

ABSTRACT

LUTFI FAUZIAH. 2024. THE EFFECT OF PROBLEM BASED LEARNING (PBL) WITH TPACK ON STUDENT'S CRITICAL THINKING AND PROBLEM SOLVING ABILITIES ON EXCRETORY SYSTEM CONCEPT (Experimental Study in Class XI SMA Negeri 3 Ciamis in Academic Year 2023/2024). Biology Education Department, Faculty of Teacher Training and Education, Siliwangi University, Tasikmalaya.

This study aims to determine the effect of problem based learning (PBL) based technological knowledge (TK) on students' critical thinking and problem solving abilities on excretory system material in class XI SMA Negeri 3 Ciamis in the 2023/2024 school years. The population in this research consisting of 4 classes with a total of 132 students. Samples were taken using the technique purposive sampling technique, namely class XI-1 as the experimental class and XI-3 as the control class. The instruments used are a critical thinking test with 10 descriptive questions and a problem solving test with 5 descriptive questions. The research data shows the average value obtained posttest critical thinking and problem solving in the experimental class were higher than in the control class. The results of hypothesis testing using the Ancova test show that partially, with pretest as a covariate or without pretest, shows a significance value < 0.05 ($0.000 < 0.050$) meaning H_0 rejected. Simultaneously showed a significance value < 0.05 ($0.000 < 0.050$), meaning H_0 was rejected. So the research results show that there is an effect of problem based learning (PBL) with technological knowledge (TK) on students' critical thinking and problem solving abilities on excretory system material in class XI SMA Negeri 3 Ciamis both partially and simultaneously.

Keywords: Problem Based Learning (PBL), TPACK, Critical Thinking Ability, Problem Solving