

ABSTRACT

Leonardo Sihaloho, IDN 4202421023 (2024). The Effect of Problem Based Learning Model on Learning Outcomes of Class X Students on Global Warming Material at SMA Negeri 8 Medan

The research has been conducted with the aim of determining the influence of the problem-based learning model on student learning outcomes on global warming materials in class X of SMA Negeri 8 Medan. Learning outcomes that are still relatively low and characterized by not reaching the minimum completeness criteria indicate the incompatibility of the learning process with the learning objectives. This research method uses a quasi-experiment with a two-group pretest-posttest design. Sampling was determined by the cluster random sampling technique in classes X-8 with 35 students as an experimental class with problem-based learning and X-6 with 33 students as a control class with conventional learning. The instrument used was a multiple-choice test consisting of 12 questions. The data were analyzed using the normality, homogeneity, and hypothesis tests (t-test). Based on the study's results, the average value of the experimental class pretest was 52,38 with a standard deviation of 10,22, and the average value of the control class pretest was 48,74 with a standard deviation of 13,68. Then, given different treatments, the posttest was obtained with the average results of the experimental class (84,76 with a standard deviation of 10,79) and the control class (77,02 with a standard deviation of 11,42). The results showed an effect of using the problem-based learning (PBL) model on learning outcomes on global warming material in X class SMA Negeri 8 Medan. This is evidenced by the t-test results, with a significant level of 5% (0,05) obtained for t count (2,887) > t table (1,998). It can be concluded that the learning outcomes of students in the experimental class using the problem-based learning (PBL) model are classified as meeting very high criteria, with the maximum score obtained being 100,00 and the minimum score being 58,33. Thus, the problem-based learning (PBL) model can affect student learning outcomes on global warming material in X class SMA Negeri 8 Medan.

Keywords: Problem-based learning, learning outcomes, global warming.

