

# ACTIVE LEARNING MANAGEMENT WITH ONLINE LESSONS THAT AFFECT ACHIEVEMENT AND THE ABILITY TO MANAGE KNOWLEDGE VIA THE INTERNET OF MASTER'S DEGREE STUDENTS

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## ABSTRACT

Active learning management is a learning management process that focuses on real practice for learners, develop thinking process, get creative and present your own work. This research aims to 1) compare the learning achievements before and after learning with an active learning process with online lessons that affect achievement in knowledge management course and 2) study the ability of knowledge management through the Internet of master's degree students. The participants were selected by a simple random sampling method which included 38 first-year master's degree students in Educational Administration, in academic year 2022, Suan Sunandha Rajabhat University. The research pattern was "one-group pretest and posttest design". The research instruments consist of 1) the active learning management plan with online lessons, 2) learning achievement tests (pretest and posttest), and 3) an ability assessment form. Data were analyzed using statistics, mean, standard deviation and t-test. The findings revealed that the students who studied with an active learning management process with online lessons were achievement higher than before significantly at the level of .05 and the ability to manage knowledge via the internet is at a very good level. ( $\bar{x} = 4.67$ , S.D. = 0.45)

**Keywords:** Active learning management, Learning achievement, Knowledge management

## INTRODUCTION

Nowadays, advancement in science and technology has developed and grown rapidly and is related to the way of life of human beings in many aspects such as communication, medicine, industry, environment, education, etc. Humans need to have knowledge and understanding of new innovations that help humans live comfortably, solve problems and help society develop and grow steadily. Education is considered an important tool in developing people to become quality human beings able to live happily in society and keep pace with changes over time. (Klyprayong, 2020)

From the study of research results on Active Learning Management, it was found that it helped to raise the learning achievement of the students. (Christianson & Fisher, 1999; O'Sullivan & Cooper, 2003) Learners have a better attitude. Including developing the thinking and writing skills of the learners. (Bonwell & Eison, 1991) Because it is a learning process in which learners must act on information or experiences through hands-on practice using higher-level thinking skills such as analysis, synthesis and evaluation. In addition, discussion and exchange of knowledge with other learners until it becomes their own knowledge. Which causes permanence in the preservation of knowledge and able to manage their knowledge as well as being able to disseminate knowledge in various forms.

Various knowledge arises from learning, data collection, analysis, synthesis and reflection and systematic reasoning of issues of interest. The body of knowledge also arises from the experience of working in specific areas of people at all levels that have been accumulated until it becomes expertise that can be transferred to those who are interested and can use it to create value both now and in the future. Knowledge management is therefore necessary because the principles or concepts that the knowledgeable person has studied and brought to apply for benefit in some matters will require a long time if it lacks systematic storage, various knowledge may be lost causing those who want to find knowledge in such subjects to waste time in searching for it again. The key principle of knowledge management in terms of tacit knowledge is how to make tacit knowledge as explicit knowledge as much as possible, then bring explicit knowledge both from individuals and various forms of explicit knowledge to be managed a body of knowledge that is quality and stored in the system or the knowledge base of the educational circle and ready to be used at any time. Knowledge Management (KM) is therefore a method of knowledge management that helps gather knowledge into a quality system and can transfer or share knowledge to other personnel in the education industry for use that knowledge can be utilized for personal and social development. (Puntavungkool, & Deeya, 2020)

In knowledge management, in addition to sharing knowledge with each other, there must also be a preparation or creation of a systematic storage of knowledge by applying information technology systems to apply in knowledge management, collection, processing, storage, and disseminate data and information. It can be seen that technology plays an important role in knowledge management. In particular, the internet is a technology that can connect people around the world together. This will make the process of knowledge transfer even better. In addition, technology also makes learning easier. (Anuphan & Piriyaawong, 2013) Therefore, it can be considered that technology is a tool that helps support and increase the efficiency of the knowledge management process as well.

From the above mentioned importance, the researcher is interested in conducting a research on Active Learning Management with Online Lessons that Affect Achievement and the ability to manage knowledge via the Internet of Master's Degree Students, Education Administration Program, Suan Sunandha Rajabhat University.

## **LITERATURE REVIEWS**

### **1. Active learning management**

Active learning is a learning that focuses on the learners to practice and build knowledge from what they do during teaching, which focuses on developing skills and abilities that match the basic knowledge. It will result in learners connecting new knowledge with existing knowledge from practice and the needs of learners. Teaching and learning activities in an active learning style include teaching and learning that emphasizes student participation, seminars, informal small group teaching, data surveys, experiments, problem solving, case studies, and discussions, etc. In addition, Active learning is a teaching that focuses on the development of high-level thinking, emphasizing on practice rather than on lectures, on evaluating high-level thinking and providing feedback to learners. Active learning is a relatively new concept in educational reform by relying on learning management processes that allow learners to take action and have used the thinking process about what they have done (Bonwell & Eison, 1991) and use a variety of teaching methods, teaching techniques to design learning plans and activities to encourage student participation in class and foster interaction between students and students and students and teachers. Therefore, Active learning is regarded as a type of teaching and learning management that encourages learners to have characteristics that are consistent with the changes in today's era. This educational management concept is

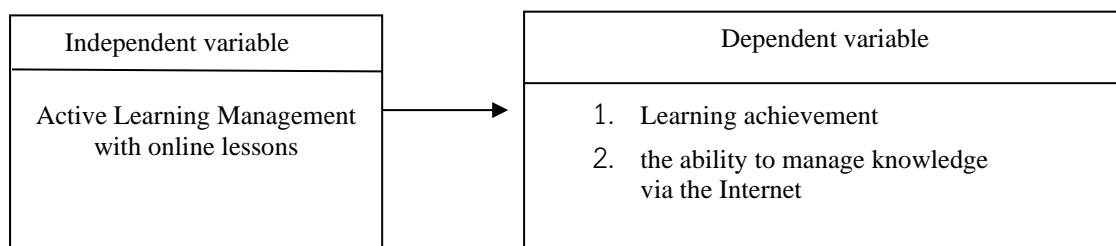
based on educational philosophies and learning theories that have been continuously developed over a long period of time and are proven to effectively develop learners to meet their desired characteristics. Active learning that focuses on the student is important, resulting in efficiency that is important for the development of learning behavior and student achievement in learning various subjects. (Wongpibool, 2017).

## 2. Knowledge management

The knowledge management refers to knowledge creation, knowledge storage, knowledge sharing and knowledge application both within an organization and across organizations (Del & Maggioni, 2014), being considered as key when developing an organization's capability to address current and future organization challenges and survival.

Knowledge can be divided into 3 types according to their appearance as follows: 1) Explicit Knowledge is commonly known knowledge found in books, textbooks, and other media that are easily accessible and exchanged. 2) Embedded Knowledge is knowledge hidden in Work process pictures, manuals, rules, rules, agreements, work schedules, and notes from work. 3) Tacit Knowledge is knowledge embedded in ideas, beliefs, values that people have gained from experiences and observations that have been accumulated for a long time, from learning various and connecting until it becomes knowledge that is high value but difficult to exchange. Deep-seated knowledge cannot be transformed into explicit knowledge at all, but must come from learning through community, such as observation, exchange of knowledge during work, etc.

From the study of relevant literature, the researcher can summarize the conceptual framework of the research as follows:



**Figure 2** Research Conceptual Framework

## OBJECTIVES OF THE RESEARCH

This research has the following objectives:

1. To compare the learning achievement before and after learning with an active learning process with online lessons that affect achievement in knowledge management subject.
2. To study the ability of knowledge management via the Internet of master's degree students, Education Administration Program, Suan Sunandha Rajabhat University.

## RESEARCH METHODOLOGY

This research was an experimental research using a one-group pretest and posttest design. The researcher defined the research process and conducted the study as follows:

### 1. Population and Participants

The population was Master's degree student, Educational Administration Suan Sunandha Rajabhat University, 1st year, 1st semester, academic year 2022, 70 students enrolled in the knowledge management course (EAD5802).

The participants were selected by a simple random sampling method which included 38 first-year master's degree students in Educational Administration, in academic year 2022, Suan Sunandha Rajabhat University.

## 2. Research instruments

The research instruments consist of 1) the active learning management plan with online lessons, 2) learning achievement tests (pretest and posttest), and 3) an ability assessment form.



**Figure 3** shows the main page of online lessons on the topic of Active Learning.

## 3. Data collection

3.1 The participants took a pre-test.

3.2 The researcher organized the learning process according to the proactive learning management plan with 12 hours of online lessons consisting of the following contents: principles, concepts, knowledge management theory, knowledge management algorithm, and the use of knowledge management technology through the Internet, etc.

3.3 When the sample has completed to learn all learning management plans and works on knowledge management through the Internet. Let the sample do the posttest.

3.4 The sample group assessed their ability to manage knowledge by themselves using Knowledge Management Ability Assessment Form.

## 4. Statistics

The data were analyzed by the application of percentage, mean ( $\bar{x}$ ), standard deviation (S.D.), and comparing learning achievement scores (pretest and posttest) was analyzed by t-test

## RESEARCH RESULT

From conducting research on active learning management with online lessons that affect learning achievement and the ability to manage knowledge via the Internet of master's degree students, Education Administration, Suan Sunandha Rajabhat University have study results that meet the objectives of the research. The researcher has divided the research findings into 2 parts as follows:

**Part 1:** the results of the comparison of learning achievement before and after learning with an active learning management with online lessons.

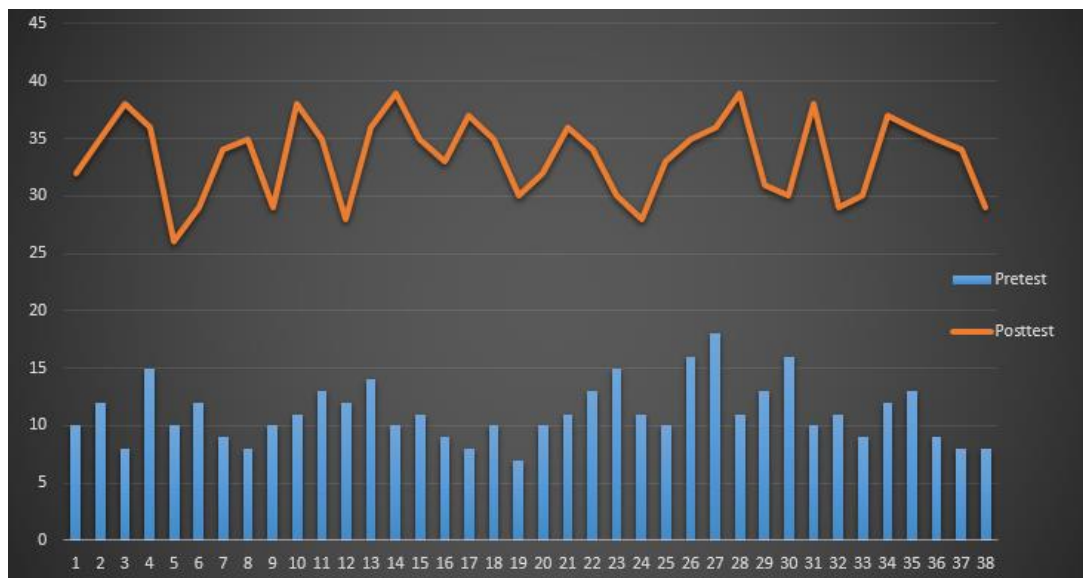
The result of comparison of learning achievements before and after learning with an active learning management with online lessons that it was presented in Table 1.

**Table 1:** Showed learning achievements between pretest and posttest

Test	N	$\bar{X}$	S.D.	t-test	P-value
Posttest	38	33.47	3.49	32.498	0.000
Pretest	38	11.13	2.57		

\*P-value < 0.05

From Table 1, the study results showed that after the sample had gone through the active learning management with online lessons that effect on their learning achievement and the ability to manage knowledge via the Internet. Learning Achievement after the learning with learning management plans was higher than that of the pretest which was a significance level of 0.05. The achievement scores pretest and posttest shown in Figure 1 as follows.



**Figure 4** shows a graph comparing the achievement scores before and after learning.

**Part 2:** the results of a study of the knowledge management ability via the Internet of master's degree students in Education Administration, Suan Sunandha Rajabhat University.

To assess the knowledge management ability via the Internet of master's degree students in Education Administration, Suan Sunandha Rajabhat University, the researcher applied the principles and knowledge management process concepts of Probst, Raub & Romhardt (2000) and Turban et al. (2004) by dividing the knowledge management process into 9 steps and results of knowledge management ability via the Internet shown in Table 2.

**Table 2:** the results of knowledge management ability via the Internet.

<b>Knowledge management ability</b>	$\bar{X}$	S.D.	Meaning
1. Knowledge Identification	4.45	0.55	High
2. Knowledge Acquisition	4.39	0.65	High
3. Knowledge Development	4.50	0.73	Highest
4. Knowledge Organization	4.61	0.59	Highest
5. Knowledge Transfer	4.68	0.47	Highest
6. Knowledge Storage	4.89	0.31	Highest
7. Knowledge Access	4.95	0.23	Highest
8. Knowledge Utilization	4.53	0.65	Highest
9. Knowledge Dissemination via the Internet	5.00	0.00	Highest
Total	4.67	0.45	Highest

The result revealed that the average the overall knowledge management ability, in general, was at the highest level ( $\bar{X} = 4.67$ , S.D. = 0.45) When considering each aspect, it revealed that In the knowledge dissemination via the Internet was ranked number one, followed by knowledge access, knowledge storage, knowledge transfer, knowledge organization, knowledge utilization, Knowledge development, knowledge identification, and knowledge acquisition, respectively.

## CONCLUSION AND FUTURE WORK

Research on the topic Active Learning Management with Online lessons that Affect Achievement and the Ability to Manage Knowledge via the Internet of Master's Degree Students. The purpose were 1) compare the learning achievements before and after learning with an active learning process with online lessons that affect achievement in knowledge management course and 2) study the ability of knowledge management through the Internet of master's degree students. The participants were selected by a simple random sampling method which included 38 first-year master's degree students. The findings revealed that the students who studied with an active learning management process with online lessons were achievement higher than before significantly at the level of .05. This may be due to the learning process with online lessons that can be repeated many times, thus allowing the learners to remember well, resulting in higher learning achievement, which is consistent with the research of Robroo (2019) in the topic: The Effect of Using e-Learning for Enhancing Active Learning of Pre-service Teachers. The results indicated that there was significant difference at the level of .01 between the learning achievements of before and after learning. Therefore, concluded that this e-learning for enhancing active learning could be used for increased the leaners' achievements.

As for the research results in terms of knowledge management ability, it was found that the knowledge management ability through the Internet was at a highest level. There are 9 processes of knowledge management as follows: 1) Knowledge Identification 2) Knowledge Acquisition 3) Knowledge Development 4) Knowledge Organization 5) Knowledge Transfer 6) Knowledge Storage 7) Knowledge Access 8) Knowledge Utilization 9) Knowledge Dissemination via Internet. This is consistent with the research of Wongwilai, Hotrawaisaya & Khaengkhan (2019) on Confirmatory Component Analysis of Knowledge Management Process in Autonomous Universities. As a result of the analysis, it was found that The components of the knowledge management process of an autonomous university consist of 5 components: knowledge verification and knowledge determination; Elements of seeking and

creating knowledge Components of knowledge processing and access to knowledge Elements of storing knowledge in a systematic way Therefore, it can be concluded that proactive learning management process with online lessons has a good effect on the success of learners' knowledge management. In this regard, the researcher has a suggestion for the next research that organizations or educational institutions should continuously promote personnel knowledge management by finding a channel to exchange knowledge that is open and accessible to personnel of all levels.

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