POST-GRADUATE PERCEPTIONS ON ONLINE SUBJECT REGISTRATION – A CASE STUDY AT UITM

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ABSTRACT

This study identifies the perceptions of post-graduate students on the ease of use and usefulness of the online subject registration. Online subject registration for post-graduate students was first introduced and implemented in July 2007 which is in line with UiTM's vision to become world class university. The objective of the online registration system is to ensure registration is made easier and faster to meet the user requirement. In the online system, data is entered into a device, such as a terminal, that is connected directly to a computer. The user will then interact with the computer through a terminal. Though the objective of the system is to encourage an easier and efficient registration system, there are factors discouraging the students from using the online registration system such as system congestions, unfriendly user tools, non-IT literates, and individual attitudes toward the technology. Self administered questionnaires were distributed among post-graduate students in various faculties. These findings are significant in understanding the constraint from the customer's perception and thus upgrading the level of online service performance by UiTM, Shah Alam.

Keywords*: online subject registration, online system, technology acceptance, post-graduate*

INTRODUCTION

Universities in Malaysia particularly has moved and improved tremendously in recent years. From promoting, marketing and courses offered has shifted to a new cycle of development whereby major universities had turn to technology for better marketing strategy. Various steps were taken especially to cater the needs of the post-graduate students and to give the best as what has been promised. However, updated literature on online subject registration is rare. Universities using online registration at this point of time can be viewed as a new technology adaptation in Malaysia. Online system was first introduced and implemented in UiTM on April, 2000. However, it is already implemented and been used since 1980 whereby all the UiTM's staff at all the branch has to come to the main campus, UiTM Shah Alam to proceed with online course registration. The system has since been upgraded for all UiTM students in Malaysia whereby they can access to the system from different places whether from their home, Cyber Cafe or even by using broadband to use the online registration system. Online subject registration for post-graduate students in UiTM was first introduced and implemented in July 2007 which is in line with UiTM's vision to become world class university. It was introduced by the Department of Information Technology, UiTM and during the system's test run around 20 IT personnel were involved on its contribution. The objective of the online registration system is to ensure registration is

made easier and faster to meet the user requirement. The objective of this study is to investigate the level of awareness and the effectiveness of the online subject registration among post-graduate students. Though the objective of the system is to encourage an easier and efficient registration system, there are factors discouraging the students from using the online registration system such as system congestions, unfriendly user tools, non-IT literates, and individual attitudes toward the technology.

LITERATURE REVIEW

Online registration is market driven and people expect you to have it (Krantz, 2004). It exists because of the computer technology. Online registration is defined as various method through which registration can be completed, such as mainframe computer, telephone and web (Cao & Brodnick, 2002) where a system data is entered into a device, such as a terminal, that is connected directly to a computer. The user will then interact with the computer through a terminal. Awareness is defined as knowledge or interest (Oxford, 2009) and effectiveness is defined as successfully producing the result you want (Oxford, 2009).

According to the literature, the development of online registration can be divided into three stages of development. It was first developed in 1972 and was also known as the "developing stage" in which some universities led higher education institutions to experience initial new technology application in administration (Michael, 1976; Chapman & Gambrell, 1976; Brown, 1979; Hengehold & Keim, 1975; Adams, 1974). During this stage, online registration underwent a period of experiments and testing. Online registration was beginning to be recognized for its operation in assisting university administration. The second stage refers to the decade of the 1980s. During these years, online registration was widely used by universities across the country. New features in the registration process were added and more experience was summarized (Heard, 1987; Cook & Parker, 1983; Arnett & Posey, 1986; Lonabocker & Long, 1983; Lisker, 1987). This period can be viewed as the "stabilized stage." Cook & Parker (1983) conducted a survey of online registration practices among 66 colleges and universities. They found that online registration had improved academic advising. Lisker summarized that the new technology application had saved time for students, faculty and staff members (1987). Online registration has been clearly confirmed as "a successful approach" (Lonabocker & Long, 1983; Arnett & Posey, 1986). The third stage includes the 1990s and beyond. This period can be viewed as the "enhancement stage." There have been new ways of exploring online registration such as using web service (Swein, 1997), integration of internet technology into all phases of the education process (Thomas, Carswell & Price, 1998), and getting specific groups of students involved in online registration (Kelly, 1998). Thomas et al. pointed out that the integrative approach has been effective in university administration. The third stage indicates that online registration has been well developed, looking for new ways to enhance the new technology environment through new technology convergence.

In information systems research, the user's attitude toward using and the actual usage of a technology are addressed in the technology acceptance model (TAM) (Davis, 1989).

TAM is an intention-based model developed specifically for explaining and/or predicting user acceptance of computer technology. Technology acceptance was defined as "an individual's psychological state with regard to his or her voluntary or intended use of a particular technology" (Hendrick et al.; 1984). Therefore, in this paper TAM is used to study the level of awareness and effectiveness of the online subject registration among post-graduate students.

The technology acceptance model (TAM) was first created by Davis (1989), based on the theory of reasoned action (TRA) (Fishbein & Ajzen, 1975) in psychology research. TAM proposes that perceived ease of use and perceived usefulness of technology are predictors of user attitude towards using the technology, subsequent behavioral intentions and actual usage. Perceived ease of use was also considered to influence perceived usefulness of technology. TAM has been applied in numerous studies testing user acceptance of information technology. The TAM which had been used by information systems researches to study individual's acceptance of technology, is said to be a strong predictor of intention to use a technology in various organizational and personal situations (Davis, 1989).

The TAM posits that perceived usefulness and perceived ease-of-use determine an individual's intention to use a system, serving as mediator of actual system use. Perceived usefulness is the degree to which a person believes that using a technology would enhance his or her job performance. Perceived ease-of-use is defined as the degree to which a person believes that using a technology would be free from effort. The present study examines four belief factors that is perceived usefulness, perceived ease-of-use, perceived attitude and perceived intention to use. Perceived usefulness is the degree to which the online subject registration system is an effective way for post-graduate students to register their subjects online. Perceived ease-of-use is defined as the degree to which the use of online subject registration system is free from difficulty and is easy to use. Perceived attitude refers to how positive attitude of the post-graduate being reflected in using the system. Perceived intention to use refers to how competency of using technology has encouraged the post-graduate students to perform the task without delay.

Chanasuc & Praneetpolgrang (2008) offer that IT compose of computer technology and communication technology. Computer technology helps to collect and evaluate data with rapidly and correctly rate. Communication technology helps fast and convenience for sending the digital computer output to distant users. From their study, researchers found that effects of organizational culture which impact to state of using technology in efficiency of persons in the university that came from influence variables. These variables are personal characteristics, using technology culture, perception of usefulness and ease to use eLearning, and technology acceptance. These effect to organizational culture in efficiently using online technology in Thai higher education.

RESEARCH METHODOLOGY

A questionnaire was developed to collect data and was conducted on post-graduate students of the University Technology MARA (UiTM) to investigate the level of awareness and the effectiveness of the online subject registration among post-graduate students. A total of 80 self administered questionnaires were distributed among the post-

graduate students from different faculties with 100% returned questionnaire. Each respondents was asked to complete the self administered questionnaire indicating his or her agreement or disagreement with each statement on a 5-point Likert scale with the end points being "strongly disagree" and "strongly agree". Scale items appearing on the survey were adapted from scales measuring variables in Davis et al. (1989). The measurement items used in this study are shown in Appendix.

Section 1 of the questionnaire gathered demographic information about the respondents. In Section 2, 27 questions were designed to measure four beliefs that influence the respondent's perceptions. The four beliefs are perceived ease-of-use, attitude, usefulness and intention to use. It uses a 5-point Likert scale to indicate their levels of agreement towards each statement.

FINDINGS AND DISCUSSIONS

Among 80 respondents, 45% were male and 55% were female. With respect to age range, 85% of the respondents are between 21 – 30 years old, 11.25% between 31 – 40 years old, 2.5% less than 20 years and 1.25% of 41-50 years. In terms of nationality, the larger portion of the respondents were Malaysian with 76.25%, 11.25% were Arab-Yemeni, 2.5% were Iraqi, 5% were Iranians and 1% respectively were Libyan, Fijian, Ghana and Syrian. In terms of study mode, 67% were full time post-graduate students and 13% were part time post-graduate students. To ensure great results, students from other faculties were apart of the respondents where 35% were taken from Engineering faculty, 23.76% were Administrative Science and Policy Studies, 16.25% were Art & Design, 12.5% were Mass Communication, 5% were Business, 2.5% respectively were Architecture and Computer Science and Mathematics and 1.25% respectively were Information Technology and Biology. In terms of semester, 30% were semester 1, 26.25% were semester 6, 18.75% were semester 4, 13.75% were semester 2, 7.5% were semester 3 and 2.5% respectively were from semester 5 and semester 8. The profile of respondents is presented in Table 1.

Based on the data collected from 80 post-graduate students, the results shown on Appendix 1 that the mean for perceived ease of use is positive and at medium low level (mean between 3.38 to 3.05). This shows that the post-graduate students find that not only that the system is clear and practical to be used but it is also reliable and acceptable for them to continue using it. On the perceived usefulness, the result shows that post-graduate students are aware and know the importance of having the system with the mean results show positive high level between 3.75 and 3.16 but the postgraduate students find that the effectiveness and objective of having this system is at positive low level between 3.07 and 3.09 and there are rooms of improvement to gain the student's commitment and better respond in using the system. An explanation might be that post-graduate students are willing to adopt the benefit of having the system if their awareness of using the system is properly introduced and met the objectives.

Table 1: Respondents' Profiles

Demographic characteristics		Number	%
Gender	Male	36	*45*
	Female	44	*55*
Age	< 20 years old	2	*2.5*
	21 – 30 years old	68	*85*
	31 – 40 years old	9	*11.25*
	41 – 50 years old	1	*1.25*
Nationality	Malaysian	61	*76.25*
	Arab-Yemeni	9	*11.25*
	Iraqi	2	*2.5*
	Iranian	4	*5*
	Libyan	1	1.25
	Fijian	1	1.25
	Ghana	1	1.25
	Syrian	1	1.25
Mode of Study	Full time	67	83.75
	Part time	3	16.25
Faculty	Engineering	28	*35*
	Business	4	*5*
	Architecture	2	*2.5*
	Information Technology	1	*1.25*
	Biology	1	*1.25*
	Computer Science & Mathematics	2	*2.5*
	Mass Communication	10	*12.5*
	Administrative Science & Policy Studies	19	*23.75*
	Art & Design	13	*16.25*
Semester	1	24	*30*
	2	11	*13.75*
	3	6	*7.5*
	4	15	*18.75*
	5	2	*2.5*
	6	21	*26.25*
	8	1	*2.5*

In this context, proper promotion of the system is essential for directing the student's awareness towards the system. The system's lack of effectiveness would explain the low level of awareness. Measuring the student's attitude towards using the system has shown that they strongly understand the purpose of having the system but they have low satisfaction towards the system with mean shown at 2.85. This could be concluded with the support of the student's comments on the need to improve the system and having a more user friendly system and reliable server to avoid errors and turmoil. This study also found that the post graduates students in UiTM are amongst those who are computer literate and are competent in using the system. The medium high mean result which is 3.65 shows and have proven

positive effect that these students are literally capable and could understand computer commands in completing the course registration.

CONCLUSION AND RECOMMENDATIONS

Based on the findings, it can be concluded that the post-graduates perceptions on the online registration system is acceptable and could be improved. These findings are meaningful because they suggest how the online subject registration system needs to be improved. It appears that post-graduate students find that the system needs improvement before it can be effectively used. An effective system could create a higher level of awareness as it will be benefited most by the post-graduate students. A well designed and tested system would give the universities opportunity to improve access to services. Online subject registration system was perhaps designed for traditional students and may not meet the demand of non-traditional students. Reengineering efforts can be employed to redesign the traditional process ensuring that the system is in service to its clients first, and to the institution second (Oberg, 1995). It is further recommended that the current online subject registration be clearly defined and analyzed. Better ICT and support systems will benefit the post-graduate students and help providing better services for the students.

It is also recommended that a short training workshop be conducted by the respective faculties for the students which could make the process more effective and efficient. The training would also be a helpful for faculties to advise students on the subjects that they need to prepared for the semester and what to expect from the subject itself. The method of assigned registration times may also aid institutions that have limited server capacity. It can be quite a bandwidth to have large numbers of students attempting to complete the registration process. Certain limited time could be assigned to the respective faculty to ensure that only the students from the faculties are freely and opened for registration. The time assigned need to be strictly followed by the students and the system will automatically denied access once the time limit is due. The university administrators also should take measures to reduce students' uncertainty and enhance students' self-efficacy in learning new technology. Creative methods can be used to promote a better understanding of the online registration procedures such as by putting up posters, banners, pamphlets telling and reminding students the need and their responsibility to complete the task and advantages they could get by using it. A better understanding of the online registration should boost faculty and students' self-confidence in using computer technology. Also frequent online registration demonstrations could help students realize some key characteristics of using the online service: simplicity, effectiveness, and convenience. We believe that if the post-graduate students are given the exposure and explanation in the importance of using a user friendly online registration system, it would no longer be a burden or delayed for them to complete all the procedures and following the date line on time.

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APPENDIX 1

Measurement items used in the study

Perceived Ease of Use	Mean	Std Deviation
The online subject registration system is convenience	3.05	1.030
The online subject registration system is acceptable	3.20	.973
The online subject registration system is practical	3.20	.973
The instruction on using the system is clear	3.24	1.034
The Helpline provided for the system is reliable	2.97	1.125
The online system is easily accessible at any time	2.99	1.073
The online system is user friendly and reliable	3.07	1.077
The system is effective	2.91	1.058
Instructions on handling the system is clear and understandable	3.20	.933
The system respond to errors	2.99	1.085
The system respond to lost of data	2.89	1.043
The system competency can be rated at par with international standard	2.93	1.100
The time needed to spend on the system is practical	3.38	.802

Perceived Usefulness	Mean	Std Deviation
I am aware about the online subject registration system	3.75	1.164
The online subject registration is effective	3.07	1.100
The online subject registration meet its objectives	3.09	.903
I believe on the importance of having the system	3.70	.906
I appreciate the importance of having the system	3.69	.949
The system enhance Web skills	3.16	1.012

Attitude Toward Using	Mean	Std Deviation
I am satisfied with the online registration system	2.85	1.213
I understand the purpose of the online registration system	3.65	.887

Intention to Use	Mean	Std Deviation
The online subject registration system is well promoted	2.89	1.043
I am a computer literate person	3.65	.887
I am competent is using the system	3.65	.887