รูปแบบการจัดการเรียนรู้แบบ Active Learning เพื่อพัฒนาทักษะการจัดการเรียนรู้สำหรับนักศึกษาสาขาวิชาพลศึกษา คณะศึกษาศาสตร์สถาบันการพลศึกษา วิทยาเขตลำปาง

A Model of Active Learning-Based Instructional Management to Enhance Physical Education Students' Learning Management Skills in the Faculty of Education, Institute of Physical Education Lampang

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บทคัดย่อ

การวิจัยเรื่องรูปแบบการจัดการเรียนรู้แบบ Active Learning เพื่อพัฒนาทักษะการจัดการเรียนรู้สำหรับนักศึกษาสาขาวิชาพลศึกษา คณะศึกษาศาสตร์ สถาบันการพลศึกษา วิทยาเขตลำปาง มีวัตถุประสงค์เพื่อ 1) ศึกษาสภาพปัญหาและความต้องการในการพัฒนารูปแบบการจัดการเรียนรู้แบบ Active Learning เพื่อพัฒนาทักษะการจัดการเรียนรู้สำหรับนักศึกษาสาขาวิชาพลศึกษา คณะศึกษาศาสตร์ สถาบันการพลศึกษา วิทยาเขตลำปาง 2) พัฒนารูปแบบการจัดการเรียนรู้แบบ Active Learning เพื่อพัฒนาทักษะการจัดการเรียนรู้สำหรับนักศึกษาสาขาวิชาพลศึกษา คณะศึกษาศาสตร์ สถาบันการพลศึกษา วิทยาเขตลำปาง และ 3) ศึกษาผลการใช้รูปแบบการจัดการเรียนรู้แบบ Active Learning เพื่อพัฒนาทักษะการจัดการเรียนรู้สำหรับนักศึกษาสาขาวิชาพลศึกษา คณะศึกษาศาสตร์ สถาบันการพลศึกษา วิทยาเขตลำปาง กลุ่มตัวอย่าง ได้แก่ นักศึกษาที่กำลังศึกษาในหลักสูตรศึกษาศาสตรบัณฑิต ชั้นปีที่ 4 สาขาวิชาพลศึกษา คณะศึกษาศาสตร์ สถาบันการพลศึกษา วิทยาเขตลำปาง 2 หมู่เรียน จำนวน 60 คน ได้มาโดยการเลือกแบบเจาะจง (Purposive Sampling) เครื่องมือที่ใช้ในการวิจัย ได้แก่ 1) แบบสอบถามสภาพปัญหาและความต้องการ 2) รูปแบบการจัดการเรียนรู้แบบ Active Learning เพื่อพัฒนาทักษะการจัดการเรียนรู้สำหรับนักศึกษาสาขาวิชาพลศึกษา คณะศึกษาศาสตร์ สถาบันการพลศึกษา วิทยาเขตลำปาง 3) แบบวัดผลสัมฤทธิ์ทางการเรียน 4) แบบวัดทักษะการจัดการเรียนรู้ และ 5) แบบสอบถามความพึงพอใจ

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ของผู้เรียน สถิติที่ใช้วิเคราะห์ข้อมูลค่าเฉลี่ย ($\bar{X}$) ส่วนเบี่ยงเบนมาตรฐาน (S.D.) และทดสอบสมมติฐานด้วย t-test ผลการวิจัย ปรากฏดังนี้

1. ผลการศึกษาสภาพปัญหาและความต้องการในการพัฒนารูปแบบการจัดการเรียนรู้แบบ Active Learning เพื่อพัฒนาทักษะการจัดการเรียนรู้ สำหรับนักศึกษาสาขาวิชาพลศึกษา คณะศึกษาศาสตร์ สถาบันการพลศึกษา วิทยาเขตลำปาง พบว่า สภาพบริบทการเรียนการสอนที่ส่งเสริมทักษะการเรียนรู้แบบ Active Learning อยู่ในระดับน้อย ในขณะที่มีความต้องการการจัดการเรียนการสอนที่ส่งเสริมทักษะการเรียนรู้แบบ Active Learning อยู่ในระดับมาก

2. ผลการพัฒนารูปแบบการจัดการเรียนรู้แบบ Active Learning เพื่อพัฒนาทักษะการจัดการเรียนรู้ สำหรับนักศึกษาสาขาวิชาพลศึกษา คณะศึกษาศาสตร์ สถาบันการพลศึกษา วิทยาเขตลำปาง พบว่า มีความเหมาะสมอยู่ในระดับมาก

3. ผลการใช้รูปแบบการจัดการเรียนรู้แบบ Active Learning เพื่อพัฒนาทักษะการจัดการเรียนรู้ สำหรับนักศึกษาสาขาวิชาพลศึกษา คณะศึกษาศาสตร์ สถาบันการพลศึกษา วิทยาเขตลำปาง พบว่า ผู้เรียนมีคะแนนเฉลี่ยทักษะการจัดการเรียนรู้ ของผู้เรียนเท่ากับ 24.52 คิดเป็น ร้อยละ 80.54 มีผลสัมฤทธิ์ทางการเรียนรายวิชา การจัดการเรียนรู้ หลังเรียนสูงกว่าก่อนเรียนอย่างมีนัยสำคัญทางสถิติที่ระดับ .05 ประสิทธิภาพของรูปแบบการจัดการเรียนรู้ E_1/E_2 มีค่าเท่ากับ 82.65/80.54 และมีความพึงพอใจของนักศึกษา โดยรวมเห็นด้วยในระดับมากที่สุด

คำสำคัญ : รูปแบบการจัดการเรียนรู้, รูปแบบ Active Learning, ทักษะการจัดการเรียนรู้

Abstract

The purposes of this study aimed to 1) scrutinize the problems and requirements for the development of active learning-based instructional management model, 2) develop the active learning-based instructional management model enhanced for the physical education students' learning management skills, and 3) investigate the effects on the implementation of the active learning-based instructional management model enhanced for the physical education students' learning management skills. Data collection employed 60 senior physical education students out of the 2 classes majoring in physical education, at the faculty of education, institute of physical education lampang were selected by the purposive sampling technique. The research instruments drawn for this study included 1) a questionnaire related to the problems and requirements; 2) a model of active learning-based instructional management enhanced for the physical education students' learning management skills. 3) a learning achievement test; 4) an aptitude test on learning management skills, and 5) a questionnaire related to learner's satisfactions. Also, the data were statistically analyzed using mean, standard deviation, and t-test. The findings of the study were detailed as follows.

1. Students had learning management skills were rarely found, meanwhile the requirements for the physical education students' active learning-based instructional management were mostly found.

2. The development of active learning-based instructional management model taught for the physical education students' learning management skills were mostly found.

3. The implementation of the active learning-based instructional management model taught for the physical education students' learning management skills in the faculty of education, institute of physical education lampang showed that the physical education students' learning management skills with their averaged scores of 24.52 were all rated at 80.54% were higher than that of their pre-implementation. Moreover, the effectiveness of active learning-based instructional management model, with the E_1 of 82.65 and the E_2 of 80.54, were mostly found. Also, the physical education students' satisfactions towards the active learning-based instructional management model designed for their learning management skills were mostly found.

Keywords: Active learning, Instructional Management, Learning Management Skills

Rationale

Educational management in Thailand has been developed from the past to the present. Moreover, it is believed that it geared in setting national directions supported for Thai citizens' readiness in their national development and growth (Aek-oun, 1999). At present, learning management in Thai higher education is served for guidelines of learning management cited in the B.E. 2542 National Educational Act (The 2nd Modified Edition) issued in 2002. Most importantly, learning atmospheres with emphasis on the learner-centered instructional management should not only be facilitated, but learners' participation in their learning, as well as their opportunities in giving classroom feedbacks should be also enhanced. In terms of the problems of Thai educational system, ineffective learning processes were mostly found; otherwise, focused courses, teachers' direct transferring, and students' lectures were mostly found in the teachers' instructional management occurred in both primary and tertiary education levels. Nevertheless, this was caused by the learners' no critical thinking skills, no well-planning, no relations with outsiders and environmental surroundings, no learning accessibility, as well as learners' life-long learning (Wasee, 1998).

According to the learning management of higher educational institutions, it was stated that the learners' lecture-based learning management was mostly found; moreover, the learners' non-participatory learning habits, and no idea-sharing were mostly observed. In fact, the instructor-centered learning management is mostly adopted for the learners' lectures, meanwhile the lecturers' demonstration and experiments are provided for their learners' practices taken from in-class activities and assignments. (Khuana, 2016).

In order to improve the lecturers' better instructional management, as well as to upgrade learners' learning achievements, the active learning is one of the most pedagogical approaches mostly designed for tertiary

educational institutions instead of the passive learning. In addition, it focuses on learners' participation in managing their learning management process, building learning atmospheres, improving learners' critical thinking skills, as well as cooperating with outsiders. Not only is learners' idea-sharing enhanced, but their participation in knowledge management is also supported. However, the importance of lecturers' effective learner-centered instructional management should be stipulated for learners' better understandings.

Active learning is one of the most interesting pedagogical approaches with its various techniques cited in the Office of Distance Learning, the Florida State University (2011), and Dasa (2009). Furthermore, Prince (2004), Bonwell (2003), and Manopichetwattana (2004) stated that learners' practices along with their participation, and knowledge-building were all resulted from their learning activities served for tertiary institutions. Also, this approach could be implemented for learners' participatory learning management, as well as their self-academic development (Hake, 1998; Watanapokakul , 2006).

Aforementioned, the model of active learning-based learning management to improving the physical education students' learning management skills in the Faculty of Education, Institute of Physical Education Lampang is scrutinized in order to better their improvements for learning management skills, to be a guideline for the development of effective learning management, as well as to be implicated for the quality of new physical education-related graduates in the future.

Objectives of the Study

1) To scrutinize the problems and requirements for the development of active learning-based instructional management model designed for the physical education students' learning management skills.

2) To develop the active learning-based instructional management model enhanced for the physical education students' learning management skills.

3) To investigate the outcome of the implementation of the active learning-based instructional management model enhanced for the physical education students' learning management skills.

Scope of the Study

1. Population and Samples

Population : 90 senior physical education students majoring in Physical Education, at the Faculty of Education, Institute of Physical Education Lampang. Samples : 60 senior physical education students out of the 2 classes majoring in Physical Education, at the Faculty of Education, Institute of Physical Education Lampang were selected by the purposive sampling technique.

2. Contents

The active learning-based instructional management model enhanced for the physical education students' learning management skills in the Faculty of Education, Institute of Physical Education Lampang was implemented for the course "Learning Management".

3. Time of study

From October 1st, 2017 to September 30th, 2018

Research Design:

The using research and development (R&D) methods in this study.

Research Instruments:

1) A questionnaire related to the problems and requirements for the development of active learning-based instructional management model taught for the physical education students' learning management skills in the Faculty of Education, Institute of Physical Education Lampang. The reliability of 0.67

2) The active learning-based instructional management model enhanced for the physical education students' learning management skills in the Faculty of Education, Institute of Physical Education Lampang is appropriate at a high level 4.29

3) A learning achievement test obtained from the implementation of the physical education student's active learning-based instructional management to improving their learning management skills in the Faculty of Education, Institute of Physical Education Lampang. The difficulty of 0.33-0.67, the discrimination power of 0.50-0.70

4) An aptitude test on learning management skills. The reliability of 0.98

5) A questionnaire related to The physical education student's satisfactions towards the implementation of active learning based instructional management to improving their learning management skills in the Faculty of Education, Institute of Physical Education Lampang The reliability of 0.92

Data Collection :

Related researches related to theoretical concepts, and research literatures were reviewed

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A questionnaire related to the problems and requirements for the development of active learning-based instructional management model implemented for the physical education students' learning management skills in the Faculty of Education, Institute of Physical Education Lampang was surveyed

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A focus group discussion was provided for drafting the model of active learning-based instructional management implemented for the physical education students' learning management skills in the Faculty of Education, Institute of Physical Education Lampang. By using experts Curriculum and instruction 2 person; Educational measurement and evaluation 1 person; and physical education 2 person total 5 person

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The model of active learning-based instructional management implemented for the physical education students' learning management skills in the Faculty of Education, Institute of Physical Education Lampang was redeveloped

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The model of active learning-based instructional management implemented for the physical education students' learning management skills in the Faculty of Education, Institute of Physical Education Lampang was tried out

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Effects on the model of active learning-based instructional management implemented for the physical education students' learning management skills in the Faculty of Education, Institute of Physical Education Lampang were scrutinized

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The data were analyzed, and research findings were also summarized

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The research findings were disseminated, and research articles were publicized. Also, the completed research was presented orally at either national or international conferences

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The completed research paper was compiled and edited for its accuracy, and the research report was finally completed.

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A focus group discussion was conducted for criticizing the model of active learning-based instructional management implemented for the physical education students' learning management skills in the Faculty of Education, Institute of Physical Education Lampang

Data Analysis

1. Quantitative Data Analysis

Quantitative data included the scores of pretest and posttest obtained from the physical education students' learning achievement tests, and the data were statistically analyzed using Percentage, Mean, and Standard Deviation.

2. Qualitative Data Analysis

Qualitative data included a small group discussion checklist, and a focus group discussion checklist, which were carried out for data analysis.

Findings

1) The problems and requirements for the development of active learning-based instructional management model taught for the physical education students' learning management skills in the Faculty of Education, Institute of Physical Education Lampang were found;

Question point	Contexts		Needs	
	$\overline{X}$	S.D.	$\overline{X}$	S.D.
Subject matter / study skills	2.38	0.71	4.31	0.59
Activities / learning experiences	2.59	0.67	4.18	0.67
Current teaching and learning management	2.60	0.65	4.20	0.65
Total average	**2.52**	**0.68**	**4.23**	**0.64**

2) The development of active learning-based instructional management model, with its mean of 4.29 and its standard deviation of 0.73, taught for the physical education students' learning management skills in the Faculty of Education, Institute of Physical Education Lampang were mostly found

3) The implementation of the active learning-based instructional management model taught for the physical education students' learning management skills in the Faculty of Education, Institute of Physical Education Lampang

3.1) The physical education students' learning management skills were found;

N	Full score (30)		$\bar{X}$	S.D.	percent
	Highest score	Lowest score			
60	28	22	24.52	0.43	80.54

3.2) The effectiveness of active learning-based instructional management model were found;

effectiveness	Full score	$\bar{X}$	S.D.	Percentage of full scores
(E_1)	3420	73.66	0.62	82.65
(E_2)	1140	24.52	0.43	80.54
(E_1/E_2) = 82.65/80.54				

3.3) The physical education students' satisfactions towards the active learning-based instructional management model designed for their learning management skills were found;

list	$\bar{X}$	S.D.	meaning
The learning activities	4.49	0.37	Much
The learning atmosphere	4.67	0.42	most
The Benefits	4.53	0.42	most
Total average	**4.56**	**0.48**	**most**

Discussion

1) According to the problems and requirements for the development of active learning-based instructional management model taught for the physical education students' learning management skills in the Faculty of Education, Institute of Physical Education Lampang revealed that the contexts of the physical education students' active learning-based instructional management, with its mean of 2.52 and its standard deviation of 0.68, were rarely found, meanwhile the requirements for the physical education students' active learning-based instructional management, with its mean of 4.23 and its standard deviation of 0.64, were mostly found. This was because traditional pedagogical approaches were not only implemented for instructional managements in Thailand, but the concepts of active learning were not also carried out. However, the development of instructional management was mostly required in consistence with the previous study related to "A Study of Thai Children's Potentialities in Their Learning Skills" conducted by Academic Department (1999), it was stated that the purposes of this study aimed to investigate the Thai children's potentialities in their learning, critical thinking, and communicative skills served for their further study. For data collection, an aptitude test on learner's potentialities in their basic life skills served for further studies adapted by the Academic Department was conducted with 9,067 Prathomsueksa 6 students and 8,053 Mattayomsueksa 3 students. The research findings revealed that the learners' low learning skills were mostly found in their different educational level.

2) The development of active learning-based instructional management model, with its mean of 4.29 and its standard deviation of 0.73, taught for the physical education students' learning management skills in the Faculty of Education, Institute of Physical Education Lampang were mostly found. This was because

the prototypical model of instructional management was surveyed, and synthesized for surveying the contexts and requirements for instructional management and its essential learning outcomes. Thus, it directly led to teachers' effective planning management, as well as the selection of the major elements designed for the development of instructional management. Also, well-organized databases could be drafted for teachers' effective learning management.

Furthermore, guidelines for the effective instructional management model of Joyce & Weil cited in 2009, on page 9 showed that there were 5 major elements applied to the development of instructional management: 1) "Orientation to the Model" including its goal, assumption, and major concept; 2) "Syntax or Phases" referred to such a different learning activity with its pedagogical procedures was sequenced; 3) "Social System"-teacher's, and learner's roles were explained; 4) "The Principle of Reaction" referred to how to explain learners' reflections, as well as awarding, and building learning atmospheres, and 5) "Support System"-indicated the terms of condition that were needed for effective instructional management. With references to the previous study of Kit-aek (2007), she conducted her study related to the effects of implementing proactive learning activities affecting the Mattayomsueksa 6 students' chemistry learning achievements and attitudes in Pathumthani province. For data collection spent for 10 weeks, 130 Mattayomsueksa 6 students studying in Pathumwittayalai School in Pathumthani province were conducted in the 2nd semester of the 2006 academic year. These included 50 respondents used as an experimental group were carried out with their active learning, and 53 respondents used as a controlled group were taught with their non-active learning. The research instruments drawn for this study encompassed a lesson plan on learner's proactive learning, a lesson plan on learner's non-proactive learning, a learning achievement test, and an aptitude test. The data were statistically analyzed through using Mean, Standard Deviation, and Independent T-test. The research findings revealed that those learning achievements obtained from their proactive learning, with its significant difference of 0.01, were higher than that of those obtained from their non-proactive learning, meanwhile those attitudes on the implementation of proactive learning activities, with its significant difference of 0.05, were higher than that of those with their non-proactive learning.

3. The implementation of the active learning-based instructional management model taught for the physical education students' learning management skills in the Faculty of Education, Institute of Physical Education Lampang showed that the physical education students' learning management skills with their averaged scores of 24.52 were all rated at 80.54% , were higher than that of their pre-implementation. Moreover, the effectiveness of active learning-based instructional management model, with the E_1 of 82.65 and the E_2 of 80.54, were mostly found. Also, the physical education students' satisfactions towards the active learning-based instructional management model designed for their learning management skills were mostly found. This was because

appropriate procedures were all resulted in the development of the active learning-based instructional management with references to Joyce & Weil (2009) stated that the components of instructional management model in relations to its goal, its theories and certified hypothesis, its principle and conceptualization, as well as the educational experts' results of assessing the active learning-based instructional management model were mostly found. Furthermore, pre-teaching procedures, the learners' revision on their knowledge and learning experiences, as well as the learners' question-answering and practices in their reading activities, in terms of teaching procedures, should be supported for the learners' well-preparation in their learning. On the other hands, wrap-ups, reflection papers, as well as the assessment of individual and group scores, in terms of post-teaching procedures, should be all adapted for effective instructional management and well-planned procedures for learning activities. With references to Thorndike's theory related to "Law of Practice", it was stated that learning was obtained from the connection of stimulus and responses; otherwise, repeating practices, which directly led to learners' permanent learning skills and critical thinking skills, focused on the 5 following research steps: 1) Problem identification; 2) Identification of problem-solving methods; 3) Data collection; 4) Data analysis, and 5) Summary (Kowtrakul, 1998).

In integrating the theory of constructivism with lecturers' instructional management cited in Johnson, Johnson and Holubec (1994) stated that giving role models and practices in learning processes such as reporting, group presentation, learning evaluation, etc. must be both served for learners' self-study in cooperation with their cooperative learning. Thus, the lecturers' learning steps should be well-organized for learners' effective instructional management, which is so called "cooperative learning scripts".

With references to the study of Khunkhammuen (2010) related to the implementation of proactive physics learning model with "balancing" course designed for Mattayomsueksa Students, he stated that the purposes of this study aimed to explore the Mattayomsueksa students' learning achievements obtained from their physic learning retention compared with their proactive physic learning. For data collection, a lesson plan on proactive physic leaning management and a learning achievement test were both conducted with 74 Mattayomsueksa 3 students implemented with the pair work-based proactive learning model and using PODS-oriented discovery labs. These included 39 respondents used as an experimental group, and 35 respondents used as a controlled group. The research findings revealed that this model directly affected the learners' more interests in their learning; moreover, the learners' normalized gain of 0.39 occurred in their whole class were rated at a moderate level. On the other hands, those with their normalized gain of 0.25 occurred in their whole class were all rated at a lower level. Also, the learners' learning retention, with its significant difference of 0.5, obtained from the implementation of proactive learning was higher than that of those obtained from their learning. According to the previous study of

Ruhl et al. (1987), he conducted a study of active learning-based instructional management through using the technique of pause procedure affecting the 72 undergraduate students' learning achievements obtained from 2 lecture classes. For research methodology, all the lectures were mostly used in the 1st course, meanwhile the technique of pause procedure, which was spent for 3 times per 2 minutes (45 minutes/period), was mostly used in the 2nd class. When pausing the procedures, those students shared their notes together. Subsequently, a learning achievement test on learner's short-term memories was testified before the learners took their notes for 3 minutes. Also, a multiple choice-designed learning achievement test on learner's long-term memories with 65 questions was carried out for their learning evaluation. The research findings revealed that the undergraduate students' total scores of 108 obtained from the implementation of active learning-based short-term memories were higher than that of their lectures with their total scores of 80, meanwhile those with their total scores of 89.40 obtained from their active learning-based long-term memories were higher than that of lectures with their total scores of 80.93. with references of the previuos study of Hake (1998), his comparative study of the 6,542 undergraduate students' physics learning achievements and their class attendance compared with those students obtained from the implementation of interactive engagement showed that those learning achievements and their class attendance obtained from the implementation of active learning were higher than that of those obtained from their implementation of non-active learning.

Recommendations

Recommendations for Application

1. It was suggested that not only should the learners' patience and attempts on their learning be supported for efficient thinking processes, but the lecturers' better learning atmospheres and positive instructional management should be facilitated for decreasing their learners' stress happened during their instructional management.

2. Provisions for the enhancement of the learners' learning management skills should be encouraged; moreover, the university lecturers' academic qualifications and experiences in their specialized lectures, their well-mannered personality, as well as their abilities in effective instructional management integrated with other courses should be also served for higher educational institutions.

Recommendations for Further Study

The development of active learning-based instructional management model designed for the physical education students' learning management skills in the Faculty of Education, Institute of Physical Education Lampang should be implemented for the other different major students' learning skills development.

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