

Factors that Influence Students' Decision Making for Online Learning

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Abstract: The objectives of this study were (1) to identify the different factors that affect students' decision to online learning; and (2) to study the influence of different factors on students' decision to online learning. **Research Methodology:** The sample consisted of 400 undergraduated students from both public and private institutions. The research instrument used was questionnaires. The questionnaires were separated into three parts, including demographic, e-learning factors, and student behavior factors. It was distributed online to undergraduates in Bangkok. Item-objective congruency (IOC) was used for testing the content validity. The reliability was tested by Cronbach's Alpha with the score of 0.958. Research findings were as follows: (1) every factor includes e-learning factors and student behavior factors were mostly in the level of "Very Important" (e-learning factor, $\bar{x} = 3.74$ and student behavior factors, $\bar{x} = 3.78$) by using average mean for calculation. (2) Every sub-factor from e-learning factors and student behavior factors have significant relationship with student's decision making to online learning by using Pearson's Correlation ($r = 0.401$). (3) For demographic, there is a significant difference between gender and decision making with the value of 0.00

Keywords: Online learning, E-learning factors, Student Behavior, Decision Making.

1. Introduction

Massive Open Online Course (MOOC) is the first distance-learning model that delivers knowledge online for students around the world. This innovative technology aims to offer knowledge from famous universities including Harvard, Stanford, and MIT.

However, in Thailand, there's still no pure online learning courses, it means that there is blended learning where the students are able to study online or submit assignments online, but still have regular face-to-face classes.

The number of enrollment in Thailand is increasing year by year (Runckel, n.d.). Therefore, the traditional classrooms become limited. Universities in Thailand should offer online learning to support huge number of students. The table below shows that rise of number of enrollment in Thailand from the year 2003-2006.

TABLE:I - Number of Enrollment for Bachelor's in the year 2003 to 2006

Year	Number of enrollment for Bachelor's
2003	1,631,693
2004	1,579,508
2005	1,656,427
2006	1,850,846

Source: Business-In-Asia.com

Under the policy of IT 2000, Ministry of ICT in Thailand came up with a project named “Schoolnet Thailand” (Laohajaratsang, 2010) where thousands of schools in Thailand were able to connect through the Internet and create content for teaching and education without paying for extended internet access.

Then, there was another national IT policy which was IT 2010. In this, the government tried to integrate the use of internet in different industries like e-Society, e-Government, e-Commerce, e-Industry, and e-Education. The purposes for this master plan were to improve quality of life through ICT as well as by using technology to leverage Thai society standard for global standards (Laohajaratsang, 2010). So, e-Education is the basic principle to be developed well which can improve learners to have standard qualities for work both locally and globally.

Distance learning is not aimed for only students who are not graduated but sometimes can be used in different organizations for training, video conferences, and seminar. Therefore, it’s important to have distance learning in different organizations as well. So, this research which is online learning is significant for Thai people to develop their own online tools for education in their organizations or universities in order to reach global standards. This research could help the organizations to have ideas on how should they implement their own online tools for training and studying, so the most appropriate design can develop the learners well in somehow.

This paper will discuss the factors that influence students’ decision making for online learning within Bangkok Metropolitan, Thailand.

2. Objectives

- 1) To identify the factors that affect students’ decision making to online learning
- 2) To identify the differences of each demographic factors to decision making
- 3) To identify the relationship between each factor and decision making

Conceptual Framework

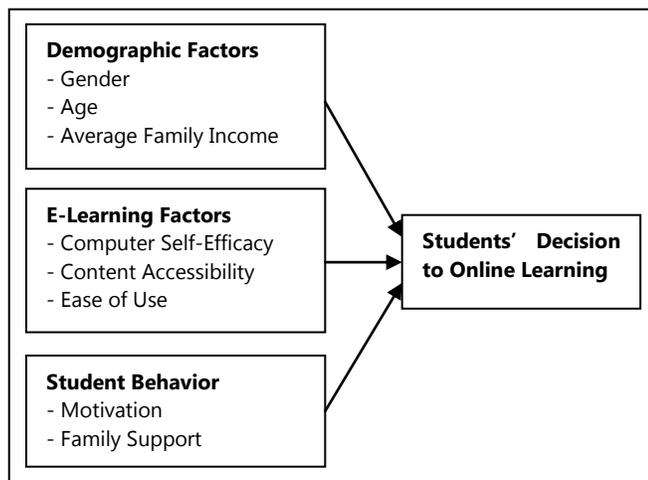


Fig. 1- Conceptual Framework

3. Literature Review

Factors Influencing Adult Learners’ Decision to Drop Out or Persist in Online Learning

According to the paper, distance learning is suitable for adult learners who have their own responsibilities to update their knowledge by having their own motivation to study. National Center for Educational Statistics stated that in the academic year 2010-2011, the trend of the distance learning was increased because more and more high educational institutions offered online learning for some degree courses. However, there were still some online learners that preferred face-to-face classroom because of the environment and lack of self-motivation. This leads to higher number of dropout rate. Corporate University Xchange indicated that students decided to drop out from online learning because of their personal issues and characteristics, but not the technical issue of online learning. Moreover, this paper summarizes the difference in traditional students, nontraditional students, and online learners. Traditional students are students studying full-time like high school.

However, nontraditional students are students studying part-time or in weekends. Lastly, online learners are people who are taking distance learning courses.

Factors that Influence Participation in Online Learning

This paper examines factors that motivate online learner's participation in each course. Those factors are: 1) Technology and Interface characteristics; 2) Content Area Experience; 3) Students Roles and Instructional Tasks; and 4) Information Overload. Tracking students' participation and patterns of participation provide information about what could really motivate students as well as understanding students' needs. There are three types of participation: 1) Active participants; 2) Read-Only participants; and 3) Inactive participants. These learners have different motivations and needs while studying online. Each type of participant has different influential. So, these are other factors that could affect student's participation, including, criteria of evaluating and assessing online discussions, course design and instructor interventions, and learners background knowledge.

Factors Influencing the Adoption of E-Learning at University of Bahrain

The factors in the research were generally from the use of the Technology Acceptance Model (TAM), but the researchers selected only three factors that could affect the adoption of E-Learning. The objectives of Technology Acceptance Model were to describe the change in online learning and the use of information technology to support online learning. Also, it's normally suggested two main attitudes towards changing in online learning, such as usefulness and easy to use. Those attitudes affect users' intention to online learning.

Online learning changes the way of how learning process performs. Therefore, some cultural factors may affect students' behavior and attitudes towards online learning. So, there were relationships between learners and cultural environment to motivate students to study well through online learning. The cultural factors included power distance, individualism, masculinity, uncertainty avoidance, and long-term orientation.

Technology Acceptance Model

Davis (1989) mentioned that users have evaluated the system for mainly two objectives, including 1) to predict acceptability, and 2) to diagnose the reasons in lack of acceptance and finding solution to improve the acceptance. The factors related to the model can be used to identify the user's attitude towards technology whether it's appropriate to be used in the specific fields or not. The first factor is "Perceived Usefulness (PU)" which defines the level of person's belief in using technology to improve their performance (Shroff, Deneen, & Ng, 2011). The second factor is "Perceived Ease of Use (PEOU)" which defines the effort of using particular system (Davis, 1989). Perceived usefulness and perceived ease of use are the main factors that refer to the result of "Attitudes towards Usage (ATU)" which explains the user's evaluation whether the system is appropriate to their job or career or not (Davis, 1993). Therefore, TAM defines the actual usage of the system by explaining users' "Behavioral Intention to Use (BIU)" which defines the user's attitudes towards use of technology specifically.

Decision Making Process

Decisions are what people are doing in their daily lives. Therefore, it is important to understand how each individual makes their own decisions for various situations. Dietrich (2010) stated that main factors that influence decision making are past experiences, cognitive biases, age and individual differences, belief in personal relevance, and escalation of commitment. Each decision making affects the outcome.

There are two perspectives for decision making, which are normative and descriptive (Sanz de Acedo Lizarraga, M.L., et.al, 2007). Normative perspective is explaining the decision making from choices as a group by using statistics to measure and summarize the whole subject whereas descriptive perspective explains the individual selection by describing their psychological process, environmental characteristics, and judgments.

4. Research Methodology

Population and Sample Size

The population of this study is the undergraduates in Bangkok both male and female. According to Ministry of Education (2013), the number of undergraduates is increasing each year for both private and public. However, the numbers of undergraduates in public universities are higher than the number of undergraduates in private universities.

The number of undergraduates in public universities is higher than the number of undergraduates in private universities. So, for this research study, the target group will be undergraduates in public universities.

To calculate the size of sample, for this research study, Taro Yamane is used to calculate the number of samples. Yamane (1967) came up with simplified formula for proportions where the researchers are able to use his formula to find the sample size for the research study by suppose that proportion equals to 0.5 and confidence level is 95%. This formula makes it simpler for the researchers to find out suitable sample size for their research.

The size of sample in this study was calculated by using Taro Yamane equation as follows:

$$n = N / 1 + N(e)^2$$

Remark; n = sample size

N = Total number of undergraduates in public universities in 2014

e = significant level (0.05)

From equation the sample size can be calculated as follows;

$$\begin{aligned} n &= 1,905,924 / 1 + 1,905,924 (0.05)^2 \\ &= 1,905,924 / 4764.81 \\ &= 400 \end{aligned}$$

Therefore, this study collected data from 400 samples from undergraduates in public universities in Bangkok both male and female.

5. Data Collecting Procedure

Qualitative analysis allows the respondents to provide more details on their opinions about the topic. Then, the descriptions from respondents are needed to be clarified and summarized for final results related to research topic. For this type of analysis, statistical sampling method cannot be used, including random sampling because in qualitative analysis, the researchers have to investigate real situation and interview experts on specific fields for information (Mays and Pope, 1995). Qualitative research aims to find purposeful information to describe, explain, and interpret data to come up with new theories (Williams, 2007).

Quantitative research is to analyze the statistical data for the results based on existing theories (Mays and Pope, 1995) or it can be said that this methodology is using mathematical models for data analysis (Williams, 2007). Also, for this methodology, researchers are able to use statistical sampling method to generate the sample size for research study. The approach for this research is to define hypothesis, review literature, and analyze quantitative data (Williams, 2007).

For this research study, quantitative methodology is being used because related theories are reviewed and statistical data is needed to prove the existing theories. In this case, questionnaire is selected as a tool to collect data and generate into mathematical model before generating statistical methods.

The researcher uses close ended questionnaire for sending online questionnaires to target people. The procedures for collecting data are as follows:

- 1) Review the information about online learning and gathering the main factors that can be used with Thai students. Then, come up with different questions relating to the factors.
- 2) Conducting questionnaires online through Google Docs which is easily distributed to different students in Bangkok.
- 3) Analyzing the data from the questionnaires and testing the hypothesis.
- 4) Summarizing the overall research explaining what does researcher get from this study and making recommendations for further study.

6. Research Findings

TABLE: II – Hypothesis Testing Results

No.	Hypothesis	Results
<i>Ho1</i>	Students with different gender backgrounds are no different when deciding to take online learning courses.	Rejected
<i>Ho2</i>	Students with different ages are no different when deciding to take online learning courses.	Accepted
<i>Ho3</i>	Students with different family income levels are no different when deciding to take online learning courses.	Accepted
<i>Ho4</i>	Computers with different self-efficacy levels have no relationship in affecting students when deciding to take online courses.	Rejected
<i>Ho5</i>	Websites with different content accessibility levels have no relationship in affecting students when deciding to take online courses.	Rejected
<i>Ho6</i>	Websites with different ease of use levels have no relationship in affecting students when deciding to take online courses.	Rejected
<i>Ho7</i>	Students with different self-motivation levels have no relationship in deciding to take online learning courses.	Rejected
<i>Ho8</i>	Students with different family support levels have no relationship in deciding to take online learning courses.	Rejected

According to the hypothesis results mentioned above, each factor can be discussed as follows:

Gender: Students with different gender backgrounds are different in their decisions to take online learning courses. Therefore, male and female students have different opinions towards online education. So, the instructors need to make sure that appropriate learning tools are available for both genders.

Age: Students with different ages are no different when deciding to take online learning courses. So, people in different age group are able to join online learning courses together without any gap of generation.

Income: Students with different income level are no different when deciding to take online learning courses. People in different income level are able to join online learning. However, online learning should be cheaper than university tuition fees as the universities do not have to provide location for studying.

Computer Self- Efficacy: Computers with different self-efficacy levels have relationship in students' decision to take online learning courses. So, every learner needs to have basic skills of using computers to make documents and reports as well as to understand the basic use of internet browsers in order to participate online learning well. Some institutions may consider training courses before studying through online learning to be confident that every student is able to communicate through the system.

Content Accessibility: Websites with different content accessibility levels have relationship in students' decision to take online learning courses. Instructors have to make sure that uploaded content through online learning is significant and related to the subject so students are able to reach to the correct information about each topic while studying.

Ease of Use: Websites with different ease of use levels have relationship in students' decision to take online learning courses. The system has to be designed properly to support the ease of accessibility in order to bring attractions from learners because if the websites are too complicated, people would not be interested in using the system.

Self-Motivation: Students with different self-motivation levels have relationship in their decision to take online learning courses. Instructors have to manage appropriate plans for each assignment to motivate learners to finish their work as well as to follow up the course throughout the program.

Family Support: Students with different family support levels have relationship in their decision to take online learning courses. Every institution has to explain clearly the concept of using online learning and how it is efficient and effective in the same way as traditional classroom. So, parents and guidance are able to understand how they children are able to study like others through online learning instead of attending classes at colleges.

7. Discussion and Conclusions

The aims of the research were to determine the factors affecting students' decision making to online learning. The samples were 400 undergraduates in Bangkok. All data were collected by online questionnaires.

The questionnaire was separated into three parts: Demographic, Elearning factors, and Student Behavior. The data was analyzed through SPSS program by using One Sample Independent T-test, One-Way ANOVA test, and Pearson correlation.

According to the findings, for the demographic factors, there were 52.5% of male respondents and 58.0% of respondents were aged between 21-25 years old. For Elearning factors, the findings showed that the most important sub-factor is "Ease of Use" with the average mean of 3.81. For Student Behavior factor, "Motivation" is the most important sub-factor with the average mean of 3.84.

From the hypothesis testing, there was a significant difference between gender and decision making, but there was no significant difference between age and decision making as well as income and decision making. For Elearning factors and Student Behavior factors, the findings stated that all of them had significant relationship with decision making. However, "Motivation" factor is the one that had great positive relationship with decision making with the R-value 0.401.

8. Conclusions

Factors that influence students' decision making for online learning research was using quantitative research tool which was questionnaires. The questionnaires were distributed online through Google Docs application to undergraduates from both private and public colleges and universities. This research was focusing on several factors that affect decision making including Demographic factors, Elearning factors, and Student Behavior factors.

The findings showed that both Elearning and Student Behavior factors have influences to students' decision making to online learning. However, for the demographic factors, gender is the only factor that has influences to decision making. From Pearson correlations results, every factor has positive level of Pearson correlation which showed that every factor has positive relationship with decision making.

9. Recommendations of the Study

For further study, more factors should be considered along with the existed factors in order to see whether the quality of the system affect the decision making or not. Moreover, the future research should discuss on different factors that affect decision making after having experienced on online learning in order to see the differences of opinions before and after using online learning system in Thailand. Another important recommendation for further study is that the research should be held in different parts of Thailand to analyze the overall opinions from different background of students.

10. References

- [1] Al-Ammari, J.,and Hamad, S. (2008). *Factors Influencing Adoption of E-Learning at University of Bahrain*. Proceedings of the International Arab Conference on Information Technology, Tunis.
- [2] Davis, F.D. (1989). *Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology*. MIS Quarterly, 13 (3), 319-340.
- [3] Davis, F.D. (1993). *User Acceptance of Information Technology: System Characteristics, User Perceptions and Behavioral Impacts*. International Journal of Man-Machine Studies, 38 (3), 475-487.

- [4] Davis, F.D., Bagozzi, R.P. and Warshaw, P.R. (1989). *User Acceptance of Computer Technology: A Comparison of two Theoretical Models*. *Management Science*, 35 (8), 982-1003.
- [5] Dietrich, C. (2010). *Decision Making: Factors that Influence Decision Making, Heuristics Used, and Decision Outcomes*. *Student Pulse*, 2(02). Retrieved from <http://www.studentpulse.com/a?id=180>
- [6] Dudley, S. (n.d.). *Why Online Learning is More Valuable than Traditional College*. Retrieved from <http://www.wired.com/2013/11/why-online-learning-is-more-valuable-than-traditional-college/>
- [7] Humphries, S. (2008). *Research methodology review: The use of textbook analysis, questionnaires and interviews to evaluate EFL textbook implementation*. Research reports: Kinki University Technical College, 2, 69-74