

Chonthicha Panudso 2012: Learning Activities with Inquiry Approach on Critical Thinking Abilities and Learning Achievement in the Topic of “Matter and Properties of Matter” for Grade 7 Students. Master of Education (Science Education), Major Field: Science Education, Department of Education. Thesis Advisor: Assistant Professor Sumalee Kanjanachatee, Ed.D. 139 pages.

The purposes of this research were to study the critical thinking abilities, learning achievement and to find out suitable teaching techniques of inquiry approach on critical thinking abilities and learning achievement of the students on the topic of “Matter and Properties of Matter” This research was the case study method. The subject were a group of 30 students, grade 7 in a medium size school, under the municipality of Saraburi province in the first semester of academic year 2011. The research instruments consists of: critical thinking ability test, learning achievement test, the teacher’s notes, the students’ journal and exercises. The data on the critical thinking abilities test were analyzed by content analysis and grouped the answer into 4 groups. The frequency and percentage of the answer in each group were calculated both before and after learning with inquiry approach. The data on learning achievement were analyze from learning achievement test after learning with inquiry approach. The data on teaching techniques were analyzed by content analysis from the students’ journal and the teacher’s note.

The results indicated that: 1) learning with inquiry approach successfully develop critical thinking abilities of students. It was found that before learning most of the students were in the correct answer for the problem issue group, relevant to the answer with no extending on assumption group and conclusion group. For The evaluation, most of the students were in irrelevant to the situation group. On the other hand, after learning with inquiry approach, it was found that most of students were in the correct answer groups in all indicators of critical thinking abilities. 2) 86.7 percent of learning with inquiry approach students scored the learning achievement test at level 3 or higher, which higher than determined standard. 3) For five step of learning with inquiry approach suitable teaching techniques are questions for sharing opinions, participating activities and finding out the answer themselves. For the explanation and the elaboration, group work should be added. For the exploration, group work and self-planning in activities should also be added for effective learning.

---

Student’s signature

Thesis Advisor’s signature