

ABSTRACT

Erfan Apriana. 2023. **THE EFFECT OF THE PhET SIMULATION-ASSISTED THINK, TALK WRITE (TTW) LEARNING MODEL ON THE ABILITY OF STUDENTS' CRITICAL THINKING SKILLS ON PARABOLIC MOTION MATERIAL**

This research was motivated by the low ability of students' critical thinking skills in physics learning and lack of innovation in the learning process. The researchers' efforts to overcome this problem are by applying the Think, Talk, Write (TTW) learning model assisted by PhET Simulation. The purpose of this study was to determine the effect of the Think, Talk, Write (TTW) learning model assisted by PhET Simulation on improving the ability of students' critical thinking skills in learning physics of parabolic motion matter. This research method is quasi-experimental with a non-equivalent control group design. The population in this study was class XI of Physics interest of SMA Negeri 10 Tasikmalaya as many as 72 students with saturated sampling techniques obtained XI 2 as an experimental class and XI 3 as a control class. The data collection technique in this study is to provide a test in the form of 9 description questions with a research instrument testing the ability of critical thinking skills. The data analysis techniques used are prerequisite tests (normality tests and homogeneity tests), and hypothesis tests, N-Gain, and model implementation analysis. The results of the analysis of hypothesis test data using the t test at the level of significance ($= 0.05$) showed α that after the application of the Think, Talk, Write (TTW) learning model assisted by PhET Simulation obtained $t_{hitung} > t_{tabel}$ $4.05 > 1.67$ and the calculation results using SPSS showed sig results. (2-tailed) < 0.05 i.e. $0.000 < 0.05$. Thus, H_a is accepted and H_0 is rejected. This means that it can be concluded that there is an influence of the Think, Talk, Write (TTW) learning model assisted by PhET Simulation on the ability of students' critical thinking skills on parabolic motion material in class XI of the interest in Physics at SMA Negeri 10 Tasikmalaya for the 2023/2024 academic year. However, there are indicators with similar achievements, namely building basic skills and concluding.

Keywords: Think, Talk, Write (TTW) learning model, Critical thinking skills ability, PhET Simulation, and Parabolic motion.