mengkaji hubungan di antara pemboleh-ubah motivasi (kesan dalaman dan luaran), pemboleh-ubah demografi serta penggunaan Internet (kekerapan dan penggunaan sebenar). Penyelidikan yang telah dijalankan menunjukkan bahawa para pelajar terutamanya pelajar lelaki menunjukkan minat yang mendalam terhadap penggunaan Internet. Selain itu faktor usia juga menunjukkan kesan kepada penggunaan Internet dari segi penghantaran mesej serta muat turun aktiviti. Penyelidikan ini dilakukan untuk melihat tanggapan membawa kebaikan adalah factor utama kepada penggunaan Internet. Malah tanggapan mudah digunakan mempunyai hubung-kait dengan menyemak serta muat turun aktiviti manakala tanggapan keseronokan mempunyai hubung-kait terhadap kesemua aktiviti yang dijalankan kecuali aktiviti memuat turun.

UMS
UNIVERSITI MALAYSIA SABAH

CONTENTS

ITEM	PAGE
TITLE	I
ACKNOWLEDGEMENT	II
ABTRACT	III
ABTRAK	IV
LIST OF TABLE	V
LIST OF FIGURE	VI

Chapter 1: INTRODUCTION

1.1 Overview	1
1.2 Background of Research	6
1.3 Problem Statement	9
1.4 Aims and Objective of Research	10
1.5 Scope of Study	11
1.6 Significance of Study	11
1.7 Key Variables	12
1.8 Organization of Thesis	12

UMS
UNIVERSITI MALAYSIA SABAH

Chapter 2: LITERATURE REVIEW

2.1 Introduction 14

2.2 Definition of Key Concept 15

2.2.1 Technology adaptation And Innovation 15

2.2.2 Technology Acceptance Model (TAM) 17

2.2.3 Demographic Variables 23

2.2.3.1 Gender 24

2.2.3.2 Age 25

2.2.4 Motivational Variables 26

2.2.4.1 Intrinsic motivation 26

2.2.4.2 Perceived ease of use 26

2.2.4.3 Perceived enjoyment 26

2.2.4.4 Extrinsic motivation 27

2.2.4.5 Perceived usefulness 27

2.2.4.6 Internet 28

2.2.4.7 Internet Usage Model 29

2.3 Summary 29

Chapter 3: RESEARCH METHODOLOGY AND FRAMEWORK

3.1 Introduction 30

3.2 Research Framework 30

UMS
UNIVERSITI MALAYSIA SABAH

3.2.1 Dependent Variable 34

3.2.2 Independent Variable 34

3.3 Hypotheses 35

Gender 35

Age 36

Perceived Ease of Use 37

Perceived Enjoyment 38

Perceived Usefulness 39

3.4 Research Design 40

3.5 Unit of Analysis 40

3.6 Sampling Design 40

3.6.1 Location of study and population 42

3.6.2 Sampling frame 43

3.6.3 Sampling technique 43

3.6.4 Sampling size 44

3.7 Instrument Design 45

3.8 Data Collection Method 47

3.9 Data Analysis Method 48

UMS
UNIVERSITI MALAYSIA SABAH

Chapter 4: DATA ANALYSIS AND RESULTS

4.1 Introduction 49

4.2 Demographic profile and Respondent 50

4.3 Validity and Reliability Test Analysis 56

4.4 Hypotheses Testing 58

4.4.1 Hypothesis one – Gender 59

4.4.2 Hypothesis two – Age 60

4.4.3 Hypothesis three - Perceived Ease of use 62

4.4.4 Hypothesis four - Perceived Enjoyment 65

4.4.5 Hypothesis five - Perceived Usefulness 67

4.5 Summary of finding 70

Chapter 5: DISCUSSION AND CONCLUSION

5.1 Introduction 71

5.2 Recapitulation 72

5.3 Discussion 74

5.4 Implication 79

5.5 Limitations of study 83

5.6 Suggestion for future research 83

5.7 Conclusion 85

UMS UNIVERSITI MALAYSIA SABAH

REFERENCES 88

APPENDIX 1 100

APPENDIX 2 105

APPENDIX 3 129

APPENDIX 4 130

UMS
UNIVERSITI MALAYSIA SABAH

LIST OF TABLES

No.	Title	Page
1	Sampling Design	41
2	Sampling Technique	43
3	Summary of frequency count and percentage distribution of respondents on demographic.	51
4	Cronbach's Alpha Values for Variables	57
5	Group statistics – H1	59
6	Independent Samples Test – H1	59
7	Group statistics – H2	60
8	Independent Samples Test – H2	61
9	Variables entered/removed – H3	62
10	Model summary – H3	63
11	Coefficients – H3	63
12	ANOVA – H3	64
13	Variables entered/removed – H4	65
14	Model summary – H4	65
15	Coefficients – H4	66
16	ANOVA – H4	67
17	Variables entered/removed – H5	67
18	Model summary – H5	68
19	Coefficients – H5	68
20	ANOVA – H5	69

UNIVERSITI MALAYSIA SABAH

LIST OF FIGURES

No.	Title	Page
1	Technology Acceptance Model	19
2	Technology Acceptance Model II	21
3	The Theory of Reasoned Action	22
4	Research Model	33
5	Questionnaire Source	46

UMS
UNIVERSITI MALAYSIA SABAH

CHAPTER 1

INTRODUCTION

1.1 Overview

Looking at the current situation today's technology showing that it is considered as one of the most important and influential part to gain more competitive advantage and to succeed in today competitive era of globalization. From the beginning of time, technological innovation has had a profound effect component in all activities. Early adaptations of technology revolved around the basic needs of protection and hunger. In present time, we have faced many of the same issues that challenged early users of technology.

UMS
UNIVERSITI MALAYSIA SABAH

Basically, technology means is by how the people modify the natural world to suit their own purposes and it comes from the Greek word 'techne' meaning art or artifice or craft (Standards for Technological Literacy, ITEA, 2000). It is a very broad term that can be related to every fact of life and necessary component in all organizations. One of the early adaptations of technology made is the Internet. The Internet is a computer network made up of thousands of networks worldwide (Wikipedia, February 2007). Actually no one knows exactly of how many computers are connected to the Internet. It is certain, however that these number in the millions.

The Internet is clearly the foremost among the new information technologies that promises to significantly impact the day-to-day circumstances of all social relations. Increasing numbers of people, upon discovering the Internet, are enamored by the technology's ability to publicly legitimate their self – expression and by the freedom it provides from traditional space and time barriers.

The number of Internet users has more than doubled since the year 2000, and now, in 2006, it is available to over one billion people worldwide. Future growth is expected from countries with large populations. The Internet is still growing at a good rate, but the growth rate is declining. (Paul Budde, Web Reports, 2006). No one is in charge and own of the Internet. Normally there are organizations, which develop a technical aspect of this network and set the standards for creating applications on it, but no governing body is in control for this system. For private companies, they own the Internet backbone through which Internet traffic flows. There are many activities that can be done by using Internet for example browsing, messaging, purchasing downloading and etc. Based on the data provided by World Internet Usage Statistics, in 2007 the total of 1.093 billion of world total usage where 389 million contributed from the Asia region that is the highest usage among other region.

Looking back the situation here in Malaysia, the entry of the Internet is relatively late and all of this causes by the lack of government's effort in penetrating the technology into our country. The Internet today has revolutionized information distribution. Aided significantly by the huge acceptance of World Wide Web and its platform independent browser technologies, the Internet now has becoming the standard global information infrastructure for all types of information are stored, accessed, processed, and distributed.

UNIVERSITI MALAYSIA SABAH

Although the government is now continuously promoting the usage of ICT, but for certain such as in the rural and urban center the usage are quite limited because of the geographic and the demographic part (Sharifah, 2003) stated that Kuala Lumpur and Selangor residents form about 40% of the dial up Internet subscribers within that year.

The used of an Internet in any Institutions of Higher Learning cannot be doubted, even here in our developing country. However, in this case there will have a lot of questions involved such as what do the students use Internet for? Is the Internet are used for educational purposes? Or does it help the students in the academic activities? Even though that the students market for consumer product is low, due to the lack of purchasing power but in the future they are the potential consumers once they have begin their working career. When we understand the pattern of usage and what factor drives them to use the Internet are the most important information for any web designers, if we are to encourage greater use of the Internet and increase the potential of the e-commerce of the future time. Thus this study attempts to find an answer for the following questions: (1) What is the impact of gender on Internet usage? (2) What is the impact of age on Internet usage? (3) What is the impact of perceived ease of use towards Internet usage? (4) What is the impact of perceived enjoyment towards Internet usage? (5) What is the impact of perceived usefulness towards Internet usage?

There are two major roles play for this research that are demographic and motivational variables. There two parts going to test which are gender and age under the demographic variables segment. In demographics which came out from the root

word of demography is shorthand term for 'population characteristics'. Demographics include age, density, sex, race, income, mobility (in terms of travel time to work or number of vehicles available), educational attainment, home ownership, employment status, and even location. Distributions of values within a demographic variable, and across households, are both of interest, as well as trends over time.

Demographics are normally used in marketing research, opinion research, political research, the study of consumer behaviour, as well as in straightforward marketing. Using demographics is the right tools to research on for the student's population. (http://en.wikipedia.org/wiki/demographics). Normally in demographic variables people or a person who doing the research often group people to be research on into segments based on demographic variables. The most frequent frequently used demographic variables are age, gender, sexual orientation, family size, income, occupation, education, home ownership, socioeconomic status, religion, and nationality.

UMS
UNIVERSITI MALAYSIA SABAH

In motivational variables, there are two types of motivations involved namely extrinsic and intrinsic motivation. Extrinsic motivation is encouragement from outside forces; where behavior is performed based on the expectance of an outside reward, such as money, prize or praises. Extrinsic rewards can be abused to bribe or coerce someone into doing something that they would not do on their own. Ryan and Deci (1996) describe these rewards as a task-contingent; the rewards are contingent on the completion of the task. The problems with these types of extrinsic motivators are numerous.

Innate or within hence intrinsic motivation is where the simulation from within oneself. In the learning process, one is compelled to learn by motive to understand, originating from they own curiosity. In this part, it is more often associated with intrinsic rewards because the natural rewards of a task given are the motivating forces that encourage an individual in the first place. Paul Chance (1992) describes intrinsic rewards beautifully (p.202). Malone and Lepper (1987) have their own definition where intrinsic motivation more simply n terms of what people will do without external inducement. Intrinsically motivating activities are those in which people will engage for no reward other than the interest and enjoyment that accompanies them. Malone and Lepper have integrated a large amount of research on motivational theory into a synthesis of ways to design environments that are intrinsically motivating.

One of the most frequent failures in education is that students are rarely said that they find studying to be intrinsically rewarding (Csikszentmihalyi & Larson, 1984). This is a critical problem. One of the most straightforward conclusions of research from the past two decades is that extrinsic motivation alone is likely to have precisely the opposite impact that we want it to have on student achievement (Lepper & Hodell, 1989). That is why this study is conducted where it try to look on whether this factor will lead the students to use Internet as their tools to get a better studying method.

PERPUSTAKAAN UNIVERSITI MALAYSIA SABAH
UNIVERSITI MALAYSIA SABAH

1.2 Background of Research

Technology Acceptance Model (TAM) is an information system theory that models how users come to accept and use a technology. Researches on technology adoption and usage in general, and information technology in certain area, have truly relied on the TAM (Davis, 1989). The technology acceptance model (TAM) is the most well known among these. TAM is outgrowth of the model of individual behavior as posited by Theory of Reasoned Action (TRA) (Fishbein & Ajzen, 1975; Ajzen & Fishbein, 1980) and the Theory of Planned Behavior (TPB) (Ajzen, 1985, 1991).

The technology acceptance model (TAM) is one of the most influential extensions of (Ajzen and Fishbein's 1980) theory of reasoned action (TRA) in the literature and was developed by (Fred Davis and Richard Bagozzi) (Bagozzi et al., 1992; Davis et al.,1989; Davis, 1993; Igbaria, 1993; Igbaria, Schiffman, & Weickowski, 1994; Dishaw & Strong, 1999). This model had already replaces many of the TRA attitude measurement where the two variables within the technology acceptance that is measure ease of use and usefulness. Why would both of these models have strong behavioral elements? It is because assuming that when someone forms an intention to act, they are free to do or act without any limitation or border line. As a result a person will tend to act more until him or her willing to stop. In practice constraints such as limited ability, time, environmental or organizational limits, and unconscious habits will limit the freedom to act.

TAM is an adaptation of the Theory of Reasoned Action (TRA) to the field of IS. TAM explains that perceived usefulness and perceived ease of use determine an individual's intention to use a system with the intention to use serving as a intermediary from the actual system use. But perceived usefulness is also seen as being directly impacted by perceived ease of use. TAM simplified by most researches saying that removing the attitude construct which found in TRA model from the current specification (Venkatesh et.al., 2003). There are three approaches which can be used to broaden up TAM such as by introducing factors from related models, by introducing an additional or another alternative belief factors and also by examining antecedents and moderators of perceived usefulness and perceived ease of use (Wixom and Todd, 2005).

So in other word that TAM model are divided into two variables which is the perceived usefulness and perceived ease of use make it major influence to acceptance behavior of individuals but on this research done TAM model will going to introduces four additional variables which is perceived enjoyment added to under the motivation variables and the rest going to be placed on demographic variables which are age and gender.

The model suggests that when users are presented with a new software package, a number of factors influence their decision about know how and when they going to use it:

UMS
UNIVERSITI MALAYSIA SABAH

- PERCEIVED USEFULNESS (PU) – This was defined by Fred Davis, 1989 as "the degree to which a person believes that using a particular system would enhance his or her job performance".
- PERCEIVED EASE OF USE (EOU) – Davis, 1989 defined this as " the degree to which a person believes that using a particular systems would be free from effort"

Studies done by many researches found out that this model regularly explains a substantial section variance in usage intentions and behavior, among variety of technologies. Also it performs more efficient against the other models such Theory of Reasoned Action (TRA) and Theory of Planned Behavior (TPB) (Mathieson, 1991; Sun, 2003). TAM theorizes that an individual's behavioral intention to use a technology is determined by two beliefs: perceived usefulness and perceived ease of use. TAM has become a well-established and solid model for predicting user acceptance. TAM has become one of the most influential research models in studies to determinants of information systems or information technology acceptance (Chau, 1996).

This model is commonly used for IT usage, receiving considerable empirical support (Davis, 1989; Davis, et al., 1989; Mathieson, 1991; Taylor and Todd, 1995). Based on studies done by Igbaria, Zinatelli, Cragg, and Cavaye in 1997 stated that the effect of internal computing support, internal training, management support, external computing support and training on TAM model they have founded that perceived ease of use domain factor in explaining perceived usefulness and system use, but perceived usefulness has strong effect on use.

1.3 Problem Statement

Looking that today educations institutions, there are many and mostly of them have easy Internet access connection. It is available at any time and places for the students. Although, there is some cases that local institutions or even private institutions have provided with a the latest open computer laboratory with open connection to the Internet but yet there are still a few group of people whom did not utilize the facilities provided, and this could leads to a problem. Students should be thankful to their education institutions providing this opportunity so that they could be more successful by using the new technology to get better competitive edge and should try to initiate more over the technology adoption in the future time. Study by Farhood (2004), he found that there are directed at insufficient knowledge of the usage of the technology and the ability to used the right tools to teach this students in having the technology in the classroom environment. Supported by Brancheau & Wetherbe (1990) stated that our transitioning society traditional efforts of attending higher education are not feasible in many people's lives. Thus, innovative and nontraditional efforts are made by education institution in respond to help the student to be able to knowledgeable in the technology available from the Internet.

The researcher said that the students should always make full utilize the Internet. Hopefully by this research conducted on them, they will go to make full used of the Internet or any activities in terms of messaging, downloading, browsing and purchasing. The problems occurred leads for this research going to be conducted where this going to find the relationship between motivational variables (intrinsic and

UNIVERSITI MALAYSIA SABAH

extrinsic), demographic variables and the Internet usage activities including messaging, downloading, browsing, and purchasing amongst the students. Another reason is why was timely was because there is less of research done on this field especially on the local sample, in fact that while doing this literature review there is quite a small number of references and research can be found out, or any studies that involved using TAM and its relationship with motivational and demographic variables. Most of it, done outside of this country and so the result might be differ from it.

1.4Aim and Objective of Research

The aim and objective of this research project is to:

- To investigate the influences of age and gender towards the actual and frequencies of the Internet usage.
- To determine the differences between male and female respondent in term of Internet actual usage and the total frequencies.
- Study the relationship between motivational variables, demographic variables, and Internet usage activities in term of actual usage and frequencies.
- To determine whether Internet is the primary sources for Universiti Malaysia Sabah students for any Internet activities.
- To find out whether demographic and motivational variables does influences towards Internet usages.

UMS
UNIVERSITI MALAYSIA SABAH