

**THE EFFECT OF HIGHER ORDER THINKING QUESTION IN BIOLOGY  
PRACTICAL WORKSHEETS TO STUDENTS LEARNING ACHIEVEMENT  
ON ECOSYSTEM TOPIC IN GRADE X SMA NEGERI 2 BINJAI  
ACADEMIC YEAR OF 2015/2016**

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**ABSTRACT**

The study was aimed to investigate the effect of higher order thinking questions in biology practical worksheets to students learning achievement on ecosystem topic. The type of the research was quasi experiment and pre-test and post-test were applied. The population of the research is grade X of SMA Negeri 2 Binjai academic year 2015/2016. The samples consist of two groups and were selected randomly, grade X PMS 2 as control group (n=36 students) and X PMS 4 as experiment group (n=36 students). Learning method in both groups was practical. For experimental group, the learning process used the revised-worksheets and the control group used the student's handbook. Multiple choice questions were the instrument to collect the cognitive data and questionnaires were used to assess the psychomotor aspect of the student achievement. Hypothesis was tested by *t*-test. The post-test result showed that, the average score in experimental group (85.72) was higher than control group (78.61).  $t_{\text{count}} (5.64) > t_{\text{table}} (1.994)$  (with  $\alpha=0.05$  and  $df=70$ ). The psychomotor assessment revealed that the score of experimental group (90.02) was higher than control group (78.5).  $t_{\text{count}} (7.32) > t_{\text{table}} (1.994)$  (with  $\alpha=0.05$  and  $df=70$ ). Based on the data from research result used  $t_{\text{count}} > t_{\text{table}}$  then  $H_0$  was rejected and  $H_a$  was accepted. It means that there is a significant effect of providing higher order thinking questions in biology practical worksheets to students learning achievement on ecosystem topic of grade X SMA Negeri 2 Binjai academic year 2015/2016.

**Keywords:** *Practical, Revised-worksheet, Learning Achievement.*