

## ABSTRAK

Skripsi dengan judul “ Pengaruh Penerapan Model *Project Based Learning* (PjBL) Terhadap Kemampuan Berfikir Kritis Dan Kemampuan Kolaboratif Siswa Pada Materi Pemanasan Global Kelas X MA Darul Hikmah Tawang Sari Tulungagung” ditulis oleh Falentina Nur Alifia, NIM 126211211010, pembimbing Nani Sunarmi, S.Si., M.Sc.

**Kata kunci** : *Project Based Learning* (PjBL), Kemampuan Berpikir Kritis, Kemampuan Kolaboratif

Penelitian ini dilatar belakangi dengan rendahnya kemampuan berpikir kritis dan kemampuan kolaboratif siswa kelas X MA Darul Hikmah Tawang Sari Tulungagung. Hal tersebut disebabkan karena dalam pemilihan model pembelajaran masih belum sesuai dengan materi dan kebutuhan siswa, sehingga hal ini mengakibatkan rendahnya kemampuan berpikir kritis dan kolaboratif siswa terutama saat pembelajaran fisika. Salah satu upaya yang dapat dilakukan oleh guru dan sekolah untuk menangani kedua aspek tersebut adalah dengan memilih model pembelajarana yang efektif, yaitu salah satunya penggunaan model *Project Based Learning* (PjBL). Adapun tujuan penelitian ini yaitu, mengetahui pengaruh penerapan model *Project Based Learning* (PjBL) terhadap kemampuan berpikir kritis dan/atau kemampuan kolaboratif siswa pada materi pemanasan global.

Jenis penelitian adalah jenis penelitian *Quasi Eksperimen* (eksperimen semu). Penelitian ini dilakukan di MA Darul Hikmah Tawang Sari Tulungagung. Populasi pada penelitian ini adalah 181 siswa. Sampel yang digunakan pada penelitian ini sebanyak 66 sampel yang diantaranya yaitu kelas XB-1 yang berjumlah 34 siswa dan kelas XB-3 sebanyak 32 siswa. Teknik sampling yang digunakan pada penelitian ini adalah *Purposive Sampling*. Teknik pengumpulan data dalam penelitian ini berupa soal tes kemampuan berpikir kritis (*pretest-posttest*) berupa soal uraian sebanyak 10 soal dan lembar observasi kemampuan kolaboratif sebanyak 25 soal. Teknik analisis data pada penelitian ini menggunakan uji instrumen (uji validitas dan uji reliabilitas), uji prasyarat (uji normalitas dan uji homogenitas), dan uji hipotesis (*independent Sampel T-test* dan uji MANOVA)

Berdasarkan hasil penelitian yang telah dilakukan oleh peneliti maka dapat diketahui : 1) Ada pengaruh penerapan model *Project Based Learning* ( PjBL) terhadap kemampuan berpikir kritis siswa pada materi pemanasan global kelas X MA Darul Hikmah Tawang Sari Tulungagung yang ditunjukkan oleh sig.(2-tailed) uji t sebesar  $0,006 < 0,05$ , maka  $H_0$  ditolak  $H_a$  diterima. 2) Ada pengaruh penerapan model *Project Based Learning* ( PjBL) terhadap kemampuan kolaboratif siswa pada materi pemanasan global kelas X MA Darul Hikmah Tawang Sari Tulungagung yang ditunjukkan oleh sig.(2-tailed) uji t sebesar  $0,000 < 0,05$ , maka  $H_0$  ditolak  $H_a$  diterima. 3) Ada pengaruh penerapan model *Project Based Learning* ( PjBL) terhadap kemampuan berpikir kritis dan kemampuan kolaboratif siswa pada materi pemanasan global kelas X MA Darul Hikmah Tawang Sari Tulungagung. Hasil uji MONOVA diperoleh bahwa nilai F pada *wilks' Lambda* adalah 25,953 dengan nilai signifikansi  $0,000 < 0,05$ , maka  $H_0$  ditolak  $H_a$  diterima. Berdasarkan hasil uji hipotesis di atas maka dapat disimpulkan bahwa ketiga hipotesis tersebut dinyatakan diterima.

## **ABSTRACT**

*This thesis, entitled "The Influence of Project-Based Learning (PjBL) Model on Students' Critical Thinking Skills and Collaborative Skills in Global Warming Material for Grade X at MA Darul Hikmah Tawangasari Tulungagung", was written by Falentina Nur Alifia, NIM. 126211211, supervisor Nani Sunarmi, S.Si., M.Sc.*

**Keywords:** *Project-Based Learning (PjBL), critical thinking skills, collaborative skills*

*This research was motivated by the low levels of critical thinking and collaborative skills among Grade X students at MA Darul Hikmah Tawangasari Tulungagung. This issue arises due to the selection of learning models that are not yet aligned with the subject matter and students' needs, resulting in students' low critical and collaborative skills, particularly in physics learning. One effort that can be undertaken by teachers and schools to address these two aspects is to select an effective learning model, such as the use of the Project-Based Learning (PjBL) model. The aim of this research is to determine the effect of applying the Project-Based Learning (PjBL) model on students' critical thinking and/or collaborative skills in global warming material.*

*This study is a Quasi-Experimental research. The research was conducted at MA Darul Hikmah Tawangasari Tulungagung. population in this study consisted of 181 students. The sample consisted of 66 students, which included 34 students from class XB-1 and 32 students from class XB-3. The sampling technique used was purposive sampling. Data collection techniques in this study included critical thinking skill tests (pretest-posttest) in the form of 10 essay questions and an observation sheet consisting of 25 items. The data analysis techniques used in this study were instrument tests (validity and reliability tests), prerequisite tests (normality and homogeneity tests), and hypothesis testing (independent t-test and MANOVA test).*

*Based on the results of the research conducted, the following conclusions were drawn: 1) There is an influence of applying the Project-Based Learning (PjBL) model on students' critical thinking skills in the global warming material for Grade X at MA Darul Hikmah Tawangasari Tulungagung, as indicated by the t-test (2-tailed) significance value of  $0.006 < 0.05$ ; thus,  $H_0$  is rejected and  $H_a$  is accepted. 2) There is an influence of applying the Project-Based Learning (PjBL) model on students' collaborative skills in the global warming material for Grade X at MA Darul Hikmah Tawangasari Tulungagung, as indicated by the t-test (2-tailed) significance value of  $0.000 < 0.05$ ; thus,  $H_0$  is rejected and  $H_a$  is accepted. 3) There is an influence of applying the Project-Based Learning (PjBL) model on both students' critical thinking and collaborative skills in the global warming material for Grade X at MA Darul Hikmah Tawangasari Tulungagung. The MANOVA test result shows that the F-value on Wilks' Lambda is 25.953 with a significance value of  $0.000 < 0.05$ ; thus,  $H_0$  is rejected and  $H_a$  is accepted. Based on the hypothesis test results above, it can be concluded that all three hypotheses are accepted*

