The Needs Assessment of Ubiquitous Learning Strategic Plan for Rajabhat Universities

Patteema Masiritanathip* Naowanit Songkram** Chaiyong Brahmawong***

* **Faculty of Education, Chulalongkorn University

***Vice President for Academic Affairs, Bangkok Thonburi University

*Corresponding author. E-mail: teamilk_tm@yahoo.com

Received: January 31, 2019 Revised: April 23, 2019 Accepted: June 10, 2019

Abstract

The research purposes were to 1) To study the present situation and study the problems of Rajabhat University, and 2) To assess the needs of Ubiquitous learning of Rajabhat University by qualitative study and collecting data by interviews. The interviewees were the administrators, the lecturers and staffs of Rajabhat University and the populations were 38 Rajabhat University by sampling from 19 Rajabhat University from 40 persons. The research result found that 1) From the present study, every Rajabhat University did not apply the Ubiquitous learning because all Rajabhat university did not allocate the clear strategies and policies causing the difficult practice. 2) All samples from every university needed assessment of the Ubiquitous learning strategy.

Keywords: Needs Assessment, Rajabhat University, Ubiquitous Learning, Strategies, Strategy, Present Situation.

Introduction

One of the hazard for university was the low rate of graduated students and the high rate of students' dropout which increased continuously for many years ago. (Odunaike, Olugbara, and Ojo, 2013; Chantawongse, 2015). The dropout meant that the students' names were deleted from university because the students did not graduate from the university, but not transferring to the other university (Office of the National Primary Education Commission, 2000). The dropout was the waste of education (Panawongse, 2015) and the problem of the dropout students caused the social problems, therefore every university should be aware of the dropout of students (Pansrikaew, 2016).

From the Rajabhat University' statistics, the dropout problem of students such as Chiengmai Rajabhat University, Kanchanaburi Rajabhat University, Dhonburi Rajabhat University, Surathani Rajabhat University, Valaya Alongkorn Rajabhat University etc. It showed that the statistics of students' dropout increased every year (Committee of Risk Management and Internal Control, 2012) which corresponded with the ones of these universities such as Rajamangala University of Technology Phra Nakhon. In academic year 2014, the students of bachelor degree level dropout 1,137students or 10.02% (Karaket and Kunakornwirute, 2015), students of Suphanburi College of Agriculture and Technology dropped out 200 students or 17.35% (Pansrikaew, 2016). In academic year 2013, Bachelor degree' students of Khonkaen University dropped out 1,540 students or 17.33% (Khonkaen University, 2014). In the academic year 2014, Bachelor degree' students of Thammasart University dropped out 1,330 students or 15.17% (Thammasart University, 2015). In academic year 2009-2012, Bachelor degree's students of Valaya Alongkorn Rajabhat University dropped out 214 students or 50% (Chantawongse, 2015) and in the academic year 2014, Bachelor degree's students of Dhonburi Rajabhat University dropped out 1,925 students or 25% (Dhonburi Rajabhat University, 2015). From the above statistics, it showed that the Rajabhat University' students dropped out higher than the other university. Therefore, Rajabhat University should find the problem solution.

The causes of students' dropout were as follows 1) Regarding students, students' scores were under average causing their dropout at the high level, 2) Regarding teaching method of instructors, it was found that the instructors had not interesting technical presentation at the high level and 3) students' families were the factors impact dropout at the moderate level (Trakulngam, 2007 and other researches (Bundasak, Chaowiang & Jangasem, 2017; Ratchpoh, 2017, Karaket and Kunakornwirut, 2015; Chantawongse, 2015). Furthermore, there was a consistent research on the causes of dropouts sorting by priority as follows: the learners, instructors, family and personnel surrounding and the environment of institution. The most learners had the low grade achievement which caused the dropout.

The present educational management applies the educational technology to increase the learning knowledge option for students and to increase the efficiency of learning and teaching (Thamamaetha, 2014). Every university needs to reduce the dropout rate because the high level of dropout will impact the low rate of graduation. Presently, the Ubiquitous Technology is applied to access the network system which students can learn everywhere and every time through the internet appliance depending the prepared circumstance (Brahmawong, 2012; Praewprasit, 2014). The technology is applied to solve the problem of the students' dropout (Office of the Vocational Education Commission, 2015), thus the Ubiquitous Technology is selected to apply for education in order to reduce the rate of dropout.

The Ubiquitous technology learning is a kind of learning which learners can learn at any place by notebook or mobile appliance and wireless communication as the learning tools (Phumeechanya, Wanpirune and Nilsook, 2015). The learning environment is managed for learning at any time which can solve the problem of students' dropout, reduces the lack of content understanding, increase the learning channel and also develop both teaching and learning method.

The successful technology application in many university consists of many factors (Basak, Wotto, and Belanger, 2016), the strategic planning was the important factor for their success. The good strategic plan set the good vision, long term target, future analysis and competition concept. Furthermore, they need the effective working system to adapt themselves to the changeable environment including high effective to reach into the future target.

From above, the researchers are interested to study the needs assessment of Ubiquitous learning strategic plan for Rajabhat Universities to be the concept to set up strategic plan and the promotion of Rajabhat University corresponding their needs assessment.

Objectives

- 1. To study the present situation and study the problems of Rajabhat University.
 - 2. To assess the needs of Ubiquitous learning of Rajabhat University.

Methodology

This research was the qualitative research which the researchers collected the data by document analysis, interviewing the administrators, strategic plan expert, technology expert, lecturers and staffs of Rajabhat University.

1. Research area

The research assessed the needs of Ubiquitous learning strategic plan for Rajabhat University by analyzing the application concept of Ubiquitous learning in university including the environmental analysis of both internal and external Rajabhat University in all cases. The researchers set up the population of study from 38 Rajabhat University.

2. The main respondents

Administrators, lecturers, IT staff and staffs of Rajabhat University.

3. Tool of research

Document analysis

By record data of the document study result and other researches relevant to the Ubiquitous learning strategic plan for Rajabhat Universities, the records were background, university / Rajabhat University, academic year, the concept application of needs assessment of Ubiquitous learning strategic plan for Rajabhat University.

Semi-structured interviews

The conceptual framework from the documentary analysis, reports, seminars, Thai and English researches and research conceptual framework were the guide line for research tool. The semi-structured interviews were suitable for interview, record and conclusion from the interviews within conceptual framework and also the interviewees were free to give the information which the in depth interviews were prepared for more information in case that the interviewees did not respond at the right points. To get the correct information, the semi-structural interviews were separated into 3 parts: 1st part: general information, 2nd part: the various issues about policy and administrations of Rajabhat University, concept of the needs assessment to Ubiquitous learning strategic plan for Rajabhat Universities and 3rd part: additional information.

The tool development steps

The researchers applied the conceptual framework by studying the principles, concepts and the relevant important issues 1) concept of policy and administration of Rajabhat University, 2) concept of Ubiquitous, 3) concept of stake holders and 4) concept of strategy. Then, the conceptual framework was set up and developed the tool and classify the issue and set up the semi-structure interviews.

The 3 experts inspected the semi-structured interview form and questionnaires before they were used for interviews. They inspected the content validity or IOC and the index of congruence (IC) between questions and objectives or content. The more than 3 experts who inspected set the following criteria of questions that the IC of the selected questions were 0.50 up, lower than 0.50 must be corrected.

(Kanlong, 2012) To inspect the content validity, the inspectors must be the experts of Ubiquitous learning, strategic plan and administrations will be inspector the content validity.

4. Data collection

The population of the research was 38 Rajabhat University by random sampling from 19 university with probability sampling which every samples had an equal chance to be selected. By this way, the result would be reference. The letters requesting the data collecting from Faculty of Education, Chulalongkorn University were sent and after receiving the request letter, the researchers made an appointment to 40 interviewees. The 40 interviewees were separated into 4 groups as follows:

- 1. The administrators of university were interviewed about the comments and inspected the need of needs assessment of Ubiquitous Learning Strategy Plan for Rajabhat University including the various factors of success. The interviewees were the President, Vice President or equivalent of the university who were selected by purposive sampling method.
- 2. The lecturers were interviewed the comments concerning the Ubiquitous learning for Rajabhat University and the application concept. The lecturers who worked at least 3 years were selected by purposive sampling.
- 3. The IT staffs were interviewed the comments about Ubiquitous learning for Rajabhat University and the application concept. The IT staffs who worked at least 3 years were selected by purposive sampling.
- 4. The staffs such as financial staffs were interviewed the comments about Ubiquitous learning for Rajabhat University and the application concept. The financial staffs who worked at least 3 years were selected by purposive sampling.

Data Analysis

When the semi-structured interview finished, all data were analysed by descriptive statistic and comments conclusion and used the basic statistic such as frequency.

Research framework

The researchers studied the relevant theory to set the conceptual framework as follows:

Ubiquitous concept is the environmental education management to support the learners at any places, any time that is supported by mobile and embedded computers and wireless as the learning tool. (Brahmawong, 2012)
The Complement of Ubiquitous Learning consists of basic technology, hardware, technology access, applied technology.
The factors effected the successful Ubiquitous study of university were separated into 6 factors: 1) Knowledge 2) Basic structure
3) Learning aid 4) Policy of electronic learning
5) Stake holders and 6) Strategy

Strategic Concept The strategy was created to solve the weak point of the original administration way by concerning to the external factors affected the organization operation and goals formulation and objectives clearly.

The 5 steps of strategic development plan as follows: 1st step: Environmental Analysis, 2nd step: Resource Analysis, 3rd step: Goal Formulation, 4th step: Strategic Formulation, 5th step: Strategy Evaluation

Policy meant the principle and practice as the operation 1) 15 years Higher Education Plan (2008-2022) 2) Education Development Plan of Office of the Permanent Secretary Ministry of Education issue No. 12 (2017-2021)

- 3) National Education Plan (2017-2036)
- 4) Strategic Plan to the Excellence Rajabhat
 Universities (2017-2026) 5) Policy of IT and
 Communication for the period of 2011-2020 of
 Thailand (ICT2020) 6) New Strategy of Rajaphat
 university to Local Development following the
 Royal Policy for 20 years (2017-2036) 7) Strategic
 Plan of Rajabhat University for 10 Years (20152024) and 8) Strategic Plan of ASEAN
 Universities.

Stakeholders analysis (Mendelow's matrix) which the universities should understand the stakeholders of each group had 3 steps as follows: 1st step: identify the Rajabhat Universities' stakeholders, 2nd step: set the priority of stakeholders, 3rd step: understand the stakeholders' comments.

The needs assessment of Ubiquitous learning strategic plan for Rajabhat Universities

Figgure 1 Research Conceptual Framework

Research Result

The research studied the 38 Rajabhat University from 19 university by random sampling.

Table 1: show the sample group of Rajabhat University by random sampling

Phetchaburi Rajabhat	Nakhon Pathom Rajabhat	Muban Chombueng
University	University	Rajabhat University
Ayudhaya Rajabhat	Thepsatri Rajabhat	Bansomdejchaopraya
University	University	Rajabhat University
Phanakhon Rajabhat	Dhonburi Rajabhat Univer-	Nakhon Sawan Rajabhat
University	sity	University
Songkhla Rajabhat	Ubon Ratcha Thani Ra-	Chaiyaphum Rajabhat
University	jabhat University	University
Roi Et Rajabhat University	Kanchanaburi Rajabhat University	Udon Thani Rajabhat Uni- versity
Chiengmai Rajabhat University	Yala Rajabhat University	Nakhon Si Thammarat Rajabhat University
Valaya Alongkorn Rajabhat University		

The data was collected by interviews from administrators, lecturers, IT staffs and staffs of Rajabhat University totaling 40 persons which the interview format concerned the environment and the needs assessment of Ubiquitous learning for Rajabhat University.

From the above interviews, the researchers analysed the important issue from the content of interviews as follows: 1) Technology application at Rajabhat University, 2) Graduate production, 3) Local development, and 4) Ubiquitous learning for Rajabhat University.

1. Technology application at Rajabhat University

It found that Rajabhat University divided into 2 categories; 1st category was the university which do not apply technology for teaching and learning and 2nd category was the university which used some part of technology for teaching and learning.

"The University did not use the new technology for teaching and learning but use only Microsoft PowerPoint and the university did not motivate to use technology." (25 interviewees)

"The young lecturers would like to self improvement and also improve their teaching and learning method with technology." (12 interviewees)

"If everybody understand and set up the policy of technology application, most lecturers would like to use the technology for teaching and learning." (9 interviewees)

"The University used the technology for teaching and learning such as QR code for attendance check list or used game application with learners." (8 interviewees)

"The university increase the internet speed but not stable." (7 interviewees)

"The lectures' skills were different depending the age of lecturer." (5 interviewees)

"The University set up the e-learning training class for lecturers but they have not apply and rarely attended the training class." (4 interviewees)

"The University purchased PC many times and different Window version which is difficult to use for the teaching and learning." (3 interviewees)

"The University increase the fiscal budget and income budget to renew the technology standard structure." (2 interviewees)

"Most of the IT staffs support the senior lecturers to use the new technology for teaching and learning." (2 interviewees)

2. Graduate production

Graduate production found that the grade of Rajabhat University' student was in the middle level.

"Various learners learnt in the university but most are middle level" (30 interviewees)

"Most of students expect to use technology which they can learn various skills by themselves and the academic achievement will be better." (15 interviewees)

"Besides studying the text, the learners have to learn necessary skills of the 21st century for working after graduation." (11 interviewees)

"The students who dropped out because of low grade and work to help their family, that's why they do not continue studying." (4 interviewees)

"Every year the admission of student is lower and presently the university has risk of number of students." (2 interviewees)

3. Local development

Rajabhat University is the university for local development, therefore the teaching and learning development must concern to the knowledge transfer to local area.

"The teaching and learning development must concern to the knowledge transfer to local as well because Rajabhat University is university for local development." (17 interviewees)

"The University realize the local importance and the cooperation so the budget is allocated to local." (5 interviewees)

"There is a network with community chief and target community and separate the responsibility of each university." (3 interviewees)

"The University has the close relationship with community by giving various assistance such as package design, logo design, teaching marketing, household accounting and map for local tour." (3 interviewees)

4. Ubiquitous learning for Rajabhat University

All samples from every university needed assessment of the Ubiquitous learning strategy.

"Ubiquitous learning is not used in university." (30 interviewees)

"Ubiquitous learning is interesting and help the learners to have both skills and achievement." (15 interviewees)

"If the university administrators interested in Ubiquitous learning and encourage the lecturers to use, it will be beneficial to all people." (4 interviewees)

"If the university plans to restructure many sections such as internet, PC increase and wifi release point, it should have the Ubiquitous learning." (2 interviewees)

Discussions

From the above analysis, the researchers concluded as follows:

- 1) The technology application of Rajabhat University, 2) The graduates production,
- 3) The local development and 4) The Ubiquitous learning for Rajabhat University.

Regarding the technology application of Rajabhat University, the university should set up the clear policy, for instance, each lecturers would be assigned to use technology in their teaching courses, technology could not be used in some courses. However, system or technology were good, it is useless if nobody use, therefore the motivation was necessary in accordance with the Nakorn Pathom Rajabhat University's strategy which promotes the lecturers to use the teaching technology and lecturers to develop the media or on line lessons (Nakorn Pathom Rajabhat University, 2014). However, some universities do not identify to promote the lecturers to use the teaching technology in their strategy clearly such as Dhonburi Rajabhat University.

Regarding the students' dropout, unless the education achievement caused the students' dropout, the economic problem was the important problem (Chatupol, 2017). The learners missed their classes because they had to do the part-time job (Karaket and Kunakornwirute, 2015), therefore the Ubiquitous learning will support

the self-learning and reduce the dropout.

Regarding the local development. Rajabhat University is the university for local development. Therefore, the teaching and learning concern to the technology transfer to local area by building the connection and network with entrepreneurs, communities and local communities and also support their teaching and learning integrated with the work. In addition, the university must support the technology and innovation to increase the domestic economic growth which correspond with new strategy plan of Rajabhat University for local development according the royal policy for 20 years (2017-2036).

Regarding the Ubiquitous learning of Rajabhat University, the administrators, lecturers, IT staffs and staffs of Rajabhat University realized its importance and benefit, in addition, it will assist learners to have skills better achievement. Therefore, the university will be necessary to use the Ubiquitous learning in accordance with research of Chen et al. (2017) which studies the various sources by using the Ubiquitous learning by using the flexible context, different context suitable for different Chinese learners. The result of the test found that the sources are able to improve the learners both the achievement and self – learning which showed that the Ubiquitous learning with different sources was beneficial, but the result of lecturers of Rajabhat University's interview found that some lecturers used only some part of technology and lack of students' cooperation in using the Ubiquitous learning.

The Ubiquitous learning may not use with all courses, for instance, the courses need the lab test, the skill practice or the senior lecturers were lacking of technology skill and needed the support staffs' assistance

Recommendations

The recommendation from research result

1. The success factors of using notebook and wireless for teaching and learning are firstly the strategy of university must be clear and motivate the application and regulate. Secondly, the university must build the staffs' comprehension about electronics usage. Thirdly, the basic structure must correspond with the

university policy direction.

- 2. All university need to develop and increase the IT capacity for management and support the technical advance which accept at the international level. It expected to improve the activities from many knowledge sources, use the teaching and learning innovation in the class which Rajabhat University support the research scholarships in classrooms. Furthermore, the university must use the technology to increase the efficiency and reduce the working step and cost by using technology and innovation.
- 3. Presently, most university organizes the technology application training in teaching and learning but the relevant lecturers and staffs are not interested to learn. Each lecturer and staff has different technology skill because the university is lacking of the practical policy.
- 4. Presently, the Rajabhat University does not use the Ubiquitous learning because normally the students learn in class as well as some university do not have the long distance learning. However, Ubiquitous learning is able to learn from anywhere and anytime which lecturers can arrange the place or learning steps including motivation to learners.

Acknowledgements

This research was supported by a PhD Scholarship from The Office of the Higher Education Commission, Thailand, and a grant from The 90th Anniversary of the Chulalongkorn University Fund (Ratchadaphiseksomphot Endowment Fund)

References

- Basak, S. K., Wotto, M., & Bélanger, P. (2016). A Framework on the Critical Success Factors of E-Learning Implementation in Higher Education: A Review of the Literature. World Academy of Science, Engineering and Technology, International Journal of Social, Behavioral, Educational, Economic, Business and Industrial Engineering, 10(7), 2,346-2,351.
- Brahmawong, C. (2012). **Ubiquitous Education. Articles and Researches of Technology Education**. Paper presented at the 26th National Conference on
 Educational Technology. Social Media: New Frontier for Education 17th-18
 th January 2012. Nakorn Ratchasima: Nakorn Ratchasima Rajabhat
 University.
- Bundasak, T., Chaowiang, K. O., & Jangasem, N. (2017). Happily Learning among Nursing Students. **Journal of MCU Peace studies**, 5(1), 357-369.
- Chen, M., Yu, S. Q., & Chiang, F. K. (2017). A dynamic ubiquitous learning resource model with context and its effects on ubiquitous learning. **Interactive Learning Environments**, 25(1), 127-141.
- Chantawongse, K. (2015). The Factors of Students' Dropout Valaya Alongkorn Rajabhat University, Srakaew Campus. **Journal of Valaya Alongkorn Review**, 5(1),127-141.
- Chatupol, Y. (2017). The Educational Wasteness Impact to Graduates' Quality at the Higher Education of Thailand. **Journal of Education**, 18(1), 1-9.
- Commission of Risk Management and Internal Control. (2012). Report of Risk

 Management Chiengmai Rajabhat University of Fiscal Year 2012.

 Chiangmai: Chiangmai Rajabhat University.
- Dhonburi Rajabhat University. (2015). **The Strategic Plan of Dhonburi Rajabhat University**. [Online]. Retrieved September 18, 2018. from http://office.dru.

 ac.th/office/plan/
- Kanlong, S. (2012). **Assessment of Research Tools**. [Online]. Retrieved August 8, 2018. from www.ipernity.com/blog/248956/418310

- Karaket, N. and Kunakornwirut, W. (2015). Factors of Students' Dropout Rajamangala University of Technology PhraNakhon. Bangkok: Rajamangala University of Technology PhraNakhon.
- Khonkaen University. (2014). Acheivement of Bachelor Degree Students'

 Production of Academic Year 2013. Khonkaen: Khonkaen University.
- Nakorn Pathom Rajabhat University. (2014). **The Strategic Plan of Nakorn Pathom Rajabhat University 2014-2018**. [Online]. Retrieved August 8, 2018. from http://hm.npru.ac.th/LawandFrom/DATA58/Strategic%20Plan %2057-61%20 (Update%202557).pdf
- Odunaike, S., Olugbara, O., & Ojo, S. (2013). E-learning Implementation Critical Success Factors. **Innovation**, 3(4); 1-6.
- Office of the National Primary Education. (2000). **Consideration Way: The Solution of Students' Drop-Out**. Bangkok: Kurusapa Priniting Press.
- Office of the Vocational Education Commission. (2015). **5 Protection Ways of VEC Given to Advisors for Drop-Out Reduction of Vocational Students**.

 [Online]. Retrieved September 16, 2018. Retrieved from www.vecgo.th
- Panawongse, C. (2015). The Higher Education Dropout: the Urgent Problem Solution. **Journal of Community Development Research (Humanities and Social Sciences)**, 8(2); 1-7.
- Pansrikaew, S. (2016). The Causes of Students' Drop-Out of Suphanburi Agricultural and Technology College. **The 6th National Conference on Researches for Sustainable Thailand**. Phetchaburi: Phetchaburi Rajabhat University.
- Payao University. (2015). **Statistic Report of Drop-out Students**. Payao: Payao University.
- Phumeechanya, N. Wanpirune, P. and Nilsook, P. (2015). Ubiquitous Scaffolding Learning Management System. **The 29th National Conference on Educational Technology**. (pp. 28-35). Bangkok: King Mongkut's Institute of Technology Ladkrabang.

- Praewprasit, S. (2014). Ubiquitous and the Smart Organization Administration in Vocational Institutes. **Journal of Vocational and Technical Education**, 4(7),1-14.
- Thamamaetha, T. (2014). **E-Learning: from theory to practice**. Bangkok: Sahamitr printing and publishing Press.
- Thammasart University. (2015). **Registration Number of Bachelor Degree's Students**. [Online]. Retrieved September 3, 2018. From https://web.reg.

 tu.ac.th/registrar/home.asp?pageid=5
- Trakulngam, W. (2007). Factors Impact to the Students' Dropout of Suan Dusit Rajabhat University. Bangkok: Suan Dusit Rajabhat University.