

THE DEVELOPMENT OF INNOVATIVE PRACTICAL GUIDE ON REDOX REACTION TO INCREASE STUDENT'S ACHIEVEMENT AND PROCESS SKILLS

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ABSTRACT

The development of innovative practical guide on redox reaction to increase student's achievement and process skills is explained in this research. All of students 10th grade science in SMAN 14 Medan are consisted of four classes and sample taken as random sampling are two classes would be control class and experiment class. The control class applied the chemistry practical guide and experiment class applied the innovative practical guide. Each class are consisted from 30 students. The instrument that used in research are consisted of instrument test and instrument non test. Instrument test is specification test, multiple choice are consisted 16 valid questions and reliable (0.840). Instrument non test are consisted assessment sheet of BSNP and observation sheet of process skills and the character of process skills and cooperative attitude that has been validated. Based on test data requirement, results has showed that pretest and posttest value of control class and experiment has been normal distributed and homogeneous. Hypothesis test with significant level 0.05 to increased student's achievement has been got $t_{\text{count}} > t_{\text{table}}$, are $8.2937 > 2.0021$ is meant H_a accepted that student's achievement that has been used innovative practical guide higher than chemistry practical guide in school. So also with student's process skills has been got $4.500 > 2.0021$ is meant H_a accepted that student's process skills that has been used innovative practical guide higher than used chemistry practical guide in school. The correlation test has shown a positive correlation between process skills and student's achievement with $r_{\text{count}} > r_{\text{table}}$ ($16.6 > 0,361$) with an activity contribution of 27 % for control class and $r_{\text{count}} > r$ ($0.72 > 0,361$) with an activity contribution of 51 % for experiment class.

Key Words : *Innovative, Practical Guide, Process Skills, Student's Achievement, Practicum, Redox reaction*