

INTI INTERNATIONAL UNIVERSITY

MASTER OF BUSINESS ADMINISTRATION

OLD HABITS DIE HARD! TECHNOLOGY SAVVY STUDENTS AND INTERNET-BASED LEARNING TECHNOLOGY UPTAKE

Author

: Praveen Pinto.D

Student ID

: I 10007285

Supervisor

: Dr. Mudiarasan Vasu Kuppusamy

Submission Date

: 15/08/2012

Ethics Number

: INBS371

Final Word Count :15,997

0 3 FEB 2014 LIBRARY 01/60 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 | 80 | 10/90 |

MO

31

AR PRA

2712

Faculty of Business, Communications and Law

Abstract

The presence of Information Technology (IT) is seen in every part of human life. IT is used in every corner of social activities, including education as it has the capability of lifting the quality and standard of knowledge acquisition, sharing and utilisation. The advancement of IT saw the birth of Internet technology. Research on the use of Internet technology for learning purpose is growing. A similar focus in the context of Malaysia however remains scarce. This research fills the knowledge gap by examining the role of technology savvy habits of students in using Internet-based learning technology. A total of 200 students of INTI International University were surveyed in June 2012. The collected data was using the Structural Equation Modeling (SEM) technique. The empirical results suggest that technology use habit is a significant moderator between continuance intentions to use Internet based learning technology and continuance usage of Internet-based learning technology. The result also showed that the absence of technology use habit as a moderator reduces the relationship strength between continuance intentions and continuance usage. The findings lead to the conclusion that the technology savvy students would have the intention to continuously use Internet based learning technology which then leads to actual usage of the technology for learning purpose. Thus INTI International University in specific and other education institutions in Malaysia, in general, would need to make initiatives to understand the expectations and usage experience level of students and provide on par Internet based learning technology.

Keywords - Internet technology adoption, SEM, Malaysia, technology use habit

Acknowledgement

This MBA project has been the result of a long semester which included a lot of hard work, patience and motivation. I would not have been possible to complete this project on time without the support and courage given by a certain few people.

First of all, my biggest thank you goes out to the almighty and to my supervisor, Dr. Mudiarasan Kuppusamy who placed enough faith in me in the first place to carry out a research topic that was new and challenging yet interesting. He has always imparted his calm aura as well as invaluable feedback at all times in order to keep me on track. I am extremely grateful for his assistance and support throughout the duration of this project.

Secondly, I would like to thank my parents Daniel.F and Mary Santhia without their emotional support this path of journey couldn't have been any smooth. Without their advice and courage, it would have been a tough journey to complete this research paper. Furthermore, I would also like to express my gratitude to Ramonah Xavier's family who was also a strong support in helping me to finish my thesis on time. Thank you.

Praveen Pinto.D

August 2012

Declaration

I hereby declare that this research project is of my own effort except for the information that has been used from various authors that have been cited accordingly and ethically.

25th August 2012

Praveen Pinto.D

Contents

1.1	Background	9
1.2	Problem Statement	11
1.3	Research Questions	
1.4	Research Objective	13
1.6	Limitation of study	13
1.7	Assumptions	14
1.8	Scope of Study	14
1.9	Justification for Research	14
1.10	Contributions of Research	15
1.11	Outline of Research	16
2.1	Introduction	19
2.2	Theory of reasoned Action	20
2.3	Theory of Planned Behavior	
2.4	Technology acceptance model	24
2.5	Expectation-confirmation Theory	26
2.6	Habit	28
2.7	Hypotheses development	30
3.1	Introduction	34
3.2	Ontological and epistemological views	34
3.3	Research design	35
3.4	Experimental research	35
3.5	Ex post factor research	35
3.6	Sample Size	36
3.7	Unit of Analysis and Sampling	36
3.8	Sampling Design and Techniques	37
3.9	Data Collection Method	38
3.10	Questionnaire Design	38
3.11	Data Analysis	41
3.12	Structural Equation Modelling (SEM)	42
3.13	Variance-based SEM - Partial Least Square (PLS) Estimation	13

3.14	PLS Estimation Approaches	••••	44
3.16	Ethical Considerations		46
3.17	Chapter Summary	**********	47
4.1	Introduction	***************************************	49
4.2	Response Rate	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	49
4.3	Demographic Profile Analysis	·····	49
4.4	Assessment of Reliability	····	50
4.5	Results from Partial Least Square (PLS) Modeling	***************************************	51
4.5.1	PLS Outer Model Evaluation		52
4.6	Structural (inner) Model Evaluations	*******************	54
4.7	Hypotheses testing with moderating variable		56
4.7.1	Hypotheses testing without moderating variable		56
4.8	Chapter Summary	*************	58
5.1	Introduction	******************	60
5.2	Results Discussion	<u></u>	60
5.3	Theoretical Implications		63
5.4	Practical Implications	*******	63
5.5	Recommendation for Future Research	***************************************	65
5.6	Conclusion		67
5.7	Personal Reflection		68
Referer	nces		69
APPEN	IDICES		79

List of Figures & Tables

<u></u>		T
		PAGE
Figure 2.1	Theory of Reasoned Actions	21
Figure 2.2	Theory of Planned behavior	22
Figure 2.3	Technology Acceptance Model	26
Figure 2.4	Research Framework model	32
Table 3.2	Summary of Questionnaire	40
Table 3.3	Measurement scale and sources	41
Table 4.1	Summary of Respondent's Profile	50
Table 4.2	Summary of Reliability Test	51
Table 4.3(a)	Statistical Results of Outer Model Evaluation with	53
	Moderating Variable	
Table 4.3 (b)	Correlations of Latent Variable with Moderating Variable	54
Table 4.4	Structural (inner) Model Evaluation for INTI University	55
Table 4.5	The Summary of the Outer Model Estimation	57

Chapter 1: Introduction

1.1 Background

The emergence of the Internet technology has revolutionized global socio economic landscape at its core. It took many years for 'machinery and engineering' technology to foster revolutionized changes to mankind. Internet technology however fostered changes in a matter of few years, so much so that Internet technology bridged the gap between 'space and time'. The connectivity between space and time enable *information access*, *sharing* and *transfer* instantaneously and swiftly.

The advent of the Internet has penetrated into almost every part of human's life, including education. Higher education institutions have recognized the importance of Internet technology in helping knowledge imparting and knowledge building and have been making heavy investment into Internet technology based learning mechanisms for some time now (Al-Nuaimy, Zhang & Noble, 2001; Bargeron, Chandler, 2002; Chen & Paul, 2003; Dringus, 1999; Grudin, Gupta & Sanocki, 2002; Huang et al, 2004; Kinshuk, 2002; Owston, 2000; Pahl, 2003; Richardson, 2003; Rovai, 2001). Lecturers in most universities have been trained to make their notes and teaching materials accessible through the Internet (Alavi, 1994; Barker, 2002; Coppola, Hiltz & Rotter, 2002; Lee, 2001; Topper, 2002). Students are also encouraged to access education material and communicate with their lecturers using the Internet based learning platform created by their university. Whilst the provision of Internet technology based learning mechanism is commendable, a subsequent understanding of students' expectation, satisfaction and their Internet use habit is important to determine the factors reinforcing Internet technology based learning in universities (Frank, Reich & Humphreys, 2003; Milliken & Barnes, 2002).

Internet usage by students in the Malaysian education sector has been explored in several studies over the years (e.g. Ramayah, 2003; Ramayah, 2004a, 2004b). Much of the work has focused on identifying the motivational factors influencing computer and Internet usage by university students. However, adoption of a new technology is just the first step toward an overall success. An information system implementation can truly be considered as 'a

success' when a significant number of users have moved beyond initial adoption and used the information systems on a continued basis (Bhattacherjee 2001).

In addition, previous studies have ignored the fact that frequently performed behaviors such as Internet use becomes automatic over time (Ramayah, 2002; Noor Ariffah, 2008). Thus students' decision to continuously use the Internet-based learning technology will be simply out of their habitual behavior rather than out of conscious consideration. This is especially true considering the fact that younger generation today (mostly whom would fit a student's profile) are frequent users of the Internet and are hands on with the technology. Thus Internet usage becomes a habit amongst younger generation. Considering such phenomenon, there is a need to examine the role of students' Internet use habit in fostering continued usage of Internet-based learning technology learning behavior.

In this regards, this study aims to examine the role of Internet use habit in fostering continued use of E-campus learning technology used by INTI International University (IU) students for learning purpose. E-campus is an online system in which students are connected to learning realm 24/7. The E-campus system is comprised of three major modules namely: E-RAMIS, E-XAMODAS, and E-PRIDE. The description of these three variables is given below:

INTI ERAMIS:

INTI ERAMIS stands for INTI Electronic Resource Allocation Management Information Scheduler. It is a portal which provides INTI students and staffs with useful services such as, online class timetable, online examination timetable, online examination result, SMS examination result, electronic notice board, and other information about INTI campuses, programs, courses, staffs, lecturers, students' room status (INTI international University, 2012)

INTI EXAMODAS

INTI EXAMODAS stands for Examination Online Directory and Services. It is a portal which provides INTI students and staffs with information on Online Exam Timetable, Online Exam Guidelines, and Exam Questions which can be downloaded by students.

E-PRIDE

INTI E-pride stands for Electronic Project Information Dissertation Exchange. It is a portal which provides INTI students and staffs with services related to dissertation and projects such as project submission, project schedule, project guidelines and downloads.

1.2 Problem Statement

The growth in Malaysian education sector has been phenomenon. New institutions and universities have mushroomed over the years with the figure standing at 57 universities (both local and private institutions) as at July 2012 (www.malaysianuniversity.net, n.d.). The inflow of many foreign students, coupled with technology savvy local students makes it important for education institutions to keep abreast with Internet technology.

In the academic context many studies have tested the student's technology adaptation in their learning systems. But very few have concentrated on the usage habit apart from their adaptation system in this field, in Malaysian context no research has focused on the usage habit. As the technology adoption based research gives only a bird's eye view which is focusing in a broader aspect which does not go in depth.

Despite the growing interest in Internet-based teaching and the application of Internet technology in education, research investigating students' continued usage behavior remains scarce. Limayem and Hirt (2003) pointed that previous studies on Internet-based education focused primarily on learning outcomes and learning processes, but rarely explored the factors affecting students' decision to adopt and continue using Internet-based learning technology. This is especially true in the context of Malaysia. Most related studies INTI International University (2012)

(Ramayah, 2002, Stafford, F., 2005) have explored the factors influencing internet usage on static basis rather than looking at the dynamic habitual use of internet in knowledge acquisition process. The dynamic habitual use of internet refers to students' norms and practice of using internet for all purpose continuously.

1.3 Research Questions

This study is based on an overarching research question of 'what is the role of habit in determining students' continued usage of internet-based learning technology, particularly the E-campus system at INTI International University?'

The sub research questions are:

- 1. To what extent INTI IU student's satisfaction toward E-campus system influences E-campus use continuance intention?
- 2. To what extent INTI IU students' confirmation on the usefulness of E-campus system influences E-campus use continuance intention?
- 3. To what extent INTI IU students' E-campus use continuance intention influences E-campus continued usage?
- 4. To what extent INTI IU students' Internet usage habit moderates the influence of E-campus use continuance intention toward E-campus continued usage?

1.4 Research Objective

The overarching objective of this study is to examine the role of habit in determining students' continued usage of internet-based learning technology, particularly E-campus system at INTI International University.

The specific objectives are:

- 1. To examine the extent INTI IU student's satisfaction toward E-campus system influences E-campus use continuance intention.
- 2. To examine the extent INTI IU students' confirmation on the usefulness of E-campus system influences E-campus use continuance intention.
- 3. To examine the extent INTI IU students' E-campus use continuance intention influences E-campus continued usage.
- 4. To examine the extent INTI IU students' Internet usage habit moderates the influence of E-campus use continuance intention toward E-campus continued usage.

1.6 Limitation of study

The findings and conclusion achieved in this study are to be interpreted in the context of certain limitations.

- Although the e-campus system has all the necessary characteristics of modern Internet-based learning technology, its' specificity might have biased the results of this study.
- Second, prior research has empirically demonstrated the difference between selfreported measures of usage of an information system and computer-recorded measures. In this study, students may over report their usage behavior in attempt to give a more politically correct impression which is a rather common phenomenon.

INTI International University (2012)

• Finally, building upon the IS continuance model, the rational models of human behavior, the research model has neglected the socio-cultural or political impacts on student usage of Internet-based learning technology.

1.7 Assumptions

Two major assumptions have been made prior to conducting the research.

- INTI IU students are avid users of e-campus solution.
- The information provided by the sample students are presented honestly and without bias.

1.8 Scope of Study

This research paper scope will be limited to only one International University based in Malaysia. This study is important as an examination of the role of habit in internet based education can assist education providers in catering the best form of web based solutions with maximum utilization by students. Internet based education is not only about provision of the infrastructure but also understanding technology usage behavior for accurate match between the system and users' needs and expectations.

1.9 Justification for Research

This research paper focuses on identifying and filling up the gap that is currently present in terms of the literature. In additional, one most important thing would be the research paper is done under the Malaysian context which would be an added advantage as there has been very limited or no research papers even done on this parent topic which is

Internet based learning technology. There is new dimension given birth with the usage of different dependent variables.

This is because analyzing the usage habit in the relationship between intention and continuance usage, we get the benefit of moving from the conservative direction which test the basic benefits students' obtain from suffusing the technology into education.

In this paper though without any much doubt the focus would be on the students', the presence of Internet-Based learning technology will also provide an intuition to the tutors' way of communication and technology advancements. As an outcome, we get an understanding on students' expectation with respect to the Internet-Based learning technology while at the same time we understand the usage habit of those platforms. According to (Noor, 2011) Malaysia is considered to be in 11th rank as the utmost desired destination for the International students who are in lookout for post-secondary education, the government can invest more funds into developing technology in terms of education field through the policy makers. The results based on this research study will provide understandings on how our University could integrate the technology into education system in order to step up the standards and quality to the student's expectation level.

1.10 Contributions of Research

In a practical perspective, this research paper provides information regarding the usage habit of Internet-Based Learning technology by students'. As students usage habit is measured, we will be able to understand the usage pattern and students' acceptance of the technology embed on the education. Understanding the students' expectation and their intention will be of much importance to the stakeholders in order to increase their quality, standard and reputation of Malaysian education. Speaking about stakeholders such as policy makers, Higher education, within the University and tutors would be able to gain substantial understanding on an area like the growing importance of technology in education.

The outcome of the result would be cherished as it is based on real time research of INTI University. INTI University being a local University with collaboration with Laureate