



THE STUDY OF APPLYING THE CLASS DISCUSSION APPROACH IN THE LESSON DESIGN AIMING AT DEVELOPING CONCEPTUAL UNDERSTANDING ON THE STUDY OF INTEGER SYSTEM OF THE 7th GRADE STUDENTS

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BACKGROUND AND SIGNIFICANCE

The researcher generally used the teaching technique of problem-based approach by encouraging the students to solve the mathematics problems and then provided the explanation and conclusion on that lesson. According to this kind of teaching led by the teacher, it was found that only the group of students with high performance paid attention in joining the activities whereas other groups with lower performance were somehow less attentive in class. Therefore, the post-test provided to the students proved that the entire class gained moderate average score. Plus, referring to the interview and the analysis of the students' answer, it showed that the students with high performance were able to understand and work on the problems during the class but later they tended to forget that knowledge and could not solve other advanced problems developed from the basic ones. Interestingly, the group of students with lower performance was able to understand some parts of the lesson or could not understand but did not ask questions. They waited for the teacher to answers which resulted them to be unable to work on the exercises or tests by themselves.

According to this problem, the researcher was interested in applying the teaching technique that highlighted the discussion in classroom to find out the mathematics problems' solution. This type of discussion-based learning enabled the students to develop their idea and build their ability in gaining knowledge together with the entire class. The students of all groups: high, moderate and low performance, were encouraged to exchange their ideas. The ones with low performance were supported to be more attentive in learning. By applying the models of Lesson Study and the discussion-based learning, the classroom became the real learning class. Lastly, the designed study plan, the study of teachers & students' behavior including other factors affecting the implementation of these techniques in teaching mathematics were taken into account for evaluation aiming at developing and enhancing the performance of the students in the future.

OBJECTIVES

To design the study plan applying the discussion-based learning aiming at enhancing the students' understanding in studying mathematics on the Integer System of the 7th Grade students.

To study the behavior and factors affecting the discussion in class implementing discussion-based approach in studying mathematics on the Integer System of the 7th Grade students.

TARGET GROUP

The target group was the purposive sampling group which was 36 students in the 7th Grade of Takuapa Senanukul School. The intervention time was the 1st semester of the 2017 academic year.

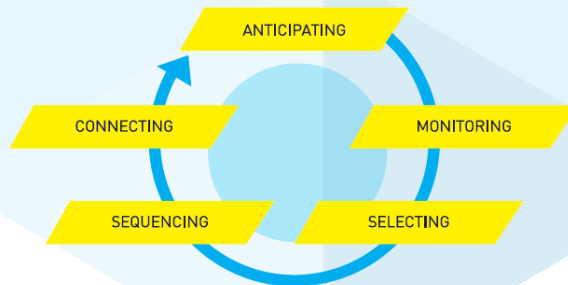
METHODOLOGY

The researcher applied the Lesson Study Approach in order to develop and design the lesson. This design was based on the discussion in order to develop the students' conceptual understanding in mathematics.

- The Lesson Study Approach



- Five Practices for Orchestrating Productive Mathematics Discussions



CONCLUSION AND DISCUSSION

The study of guideline in designing the study plan by applying the Lesson Study Approach in order to encourage the class discussion

Behavior and factors facilitating the discussion in mathematics class

According to the class observation, the observation from recorded class VDO and the analysis of behavior and factors, it was found that the behavior of teachers and students were influential in enable the discussion environment in class. Also, the media / activities and content structure led to the activity arrangement that encouraged the discussion in class.

Teacher	Students	Activities	Curriculum
- Lesson Designing	Student prior knowledge	Teaching strategies	Content and time allocation for student discussion is not enough
- Classroom management techniques	Various levels of student backgrounds	Clarity of questions and familiarity of problem context	
- Questioning techniques	Familiarity with teacher's classroom management techniques	Size of printing materials presented in front of the class	
- Waite time	attendance hour	Do individual work before group work	
- creating a friendly classroom	Obstacles in communication, explanation and symbolic writing in Mathematics	Set up clear roles and encourage student discussion among class	
	Common regulations among class		