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THE COMPARISON OF THE LEARNING OUTCOME IN SCIENCE SUBJECT OF MATAYOMSUKSA 2 STUDENTS USING WICHAN'S AND IPST MODELS

Abstract:

The objectives of this study were; 1) To compare the learning achievement in science under the content on food and nutrition of Secondary Education. Students use both Wichan's model and normal IPST teaching method for comparing ; 2) To compare their learning retention; and 3) To compare their attitudes towards the two methods. The sample was 80 Matayomsuksa 2 students of Bangyeekhan Wittayakom School, Bangplad, Bangkok; the experiment group of 40 was taught by applying Wichan's teaching method and the control group of 40 was taught via normal IPST method. The tools included Learning Achievement Test, Learning Retention Test and Students Attitude Test developed by researcher. The statistic used was independent sample t-test with the identified mean level of 0.05 statistical significance.

The results were as follows:

1. The different methods made a difference on learning achievement at a level of 0.05 statistical significance.
2. The different methods made a difference on learning retention at a level of 0.05 statistical significance.
3. The different methods made a difference on attitudes at a level of 0.05 statistical significance.

Keywords:

Comparison; Learning Outcome; Wichan's Models; IPST Models

Introduction

Science has played a vital role in today's society and future because science connects to every life on earth. Both in daily life and in your career. Science improves the quality of human resources. This is the reason why teaching science is important for helping students understand the basic principles. The report evaluates the success of teaching and learning in schools in Bangkok. Grade 3 students from the year 2006 to 2009 in science, with the test criteria. Knowledge and process skills found that students with the knowledge and skills achievement process down. And Assessment Report blended school years. According to the report , evaluating the science school in Bangkok and blended school years found that Science learning achievement is low.

Model has been developed by the Department of the reach of LP is based on the theories of Piaget's intellectual development and knowledge creation theory. (Constructivism), with a 7 step is to motivate them. The discussions / hypothesize To explore / expand the experiment in order to describe the concept and the evaluation process was repeated. The format of the course will focus on the role and importance to the students to learn. According to research on the leadership style of teaching as a form of parent to teach physics in Grade 5, the effect of higher learning, students who have been taught by some form of IPST. A. level of statistical significance. 05 (Department of excellence in May, 2543, 114-120).

From the above, therefore, the teaching methods of Wichan have been brought to this study. It is the curriculum emphasizing a student-centered learning for development of science achievement and attitudes of students.

Purpose

1. To compare the achievement of students studying Science about food and nutrition which has been teaching in Wichan’s Models and style of the IPST.

2. To compare the retention of learning of students in Grade 2 about food and nutrition which has been teaching in Wichan’s Models and style of the IPST.

3. To compare attitudes towards science 2nd year students who had been taught by the form of the in Wichan’s Models and style of the IPST.

Methodology

The purpose of this research was conducted by a sequence of operation.

Population

The population in this study was a student of grade 2 extended school Metropolitan. Union County Secondary School Term 1, 2553 of over 758 samples used in the research. The sample used in this study were students at two schools Bang Phlat selected by random sampling two classrooms of 40 students from the two classes to draw into 2 groups: group 1, the experimental group. taught by teaching the form of the 40 students and 2 teachers formed a control group IPST. 40 students.

The Instruments used in Research

1. The plan of learning activities used in the experiment was based on the model of the plan by Fitch model about food and nutrients with grade 2 students.

2. Achievement Test science learning about food and nutrition for the reliability of the test using the formula KR - 20 of the ditch rider - Bridget Richardson Kuder - Richardson), the most. Confidence is at 0.98

3. The test of persistence in learning. This is the same test set Achievement Test food and nutrients.

4. attitude towards science for the confidence. The - coefficient) of Akron BAC Cronbach (Puangratαcoefficient alpha (Thaveerut, 2543, 125 - 126), which has a coefficient alpha. 98.

Research Data Collection

The purpose of this research was conducted by a sequence of operation.

1. The Trial Researchers who teach students in both groups learned by teaching the format of the. And the students taught by Fitch model. The curriculum of each model was developed based on 8 lessons for 3 weeks in Term 1, 2553 in food and nutrition.

2. At the end of the lesson, then We will perform the following test.
   2.1 achievement at the end of the lesson.
   2.2 attitude towards science subjects

Measuring the retention of lessons learned after 3 weeks.

Data Analysis

Analysis of data from a collection of data measured by the scale. Use of computer software were analyzed in the following.

1. Compare the achievement of students studying Science about food and nutrition which has been teaching in Wichan's Models and style of the IPST. The statistic used was independent sample t-test with the identified mean level of 0.05 statistical significance.

2. Compare the retention of learning of students in Grade 2 about food and nutrition which has been teaching in Wichan's Models and style of the IPST. The statistic used was independent sample t-test with the identified mean level of 0.05 statistical significance.

3. Compare attitudes towards science 2nd year students who had been taught by the form of the in Wichan's Models and style of the IPST. The statistic used was independent sample t-test with the identified mean level of 0.05 statistical significance.

Results

To compare the achievement of students in Science 2. Food and nutrition Who has been teaching in Wichan's Models and style of the IPST. Results shown in Table 1.

Table 1 compares the average results of the analysis of student achievement of grade 2 in Science. Food and nutrition Who has been teaching in Wichan's Models and style of the IPST.

Achievement scores	$\overline{X}$	S.D.	t	df	Sig
Wichan's Models	25.25	1.971			
Style of the IPST	20.30	2.691	9.386*	78	.000

** level of 0.05 statistical significance.*

Table 1 shows that the two groups of students who had been taught Wichan's Models and style of the IPST. An achievement different from the group that was taught by Style of the IPST. A statistically significant at the .05 level. Considering the average score is found that Wichan's Models the more valuable Style of the IPST. It shows that the subjects of the students have higher achievement Style of the IPST.

To compare the retention of learning of students in Grade 2 Science. Food and nutrition Who has been teaching in Wichan's Models and Style of the IPST. The test is shown in Table 2.

Table 2 compares the average retention analysis in the learning of students in Grade 2 Science. Food and nutrition Who has been teaching in Wichan's Models and Style of the IPST.

The retention of learning scores	$\overline{X}$	S.D.	t	df	Sig
Wichan's Models	21.75	2.193			
Style of the IPST	16.73	3.146	8.288*	78	.000

** level of 0.05 statistical significance.*

Table 2 shows that the two groups of students who had been taught by Wichan's Models . It is highly resistant to learning about different groups received instruction in the following Style of the IPST. A statistically significant at the .05 level. Considering the average score is found that Wichan's Models greater than Style of the IPST. It shows Wichan's Models did the retention of learning from different classes that are taught by Style of the IPST.

To compare attitudes towards science 2nd year students who had been taught by Wichan's Models and Style of the IPST. The test is shown in Table 3.

Table 3 Analysis of the mean scores of the students' attitudes towards science. Grade 2 has been teaching in Wichan's Models and Style of the IPST.

Attitudes towards science subjects	$\overline{X}$	S.D.	t	df	Sig
Wichan's Models	4.47	.512			
Style of the IPST	3.36	.578	9.042*	78	.000

** level of 0.05 statistical significance.*

Table 3 shows that the two groups of students who had been taught by Wichan's Models. Attitude toward science unlike group received instruction in the following Style of the IPST. A statistically significant at the .05 level. Considering the average score is

found that Wichan's Models is greater than Style of the IPST. The study shows Wichan's Models gives students' attitudes towards science than Style of the IPST.

Conclusion

1. The two groups of students who had been taught by Wichan's Models did the effective achievement of different groups received instruction in the following Style of the IPST. The level of statistical significance. 05.

2. The second group of students who had been taught by Wichan's Models did the retention of learning from different classes that are taught by Style of the IPST. The level of statistical significance. 05.

3. The two groups of students who had been taught by Wichan's Models. Attitude toward science unlike group received instruction in the following Style of the IPST. The level of statistical significance. 05.

Discussion

1. The results showed that the two groups of students who had been taught by Wichan's Models achieved differently from the group that was taught by Style of the IPST. A statistical significant was at the .05 level. It was found that students who had been taught by Wichan's Models have higher academic achievement than students who had been taught by Style of the IPST. This is probably due to the format of the instruction. Thinking Skills particularly solves the problem. Reflective thinking ,critical Thinking And creative thinking were found as a result. Students discover or learn skills in scientific terminology. Significantly , students play a role in learning and knowledge by themselves. Is based on the idea of advanced further. Consistent with the research of one of the LP (2543, 114-120), the study compared the outcomes of the 5th grade students found that students who had been taught by Wichan's Models have higher academic achievement than students who had been taught by Style of the IPST. The level of statistical significance was .01.

2. The results of the research showed that the second group of students who had been taught by Wichan's Models. It is highly resistant to learning about different groups received instruction in the following Style of the IPST. A statistically significant was at the .05 level. Wichan's Models was found that the students receive teaching as a form of problem. It is highly resistant to learning to higher education students received instruction in the following Style of the IPST. This may be due. The course, taught by a parent. There is a process that focuses on teaching students to do research on their own way so that students get a better understanding and knowledge. You can create a knowledge of the students themselves. And kept in mind for a long time. The students are the retention of learning.

3. The study found that the second group of students who have been learning of Wichan's Models have attitude toward science different from the group that received Style of the IPST. Wichan's Models, the level of statistical significance at .05 is probably due to Style of the IPST. Training Working Group Discussions with As well as mutual aid learning The students' self esteem. Students are enthusiastic and interested in learning more and tend to practice self-researched facts. Unknown reason, research and resolve the issue by adopting scientific methods used in the learning process. The motivation for learning shows that students are happy and have more fun to learn. For this reason, the course follows Wichan's Models as a result, students' attitudes towards science than students who received instruction in the following Style of the IPST.

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