THE RESEARCH-BASED LEARNING MANAGEMENT METHOD ON INTRODUCTION TO RESEARCH IN EDUCATIONAL TECHNOLOGY COURSE FOR UNDERGRADUATE STUDENTS

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Abstract

The purpose of this research was to study the results of the research-based learning management method of the undergraduate students, Ramkhamhaeng University. The sample group was 25 students who took a course on the Introduction to Research in Educational Technology, Semester 2, 2012 Academic Year. The samples were selected by using simple random sampling. The instruments used included 1) observational learning form, 2) learning record form, and 3) learning achievement test. The research results revealed as follows:

The students participated in the activities had the behaviors of class participation consistently, the students paid attention, be interested in, and be enthusiastic with the study. The students participated in practical work, exercises practice, as well as individual and group reports. The students also cooperated with the instructional activities, especially during the group work periods. The students could do the classroom action research successfully, both group work and individual work. Finally, the students who participated in the activities and final exam had the test results score as the pass result, or at the percentage of 98%.

Keywords: Research-Based Learning, Educational Technology, Learning Achievement, Behavior Leraning

Introduction

The National Education Act B.E.2545 (2002) which emphasizes the educational management has to hold the process of principles that all learners have abilities to learn and develop themselves. And the learners are regarded as the most important factors which have to be promoted and supported in order for letting them be able to develop themselves concordant with their natures and potentials. Moreover, the educational institutes and related organizations have to take the responsibilities for their enhancement as follows: (1) to organize contents and activities to be concordant with the learners' interests and skills considering the differences of each individual, (2) to practice the skills of thinking process, management, situational encountering, and knowledge application for problem solving and prevention, (3) to organize the activities for the learners to learn from their real experiences, let them practice until they can do all activities by themselves, learn by doing, love reading, pay attention continuously, (4) to organize instructions by integrating various kinds of knowledge appropriately and in balanced, as well as embedding the moralities, good values, and desired characteristics through every subject course, (5) encourage teachers to be able to organize atmospheres, environments, instructional materials, and facilities to help the learners get their perceptions, have knowledge, and be able to use the research to be as a part of learning process. Both teachers and learners can learn simultaneously from the instructional materials and various kinds of academic resources, and (6) organize learning as it should happen in all time and places, have the cooperation among parents, guardians, and every community sections to mutually develop the learners in accordance with their own potentials. Moreover, various educational institutes should develop their effective instructions, and encourage teachers and lecturers to be able to do researches for learning development appropriately for learners according to their educational levels (Office of the National Education Commission B.E. 2542 (1999, page 12-16).

For the Instructions today, it has to be acquired for students to get them to have knowledge and competence to be able to develop themselves according to their potentials, by focusing on the students center. The instructional method as the research-based learning helps the learners take parts to the instructions by setting problems, topics of contents, in order to share mutual ideas to be acquired and achieved the instructional goals. Teachers and lecturers are the persons who suggest and facilitate as well as sharing opinions and consultancy to the students by giving roles of instructions by learners center method for the students to study and research, do exercises, and do the reports. These have to be done in accordance with the research design for instructional participation among learners. This is considered as the tendency of instructional management in the present time.

The principle of educational evaluation means that the learning has to be evaluated, the learners are the most important, called the learners center (Office of the National Education Commission (2001, page 3).

According to the backgrounds and rationales, the researcher views that the instruction takes an important role towards the learning of learners. However, in the past, the learners still encountered the problems and obstructions through the instructional management. The instructional management actually can support and enhance students to be able to develop themselves concordant with their potentials. At the same time, the lecturers can set the instructional atmospheres in accordance with the subject contents determined by the educational institutes appropriately. Moreover, for instructional management of undergraduate level, it is necessary to use the research based learning method to let the students have the most participation. Therefore, the instruction is regarded as one of the several methods used for instructional management. These are the causes and effects which interest the researcher to study and research how this research based learning for the undergraduate students, Educational Technology Program, Ramkhamhaeng University would be.

Purpose of Research

The purpose of this research is to study the instructional results on research based learning of the undergraduate students, Ramkhamhaeng University.

Scope of Research
Scope of context

The context of this research is about finding knowledge on the Introduction to Research in Educational Technology Course, curriculum in the Bachelor of Education (Program in Technology and Educational Communication), Faculty of Education, Ramkhamhaeng University. The contents characteristics must have both theoretical and practical sections. The students participated in the lectures each week including the theoretical lectures for 1 hour, and practical section for 1 hour, totally 14 weeks.

Scope of Population and Sample Group

The population of this study was 120 undergraduate students studying on the Bachelor of Education curriculum (Program in Technology and Educational Communication), Ramkhamhaeng University, in 2012 Academic Year.
The sample group was 25 students studying the Introduction to Research in Educational Technology Course according to the Bachelor of Education Curriculum (Program in Technology and Educational Communication), Ramkhamhaeng University in 2012 Academic Year. The sample group was selected by simple random sampling method.

Scopes of Variables

The variables of this study include as follows:

1)   Independent variable, which is, instructional management by research based learning method.
2)   Dependent variable, which is, the results of instructional management by research based learning method. This consists of (2.1) the learning behaviors of the students, (2.2) learning participation characteristics and the success of classroom action research, and (2.3) the final exam results.

Expected benefits

1. To get the research based learning method, Program in the Introduction to Research in Educational Technology Course, and can apply to the instruction of Bachelor's Degree level, or from the level of certificate, master's degree, and doctoral' s degree.
2. To get the instructional methods by research based learning, and can apply to other courses.
3. To be the information application of knowledge management in terms of instructional management, Ramkhamhaeng University.

Documents and Literature Reviews

Instructional management by research based learning method is the method of instructional management integrated with the instructional activities to be in accordance with the methodical learning according to the scientific principles for instruction.

The students can participate in the instructions and they can learn as determined in the instructional plan, the students have the opportunities to do the instructional activities, and share mutual opinions both individuals and roups in the classroom on various issues according to the topics of instructional plans which have already been set. For this research, it is about the learning of Introduction to the Research in Technology Educational Course, which is the prescribed course on Bachelor of Education curriculum (Program in Technology and Educational Communication), Faculty of Education, Ramkhamhaeng University.

According to such instruction, this is in accordance with the research found that the instructional method is the major principle on instruction focusing on learning as the most important, learning with classmates, learning from learning resources, learning from teachers or lecturers, and learning from friends. These are the learning from practice and learning by integration which can be considered as having various teaching methods (Pansak Polsaram, Wallapa Tephassadin Na Ayuttaya, and Tipparat Sripetchleung, 2000, page 39).

Academic Achievement means the Grade Point Average (GPA), which is the result of individual grade average point in courses being learned in the curriculum. The academic achievement is the indicator of knowledge, competence, skills, and learners attitudes as overall image (Office of the Basic Education Commission of Thailand, Bureau of Educational Testing, 2003). However, for this academic achievement, the researcher determined it as the test results evaluated in two aspects; which was, passed and failed. The test was done by the final test after finishing the instructional activities, then the scores got were concluded as the components of this research.

For the reasons mentioned above, they are the backgrounds and rationales which interest the researcher to do this research to study the results of instructional activities management in terms of research based learning method in the Introduction to the Research of Educational Technology Course. It is expected that the research results would get the ways of instructional activities management in terms of research based learning method in other courses, and can be applied to use for instructional management in the graduate level from certificate, master degree, and doctoral level.

Research Methodology

The sample group of this research was 25 students of Educational Technology Department, Faculty of Education, Ramkhamhaeng University, who registered the Introduction to the Research of Educational Technology Course, Semester 2, 2012 Academic Year. The research method was done by simple random sampling.

The instruments used for this research included the learning behavioral observation form, the questionnaire about opinions, and learning achievement test. The development stages are as follows:

1) To study the documents, texts, books, and documents related to the learning behaviors, opinions, and lesson plans of the Introduction to the Research of Educational Technology Course, Semester 2, 2012 Academic Year.

2) To create the learning behavioral observation form, opinions questionnaire, and learning achievement test to be in accordance with the definition of operational glossaries.

3) To find the quality of learning behavioral observation form, opinions questionnaire, and learning achievement test, by using the content validity and finding the Index of consistency value on the question items in the learning achievement test and questionnaires (Index of Item-Objective Congruence: IOC). 3 experts considered the validity, investigated the questions and answer items in terms of contents and languages used that how much they are complete and correct, then they are improved and amended completely, after that the experts checked and scored each item by finding the Index of Item-Objective Congruence:IOC +1 means be correct, 0 means be unsure, and -1 means be incorrect. The values got are calculated and chosen through the question items which contained the index values from 50 up (Sukhothaitammatirat University, 2002).

The data collection was done in the semester 2, 2012 Academic Year by the researcher as follows:

1)   The classroom environments were set by preparing the desks appropriately according to each instructional technique.
2)   The students participated in the class according to time and date set from the learning schedules.
3)   The students did the pre-test of Introduction to the Research of Educational Technology Course by the learning achievement test. Then the lecturer informed the instructional purposes of the Course, and instructional details of contents which would be taught in the classroom.
5) The students participated in the class of instruction management through the research based learning method according to the topics studied on the Introduction to the Research of Educational Technology Course.

6) The lecturers observed and recorded the learning behaviors of the students.

7) The student did the post-test of Introduction to the Research of Educational Technology Course by the learning achievement test.

8) The lecturers recorded the data from the learning achievement test, observation test, and learning record form to analyze the results of instructional activities further.

For the part of data analysis in this research, the details are as follows:

1) The researcher analyzed the data by concluding the behavioral observation of the students together with recording the behaviors.

2) The researcher analyzed the opinions of students by using the statistics of frequency and percentage.

3) The researcher analyzed the learning achievement results of the students by the statistics of frequency, percentage, mean and standard deviation, to evaluate the learning achievement of the students. The results were divided into pass and fail.

Research Results

The students who participated in this research project were female for 52%, and male for 48%. The learning observation results of the students during the instructional management on the research based learning revealed that the instructional management by research based learning for the undergraduate students studying the Introduction to the Research of Educational Technology Course, Bachelor of Education curriculum (program in Technology and Educational Communication), Faculty of Education, Ramkhamhaeng University, the students consistently participated in the classroom, paid attention, be interested in and enthusiastic with the study. Moreover, they worked in practice, did exercises, did the reports both individual and group work, and cooperated with instructional activities especially in group work.

According to the research process on the students who studied by this method, it was found that the students presented the research topics as classroom action research in every topic, and they could finish it successfully, both in group and individuals. Moreover, it was found that for the opinions of students through the research success, most of the students (87%) agreed with the opinions at the high level with the instructional management by research based learning method. The students added their opinions that this type of instructional management could help them be able to practice the research really, understand the research process, and remember more easily.

For the learning achievement results in the Introduction to the Research of Educational Technology Course, according to the Bachelor of Education curriculum (Program in Technology and Educational Communication), Faculty of Education, Ramkhamhaeng University, it was appeared the grade point average was at 78 scores (SD. = 10.25), the evaluation got was 'pass', and 98% of the students participated in the activities and the tests.

Research Discussion

According to the research results, it indicates that the undergraduate students who studied the Introduction to the Research of Educational Technology Course, according to the Bachelor of Education curriculum (Program in Technology and Educational Communication), Faculty of Education, Ramkhamhaeng University and studied by instructional management of research based learning method got the learning achievement results after learning by research based learning which was found that the students had more knowledge, especially in the instructional management in terms of research based learning considered as a method of instructional management which emphasizes the learner center or the learners considered as the most important (Office of the National Education Commission, 2002, Page 12-16,). Moreover, the instructional activities are integrated, flexible, and varied (Pansak Polsarum, Wallapa Tephassadin Na Ayuttaya, and Tipparat Sripetchleung, 2000, Page 39). According to this research, it identifies the instructional management in terms of theoretical section taught by the lecturer. The lecturer let the students practice which helped the students increase their knowledge and perceive the contents correctly. The lecturer supervised, suggested, and gave consultancy, as well as facilitating according to the learning principles of the learners center.

According to the observation and record of learning and learning achievement test of the students towards instructional management by research based learning, it has to be applied by focusing on the students' participations as much as possible. It can be done by managing the instructions to be appropriate to the time and contents studied. The contents should neither too much difficult nor easy. Moreover, the contents should be arranged in order, the instructional atmospheres should be appropriate according to the appropriateness of the contents and practices, give the opportunity between the learners and lecturers to participate in the contents of study, exchange the opinions, and evaluate the results variously by focusing on the roles of students as the center called learners center.

Recommendations

Recommendations for research application

1. It should have the instructional management by research based learning. The management should consider the factors of students, time, contents, and courses appropriately, as well as enhancing and supporting the activities of participation of the students.
2. The administrators of Bachelor of Education curriculum (Program in Technology and Educational Communication), Faculty of Education, Ramkhamhaeng University, and related persons should emphasize the instructional management by research based learning method, to originate learning, enhance and support the students to realize the values of instructional activities by research based learning method considered as the instruction which emphasizes the learners center as a major point.
3. For the lecturers teaching the Introduction to the Research on Technology and Educational Course, as well as other courses, which use the method of instructional management by research based learning method should give suggestions, consultancy, and facilitations to the students, create the learning atmospheres, be interested in the contents, and participations in instructional activities.
4. The students have to emphasize the instructional management by research based learning method which will help them learn both theories and practices, get more knowledge, and increase the learning achievement results.

Recommendations for further research

　　　1. It should have the research done with population of undergraduate students studying other courses because the contents are about the theories which are difficult for the perception.
　　　2. It should have the qualitative research together with the quantitative research, and study other related variables. This is because this research is studied only the case study of the classroom research, while it the study should be about other variables as well, such as learning attitudes, and development of learning models by research based learning, etc.

Brief Biography

Assistant Professor Dr. Supot Ingard received his Ph.D. in Education Technology from the faculty of Education, Ramkhamhaeng University. He received his Master's degrees in Technical Education Technology from King Mongkut's Institute of Technology North Bangkok. Her Bachelor's degree was in Education Technology and Innovation from Bansomdejchaopraya Teacher's College. At present he is the vice-dean, administrative affairs at Faculty of Education, Ramkhamhaeng University.

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