

Prachya Janta 2013: The Effects of Science, Technology, Society and Environment Approach on Problem Solving Ability of Grade 10 Students. Master of Education (Science Education), Major Field: Science Education, Department of Education. Thesis Advisor: Associate Professor Sawrarat Patarathitinant, M.A. 194 pages.

The purposes of this research were: 1) to study the effects of Science, Technology, Society and Environment approach on problem solving ability of grade 10 students; and 2) to study the guidelines for learning management in biology in the topic of “Human with Environment and Natural Resources” using Science, Technology, Society and Environment approach.

The subjects of this study were 36 students in grade 10 from a school in Chon Buri province during the second semester, academic year 2011, received by Cluster sampling. The research instruments were problem solving ability test, teachers’s journal, students’ journals, and interviews on learning management. The data collected was analyzed by t-test for dependent groups and content analysis.

The results showed that: 1) the students’ problem solving ability on the posttest was significantly higher than the pretest ($p < .01$); and 2) the guidelines for learning management in biology in the topic of “Human with Environment and Natural Resources” using Science, Technology, Society and Environment approach should emphasize on such learning activities, in which students are allowed to work individually as well as in groups. There should be a variety of activities forms and learning materials related to current environmental situations. Teachers have the important roles in supporting the students to learn effectively.

Student’s signature

Thesis Advisor’s signature