

Development on Learning Management Competency Using Game Method of Pre-Service Teachers in the Social Studies Program

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Abstract

This research is the quasi-experimental research. The objectives were to study the learning management competency of pre-service students in the Social Studies program with the learning management using the Game Method and to compare the learning management competency of pre-service students in the Social Studies program before and after the trial of the learning management using the Game Method. The sample group of this study consisted of 36 pre-service students in the Social Studies program, Suan Sunandha Rajabhat University, from Cluster Random Sampling. The tools used in the research were the learning management plan using the game method and the assessment form on the learning management competency of the pre-service students. The statistics used in the data analysis were mean and standard deviation. The results revealed that learning management using Game Method can improve the students' learning management competency. The students' learning management competency was higher after the experiment of learning management using the game method. When considering each aspect for the learning management competency after the experiment, it was found that the learning management competency was at the good level in 2 aspects, namely, media use/innovation and learning resources. For the evaluation, the learning management competency was at moderate level in 3 aspects; learning management, writing of objectives, and atmosphere arrangement.

Keywords: Learning management competency, learning management using game method, student teachers, social studies program

Introduction

The change of the world in the 21st century has affected many things in terms of volatility and deviation that are difficult to predict. It affects all sectors in formulating policies to cope with such changes in a timely manner. Similarly, the educational institutes need to modify curricula, teaching, learning processes to improve learner quality and overall Thai education to be of higher quality agreeing with international standards. The learners are allowed to learn in practice with the emphasis on process skills. It promotes thinking processes, communication, cooperation, information technology, etc. rather than focusing on subject content as it results in a lack of competency among students necessary for living in the present. At present, educational institutes in many countries have adopted the Competency Based Curriculum approach in organizing educational programs at different levels in order to develop learners to have important and necessary competency in the 21st century. The conceptual framework for the development of students' learning management competency consisted of knowledge bases, skills, and attitudes or attributes. According to the concept, human competency was derived from 5 key elements; skills, knowledge, attitudes, values and opinions about one's self-image, personality and motivation. Competency was, therefore, the sum of knowledge, skills, attitudes, attributes and abilities that contribute to success at work and application to life (David McClelland cited in Nilarat Nawakitpaitoon, 2012). Thailand has been interested in professional development. The teacher competency is determined to be essential for effective teaching profession (Pimpan Dechakup and Pornthip Khaengkan, 2008). The production of

teachers in the education field is the science that deals with the preparation and development of teachers and educational personnel before recruiting. This is to promote the development of full-time and non-commissioned teachers to have knowledge and competency in the profession to adhere to values, ideology, teacher spirit and professional competency with the emphasis on the goal of creating quality people who are competent and good people who have the ability to compete and the ability to create innovation (Ministry of Education, 2017). Giving knowledge through lectures or occasional training is not sufficient to promote the development of knowledge, skills and competency continuously and effectively (Costa and Garmston, 2002).

For the current teacher production in Thailand, the curriculum has been changed to a four-year curriculum, known as “competency-based curriculum”, which is one approach to raise the quality of the nation’s education in order to drive the country beyond the middle-income trap. The aim was to produce graduates with the ability to perform tasks that meet the needs of the manufacturing and service sectors with an emphasis on learning outcomes to meet the needs of the labor market. Therefore, the teaching and learning management of educational institutes must be linked to the labor market through the development of curriculum, teaching and learning management, measurement and evaluation through cooperation between educational institutes and enterprises. The competency-based curriculum was therefore used to produce pre-service students with a change of 5-year student-teacher production to 4-year competency-based curriculum. However, this change raises the question of how we can be confident that the production of 4-year teacher graduates will enable teacher graduates to have the same skills and knowledge as 5-year teacher graduates. In addition, Suan Sunandha Rajabhat University also arranged the 4-year teacher curriculum which is the competency-based curriculum. Teaching began in the first semester of the academic year 2019 with an emphasis on developing students to meet the competencies in the prescribed curriculum. Therefore, it gives importance to the development of student teachers. The emphasis is placed on vocational training schools as a base for student teacher development. The pre-service students must practice teaching in educational institutes from the first year to the fourth year by using the educational institute as a source of practice for learning experiences through teaching profession and major courses. This includes learning about teachers’ work in educational institutes, application of knowledge in student development on a case-by-case basis, and then learning from the lessons in schools, working as an assistant teacher in cooperation with the coaches and parents in student development (Faculty of Education, Suan Sunandha Rajabhat University, 2019).

Regarding the learning management using the Game Method, Teachers and Basic Education Personnel Development Bureau, Office of the Basic Education Commission (OBEC) said that one method of teacher learning management is the Game Method. It is a form of teaching and learning that students are interested in. It is a teaching method that allows students to participate in learning. Learners have fun and can learn from playing (Ministry of Education, 2019: 7). As for the advantages of the game, it is challenging, giving students the opportunity to play by trial and error. The students have decision-making powers to play. The content of the game reaches the needs of ordinary people with the characteristics to respond to the challenge of wanting to win. They can make fun encouraging the players to enter the simulation and let the players express their feelings. They can play according to the specified conditions. Otherwise, players cannot play that game (Thitsana Khaemane, 2008). Therefore, the researchers were interested in researching the development of learning management competency using the Game Method in order to develop learning management competency and the knowledge of pre-service students. The objectives of this research were to develop learning management competency of pre-service students in the Social Studies program with the learning management using the Game Method and to compare the learning management competency of pre-service students in the Social Studies program before and after the trial of the learning management using the Game Method.

LITERATURE REVIEW

From the study of concepts, theories and related researches on competency and learning management by using game method, the definition of ability or competency is the ability referring to the behavioral characteristics of persons. This consists of knowledge, skills and attitudes that can be applied to work or solve concrete problems (Kannikar Piromrat and Wiraphot Rattanawan, 2020). In the part of learning management using game method, the meaning of the game is that the game is an activity that creates interest and fun for learners. There are rules and regulations to encourage learners to learn, easy to understand, remember lessons,

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and develop skills. It also teaches students to work altogether. There is a process of working and coordinating in the game (Sukhon Sinthaphanon, 2008). The game method teaching is the process used by teachers to help learners achieve their intended learning objectives. The learners are allowed to play the game according to the rules and bring the content and information of the game, learners' playing behaviors, playing methods, and game play to be used in the discussion to summarize their learning. These lead to the development of learning achievement (Thitsana Khaemane, 2007). This is consistent with the theory of using games for teaching. It can be said that the game-based learning management is the learning process in which the teachers instruct the learners to play games with simple rules, regulations, conditions or agreements leading to the fun, cheerfulness, exercise to develop creativity with the opportunity to exchange knowledge and learning experiences with others. The content, game data, playing behaviors, playing methods and game results are used in the discussion of learning outcomes (Suwit Munkham and Orathai Munkham, 2017). This agrees with the research on teaching and learning management using the game method to develop achievements on the subject of recording items about products in the subject's general journal, fundamental accounting 2 of the 1st year vocational certificate students (vocational certificate 1), Dusit Commercial Vocational College (Yingcharoen Boonyang, 2013). The research result of using the game method and the teaching using 5-step learning cycle (5Es) were in conjunction with science teaching in a multicultural society affecting learning achievement. The scientific process skills and multicultural attitudes on the human body system of Mathayom Suksa 2 students (Atchara Prempreeda, 2015) include the research on the development of learning achievement of Mathayomsuksa 4 students on the mineral table. The quest for knowledge learning management was used together with the card game technique (Sukanya Nakhon, 2016). The research above found that learning management using games can improve learning achievement higher than before. The researchers therefore formulated hypothesis in the research that students and teachers in social studies who were taught by using game methods had improved learning management competency. The pre-service students in the Social Studies program had higher learning management competency after being taught using the Game Method than before. The researchers had therefore formulated the research conceptual framework as shown in Figure 1.

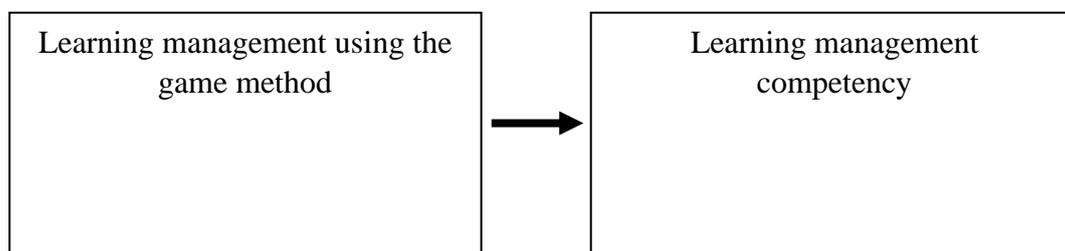


Figure 1 Research conceptual framework

Research methodology

In this research, the researchers defined the sample group used in this research, namely 36 pre-service students in social studies program from Cluster Random Sampling. The game method was used to teach in the process for creating and finding quality tools such as studying documents and researches related to teaching model. The Game Method was used to create learning plan. The Game Method consisted of team building, problem determination, planning, process design, implementation of the plan, and reflection of performance. Then, the created learning plan was brought to the experts for appropriate review using the rating of 5-level scales; Highest, High, Medium, Low, and Lowest. The result of findings the suitability of the learning plan using the Game Method was found to be at the highest level ($\bar{x} = 4.68$, $S.D. = 0.47$). Then, the learning management plan was applied to improve according to the advice of experts and prepare the complete learning plan. Finally, the learning plan was applied to the target group using the obtained data for statistical analysis. For the second tool, it was in the assessment form of learning management competency of pre-service students in the Social Studies program. There is a process to create and find the quality of the tool including the study of documents and researches related to learning management competency. The process is to create learning management competency assessment that corresponds to the research objectives. The 5 sub-questions consist of

writing objectives, learning management, media/innovation use, learning resources, setting up learning atmosphere and learning evaluation. Then, the five-level Rubric Scale assessment score was created; very good, good, moderate, fair, and improved. The Learning Management Competency Assessment Form was taken to 3 experts to determine the Index of Item Objective Congruence (IOC) that has passed the assessment criteria. The value was between 0.67 – 1.00. Then, the learning management competency assessment form was used to improve and make complete assessment. Finally, the learning management competency assessment form was applied to the sample group and the collected data was statistically analyzed. In this research, the Quasi Experimental Research model was used. The same research group was measured (One group Pretest-Posttest design) (Pissanu Fongsri, 2015: 128). The data was collected in order. The assessment on the learning management competency of students in social studies program was made before learning management using the Game Method. The assessment created by the researchers was examined on the quality. The learning management using the game method according to the learning plan was conducted for 6 weeks and the researcher assessed the learning management competency of the pre-service students in the social studies program after experimenting with the game method teaching. This leads to statistical data analysis using the mean and standard deviation as shown in the following table.

Table 1 Mean scores to compare the learning management competency of the pre-service students in the social studies program before and after the learning management using the Game Method

Assessment form	Number of students	\bar{x} Full scores of 25 points	S.D.	Interpretation of quality level
Pre-test (Before the experiment)	36	7.61	1.48	Low competency
Post-test (After the experiment)	36	17.69	3.01	High competency

From Table 1, it was found that the learning management using the Game Method could help the pre-service students in the Social Studies program have higher learning management competency. The mean score after studying was 17.69 which was in a very competent level. The standard deviation was 3.01, slightly higher than before learning with the mean of 7.61 at the low level. The standard deviation was 1.48.

Table 2 Mean of learning management competency in each aspect before and after the experiment on the learning management using the Game Method

N=36	Writing of objectives		Learning management		Media/innovation use		Setting up learning atmosphere		Evaluation on the results	
	Before	After	Before	After	Before	After	Before	After	Before	After
Mean	1.39	3.39	1.64	3.44	1.72	4.00	1.36	3.36	1.50	3.50
Std. Deviation	0.48	0.62	0.48	0.63	0.46	0.49	0.48	0.61	0.50	0.48
Level of										

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learning management competency after the experiment	Moderate level	Moderate level	Good level	Moderate level	Good level
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From Table 2, it was found that the mean scores of all aspects of learning management competency were higher. When considering each aspect after the experiment, 3 aspects were at moderate level and 2 aspects were at good level. These were higher than before the experiment which was in the improvement level of 2 items and fair level of 3 items. Before and after the experiment, the mean scores from highest to lowest were as follows. For the media/innovation use and learning resources, the mean score after the experiment was 4.00 at the good level. This was higher than before the experiment with the mean of 1.72 at the fair level. In the evaluation aspect, the mean score after the experiment was 3.50 at a good level. This was higher than before the experiment with a mean of 1.50 at a fair level. In terms of learning management, the mean score after the experiment was 3.44 at a moderate level which was higher than before the experiment with a mean of 1.64 at a fair level. For the writing objectives, the mean score after the experiment was 3.39 at a moderate level which was higher than before the experiment with a mean of 1.39 in the improved level. In the atmosphere arrangement, the mean score after the experiment was 3.36 at a moderate level. This was higher than before the experiment with a mean of 1.36 at the improved level, respectively.

CONCLUSION AND DISCUSSION OF THE RESULTS

From the research results, it can be summarized and discussed according to the research objectives as follows. From the first objective, learning management using the game method can develop learning management competency in relation to learning management of pre-service students in the social studies programs. The game was used in the process for teachers to help learners achieve their learning objectives. The learners were allowed to play the game according to the rules and bring the content and information of the game, learners' playing behaviors, playing methods, and game play to be used in the discussion to summarize their learning. These lead to the development of learning achievement (Thitsana Khaemane, 2007). The process of using teaching games that may allow students to develop their learning management competency is to have knowledge and understanding in choosing games to support learning activities and they must learn the process of using games to support learning that must be studied (Krirk Thuamklang and Jintana Thuamklang, 2012). It was consistent with the research on learning management using the game method for developing the achievement on the on the subject of recording items about products in the subject's general journal, fundamental accounting 2 of the 1st year vocational certificate students (vocational certificate 1), Dusit Commercial Vocational College (Yingcharoen Boonyang, 2013). For the second objective stating that the pre-service students in the Social Studies program had higher learning management competency after the experiment using the game method. The score from the post-test assessment form was 17.69 at the high level. This was higher than before the experiment with the mean of 7.61 at the low competency. This agreed with the concept that learning management could use the game method following the processes; preparatory stage, use of games for learning, summarizing the body of knowledge, expanding, exchanging, and applying knowledge to make students understand the principles of learning management very well. The learners practiced working planning and practiced implementation (Krirk Thuamklang and Jintana Thuamklang, 2012). This was similar to the learning management approach according to the new knowledge creation using the game method. It was found that instructional activities should be organized with the focus on learners. It was the game for learning. Its main purpose was to enable learners to learn while playing or after playing games. The learners could study together with having fun at the same time. This made learners have meaningful knowledge, gain direct experience and develop the students' thinking process. The contents were inserted into the game. The learners participated in learning and practiced learning on their own. The learners would acquire skills and knowledge from the lesson contents while playing the game. Games are often simulated to attract learners' attention to make them feel challenged and want to continue playing the game (Ekasit Chanintaphum, 2016). This was consistent with the research on the use of game method and the teaching using 5-step learning cycle (5Es) in conjunction with science teaching in a multicultural society affecting learning achievement. The scientific

process skills and multicultural attitudes on the human body system of Mathayom Suksa 2 students (Atchara Prempreeda, 2015). The researchers then discussed the results that learning management using the Game Method was the learning management approach that focused on allowing learners to practice in accordance with the principles of learning management. By planning the work through step-by-step implementation, it was the learning process from the introduction into learning so that students know the objectives. The process of using the game for learning where the learners played the game individually practiced the groups in learning with games. There was the pre-learning assessment with learning games. The game components, essence, and learning objectives, steps of playing games for learning, educational content learning of the game were studied. Continuous learning could be made through game. There was the post-learning assessment with learning games and the the results of playing games were recorded along with the results of learning activities from the games. The process of summarizing the body of knowledge created from learning and practicing skills from learning games could be effective. By bringing the learning results from learning games to discuss, summarize, recording the results of the discussion or summarizing the discussion results, the conclusion could be reached to meet the learning objectives with learning games. Expanding and exchanging knowledge could also reach the conclusion from learning with games for successful learning and knowledge, memory, understanding, and durable skills for learners. The step of applying the knowledge was the step assigned to activities by the learners to study, research, do additional skills training activities from learning with games until crystallized into knowledge and understanding in principles. They were able to plan learning management, knowledge that promoted learning management competencies in writing objectives, learning management, media/innovation use, learning resources, setting up learning atmosphere, and learning assessments with the effect on learning effectively and efficiently. From the research results, the researchers had the following recommendations. The interested persons should conduct researches by experimenting with other teaching methods to encourage students to develop learning management competency. There should be the researches to compare the results of learning management using the game method with the model of learning management by other methods.

REFERENCES

- [1] Kannika Piromrat and Weerapojt Ruttanawarn. (2020). A Study of the Competency in Doing Research in the Classroom of Students Teaching Professional Experience, Faculty of Education, Suan Sunandha Rajabhat University. Bangkok: Suan Sunandha Rajabhat University.
- [2] Ministry of Education. (2017). Handbook of training on how to drive PLC “Professional Learning Community” towards educational institutes at the educational service area Office level. Bangkok: Teachers and Basic Education Personnel Development Bureau, Office of the Basic Education Commission (OBEC), Ministry of Education.
- [3] Ministry of Education. (2019). Notification of the Ministry of Education on the Standards for Bachelor’s Degree in Education (Four-Year Program) 2019. Bangkok: Office of the Prime Minister.
- [4] Krirk Thuamklang and Jintana Thuamklang. (2012). Media /educational innovations Development to promote academic standing. Bangkok: Yellow Printing Company.
- [5] Thitsana Khaemane. (2007). Pedagogical Science: Knowledge Organization for Effective Learning Process Management. (2nd Edition). Bangkok: Printing House of Chulalongkorn University.
- [6] Thitsana Khaemane. (2008). Science of Teaching: Knowledge for Organizing Effective Learning Processes. (7th edition). Bangkok: Chulalongkorn University Publishing.
- [7] Nilarat Nawakitpaitoon, 2012. Concepts and theories of innovation management for Development. Online article. Retrieved at <http://www.gotoknow.org/posts>. Retrieved January 15, 2021.
- [8] Pimpan Dechakup and Pornthip Khaengkan. (2008). Research report on teacher competency And development guidelines for teachers in a changing society. Bangkok: Prikwan Graphic.
- [9] Phisanu Fongsee. (2015). Classroom research: Principles and practical techniques. (10th Edition). Bangkok: Dan Sutthakan Printing.
- [10] Suan Sunandha Rajabhat University. (2019). Bachelor of Education Curriculum, Early Childhood Education Program (Updated curriculum 2019). Bangkok: Faculty of Education.
- [11] Yingcharoen Boonyang. (2013). Teaching and learning management using educational games To develop achievements on recording items in general journal in the subject of Basic Accounting 2 of

Development on Learning Management Competency Using Game Method of Pre-Service Teachers in the Social Studies Program

the 1st year vocational certificate students (vocational certificate 1), Dusit Commercial Vocational College. Classroom research, Dusit Commercial Vocational College.

- [12] Sukhon Sinthaphanon. (2008). Teaching innovations to improve the quality of youth using Games in teaching. Bangkok: 9119 Technique Printing.
- [13] Suwit Moonkham and Orathai Moonkham (2017). 19 Methods of learning management: to develop knowledge and skills. (10th edition). Bangkok: Printmaking Partnership Limited.
- [14] Atchara Prempreeda. (2015). Effects of using games and teaching using 5-step learning cycle (5Es) in teaching science in multicultural society on learning achievement of process Skills, scientific and multicultural attitudes about human body system of students in Secondary School Year 2. Master's Degree Thesis on Teaching Curriculum, Prince of Songkla University.
- [15] Ekasit Chanintaraphum. (2016). A study of learning management approaches based on the Creation of new knowledge by using games. Journal of Education, Silpakorn University. Year 14, Issue 1 (June-October 2016): 54