

Waruntee Karaket 2012: Development of Grade 7 Students' Conception about Substance and Its Properties by Less Guided Inquiry. Master of Education (Science Education), Major Field: Science Education, Department of Education.
Thesis Advisor: Miss Akarat Sreethunyoo, Ph.D. 132 pages.

The purposes of this research were to study guideline of teaching and learning and to develop grade 7 students' conception about substance and its properties by less guided inquiry. This research was classroom action research. The subject was grade 7 students of an elementary school in Ratchaburi Province which were selected by purposive sampling. The research tools were substance and its properties concept test, classroom observation field notes, worksheets and students' interviews. The data from classroom observation field notes and students' interviews were analyzed by content analysis to reflect the guideline of teaching and learning to develop grade 7 students' conception about substance and its properties by less guided discovery. The data from concept test were analyzed by grouping into 5 categories and then calculated by using percentage. In addition, the data from worksheets were also analyzed by content analysis.

The results were: 1) Less guided inquiry – based learning could start with situations or problems or use real situations and then ask questions, have students plan and solve problem by themselves, learn by doing, collecting data, analyzing data and making conclusion by themselves. The teacher role was a guide lead to classroom discuss 2) after participating in inquiry based approach, 58.25% of students hold sound understanding, followed by 30.00% of students hold partial understanding and misunderstanding, 6.00% of students hold complete misunderstanding, 4.25% of students hold partial understanding and 1.50% of students showed without answer. The content which students had sound understanding the most was emulsion, whereas the content which they hold misunderstanding the most was status and arrangement of molecule of matter.

Student's signature

Thesis Advisor's signature