

**THE EFFECT OF PROBLEM BASED LEARNING MODEL (PBL) ON
STUDENT SCIENCE PROCESS SKILL AND LEARNING
OUTCOME ON HUMAN EXCRETORY SYSTEM TOPIC
FOR XI GRADE STUDENT SMA NEGERI
5 BINJAI ACADEMIC YEAR 2014-2015**

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ABSTRACT

The research aims to know the effect of problem based learning on students' science process skill and learning outcomes at human excretory system topic. This research was carried out in SMA Negeri 5 Binjai. This research used quasi experiment type with pretest-posttest control group design. Population is the whole students in grade XI SMA Negeri 5 Binjai on 2nd semester, consisting of three classes. Sample was taken using technique of cluster random sampling. The number of research sample is 30 students for experiment class and 30 students for control class. The data of learning outcomes is taken by using instrument test in form of multiple choice which has been tested for the validity and reliability, while the data of Science Process Skill is taken by using instrument test in form of essay question from seven indicators. The data analysis used t-test, from the result of pretest calculation obtained the mean of experiment class is about 32.56 with deviation standard 8.46 and the mean of control class is about 31.16 with deviation standard 6.08. By testing the data both classes are distributed normally and homogeny, with t_{count} lower than t_{table} ($0.06 < 1.023$), therefore H_0 accepted, means the cognitive of students before treatment are similar. During the treatment process experiment class was learned by using problem based learning model, while control class was learned by conventional learning model. From the result of data calculation there was differences of mean between the two classes, the value obtained of post-test are t_{count} is about 2.42 and t_{table} 2.001. Therefore can be concluded that $t_{count} > t_{table}$ it means H_a accepted. By using t-test two tail seven indicators were tested. The result shows science process skill in problem based learning significantly higher than control class. By the other words it can be concluded that there is effect of problem based learning on students' science process skill and learning outcomes at human excretory system topic in grade XI SMA Negeri 5 Binjai Academic Year 2014/2015.

Keywords: Problem Based Learning Model, Conventional Learning, Science Process Skill, Learning Outcome.