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Current Situation and Need in Learning Management for Developing the Analytical Thinking of Teachers in Basic Education of Thailand

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Abstract

This research was a Survey Research. The objective of this study was to study current situation and need in learning management for developing the analytical thinking of teachers in Basic Education of Thailand. The target group consisted of 400 teachers teaching in Basic Education Level. They were selected by Multi-Stage Random Sampling. The instrument using in this study was the questionnaire asking current situation and need in learning management for developing the analytical thinking, 5 level rating scales. Data were analyzed by calculating the frequency, mean, standard deviation, percentage and content analysis. The research findings found that: 1) for current situation, the teachers provided learning management for developing analytical thinking, in overall, in “High” level. The issue with lowest level of practice: the teachers had competency in designing and establishing the learning management plan for developing the students’ analytical thinking. Considering each aspect, found that: 1.1) the teacher aspect, the issue with lowest level of practice was: the teachers had competency in designing and establishing the learning management plan for developing the students’ analytical thinking, and 1.2) the learning management aspect for developing the students’ analytical thinking, the issue with lowest level of practice was: the learning activities provided opportunity for students to evaluated their analytical thinking process in each learning session. 2) The teachers showed their need in learning management for developing the analytical thinking, in overall, in “the Highest” level. The issue with highest level of the need was: to obtain knowledge and competency in model, technique, and method for learning management or steps of learning management for developing the students’ analytical thinking. Considering each aspect, found that: 2.1) teacher aspect, the issue with highest level of the need was: to obtain knowledge and comprehension in model, technique, and method for learning management or steps of learning management for developing the students’ analytical thinking, and 2.2) learning management aspect for developing the analytical thinking, the issue with highest level of need consisted of the determination of learning activities as problem situation, and the opportunity for students to comprehend the problem situation as well as practice their analytical thinking in order to find the answer.

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1. Introduction

The National Education Act 1999, and the revised issue (the 2nd issue) 2002, specified the guidelines for learning management process for the students to practice their skill, thought process, management, situation facing, and knowledge application for preventing as well as solving the problem (Ministry of Education, 2003). Consequently, the Core Curriculum of Basic Education 2008, determined one of students' major competencies as: the thinking ability especially the analytical thinking, the synthetic thinking, creative thinking, critical thinking, and systematic thinking in order to lead to construct the body of knowledge or information technology for making decision regarding to themselves as well as society appropriately (Ministry of Education, 2008). Besides, the impact from the changing trends of the present world with the growth and progress in science and information technology as well as the changes which were occurred rapidly, could caused the students to face with the world of rapid changes. Therefore, the learning management for the students to developing their thinking, was the teachers' a major responsibility especially the analytical thinking because it was very necessary to be used in working as well as daily life in the 21st century by students (Paziotopoulos and Kroll, 2004).

Although there were research studies for developing the students' analytical thinking, during 2 decades ago found that the students' analytical thinking development could perform in limited boundary as well as didn't accomplish the ultimate goal (Ministry of Education, 2006). It could be seen that the evaluative findings of students' thinking, found that the overall of national level was in "To be Improved," level especially in the analytical thinking (Wirachchai et.al., 2004; The Office for National Education Standards and Quality Assessment [ONESQA], 2007). Since the teachers' learning management didn't promote their students to obtain thinking process development (Charoenwongsak, 1998; Pongpaiboon, 1999; Sinlarat, 2000; Ministry of Education, 2006). Since the teachers lacked of precise knowledge and comprehension in thinking process as well as technique of learning management for developing the students' analytical thinking (Kamane, 2003; Art-in, 2011). Therefore, the responsible persons as well as related persons in educational management should collaborate in solving those problems by providing the teacher development in learning management for developing the students' analytical thinking.

The researcher was aware of as well as saw the importance of the problems. So, he established the project to study current situation and need in learning management for developing the analytical thinking of teachers in Basic Education of Thailand in order to know the current situation and need in learning management for developing the students' analytical thinking efficiently which would lead to the teachers development to be competent in learning management for developing the analytical thinking efficiently which would lead to the students' major competency in analytical thinking as specified in Core Curriculum of Basic Education 2008: to have quality based on Basic Education Standard in External Audit of The Office for National Education Standards and Quality Assessment [ONESQA] as well as being able to live in society happily.

2. Research Objective

To study the current situation and need in learning management for developing the analytical thinking of teachers in Basic Education Level of Thailand

3. Research Methodology

This research was a Survey Research aimed to study current situation and need in learning management for developing the analytical thinking of teachers in Basic Education Level of Thailand. The research methodologies were presented in sequence as follows:

3.1 Population and Samples

3.1.1 Population using in this research consisted of 172,755 teachers in Basic Education Level of schools under jurisdiction of the Office of Basic Education Commission, Ministry of Education, Thailand.

3.1.2 Samples using in this research were 400 teachers in Basic Education Level of schools under jurisdiction

of the Office of Basic Education Commission, Ministry of Education, Thailand. They were selected by Multi-Stage Random Sampling by following phases:

Phase 1: Determination of sample size, the sample size was determined by calculating from Krejcie and Morgan' Table (Krejcie & Morgan, 1970) from the population of 172,755 teachers in Basic Education Level of schools in North Eastern Region of Thailand which were schools under jurisdiction of the Office of Basic Education Commission, Ministry of Education. The samples were at least 384 teachers. In this research, the samples were 400 teachers.

Phase 2: Sampling of the Province, the Simple Random Sampling was administered with the provinces in North Eastern Region of Thailand. The samples were 10 provinces including: Kalasin, Khon Kaen, Chaiyapume, Nakhonrachasima, Buriram, Mahasarakam, Roi-ed, Srisaket, Surin, and Udontani Provinces.

Phase 3: Sampling of the schools was performed by sampling the schools from the provinces in Phase 2, based on proportion of schools by Simple Random Sampling. The samples were 368 schools.

Phase 4: Sampling of the teachers was performed by sampling the teachers in Basic Education Level from the schools in Phase 3, based on proportion of population by Simple Random Sampling. The samples were 400 teachers.

3.2 *The studied variables* were the current situation and need in learning management for developing the students' analytical thinking of teachers in Basic Education Level of Thailand.

3.3 *The research Instrument* was the questionnaire of current situation and need in learning management for developing the students' analytical thinking, as 5 level rating scale, consisted of 3 parts. Part 1: the respondents' demographic data included the gender, age, education, work experience, learning area in teaching, the class level of teaching, and experience in attending the training in learning management for developing the analytical thinking, Part 2: the current situation and need in learning management for developing the students' analytical thinking, and Part 3: the supplementary opinion. The questionnaire was validated its content validity by the experts which found that the Items consisted of Index of Congruence (IOC) between 0.80-1.00.

3.4 *Data Collection*, the researcher cooperated with the original affiliation as the Office of Educational Service Area, to issue document asking for allowing the permission in data collection for research study. Then, data of current situation and need in learning management for developing the teachers' analytical thinking, were collected until the required number of questionnaire was obtained. Later on, the completeness in each set of respondents' Questionnaires were checked. Four hundreds completed questionnaires were selected for data analysis.

3.5 *Data Analysis*, data were analyzed from the questionnaires by basic statistic including: the frequency, mean, standard deviation, and percentage by determining the criteria of interpretation as follows:

4.51 – 5.00 referred to the current situation/need, in "The Highest" level.

3.51 – 4.50 referred to the current situation/need, in "High" level.

2.51 – 3.50 referred to the current situation/need, in "Moderate" level.

1.51 – 2.50 referred to the current situation/need, in "Low" level.

1.00 – 1.50 referred to the current situation/need, in "The Lowest" level.

For data from the open-ended questions, data were analyzed by Content Analysis.

4. Conclusions and Discussions

The demographic data of samples as the teachers in Basic Education Level were shown that most of the teachers were females for 71.00%, males for 29.00%. Their ages were between 30-39 years old for 27.75%. The second order, their ages were less than 30 years old for 27.25%. For most of teachers' education, their highest level of education was Bachelor's Degree for 68.00%. The second order was the Master's Degree for 28.50%. For work experience in most of teachers, they had their work experience less than 10 years for 44.25%. The second order was between 10-19 years for 25.25% respectively.

Most of teachers for 14.50% of them, taught Science Learning Area. The second order for 14.31% of them, taught Mathematics. For class level of teaching, most of them for 10.80% taught in Grade 7. The second order

for 9.56% of them, taught in Grade 9. For their experience in attending the training of learning management for developing the analytical thinking during the past 3 years, found that most of teachers used to attend the training, for 71.00%. For 29.00% of them, didn't use to attend the training.

The findings of current situation and need in learning management for developing the analytical thinking of teachers in Basic Education Level, were shown in Table 1:

Table 1: The current situation and need in learning management for developing the teachers' analytical thinking.

Evaluation Lists	Current Situation			Need		
	\bar{X}	S.D.	Meaning	\bar{X}	S.D.	Meaning
1. Teachers' aspect						
1.1 To be aware of importance in learning management for developing the students' analytical thinking.	4.05	0.70	High	4.57	0.53	The Highest
1.2 To obtain the precise knowledge, comprehension in analytical thinking.	3.51	0.67	High	4.58	0.54	The Highest
1.3 To practice and develop one's analytical thinking regularly.	3.66	0.71	High	4.55	0.57	The Highest
1.4 To obtain knowledge and comprehension in model, technique, and method of learning management or steps of learning management for developing the students' analytical thinking.	3.45	0.72	Moderate	4.62	0.56	The Highest
1.5 To be competent in designing and establishing the learning management for developing the students' analytical thinking.	3.38	0.72	Moderate	4.59	0.57	The Highest
1.6 To be competent in designing the learning management by providing the students' learning in content material of program, and practicing their analytical thinking as well.	3.43	0.72	Moderate	4.59	0.57	The Highest
1.7 To face the problem in learning management for developing the students' analytical thinking.	3.62	0.77	High	4.17	0.68	High
1.8 To obtain self-development by learning management for developing the students' analytical thinking.	3.55	0.74	High	4.57	0.59	The Highest
Total	3.58	0.72	High	4.53	0.64	The Highest
2. The aspect of learning management for developing the students' analytical thinking.						
2.1 To design the learning management by providing the students' learning in content material of program, and practicing their analytical thinking as well.	3.54	0.73	High	4.51	0.55	The Highest
2.2 To apply the model of learning management, different techniques for learning management in learning management for developing the students' analytical thinking.	3.59	0.74	High	4.57	0.56	The Highest
2.3 To inform the learning objectives for students before learning every time.	3.75	0.90	High	4.48	0.59	High
2.4 To provide the learning activity focusing on analytical thinking for developing the students' analytical thinking.	3.60	0.75	High	4.52	0.58	The Highest
2.5 To provide the learning activity by using various activities for developing the students' analytical thinking.	3.63	0.73	High	4.54	0.59	The Highest
2.6 To provide the learning activities step by step based on learning management model for developing the students' analytical thinking.	3.48	0.76	Moderate	4.55	0.59	The Highest
2.7 To determine the learning activity into problem situation, and providing the opportunity for students to analyze the problem as well as understand the problem situation in order to practice the analytical thinking to find the answer.	3.60	0.78	High	4.59	0.59	The Highest
2.8 To provide the learning activity by using the question to stimulate the students to practice thinking to find the answer.	3.93	0.71	High	4.57	0.58	The Highest
2.9 To provide the learning activity for students to practice in classifying the component of incidences, stories, or contents	3.61	0.82	High	4.58	0.56	The Highest

Evaluation Lists	Current Situation			Need		
	\bar{X}	S.D.	Meaning	\bar{X}	S.D.	Meaning
from the whole into parts, and to find the relationship or connection of those factors.						
2.10 To provide the learning activity for students to practice analyzing the importance, relation, and principle.	3.43	0.76	Moderate	4.47	0.61	High
2.11 Learning activity provided the opportunity for students to practice analytical thinking individually in order to find the answer.	3.63	0.83	High	4.52	0.59	The Highest
2.12 Learning activity provided the opportunity for students to practice analytical thinking in small group in order to find the answer.	3.64	0.79	High	4.48	0.62	High
2.13 Learning activity provided the opportunity for students to present one's own ideas as well as small group for the large group.	3.50	0.80	Moderate	4.50	0.58	High
2.14 Learning activity provided the opportunity for students to discuss with the teachers.	3.66	0.86	High	4.53	0.58	The Highest
2.15 Learning activity provided the opportunity for students to discuss with their friends.	3.71	0.79	High	4.51	0.60	The Highest
2.16 Learning activity provided the opportunity for students to evaluate their own thought process during each time of learning.	3.42	0.81	Moderate	4.48	0.60	High
2.17 To evaluate the students' analytical thinking by considering the activity participation, the analytical thinking performance, and students' self-evaluation in analytical thinking.	3.54	0.78	High	4.51	0.59	The Highest
Total	3.61	0.79	High	4.52	0.59	The Highest
Total of 2 aspects	3.60	0.76	High	4.53	0.60	The Highest

According to Table 1, showed that in current situation, the teachers provided learning management for developing the analytical thinking, in overall, was in "High" level ($\bar{x} = 3.60$, S.D. = 0.76). Considering each aspect, found that in the teachers' aspect, the issue with the lowest level of practice, was the teachers obtained competency in designing the learning as well as establishing the lesson plans for developing the students' analytical thinking ($\bar{x} = 3.38$, S.D. = 0.72). For the aspect of learning management for developing the students' analytical thinking, the issue with the lowest level of practice, was the learning activity provided the opportunity for students to evaluate their own thought process during each time of learning ($\bar{x} = 3.42$, S.D. = 0.81). The findings might be due to the former decade, the evaluative findings in students' analytical thinking, found that the overall of national level, was in "To be Improved." Level (Wirachchai et. al., 2004; The Office for National Education Standards and Quality Assessment [ONESQA], 2007). As a result, there was a stimulation to develop the teachers as well as learning management in order to developing the students' analytical thinking more than before. It could be seen from research studies, found that in current situation, the teachers provided learning management for developing the analytical thinking, in overall, in "High" level. However, the development of didn't accomplish its ultimate goal (Ministry of Education, 2009). Since the teachers lacked of precise knowledge and comprehension in the model of phases of learning management for developing the students' analytical thinking (Kammanee, 2003; Art-in, 2011). Therefore, the teacher development in learning management for developing the students' analytical thinking so that the teachers would use it for developing the students' analytical thinking efficiently.

For the need aspect, found that the teachers had their need in learning management for developing the students' analytical thinking, in overall, was in "The Highest" level ($\bar{x} = 4.53$, S.D. = 0.60). Considering each aspect, found that in the teachers' aspect, the issue with the Highest level of need, was to obtain knowledge and comprehension in model, technique, and method of learning management or steps of learning management for developing the students' analytical thinking ($\bar{x} = 4.62$, S.D. = 0.56). For the aspect of learning management for developing the students' analytical thinking, the issue with Highest level of need, was to determine the learning activity as problem situation, and providing the opportunity for students to analyze as well as understand the problem situation to practice the analytical thinking in order to find the answer ($\bar{x} = 4.59$, S.D. = 0.59). It should because the teachers were aware of importance in developing the students' analytical thinking since the students' analytical thinking was specified in students' major competency based on Core Curriculum of Basic Education 2008 (Ministry of Education, 2008), The Basic Education Standard, and Standard of External Audit of the Office for National Education

Standards and Quality Assessment (ONESQA), and it was also the significant skill for students to use in their work practice as well as daily life in the 21st century (Paziotopoulos and Kroll, 2004). In addition, the evaluative findings of Thai students' analytical thinking, was in "To be Improved." Consequently, the teachers had the need for self-development in learning management for developing the analytical thinking, in overall, in "The Highest" level. The needed self-development in the technique and method in learning management for developing the analytical thinking, the lesson plan management focusing on analytical thinking, the learning process management focusing on analytical thinking. Furthermore, they needed to obtain both of knowledge and comprehension in the learning management model focusing on analytical thinking in order to be sued in learning management for developing the students' analytical thinking efficiently further.

5. Recommendations

5.1 The study of current situation and need in learning management for developing the teachers' analytical thinking, should be conducted continuously in order to obtain current information which could be able to be used for developing the teachers to be able to provide the learning for developing their students' analytical thinking efficiently.

5.2 The study of current situation and need in learning management for developing the teachers' analytical thinking in the other regions, should be conducted in order to obtain current information which could be able to be used for developing the teachers to be compare the findings to be guidelines for developing the teachers in learning management for developing the analytical thinking further.

5.3 The original affiliation such as the Office of Educational Service Area, the Office of Basic Education Commission or schools should offer the training for developing the teachers in learning management for developing the analytical thinking so that the teachers would obtain knowledge as well as comprehension in learning management for developing the analytical thinking, applying their knowledge in learning management for developing the students' analytical thinking effectively, and provide the learning management to be congruent with guidelines for developing the learning management based on National Education Act 1999, and the revised issue (the 2nd issue) 2002 which specified the learning process management focusing on the skill training, thinking process, management, situation facing and knowledge application in order to prevent as well as solve the problem. As a result, the students obtained major competency in analytical thinking based on Core Curriculum of Basic Education 2008's specification: the students have quality based on Basic Education Standard, and Standard of External Audit of The Office for National Education Standards and Quality Assessment (ONESQA).

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