

ABSTRACT

Dina Adreini Br Tarigan : The Development and Standardization of Senior High School Chemistry Textbook for Class XI at Semester I RSBI Class Based on Contents Standard of KTSP. Thesis. Medan: Postgraduated program of State University of Medan.

The aim of this research is (1) to analyze and develop of standard chemistry textbooks that proper to use in senior high school (shs) in class of XI at semester one RSBI class; (2) To know the subject matter that proper to be taught year XI shs at semester one RSBI class; (3) To get the standard chemistry textbooks that proper to use in shs year XI at semester one RSBI class; (4) To know what the teachers' responds for the standard chemistry textbook development of shs year XI at semester one RSBI class; (5) To know the effectiveness of standard chemistry textbook of shs for year XI at semester one RSBI class. The research was done on October 2011 to February 2012, the population of this research was the chemistry textbooks which used in RSBI schools, chemistry professional teachers, chemistry lecturers who expert in teaching and mastering basic chemistry, and students of RSBI class in north Sumatera. . The sample was that four chemistry textbook that used in second year class of RSBI class of shs 1 Medan, shs 1 Tebing Tinggi and shs 1 Berastagi, 2 of chemistry lecturers of state university of Medan and 11 of teachers of RSBI class of shs 1 Medan, shs 1 Tebing Tinggi and shs 1 Berastagi as respondents. The sample of students were selected by using purposive sampling to choose two classes in every school where one was treated as experimental class and another was as a control class. The selected samples in every class were grouped based on their achievement on chemistry in the first semester to make them in to two categories, the relative high achievement (HA) and relative low achievement (LA). Experimental class was taught by using innovated teaching using standard chemistry textbook as a learning media while the control class was taught without using standard chemistry textbook. The data were collected by using instruments from BSNP and by using a set of multiple tests that covering all subjects being taught. The result of analyze the chemistry textbooks showed that: the chemistry textbook from publisher of Tiga serangkai was obtained 80%, Yrama Widya was obtained 67%, Grafindo was obtained 86%, Esis was obtained 77%. The range validation of standard chemistry textbook sequence was obtained 3.45. The data of students' achievement are distributed normally and homogeny. The results obtained from pretest showed that there is no different between two classes (experimental and control class), where averaging value of pre-test in experimental classes is (35.42 ± 6.77) with $t_{\text{calculated}} 1.74 < t_{\text{table}} 1.990$ and averaging value of pre-test in control classes is (32.34 ± 6.53) with $t_{\text{calculated}} 1.85 < t_{\text{table}} 1.990$. It was found that student's achievement was increased when they were tough by using standard chemistry textbook (69.04 ± 5.09) than that of other textbooks (64.36 ± 6.83) with $t_{\text{calculated}} 4.088 > t_{\text{table}} 1.990$. The effectiveness of standard chemistry textbook is obtained 50%. It is concluded that subject matter that are exact to be taught in year XI senior high school at first semester RSBI class are: quantum mechanics atomic theory, molecular shapes, thermochemistry, reaction rate, and chemistry equilibrium, the standard chemistry textbook is proper to be used as learning media in teaching learning process and its using as learning media in teaching of chemistry equilibrium is find effective to increase students' achievement in chemistry.