THE DEVELOPMENT OF CHEMISTRY LEARNING MODULE TO INCREASE STUDENT'S ACHIEVEMENT ON THE TEACHING AND LEARNING OF OXIDATION AND REDUCTION REACTION

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ABSTRACT

The aim of the development chemistry learning module on the teaching and learning of oxidation and reduction reaction are to develop and standardize of chemistry learning module and to know its affectivity due to student's achievement. The populations of this research are all students grade X SMA Negeri 1 Medan, SMA Negeri 1 Tebing Tinggi, SMA Negeri 1 Berastagi, all students grade XI SMA Methodist 1 Medan, Chemistry lecturers, chemistry teacher, chemistry books. The samples that were chosen from two classes those are homogenize, and distributed normally. There two kinds of research instruments, those are questionaire for standarization of chemistry learning module, and 15 multiple choice those were validated by expert valuator and students, with its $r_{calculation}$ 0.682 > r_{table} 0.344, stated that it was reliable . questionaire was done in standarized chemistry learning module by chemistry lecturers, chemistry teachers, and students called as expert judgment. Trial for module have done, by giving pretest, teaching and learning activities by using module as media (in control class), and by using chemistry book as a media (in experimental class), giving posttest-I, and next two weeks is giving posttest-II. The result of this research can be shown as the average percentage in High Group (HG) using module 52.48% is higher than using book 51.12%, with t_{count} = 4.56 while t_{table} at α = 0,05 is 1.32, and the average of experimental class ($\bar{X}$=77.37±6.21), and control class ($\bar{X}$=70.48±5.45). the average percentage in Low Group (LG), using module 66.05% is less than using book 68.41% , with t_{count} = 1.19 while t_{table} at α = 0,05 is 1.32, and the average of experimental class ($\bar{X}$= 74.71±7.30), and for cotrol class ($\bar{X}$= 72.49±7.16). it could be conclude that chemistry learning module is able to increase student's achievement in HG. The afectivity of chemistry learning module can be analysed by using data posttest-II. Total affectivity percentage using module109.49% is higher than 108.92%, with the average for experimental class ($\bar{X}$= 83.26±10.45), and control class ($\bar{X}$= 78.71 ± 16.46). The standarization of chemistry learning module have assesed by lecturer (3.52), assesed by chemistry teacher (3.47), assesed by students (3.26), and the total average (3.42), it means that chemistry learning module is valid and doesn't need revision.