

## **ABSTRACT**

CAHYATY MUTIARA SANDY. 2023. *Application of Discovery Learning (DL) Assisted by Artificial Intelligence Learning System (AILS) on Students' Critical Thinking Skills in Biology Learning (Experimental Study in Class X MIPA SMA Negeri 5 Tasikmalaya Academic Year 2022/2023)*. Biology Education Department Thesis. Faculty of Teacher Training and Education, Siliwangi University.

*This research aims to determine the effect of implementing the Discovery Learning (DL) model assisted by Artificial Intelligence in the form of Chat GPT used in the learning system on students' critical thinking skills in biology learning in Class X MIPA SMA Negeri 5 Tasikmalaya. The research method used was a quasi experiment with a matched-only posttest-only control group design. The population in this study was all 7 classes of class X MIPA SMA Negeri 5 Tasikmalaya with a total of 250 students. The sampling technique was carried out using the purposive sampling method. The sample used in this research consisted of two classes, namely class X MIPA 6 as a control class with a total of 36 students and class X MIPA 7 as an experimental class with a total of 36 students. The data collection technique consists of providing critical thinking skills instruments in the form of 15 essay questions related to ecosystem material. Data analysis techniques are carried out through analysis prerequisite tests and hypothesis testing. The analysis prerequisite test using the Kolmogorov-Smirnov test obtained a significance value of 0.200 for the experimental class and 0.194 for the control class, meaning that both classes had a significance value of  $> 0.05$ . Levene's test obtained a significance value of  $0.253 > 0.05$ . Hypothesis testing uses the independent t test with a Sig value. (2-tailed) is  $0.000 < 0.05$  so it can be concluded that  $H_0$  is rejected. The results of hypothesis testing in the research state that there is an influence of the application of the Discovery Learning (DL) model assisted by the Artificial Intelligence Learning System (AILS) on students' critical thinking skills in biology learning in Class X MIPA SMA Negeri 5 Tasikmalaya for the 2022/2023 academic year.*

**Keywords:** *Discovery Learning; Artificial Intelligence Learning System; Critical Thinking Skills*