The Development of Leader Teachers Development Program in Learning Thai Management for Enhancing Critical Thinking of Students in Secondary Schools in Educational Administration Seminar Course for Master Degree Students Majoring in Education Administration

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Abstract

The purposes of this study were to: 1) Study elements and factors of learning Thai management for enhancing critical thinking of students in secondary schools under the Office of Basic Education Commission, 2) Study current context and desirable situations, 3) Create leader teacher development program, 4) Develop effective leader teacher development program, 5) Evaluate quality of developed program, 6) Compare learning achievement of students who learned through the developed program, 7) Study learning retention of students who learned via the developed program, and 8) Study the students' satisfaction on learning though developed program. Samples were 17 master degree students. Instruments were the developed program, manual program, quality evaluation, achievement test, post-operation record from, and questionnaire. Statistics used were percentage, mean, standard deviation, effectiveness index, and t-test. The results were:

The elements of the developed program included 6 elements and 23 indicators.

The overall of current context analysis were found in medium level in the highest level respectively.

The developed program had following elements: 1) Principle of program, 2) Objectives of program, 3) Goals of program, and 4) Content and activities of program.

The efficiency and effectiveness of the developed program were:

The efficiency of 85.67 (E1) /84.00 (E2) which were higher than the committed 80/80 standard.

The congruence of utility, possibility, and appropriateness in the highestlevel ($\bar{X}$ = 4.59, SD = 0.53) .

The effectiveness index was 0.7567 which meant students gained more knowledge of 75.67%.

The students had significantly higher learning achievement after learning via the developed program at the level of 0.05.

There was no significant differences of learning achievement between after learning and after learning for two weeks.

The students had satisfaction on the developed program in the highest level ($\bar{X}$ = 4.52, SD = 0.42).

Keywords: Program development; Learning program; Educational administration; Educational institute; Action learning

INTRODUCTION

Knowledge is changeable due to the new explorer or it can be said that it is a dynamic. Learning in the 21st century also requires the leaners change their mindset from learning by memorizing to learn by using critical and creative thinking. Moreover, the learners should have the necessary skills

such as learning and innovative skills, information learning literacy and communication skills, and interpersonal skill. So, learning should give the opportunity for the learners to from experience by exploring knowledge through the processes of analyzing, synthesizing, making decision, solving problem, and creating knowledge from integrating what have been found from both inside and outside classroom. The instruction should also be considered to be flipped from learning only in classroom to be allow learners for the self-study at home or outside classroom and the knowledge gained outside will be brought to the classroom for discussing and practicing with teacher.

Role of teachers in the learning in the 21st century must be changed [1]. The new teaching should be without knowledge provider, but the knowledge will occur from the activities of students such as using creative thinking in learning and learning cooperatively. The research and working scheme for the efficiency will not be considered only for changing, but they should be the changer for produce efficient leader of changing on action learning leading to the inside change which is more powerful. This will help improve the leader skill as the leader of changes who always be professional, learn for life long, and find the better teaching methods which is suitable for their own context.

Flipped classroom is the new teaching approach proposed by Jonathan and Aaron, Chemistry teachers of Woodland Park High School in the United States. This approach corresponds the learning in the 21st century focusing on teach less learn more principles which is opposite the current situation of classroom. The flipped classroom also stimulates the use of online learning, social media, information technology, multimedia, and activities at home to be performed in classroom which help increase the practice and interaction between teacher and students. This also focuses on self-knowledge acquiring based on their skills, knowledge, ability, and individual competency regarding their self-pace of learning through the experience of provided by the teacher via information technology and multimedia. This also be the learning from outside classroom with the independence of both thinking and practicing which is different from traditional learning called teachers-centered learning that teacher always provides knowledge and experience. For the 21st century learning, teachers and staff have to learn from doing, giving feedback, enlighten, being the leader of changes, self-learning, self-evaluating and improving, and team working.

The analysis of current context and desirable situations together with the need of critical thinking of students in secondary schools from the study of Suriya Senawong and Chalard Chantharasombat showed that there were 6 elements and 23 indicators of learning Thai management for enhancing the critical thinking [2]. Moreover, the results also revealed that there were the needs of the development of learning innovation including learning modules, online learning, and action learning. This corresponds with the 2nd announcement of the Office of the National Digital Economy and Society Commission in 2020 stating that there is the need of digital economy and society funds in 7 aspects. However, the researchers are interested in the 1 aspect which is Education Technology (EDTech) which focuses on applying digital technology in education for improving the efficiency and effectiveness in terms of developing the potential of educational staff on flipped classroom with the integration of Cloud.

Consequently, the integration of Google Classroom is the change of teachers' role from tutor to be coach who will initiate and create the amusement in learning as facilitator. There should be the improvement of teachers' potential of applying online learning in class through the use of G Suite for Education and Microsoft teams. The Google Classroom was, finally, selected for implementing in the Educational Administration Seminar course (ED8013302) for organizing the new approach of teaching through the development of leader teacher development. This process was simultaneously done together with the learning and researching for improving the efficiency and effectiveness of innovation with the integration of teaching though the use of digital technology for improving the wisdom on living together happily.

RESEARCH QUESTIONS

The researchers specified the research questions for developing the learning program on the leader teacher development program in learning Thai management for enhancing critical thinking of students in secondary schools of Educational Administration course (ED8013302) for the master degree students as follow:

- What are the elements of learning Thai management for enhancing critical thinking of students in secondary schools under the Office of Basic Education Commission?
- What are the current context and desirable situations of learning Thai management for enhancing critical thinking of students in secondary schools under the Office of Basic Education Commission?
- How to develop the leader teacher development program in learning Thai management for enhancing critical thinking of students in secondary schools of Educational Administration course (ED8013302) for the master degree students via the processes of the supervision of the experts?
- How to develop the leader teacher development program in learning Thai management for enhancing critical thinking of students in secondary schools of Educational Administration course (ED8013302) for the master degree students having the 80/80 standard?
- What is the level of the evaluation the program on the leader teacher development program in learning Thai management for enhancing critical thinking of students

in secondary schools of Educational Administration course (ED8013302) for students was evaluated by the experts in terms of the utility, the possibility, and appropriateness?

- What is the level of the effectiveness index of the on the leader teacher development program in learning Thai management for enhancing critical thinking of students in secondary schools of Educational Administration course (ED8013302) for students?
- Is the learning achievement of students after learning through the leader teacher development program in learning Thai management for enhancing critical thinking of students in secondary schools of Educational Administration course (ED8013302) for students higher than before learning via the developed program? How?
- How is the learning retention of the students who learned through the leader teacher development program in learning Thai management for enhancing critical thinking of students in secondary schools of Educational Administration course (ED8013302) for students?
- What is the level of satisfaction on learning of the students who learned through the leader teacher development program in learning Thai management for enhancing critical thinking of students in secondary schools of Educational Administration course (ED8013302) for students?

RESEARCH OBJECTIVES

- To study the elements and factors of learning Thai management for enhancing critical thinking of students in secondary schools under the Office of Basic Education Commission
- To study the current context and desirable situations of learning Thai management for enhancing critical thinking of students in secondary schools under the Office of Basic Education Commission
- To create the leader teacher development program in learning Thai management for enhancing critical thinking of students in secondary schools under the Office of Basic Education Commission by integrating the digital teaching (Google Classroom) .
- To develop the leader teacher development program in learning Thai management for enhancing critical thinking of students in secondary schools of Educational Administration course (ED8013302) for the master degree students by integrating the digital teaching (Google Classroom) .

RESEARCH DELIMITATION

Populations and samples

- The populations in this study were 23 master degree students of Master of Education in Educational Administration of Northeastern University, Khon Kaen province who were studying in the third semester of 2019 academic year.
- The samples were 17 master degree students of Master of Education in Educational Administration of Northeastern University, Khon Kaen province who were enrolling in the Educational Administration course in the program of continuously voluntary group in the third semester of 2019 academic year

Variables

- Independent variables was learning program on the leader teacher development program in learning Thai management for enhancing critical thinking of students in secondary schools of Educational Administration course (ED8013302) for the master degree students.
- Dependent variables were:

1) Learning achievement

-Efficiency and Effectiveness (E1/E2)

-Effectiveness Index (E.I.)

-Learning retention

2) Learning satisfaction

Duration

The learning modules on Education and Educational Institutes course (ED8013203) for mater degree students was implemented in the 2nd semester of the 2019 academic year.

The content of study received from the Education and Educational Institutes course (ED8013203) for mater degree students including Unit 1 on basic knowledge, theory, and principles of administration and development, Unit 2 on Classroom administration in the 21st Century, Unit 3 on Educational reform skill and academic leadership of educational institutes, Unit 4 on Schools and administrators, Unit 5 on The creation of administrative innovation and Unit 6 on the learning community.

RESEARCH CONCEPTUAL FRAMEWORK

The conceptual framework of the leader teacher development program in learning Thai management for enhancing critical thinking of students in secondary schools of Educational Administration course (ED8013302) for students were as follow:

MAIN INNOVATION

There were 6 units of the developed program including Unit 1 on basic knowledge, theory, and principles of administration and development, Unit 2 on Classroom administration in the 21st Century, Unit 3 on Educational reform skill and academic leadership of educational

institutes, Unit 4 on Schools and administrators, and Unit 5 on The creation of administrative innovation and Unit 6 on the learning community respectively through the use of professional learning community as follow:

- Master Degree of Education Program in Educational Administration.
- Quality classroom and quality schools as professional learning community.
- Quality Classroom and School Community.
- Symposium or Workshop.
- The development of lesson study and active as the new approach for teaching through the application of clinic supervision for excellence.
- Operational plan for developing the strength of professional learning community.

CONSTRUCTION AND DEVELOPMENT OF RESEARCH INSTRUMENTS

The development procedures of the learning program on the leader teacher development program in learning Thai management for enhancing critical thinking of students in secondary schools of Educational Administration course (ED8013302) for students were as follow:

The researchers participated in developing strategies, planning for development, and creating the developed program for students majoring in Administration and Educational Leadership, the Faculty of Education, Northeastern University, Khon Kaen, Thailand.

The researchers studied the concepts, theories, related principles, policies, strategic and strategies of education administration, and the educational reform in the 21st century for specifying the content and innovation to improve the learning achievement of schools. Moreover, the survey of learning resources for excellence was done based on the theory of educational quality development in 21st century. The development of leader by supervising and teaching, creation and development of professional learning community (PLC) , supervision for excellence (Educational Supervision Clinique the Route to Excellence: ESC, Wales Deanery) , concepts and theory of supervision for excellence of Chalard Chantarasomabat Wales and Nothai Udombunyanuparb, school is professional learning community of Blue, and opened-classroom of Dudley cited in Chalard Chantarasomabat) [3-5].

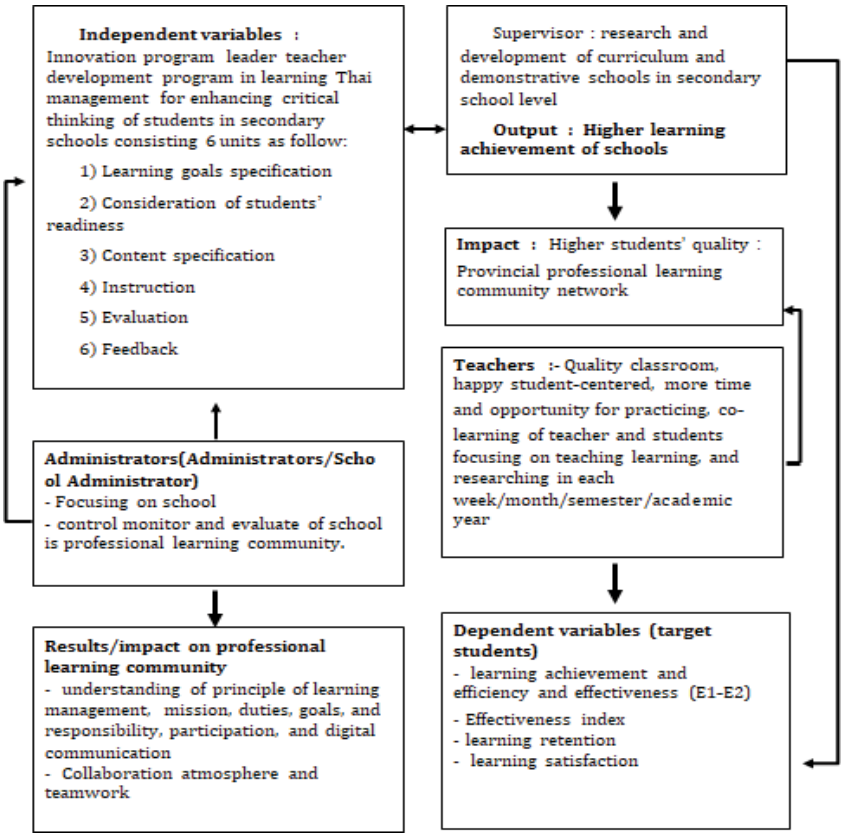

Figure 1. The conceptual framework of the leader teacher development program in learning Thai management for enhancing critical thinking of students in secondary schools.

The researchers created and developed the program for students including Unit 1 on basic knowledge, theory, and principles of administration and development, Unit 2 on Classroom administration in the 21st Century, Unit 3 on Educational reform skill and academic leadership of educational institutes, Unit 4 on Schools and administrators, and Unit 5 on The creation of administrative innovation and learning community respectively.

The researchers submitted the developed learning program on leader teacher development program in learning Thai management for enhancing critical thinking of students in secondary schools of Educational Administration course (ED8013302) for students with all six units for evaluating the congruence of content and modules to 5 experts including 1) Prof. Dr.Preecha Prathepha 2) Assoc. Prof. Dr.Samrej Yurachai 3) Assoc. Prof. Dr. Tharinthorn Namwan 4) Asst. Prof. Dr.Yannapat Seehamongkon and 5) Asst. Prof. Dr. Prasert Ruannakarn. The results of evaluation in terms of appropriateness, possibility, and utilization were in the highest level.

The developed five modules on educational administration were tried out with 5 students who were not the samples of this study in the small group trial, and 12 students for group trial. Those were studying in Master Degree in Educational Administration in the second semester of the 2019 academic year. The results of the trials revealed that the efficiency of the developed modules was 82.67/83.89. The modules were revised in terms of manual of learning program. The revised learning program in all six units were printed out for implementing with the samples of the study who were 17 Master Degree students majoring in Educational Administration of the Northeastern University studying in the third semester of the 2019 academic year.

Learning achievement test was developed and tried out as follow:

The researchers studied theories, principles, and concepts of learning achievement test construction of Boonchom Srisa-Ardas a guideline for the development [6].

The researchers conducted 40 items of 4 alternatives multiple choice learning achievement test for the selection of 30 items for the implementation phase.

The developed test was submitted to the same experts for the evaluation for the congruence of behavioral objectives with the following criteria :1) +1 refers to the test is surely congruent with the behavioral objectives, 2) 0 refers to the test is not surely congruent with the behavioral objectives, and 3) -1 refers to the test is not congruent with the behavioral objectives.

The test was evaluated for the Index of Congruence (IOC) (SomnukPattiyathanee) by choosing 30 items having the IOC value between 0.50-1.00 which means that the selected items had the appropriate content validity [7].

The developed test was implemented with the samples who were 30 schools administrators graduating master degree in educational administration, teachers, and educational supervisors under the Yasothon Provincial Educational Office due to the project of "How Coaching Teams improves the Educational Quality?" at JP Emerald, Yasothon province for studying the reaction of test taking, time of taking the test, and understanding of questions. The test was revised until every aspect of the test was appropriate.

The scores received were analyzed to find out the difficulty value (P) , and discrimination power (R) of each item. The results revealed that the difficulty value of each item was arranged from 0.40 to 0.80, while the discrimination power of each item was ordered from 0.20 to 0.60. Moreover, the test was analyzed to find out the reliability through the use of Kuder Richardson – 20 (KR20) and the results revealed that the overall reliability of the was 0.84. The test was, finally, printed out for the next phase of study.

The questionnaire of teachers' satisfaction on learning program on leader teacher development program in learning Thai management for enhancing critical thinking of students in secondary schools of Educational Administration course (ED8013302) for studentsin eight aspects with 45 items was constructed under the tried out in the following procedures:

- The researchers studied the concepts and theories of satisfaction from the book on reforming administration, theory, research, and educational operation of Thon Suntharayoot [8].
- The researchers studied the techniques of developing the questionnaire of satisfaction from the book on Basic of Research of Boonchm Srisa-Ard [6].
- The researchers studied the construction of five-points rating scale questionnaire on satisfaction of Likert Boonchm Srisa-Ard.
- The researchers developed the five-points rating scale questionnaire due to the objectives.
- The developed questionnaire was submitted to the same experts for evaluating the congruence between questions and behavioral objectives based on the following criteria:

+1 refers to the test is surely congruent with the behavioral objectives

0 refers to the test is not surely congruent with the behavioral objectives

-1 refers to the test is not congruent with the behavioral objectives

Thequestionnaire was analyzed to find out the Index of Congruence (IOC) (Somnuk Pattiyathanee) and found that the it had the IOC value ranged from 0.80 – 1.00. The experts also commented on language usage, clarification, and the repetition of questions respectively.

The developed questionnaire was implemented with the

samples who were 30 schools administrators graduating master degree in educational administration, teachers, and educational supervisors under the Yasothon Provincial Educational Office to find out the discrimination power (r) of each item. The results showed that the discrimination power of each item was found between 0.32-0.83. The questionnaire was also analyzed to find out the Cronbach θ --Coefficient BoonchmSrisa-Ard [6]. It was found that the reliability of the questionnaire was 0.96. The questionnaire was, finally, printed out for the implementation step.

DATA COLLECTION

- The theory data were collected through pre and post-tests via leaning achievement test.
- The data of learning retention were collected through taking the leaning achievement test again after two weeks of finishing learning through the developed program. The data were also gathered vis the process of AAR.
- The learning satisfaction data were gathered through the questionnaire on teachers' teaching, teaching materials, and lessons of the developed program.

DATA ANALYSIS

The efficiency and effectiveness of the learning program on leader teacher development program in learning Thai management for enhancing critical thinking of students in secondary schools of Educational Administration course (ED8013302) for students was analyzed by finding out the mean score through the formula of Chaiyong Brahmawongas follow: [9]

The efficiency was calculated via the below E1/E2 formula:

$$E_1 = \frac{\sum X/N}{A} \times 100$$

$$E_2 = \frac{\sum F/N}{B} \times 100$$

The analysis of learning achievement on of the developed program was done through the dependent sample t-test with the scores of pre-test, post-test, and learning achievement test received after two weeks of the completion of learning program Boonchm Srisa-Ard [6].

The analysis of effectiveness of the developed program was analyzed through the Effectiveness Index (E.I.) formula of Chaiyong Brahmawong as follow:

$$\text{Effectiveness Index(E.I)} = \frac{\text{mean score of post} - \text{test} - \text{mean score of pre} - \text{test}}{(\text{number of students X total score}) - \text{mean score of pre} - \text{test}}$$

The analysis of the learning retention of the developed was analyzed through thecomparison of mean score of the pre-test and post-test received after two weeks of the completion of learning through the developed program by using dependent sample t-test of Boonchm Srisa-Ard.

The analysis of the satisfaction on the developed was done by finding out the mean score and S.D. through the satisfaction evaluation of Likert Boonchm Srisa-Ard.

The comparison of the record of before and afterworking to find out the results of the qualitative learning activity project was analyzed to find out the percentage of the focused aspects of Boonchm Srisa-Ard [6].

RESEARCH FINDINGS

The results of the study of the learning retention of the learning program on leader teacher development program in learning Thai management for enhancing critical thinking of students in secondary schools of Educational Administration course (ED8013302) for students were as follow:

1. The results of the study of the elements and factors of learning Thai management for enhancing critical thinking of students in secondary schools under the Office of Basic Education Commission.

There were six elements and 23 indicators of learning Thai management for enhancing critical thinking of students found including: 1st element on goals specification containing the following indicators: 1) Teachers training on specifying goals of learning Thai management for enhancing critical thinking, 2) Teachers training on Thai language curriculum analysis for the appropriateness of students to enhance the critical thinking, 3) Teachers' participation in leaning goals specification and learning Thai management for enhancing critical thinking, 4) Coordination with experts for supervision and suggestion on specifying goals of Thai learning management for enhancing the critical thinking, and Improving quality of oneself, 2nd element, the consideration of students' readiness including the following indicators 1) Teachers training for being able to develop the evaluation instruments of students' basic knowledge, 2) Giving consultation to teachers for analyzing the students' readiness and developing systematic students' information for utilizing in enhancing the appropriate critical thinking for students, 3) Supervision of teachers on utilizing students' information in enhancing the appropriate critical thinking for students, 3rd element, content specification containing the following indicators: 1) Organizing the field study about learning resources supporting the content specification on learning Thai for enhancing the critical thinking of students, 2) Organizing the workshop for the teachers to increase the ability in specifying the content related to learning Thai for enhancing the critical thinking of students, 3) Collaborating with the experts for consulting with teachers on specifying the content related to learning Thai for enhancing the critical thinking of students, 4th element, learning activities consisting of the following indicators: 1) Presenting problems analysis step refers to teachers can specifying the problematic situations,

arguments, and unclear data needed the critical thinking, consideration to find the logical stimulating the students to define, analyze, and understand the problems, 2) Individual thinking practice step means teachers give opportunities to each student practice thinking regarding the provided situation stimulating students to practice collecting data and resources, identifying the characteristics of data, managing data system, and proposing hypothesis through specifying alternatives of solutions basing on logic allowing students to think and solve problems by themselves, 3) Small group practice step is teachers allows each student to share and exchange their ideas in group comparing the differences and similarities, 4) Presentation and discussion step refers to teachers give opportunities to students to share the idea from small group to big group to see both differences and similarities, the sharing and exchanging ideas between students and teachers are done to widen and link knowledge for solving problems, 5) Process evaluation step means teachers propose the problems or limitations of the content of lesson for considering and summarizing to students and let them evaluate their thinking methods and processes to see whether they are corresponded with the goals of development or not, the 5th element, evaluation includes the following indicators: 1) The teachers training on evaluation and assessment based on the core curriculum of the Office of Basic Education for managing the learning Thai for enhancing the critical thinking, 2) Supervision, monitoring, and evaluation of the teachers on the provided program, and 3) Collaborating with the experts for consulting with teachers on specifying the content related to learning Thai for enhancing the critical thinking of students, 6th element, feedback consisting of the following indicators: 1) Organize the teachers training to share the problems occurred in managing the learning Thai for enhancing the critical thinking of students to find the mutual solution, 2) Organize the workshop supporting the teachers to manipulate the information to be up to date or easy for searching, 3) Collaborating with the experts for consulting with teachers on specifying the content related to learning Thai for enhancing the critical thinking of students.

The current context and desirable situations of learning Thai management for enhancing critical thinking of students in secondary schools under the Office of Basic Education Commission revealed that the current situation of learning was in the high level which could be arranged in the descending order as evaluation, organizing learning activities, learning goals specification, giving feedback, consideration of student' readiness, and content specification respectively. For the analysis of desirable context for learning, the results were in the highest level which could be arranged in the descending order as giving feedback, consideration of student' readiness, evaluation, learning goals specification, organizing learning activities, and content specification respectively.

2. The construction and development of the leader teacher development program in learning Thai management for enhancing critical thinking of students in secondary schools of Educational Administration course (ED8013302) for students through the integration of digital learning (Google Classroom) .

The developed program consisted of the following elements which were: 1) Principles of system, 2) Objectives of program, 3) Goals of program, 4) Patterns and methods of development, 5) Structures of program, 6) and Content of program including six modules namely Module 1: learning goals specification, Module 2: students' readiness consideration, Module 3: content specification, Module 4: organizing learning activities, Module 5: evaluation, and Module 6: giving feedback through 118 hours foe development. The variety of methods of development were employed to create the deep and sustainable understanding and learning skills for the participants to utilize in program development including 1) Training, 2) Self-development by self-study, development, and four development processes including step 1) Evaluation before development, step 2) development, step 3) Integration during operation, and step 4) Evaluation. The results of Program evaluation from experts showed that the usefulness, the appropriateness, and the possibility of the program were found in the highest level.

The results of the implementation of the leader teacher development program in learning Thai management for enhancing critical thinking of students in secondary schools under the Office of Basic Education Commission were as follow:

- The program on the leader teacher development program in learning Thai management for enhancing critical thinking of students in secondary schools of Educational Administration course (ED8013302) for students had the efficiency of 85.67 (E1) /84.00 (E2) which were higher than the committed 80/80 standard.
- The program on the leader teacher development program in learning Thai management for enhancing critical thinking of students in secondary schools of Educational Administration course (ED8013302) for students was evaluated by the experts in the highest level ($\bar{X}$ = 4.99, SD = 0.02) .
- The effectiveness index of the developed program through the integration of digital learning (Google Classroom) was 0.7567 which meant that the students gained more knowledge of 75.67%.
- The students who learned through the developed program through the integration of digital learning (Google Classroom) had the significantly higher learning achievement than before learning via the developed program at the level of 0.05.
- The students who learned through the developed program through the integration of digital learning

(Google Classroom) had no significant differences of the learning achievement between after learning and after learning for two weeks. This could be said that they had the learning retention from learning through the developed program.

- The students who learned through the developed program through the integration of digital learning (Google Classroom) had the satisfaction on learning in the highest level ($\bar{X}$ = 4.52, SD = 0.42) . When considering in all eight aspects, the results could be arranged in the descending order as follow: 1) qualifications of teachers ($\bar{X}$ = 4.66,SD=0.50) 2) teachers have efficiency and effectiveness of teaching ($\bar{X}$ = 4.59, SD = 0.51) 3) content ($\bar{X}$ = 4.59,SD=0.50) 4) relationship between teachers and students ($\bar{X}$ = 4.57,SD=0.54) 5) practice and theory teaching ($\bar{X}$ = 4.52,SD=0.53) 6) measurement and evaluation ($\bar{X}$ = 4.49,SD=0.59) 7) practice teaching skill ($\bar{X}$ = 4.45,SD=0.57) and8) learning materials ($\bar{X}$ = 4.35,SD=0.60) respectively.

DISCUSSION

The results of the study of the leader teacher development program in learning Thai management for enhancing critical thinking of students in secondary schools of Educational Administration course (ED8013302) for students could be discussed as follow:

1. There were six elements and 23 indicators of learning Thai management for enhancing critical thinking of students found including: 1st element on goals specification containing the following indicators: 1) Learning goals specification, 2) students' readiness consideration, 3) Content specification, 4) Organizing learning activities, 5) Evaluation, and 6) Giving feedback which all elements were evaluated in the highest level. This might be due to the fact that the researchers studied the related concepts, theories, and research on elements and indicators for managing learning Thai for enhancing critical thinking of students in secondary schools. Moreover, the researchers also consulted with the experts on the processes of developing those elements and indicators. This could be concluded that the researchers used the secondary sources basing on the theories which could be accounted by reasons and checked for the validity easily. This was corresponded with Thikhamphorn Boonmaak who conducted the research on the teachers development of learning management for educational opportunity extension schools through 7 steps including: 1) Objectives specification, 2) Students characteristics study, 3) learning goals specification, 4) Content specification, 5) Organizing learning activities, 6) Evaluation, 7) Giving feedback which were appropriate for using in teachers development. Moreover, the results of the consideration of the trials of the program, it was found that the developed program helped improve the progress for both teachers and students which were: 1) Teachers had a better understanding of learning management representing by the score of the test before attended the training was in the low level while the score of the test after received the training was in the high level, and 2) Teachers could manage the learning and had the awareness and understanding of teacher development program on learning management for educational opportunity extension schools. There were five elements for organizing learning activities consisting of: 1) Problems presentation, 2) Individual thinking practice, 3) Small group thinking practice, 4) Presentation and discussion of results of thinking, and 5) Evaluation thinking processes.

2. The study the current context and desirable situations of learning Thai management for enhancing critical thinking of students in secondary schools under the Office of Basic Education Commission revealed that the current context of learning management was in the medium level while the desirable situation was in the highest level. The results also showed that the method of teacher development of learning Thai management for enhancing critical thinking by analyzing the frequency arranged in the descending order as follow: training and self-learning which corresponded with the Ministry of Education mentioning that the student-centered learning based on the belief that all individual can fully learn and improve themselves regarding their potential. Thai language is recognized as the identity and cultural treasury of nation showing being Thai. It is also used as the tool for communication for creating understanding and good relationship between people, doing business, working, and living happily in society. This was also supported by the study of Thikhamphorn Boonmaakon the research on the teachers development of learning management for educational opportunity extension schools which was found that the situation teachers development of learning management for educational opportunity extension schools was in the high level, the problems of teachers development was reported in the low level, the needs of teachers development was in the high level, and the needs of the approaches of teachers development was found in the highest level which could be arranged in the descending order as training, study trip, internal supervision, teachers teamwork development, workshop, consultation, self-research and development, seminar, direct support, and further study.

3. The development of the leader teacher development program in learning Thai management for enhancing critical thinking of students in secondary schools under the Nakhonratchasima Provincial Administrative Organization had the following element which were: 1) principles of program, 2) objectives of program, 3) goals of program, 4) content and activities of program, and 5) program evaluation. For the structure of content and activities of the development of the program, they were divided into three phases including: phase 1) the evaluation before development, phase 2) development which included six modules namely: module 1) learning goals specifying, module 2) students' readiness consideration, module 3) content specification, module 4) organizing learning

activities, module 5) evaluation, and module 6 feedback through 118 hours of time for development. The processes of development t were training and self-development, phase 3) the integration during operation, phase 4) evaluation after development. The results of the development of manual of the leader teacher development program in learning Thai management for enhancing critical thinking of students in secondary schools under the Nakhonratchasima Provincial Administrative Organization included four parts including: 1introduction, 2) teacher development program on learning management, 3) the utilization of teacher development program, and 4) evaluation.This was corresponded with the study of Yod-Anong Chomhongphiphat (2010: 175-183) on the development of leader teacher on learning management regarding the reform of basic education that created and developed the leader teachers on learning management basing on the reform of basic education consisting of seven aspects including: 1) vision) , 2) principles, 3) objectives, 4) content, 5) processes, 6) structures, and 7) measurement and evaluation of program process.

The Evaluation of both efficiency and effectiveness of the leader teacher development program in learning Thai management for enhancing critical thinking of students in secondary schools through the integration of digital learning (Google Classroom) was as follow:

- The program on the leader teacher development program in learning Thai management for enhancing critical thinking of students in secondary schools of Educational Administration course (ED8013302) for students had the efficiency of 85.67 (E1) / 84.00 (E2) . This might be due to the fact as follows: 1.1) the researchers studied the curriculum and related literatures om learning module development and had it sent to the experts to check for revision and the results revealed that the developed learning module on policies, strategic, and educational strategy plan (EDA6201) for students was evaluated by the experts in the highest level while the appropriateness, the possibility, and the utilization were arranged in the descending order when considering in each aspect, and 1.2) the two trials of the developed learning modules with two groups were done by the researchers in all steps including the first group consisted of nine schools administrators who graduated master degree in educational administration working for Khon Kaen Provincial Education Office and the results showed that the efficiency was 82.67/83.89 resulted from the improvement for the completion of the developed modules received during the trials to reach the committed efficiency. This was corresponded to the results of the study of Suchittra In-Rueangsion the development of learning modules on life and Thai culture for the diploma students of Vehicle Industry Technical College which showed that: 1) the modules containing principles, reasons, goals, basic knowledge, basic evaluation, learning activities, before learning evaluation, and remedial courses had the efficiency of 83.88/85.96. Consequently, the learning management on policies, strategic, and educational strategy plan (EDA6201) through the use of learning modules was appropriate for the developing students by appropriate using principles and theories in implementation will improve the efficiency of learning management resulting the students could fully improve their potentials.
- The students who learned through the program on learning Thai management for enhancing critical thinking of students in secondary schools of Educational Administration course (ED8013302) for students had the learning achievement which was significantly higher than before learning via the developed program at the level of 0.05. This might be due to the fact that: 2.1) there was the learning management focusing on learning by doing and student-centered, and the learning activities were based on the knowledge and interest of students for self-development which help improves students' skills. Learning activities are, consequently, necessary to be focused on real practice in terms of individual, small group and whole class which will help improve students' skills, knowledge, systematic thinking, and critical thinking.

This was consistent with the concept of Phimphan Dechakhoopstating that student-centered is the learning management stimulating students to acquire new knowledge and innovations through the use of thinking process and social process to use the relationship and participation in learning and applying knowledge [10]. Moreover, the results from the study also revealed that the use of the developed modules evaluated by the experts in the highest level made all modules had the efficiency regarded the committed standard. The students could learn from the modules according to their interests. With the appropriate content, language usage, exercises, and answer keys, this made students had knowledge, expertise, precision, and learning retention. The results of this study also found that the students had no differences between learning achievement on policies, strategic, and educational strategy plan (EDA6201) after the completion and learning achievement of the learning completion after two weeks, and 2.2) the learning modules were the motivation in learning management which the students could learn what they want and what they like. The developed modules also helped improve the critical thinking and analytic thinking from learning though each module. This was corresponded with Watthana Ra-Ngabthookwho stated that teachers who teach students have to design the teaching process to develop students to be qualified with the committed standard. Choosing of appropriate learning activities for developing the quality of students, the teachers have to know about basic of learning management and the learning goals specification for encouraging students behave in the desirable behaviors which is the simulation of students'

attention in learning and assistance for the better learning which can be utilized in the daily life, 2.3) there was the preparation of learning atmosphere supporting the learning which was relax and based on individual differences.

The students had the satisfaction on learning though the leader teacher development program in learning Thai management for enhancing critical thinking of students in secondary schools of Educational Administration course (ED8013302) for students in the highest level. This might be due to the fact that the developed learning modules were interesting since the learning activities were diverse attracting the students' attention properly. Moreover, the students had chance to practice the learning activities which were suitable for their ability which was corresponded with the concepts, theory, and principles of learning module development of Chomphan Koonchorn Na Ayuddhaya[11] who proposed the suggestions for developing learning program as follow: 1) developer have to concern with the general goals of the curriculum and consider carefully to check whether the developed learning goals can improve the graduates' competency as stated in the general goals of curriculum and to check whether the congruence of learning activities with the learning philosophy of the curriculum, 2) in there should be the targeted competencies for students, 3) after the learning goals were specified, , 4) for the development of basic evaluation, 5) for developing learning activities, 6) if the developer think that the developed leaning activities should be arranged, 7) all activities provided for the students to chooses should be equally provided to them for practicing, 8) for the evaluation after learning, 9) the developer might specify the remedial activities according to the appropriateness although the program was carefully design and develop, 10) the description of the modules should be short and clear, 11) the developer should allow team members and students to criticize for the improvement of the developed modules, 12 after the completion of the modules development, and 13) finally, the developer should be aware that the developed modules can be always changes which might stimulate the students to be satisfied on the developed modules. This was corresponded with the study of Rueangsaeng Hasakoon who studied the development of model of short course curriculum development through the use of modules for teaching and learning for the educational institutes under the Office of Vocational Education and found that the students had the satisfaction on the developed modules in the highest level [12]. As mentioned earlier, this made the students had the satisfaction on the developed modules in the highest level.

CONCLUSION

Regarding what have been presented above, the researchers develop the leader teacher development program in learning Thai management for enhancing critical thinking of students in secondary schools of Educational Administration course (ED8013302) for the master degree students with the belief that it would be useful, possible, and appropriate for the implementation in the real situation.

RECOMMENDATIONS

Recommendations for application and development

- The results showed that the developed had the appropriateness for the teacher development. So, the administrators and stakeholders in education and teacher development under the Office of Basic Education Commission should promote and support the implementation of this program.
- The use of the developed program should be focused on teachers through the processes mentioned in the manual under the assistance of the administrators and stakeholders for the clear understanding and achieve the goals of the program.
- The Office of Basic Education Commission should promote and support the schools to improve the teachers on learning Thai management for enhancing critical thinking of students by specifying the role model teachers working on the main duties namely teach, learn while teaching, and conducting research to achieve most effective goals.

Recommendations for future research

- This study was on the leader teacher development program in learning Thai management for enhancing critical thinking of students in secondary schools under both government and private sectors. The manual of the developed program should be further studied to enhance the critical thinking in other learning constrains for the development of teachers in those ones.
- There should be the implementation of the leader teacher development program in learning Thai management for enhancing critical thinking of students in secondary schools under both government and private sectors through the integration with digital teaching (Google Classroom) with the ready schools.

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