

Suwanna Ampornnanai 2011: Grade 12 Students' Conception about Metal Industry Using Science, Technology, Social and Environment Approach. Master of Education (Science Education),
Major Field: Science Education, Department of Education. Thesis Advisor:
Miss Akarat Sreethunyoo, Ph.D. 119 pages.

The purposes of this classroom action research were to study the guide line for learning management about the metal industry using Science Technology Society and Environment approach and to study students' conceptions about the metal industry using Science Technology Society and Environment approach.

The subjects of this study were fifty grade 12 students from a private school in Bangkok. Research tools were journal, students' worksheet, teachers' journal and a two tier concept test on "Metal Industry" totaling 10 items covered three concepts namely; an overview of the chemical process industry and primary raw materials, the metal refining industry processes metal ores and industrial pollution prevention. Students' responses were categorized into 5 groups according to Abraham et al.(1994) The research result found the majority of students (70.71%) hold sound understanding in all concepts. The students hold the most understanding in the topic of an overview of the chemical process industry, followed by industrial pollution. The least sound understand was metal refining industry processes metal ores.

The guideline for learning management about the metal industry using Science Technology Society and Environment Approach has 5 steps. First is motivation, second is finding information, third is discussion, fourth is apply knowledge and last is evaluation. The result of the guideline can enhance the students' learning about the concept of Metal Industry.

Student's signature

Thesis Advisor's signature