1. The nature of preservice teachers’ mathematical knowledge for teaching in school innovated by lesson study and open approach.
The nature of preservice teachers’ mathematical knowledge for teaching in school innovated by lesson study and open approach

Noparit T., Saengpun J., Noparit, T.,

Mathematics Education, Chiang Mai University, Chiang Mai, Thailand

ABSTRACT

The purpose of this study was to analyze the nature of the mathematical knowledge of preservice teachers for teaching in a school using an innovative lesson study and open approach. The study drew from the mathematical knowledge for teaching. This research was a case study in qualitative research using three student teachers of programs in mathematics from the Faculty of Education, Chiang Mai University who were teaching in three schools under the Project for Mathematics Teacher Professional Development as an innovation of the Lesson Study and Open Approach in Chiang Mai province. They taught in fourth grade mathematics classrooms in the academic year 2011. Data were collected by audio-video tape recordings, classroom protocols, lesson plans, observation records, students’ written works, and interviews. Data were analyzed by video analysis and described in narrative text. The results revealed that: 1) in the posing open-ended problem stage, the student teachers possessed knowledge at the mathematical horizon and specialized content knowledge (SCK); 2) in the students’ self-learning stage, they possessed knowledge of content and the student (KCS); 3) in the whole-class discussion and comparison stage, they had SCK and KCS and knowledge of content and teaching (KCT); and 4) in the summarization through connecting of the students’ mathematical ideas that emerged in the classroom stage, the student teachers possessed SCK and KCT. © 2006, Kasetsart University. All rights received.