ABSTRACT

Syifa Khairunnisa, NIM. 4191121003 (2019), The Effect Of Metacognitive Strategy In Problem Based Learning Model On Physics Problem Solving Ability Of Students At Man 2 Deli Serdang

This study aimed to knowing the effect of metacognitive strategy in Problem Based Learning model on students' problem solving abilities and knowing the improvement of physics learning activities in the classroom after applying a metacognitive strategy in Problem Based Learning model on the material of elasticity and Hooke's law. The research method used is quantitative research with quasi experiment pretest-posttest control group design. The population of this study were all students of class XI MIA MAN 2 Deli Serdang in the academic year 2023/2024. The sample was chosen through random sampling. The experimental class was composed of 36 students from class XI MIA 1, while the control class consisted of 36 students from class XI MIA 2. The independent variable in this study is the metacognitive strategy in Problem Based Learning Model applied to the experimental class, while the physics problem solving of students are the dependent variable. Data collection in this research was carried out by using pretest and posttest through instrument test with problem solving ability. The results showed that the average pretest score of students in the experimental class of 52.5 and the average posttest score of 85.93, while in the control class, the average student pretest score was 53.6 and the average score was posttest average of 80.79. The research hypothesis was tested using hypothesis testing with a significant level of 0.5%, the results of the hypothesis test showed $t_{count} > t_{table} = 5.367 > 1.671$. so Ha is accepted. And the overall average percentage of the results of the analysis of physics learning activities has increased in the two meeting cycles. Based on these results, it can be concluded that there is an effect of metacognitive strategy in Problem Based Learning model on physics problem solving ability and there is an increase of physics learning activities in the classroom after applying a metacognitive strategy in Problem Based Learning model on the material of elasticity and Hooke's law.

***Keywords**: Metacognitive Strategy, Problem Based Learning, Problem Solving Ability*