

FACTORS AFFECTING DECISION MAKING TO STUDY MASSIVE ONLINE OPEN COURSE (MOOC) FOR BACHELOR DEGREES IN BANGKOK

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Abstract

The purpose of this research was to study the factors affecting the decision making on open online education (MOOC) of undergraduate students in Bangkok by using closed-ended questionnaire that passed the confidence examination. The content of the data was collected from 400 undergraduate students living in Bangkok studying online, open system (MOOC) and inferential statistics used to test the hypothesis, including multiple regression analysis. The study found that the factors affecting the decision to open online education (MOOC) of undergraduate students in Bangkok Metropolis with statistical significance at the level of .05, namely educational quality factors The form of communication and the acceptance of benefits technology in terms of ease of use and risk perception while quality factors Institution and the cost of education does not affect the decision to open online education (MOOC) of undergraduate students in Bangkok.

Keywords: Open online education, Quality factors, Technology acceptance

Introduction

Nowadays, Thailand has stepped into the digital age quickly and continuously. Therefore, information and communication technology has come to play a role in the people to use as a tool to access information in the form of digital, to communicate thoroughly, conveniently and quickly. Many ways to

make use of information and communication technology in keeping with developed countries need to develop cattle. To build the technology foundation and promote the people to have the knowledge and skills in using technology which will be useful for the economic and social development of the country to move forward rapidly in the globalization society (National Statistical Office Ministry of Digital Economy and Society, 2018).

When information and communication technology has improved a lot, students or students. Therefore, change the learning behavior according to what you are interested in, focusing on in depth rather than breadth Fundamental subjects are not as important as the subject matter they are interested in. The learning materials appearing in the classroom must be concise and in the form of digital media because learners of this age grew up with important technology. The interest of 1st century learners per lesson or during studies, that averages 20-30 minutes only to understand the content because I want to take immediate action rather than designing learning media and presentation techniques are very important for the teaching profession at this time with issues that need to be addressed, what to do to drive students to be alert to study in the classroom and also increase intellectual skills. And develop social intelligence Learners learn more than just memorizing lessons but using them in real life, not in conjunction with systematic factors. When many educational institutions begin to go out of their way, business forms become something it is unavoidable that the institution has to apply it to build a student base with new courses and create the most interesting of their institutions. One form of business that is always effective with educational institutions is to provide training courses or workshops for those interested in any subject, similar to the normal academic services offered by teachers or teachers at the institution. Education has always been done at this point. Leading international institutions that take into account the issues of student behavior change and ways of creating awareness. The prestigious institution has started to take form in the semi business, but he's more innovative media (digital magazine Edge, nd).

MOOC or Massive Open Online Course is an online course that is free to use and supports a large number of learners. Students can connect to watch the video lecture, practice, test, practice, or join the conversation with the participants. Can study other (degree Noi Donphrai, 2560) MOOC it is a new innovation in the world education industry by incorporating modern technology

and methods of teaching, making it accessible to people all over the world online. The internet and computer systems help in teaching and learning, giving students the opportunity to learn a lot through the webpage. Site available for free or for a fee. MOOC is an open education for everyone, from students of all levels. All groups of people, both working-age and adults who have retired from work, can study MOOC for more knowledge. Increase job opportunities and careers or in order to develop one's potential. Currently, the most popular MOOCs include EdX or MOOC.org (Google), Coursera, iTunes, Udemy and many other services (MonAmorn Preecharat, 2018).

In Thailand, the Thai Cyber University Development Program for Teaching and Learning in an Open System or Thai-MOOC is a project under Digital Economy and Social Driveway, Project 3, "Creating a Quality Society with Digital Technology" is collaboration between the Office of Higher Education Commission (Ministry of Education). The National Science and Technology Development Agency (NSTDA) and the Ministry of Digital Economy and Society have created a project to develop Thai Cyber University and be a leader in developing a central system for online teaching and learning for the public. Or Thai MOOC was established as a central information technology architecture to support "open system education for lifelong learning" and launched Thai MOOC formally launched in March 2017) in which each department will take care of Thai MOOC by managing the whole system, from technology infrastructure, network system, program, learning management system and teaching and learning management, with educational institutions and various departments jointly developing courses and teaching and learning by the Thai Cyber University Project. Under the Office of the Higher Education Commission, the Ministry of Education will be the main unit in overseeing and coordinating the provision of Teaching standards, education and history storage and the transfer of learning results (Mon Amon Preecharat, 2018) with an important objective is

- 1) The development of an online teaching and learning system in an open system that can support an unlimited number of students with a student database Credit Bank and Credit Transfer with Credit Transfer System
- 2) Developing Standards and Practices for Teaching and Educational Quality Assurance (MOOC)
- 3) Establishing cooperation with University and inter-university to create and or improve the course media to be MOOC and cooperate in the transfer of credits between institutions
- 4) Course development Consisting of learning materials and learning activities in accordance with the quality

standards and online teaching and learning process for open systems (MOOC) 5). The development of test warehouses for the measurement and evaluation of learning in the MOOC system. 6) Data collection for research and development of processes And teaching systems to improve quality (Thai Cyber University Project, Office of the Higher Education Commission, 2019).

Therefore, the students are interested in studying factors affecting the decision to open online education (MOOC) of undergraduate students in Bangkok, which this study will be a guideline to know the factors that students need to apply. It is a database for learner analysis, used for strategic planning, improvement and development of online teaching and learning services. Institutions and organizations to be effective and can meet the needs of learners and the most beneficial to the general public.

Research Objectives

- 1.To study the quality factors affecting the decision to open online education (MOOC) of undergraduate students in Bangkok.
- 2.To study the factors of technology acceptance that influences the decision to open online education (MOOC) of undergraduate students in Bangkok.

Literature Reviews

The English language curriculum, written as curriculum, has many meanings based on educational beliefs and understanding. With the meanings as follows: Wichai Wongyai (2009) explained that curriculum is a word derived from the Latin word “race-course” which means the path used to run the competition because the goal of the course aims to learners growing up as a quality adult, successful in living, which the definition of the current curriculum has given the definition of the curriculum as the mass of educational experience. As specified in the subject course subject including various activities that have been conducted teaching and learning activities organized for learners with efficiency.

Singha Chaweesuk and Sunanthawong Chaturaphat (2012) have defined the acceptance of technology as an element that causes people to change

technology in 3 areas: behavior, attitude towards technology and technology usage. That is easier. Sasiporn Muensrichai (2012) has defined the acceptance of technology as an important factor in using and coexisting with technology as a result of using technology, resulting in experience, knowledge, skills and the need for technology.

Research Methodology

The data of the study can be divided into 2 types as follows:

1.Data from primary sources has collected demographic data. Consumer satisfaction affecting the decision to open online education (MOOC) of undergraduate students in Bangkok.

2.Data from secondary sources, the researchers collected data from sources that have collected data. Both in the public and private agencies involved as well as researching from research papers from newspapers, journals, various publications, internet information, academic books, articles, thesis, thesis and related research reports.

Data analysis: From the collection of questionnaires that have been accepted and accepted by the learner group Therefore the data is processed through statistical methods by SPSS windows statistical software as follows:

Part 1 Personal data of the sample group uses frequency determination statistics. (Frequency) Percentage, the statistics for measuring the trend towards the middle, the Mean (Mean) and the statistics for measuring the distribution of the data, the standard deviation (Standard) Deviation, S.D.).

Frequency distribution statistics (Percentage) is the calculation of the proportion of data in each of the total data, with all the data in percentage. Statistics for measuring the distribution of data Standard Deviation (SD) is the square root of the sum of the difference between raw data and the mean squared divided by the total numbers of data.

Part 2 Testing of Hypothesis

Hypothesis 1, and hypothesis 2 Data on quality factors and technology acceptance. Use statistics Multiple Regression.

From the equation showing the relationship between the variable under (Y) and the independent variable (X) of the population will see that The independent variable group $(\alpha + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_k X_k)$ Part of this unexplained change is called the prediction error (Error : ε) the multiple regression analysis will be Forecasting coefficients α and β_1 from statistical values a and b, which are calculated by the sample group by the analytical principle, that the calculated coefficient must be the coefficient that makes the equation least squares (Ordinary Least Square: OLS).

Multiple regression equations for population

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_k X_k + \varepsilon$$

Multiple regression equations of sample groups

$$Y = \alpha + b_1 X_1 + b_2 X_2 + \dots + b_k X_k$$

Multiple regression analysis has important conditions which are:

1. The error must be a random variable. And have a normal curve distribution.
2. The variance of the dependent variable (Y) in all values of the independent variable (X) must be equal.
3. The error values of each variable under (Y) are independent.
4. Independent variables to be analyzed must be independent.

Results

The decision to open online education (MOOC) of undergraduate students in Bangkok

1. Number and percentage of personal factors classified by gender: It is found that most of the students who decide to study open online (MOOC) are female. 231 people are 57.80% and 169 males are 42.30%.

2. Number and percentage of personal factors data classified by age, found that most of the students who decide to study open online (MOOC) are 21 years old. 120 people, representing 30 percent, followed by 106 people aged 20 years, representing 26.50 percent and 62 years of age, 62 people, representing 15.50 percent.

3. Number and percentage of personal factors information classified by year of study, found that the students who decided to study online (MOOC), most of them are studying in year 3, 118 people, equivalent to 29.50 percent,

next Currently, there are 105 students studying in Year 2, accounting for 26.30% and studying in Year 4. A total of 89 people, representing 22.30 percent.

4. Number and percentage of personal factors data classified by average monthly income It is found that most of the students who decide to study open online (MOOC) have a monthly income of 5,001-10,000 baht, 137 persons, representing 34.30 percent. Followed by a monthly income of less than or equal to 5,000 baht, a total of 134 people, representing 33.50% and an average monthly income of 10,001-15,000 baht, of 47 people, accounting for 11.80%.

Quality factors affecting the decision to open online education (MOOC) of undergraduate students in Bangkok

1. In the educational curriculum, it is found that the students who decide to study online in an open system (MOOC) gave a high level of opinion on the quality factors of educational institutions, with an average of 3.98. When considering individually, it was found that the opinion level was at the highest level in all agreeing points. The first rank was educational institutions with a variety of courses to choose from, with an average of 4.02, followed by educational institutions with expert teachers with an average of 3.98 and the reputation of the educational institutions. Studies have an average of 3.93 respectively.

2. In the aspect of educational institutions, it is found that the students who decide to study online in an open system (MOOC) gave a high level of opinions on educational quality factors at the level of agreeing, with an average of 3.96. The opinion level was at the highest level in all agreeing points. The first rank was educational institutions with various courses to choose from, with an average of 3.99, followed by educational institutions with expertise, with an average of 3.97 and the reputation of the educational institutions. The study has an average of 3.91.

3. In terms of educational expenses, it was found that students who decided to study online with open systems (MOOC) give opinions about the quality factors of the cost of education. Overall, it was at the very agreed level with an average of 4.00. When considered individually, it was found that the opinion levels were in the high level of all items, with the first rank being value for money compared to the money you paid, and the course cost is appropriate for the content, with an average of 4.01, followed by the ease of payment of application fees, with an average of 4.00.

4. In terms of communication styles, it was found that learners who decided to study online with open systems (MOOC) gave a high level of opinions to the communication style factors at a high level, with an average of 3.98. When considering each item, it was found that all opinions were at the highest level of agreement. Various communication channels such as Facebook, line, email etc. With an average 4.06 Next, modern teaching media has an average of 4.00 and instructors have a form of teaching that is easy to understand and interesting, with an average of 3.87 respectively.

Adoption of technology affecting online education system decision making (MOOC) of undergraduate students in Bangkok

1. Accepting technology for awareness of benefits it was found that learners who decided to study online in open systems (MOOC) gave a high level of opinion on factors of acceptance of technology for awareness of benefits, with an average of 4.04 when considering each item, it is found that the opinion level is at the highest level in all items, with the first ranking is to help you to learn more efficiently. Increase With an average of 4.08, followed by benefits for online learners with an average of 4.04 and an up-to-date curriculum, and quick and easy access to a variety of academic programs with an average of 4.02.

2. Acceptance of technology for ease of use found that learners who decided to study online in open systems (MOOC) gave a high level of opinions on factors of acceptance of technology on ease of use, at a high level. The average of 4.07, when considered by item, it was found that the opinion level was at the highest level in all items, with the first ranking being the convenience of online education system. Open (MOOC) with an average of 4.15, followed by simple steps with an average of 4.07 and easy to apply, with an average of 3.99.

3. Acceptance of risk perception technology: It is found that learners who decide to study online in open systems (MOOC) give a high level of opinion on risk recognition technology acceptance factor in the overall level, which is highly agreed. The average of 4.07, when considered by item, it was found that the opinion level was at the highest level in all items, the first ranking was the risk of payment method with average 4.16 followed by the threat of viruses with an average of 4.09 and a standard of personal information security with an average of 3.96.

Adoption of technology affecting online education system decision making (MOOC) of undergraduate students in Bangkok

1. Open system online education (MOOC) decisions of undergraduate students in Bangkok Metropolis found that learners who decide to open online

education (MOOC) (MOOC) provide feedback for online education decisions (MOOC) in overall is in high level with the average of 4.08. When considering each item, it is found that the opinion level is in the high level of all of the items, first ranking is standard and reliability with the average of 4.12, second. Come standard and you can divide the time in normal daily life with easy study with an average of 4.11.

Linear regression analysis for studying the factors affecting the decision to open online education (MOOC) of undergraduate students in Bangkok

The researcher used multiple regression analysis. Regression to find the relationship between the factors that affect the decision to open online education. (MOOC) the results of each aspect of behavior analysis are as follows: Factors Affecting Decision Making for Open Online Education (MOOC) of Undergraduate Students in Bangkok.

Hypothesis 1: Quality factors consist of academic programs, educational institutions, educational costs, and communication styles that do not influence online education decisions (MOOC).

Models obtained from linear regression analysis (Model Summary) It is found that the lowest standard error value is 0.38965 and has a coefficient of determination (R Square of 0.526 shows that the independent variable can explain the decision in the open online education (MOOC) of the sample is 52.6%. 2) Analysis of the linear regression model of the model (ANOVA) from the test results Found that the Sig. 0.000 which is less than the specified significance level $\alpha = 0.05$, therefore rejecting H_0 acceptance H_1 indicates that there are at least 1 independent variable can be used in the decision to open online education (MOOC) of degree students. Bachelor in Bangkok. 3) Multi regression (Multi) le Regression Analysis of quality factors that influence the decision to open online education (MOOC).

When considering the Sig. Value, it can be concluded that the independent variables affecting the decision to open online education (MOOC) with statistically significant P-Value. Less than the significance level at 0.05, there are 2 factors, which are education course (Sig.= 0.000) and communication model (Sig.= 0.000), while the remaining factors do not influence the decision to open online education (MOOC) of Undergraduate student In Bangkok, including educational institutions and education expenses.

Considering the weight of the impact of independent variables affecting the online education (MOOC) decision of undergraduate students in Bangkok, it is found that the quality factor of the communication style (Beta= 0.528) affects

the decision making. Open online education (MOOC), followed by education curriculum (Beta= 0.313) and the least, educational institutions (Beta = -0.52) respectively.

Hypothesis 2: The acceptance of technology consists of perceived benefits Ease of use and risk awareness do not influence the decision to open online education (MOOC). 1) Models obtained from linear regression analysis (Model Summary) The lowest standard error value is 0.44876 and the highest coefficient of determination (R Square) is 0.370, indicating that the independent variable can explain the decision in the open online education (MOOC) of the sample, representing 37.0%. 2) Analysis of the linear regression model of the model (ANOVA) from the test results It was found that Sig.0.000, which is less than the significance level of $\alpha = 0.05$, therefore rejected H0 acceptance H1 indicates that at least 1 independent variable can be used to make decisions for an open online education (MOOC) of undergraduate students in Bangkok. 3) Multi regression analysis (Multi) Regression analysis of technology acceptance factors that influence the decision to open online education (MOOC).

The considering the Sig. Value, it can be concluded that the independent variables affecting the decision to open online education (MOOC) with statistically significant P-Value. There are 3 factors which are perceived benefit (Sig. = 0.000), ease of use (Sig. = 0.002) and perceived risk (Sig. = 0.000). All of these have an influence on online education decisions. Open systems. (MOOC) of undergraduate students in Bangkok.

When considering the weight of the impact of independent variables affecting the decision to open online education (MOOC) of undergraduate students in Bangkok it was found that the acceptance of technology for perceived benefits (Beta = 0.305) affects the decision to open online education (MOOC) the most, followed by the risk perception (Beta = 0.289) and the least is the ease of use (Beta = 0.152) respectively.

In conclusion, the hypothesis testing, the statistical testing of coefficients of independent variables, including quality factors and technology acceptance factors, concluded that the factors affecting the decision to open online education (MOOC) of undergraduate students in Bangkok area with significant quality factors in education programs, communication styles and technology acceptance factors, perceived benefits, ease of use, and perceived risks, factors

that did not affect the decision to open online education (MOOC) of undergraduate students in Bangkok, for example, quality factors, educational institutions and education costs.

Discussions

From the research, it can summarize important issues related to education on factors affecting decision making in open online education (MOOC) of undergraduate students in Bangkok, which can be discussed as follows: Assumption 1 Quality factors it consists of educational curriculum, educational institution, educational expenses, and communication styles, which do not influence the decision to open online education (MOOC) from the summary of the test, hypothesis, factors affecting the decision to open online education (MOOC) of the undergraduate students in Bangkok that are significant, including quality factors in the curriculum of communication style.

Hypothesis 1.1: curriculum quality factors have an effect on decision making on open online education (MOOC) of undergraduate students in Bangkok. It is found that curriculum quality factors have an effect on online education (MOOC) decision on degree students. Bachelor's degree due to that curriculum is an important factor in choosing whether to study with this institution or not. If the course does not meet the interests of the students would not choose to study in institutions that are important to a large extent on primary research. Nick Manon (1985) on non-formal education found that the number one motivation for admission is a curriculum because it is information that will be considered for admission to the education management plan and course activities according to the objectives. Of the curriculum and the intention of the learners.

Hypothesis 1.2: the communication quality factor affecting the decision to open online education (MOOC) of the undergraduate students in Bangkok Metropolis. It is found that the communication quality factor affecting the decision to open online education (MOOC) MOOC) of undergraduate students in Bangkok, because of the fast communication and various contact methods are factors that because when there is a question about learning, contacting the instructor is very important. A variety of communication channels will make it easy to contact the teacher, including modern teaching materials and updated content. To keep up with the situation at all times is a secondary factor. Which is consistent with the research of Solomon Sasataporn (2006) on the development of communication styles for service and support for English language learners in the distance, most students said that learning English by themselves, lacking interaction with teachers and colleagues, doing self-practice activities,

sometimes unable to check the answers, lack of motivation to learn from practical and theoretical practice.

Hypothesis 2: The acceptance of technology consists of perceived benefits, ease of use, and ease of use and risk perception, not influencing the decision to open online education (MOOC).

Hypothesis 2.1: Adoption of cognitive technology in use it has an effect on the decision making on open online education (MOOC) of bachelor degree students in Bangkok. The analysis found that the perceived benefits of using it affect the decision to open online education online. (MOOC) of undergraduate students in Bangkok, with the benefits of using online learning in an open system, is the use of free time to benefit or help develop real knowledge and respondents. Aware of the benefits of online learning in an open system that is able to access a large amount of information and is diverse. The research on the integration of electronic book formats and the adoption of mobile devices through the use of evidence from South Korea's Lee (2013) in which the research found that consumers accept the usage of electronic books via mobile phones, taking into account the awareness of the useful uses of the content in the electronic books, and also receiving additional information from awareness and development of daily abilities.

Hypothesis 2.2 : Adoption of user-friendly technology that affects the online education (MOOC) decision of undergraduate students in Bangkok found that the acceptance of technology for ease of use affecting the decision to use online learning services at the open level of users in Bangkok has statistically significant because the online learning in an open system (MCOC) has categorized courses that are easy to search. Find information by using short duration, can use or search for information about the course, 24 hours a day and flexible to use with results. These study results are consistent with studies of Patcharin Pum Lamjiak (2013). According to research on the causal influence that affects the behavior of users of electronic books in Bangkok, it is found that consumer groups agree with the use of electronic books can learn to use. Easy without having to read the manual, is free to use, can be used anywhere, time is not limited, but due to the negative R value may Cause by communication on the ease of use, online learning in the open system (MOOC) is still not comprehensive or unclear, so some users are not yet aware of the ease and make uncertain about the ease. Operating.

Hypothesis 2.3: Adoption of risk technology that affects the decision to open online education (MOOC) of undergraduate students in Bangkok it was found that risk affects the decision to open online education (MOOC) of undergraduate students in Bangkok. Due to the payment that may be spoofing the account used to make payments, including providing confidential information of others to others. If there is not sufficient security management, the user's information may Slipped through to a third party who was a computer crime in accordance with Nantinith's research Awep Im (2016) on the risk factors and online media usage behavior of PhraNakhon Si Ayutthaya Rajabhat University students, it is found that the risk of computer crime from the sample is high and the risk from electronic commerce or buying scams has a lot of effects which are Important factors in choosing to use social media.

Conclusions

Factors affecting the decision to study online, many open courses (MOOC) were at high levels in all aspects. It was found that the factors affecting the decision to study online in terms of ease of use were at high levels. Convenience in terms of opinions on the quality of electronic services in the Thai MOOC open system, it was found that access to services was at a moderate level. at the highest level in meeting needs and privacy was at a high level, credibility was at a moderate level. For the decision to use the learning service in the Thai open system MOOC is based on online education management factors, technology acceptance, ease of use and quality of electronic services, privacy.

References

- KulPariya NokDee, (2014). **Adoption of GPS Tracking Technology of PT.** Trans Express Company Limited. Independent Study, Master Degree, Bangkok University.
- Chintawee Khlaisang, (2013). **“MOOCs PEDAGOGY: From OCW, OER to MOO, a learning tool for digital learners.”** 276-285. In the national e-learning conference of the year 2013.
- Nattha sombat, (2017). **Benefits from MOOC.** (Online), Retrieved from:<http://mooc-3.blogspot.com>.
- Natthaphan Kheanchanant, (2008). **Organizational Behavior.** Bangkok: Se-Education.
- Nantanit Erbm, (2016). **Risk factors and online media usage behavior of students at Phranakhon Si Ayutthaya Rajabhat University.** Journal of Management Science Review, Phranakhon Si Ayutthaya Rajabhat University.
- Genesis Manon, (1985). **Non-formal education.** Bangkok: Thip Aksorn
- Panuphong Sekwawi Lap, (2014). **Factors Affecting the Intention of Cloud Storage Behavior at Software-as-a-Service Level (SaaS) of Private Enterprise Employees in the Economic Area of Bangkok.** Bangkok University.
- Research Ashshakhi, (1996). **Scientific problem solving and decision making process.** 1st edition 3. Bangkok: Chulalongkorn University Press.
- Rangsan Prasertsri, (2005). **Organizational Behavior.** Bangkok: Company Thammasarn Co., Ltd.
- Watjanaphupani, (U.K.P.) (2013). **Reference group and consumer behavior.** (Online). Retrieved from: <http://www.slideshare.net/kingkongzaa>.
- Sasiporn Muensarachai, (2012). **Factors Affecting ERP Adoption Software for accounting users.** Master degree thesis, Thammasat University.
- Sasiwimol Saen Mueang, (2011). **Factors Affecting the Intention to Choose Suranaree University of Technology for Students with Good Academic Levels in the Lower Northeast.** Master Degree Thesis, Suranaree University of Technology.
- Somkid Bangmo, (2005). **Organization and management.** First edition. 4 . Bangkok: Witthayaphat.
- Singha Chaveesuk and Sunantha Wong Chaturaphat, (2012). **Theory of acceptance of use of information technology.** (Online), Search from: <http://journal.it.kmitl.ac.th>.
- Suriya Phakphan, (2013). **The heart of MOOC,** (Online). Retrieved from: <http://www.learn.in.th/heart-of-mooc/>.

Sorosat Satporn, (2006). **Development of communication models for service and support for English language learners in the distance.** Action Research, Sukhothai Thammathirat Open University.

Apichai Thakong, (2016). **Adoption of technology and electronic service quality affecting the decision to use online learning services in an open system for the public. (MOOC) of users in Bangkok.** Independent study, Master Degree, Bangkok University.