

ABSTRAK

TEZA LESTARI NINGRUM. 2023. **PENGARUH MODEL *PROJECT BASED LEARNING* TERINTEGRASI STEM TERHADAP KEMAMPUAN PEMECAHAN MASALAH DAN KETERAMPILAN KOLABORASI PESERTA DIDIK PADA MATERI EKOSISTEM** (Studi Eksperimen di Kelas X MIPA SMA Islam Cipasung Tahun Ajaran 2022/2023). Jurusan Pendidikan Biologi, Fakultas Keguruan dan Ilmu Pendidikan, Universitas Siliwangi, Tasikmalaya.

Tujuan penelitian ini adalah untuk mengetahui pengaruh model *project based learning* terintegrasi STEM terhadap kemampuan pemecahan masalah dan keterampilan kolaborasi peserta didik pada materi ekosistem di Kelas X MIPA SMA Islam Cipasung. Penelitian ini dilaksanakan pada bulan Mei 2023. Metode penelitian yang digunakan adalah metode eksperimen dengan desain *Quasi Experiment* dan bentuk desain *the matching-only posttest-only control group design*. Populasi penelitian adalah kelas X MIPA SMA Islam Cipasung tahun ajaran 2022/2023. Sampel diambil dengan menggunakan teknik *purposive sampling* dan didapatkan kelas X MIPA 1 sebagai kelas kontrol dan X MIPA 4 sebagai kelas eksperimen. Instrumen penelitian yang digunakan dalam penelitian ini terdiri dari 3 instrumen yang sudah divalidasi yaitu instrumen tes kemampuan pemecahan masalah, angket CSAT (*Collaboration Self-Assessment Tool*) dan lembar observasi keterampilan kolaborasi. Teknik analisis data yang digunakan adalah uji *One way ANOVA*. Berdasarkan hasil analisis dapat disimpulkan bahwa ada pengaruh model *project based learning* terintegrasi STEM terhadap kemampuan pemecahan masalah dan keterampilan kolaborasi peserta didik pada materi ekosistem di Kelas X MIPA SMA Islam Cipasung.

Kata Kunci: *Project Based Learning*, STEM, Kemampuan Pemecahan Masalah, Keterampilan Kolaborasi

ABSTRACT

THE EFFECT OF STEM-INTEGRATED PROJECT BASED LEARNING MODEL ON PROBLEM SOLVING ABILITIES AND COLLABORATION SKILLS OF STUDENTS ON ECOSISTEM MATERIALS (Experimental Study in Class X MIPA SMA Islam Cipasung Academic Year 2022/2023). Department of Biology Education, Faculty of Teacher Training and Education, Siliwangi University, Tasikmalaya.

The purpose of this study was to determine the effect of STEM integrated project-based learning model on problem solving ability and collaboration skills of students on ecosystem material in Class X MIPA SMA Islam Cipasung. This research was conducted in May 2023. The research method used is an experimental method with a Quasi Experiment design and the matching-only posttest-only control group design form. The research population was the X MIPA class of Cipasung Islamic High School in the 2022/2023 school year. The sample was taken using purposive sampling technique and obtained X MIPA 1 class as the control class and X MIPA 4 as the experimental class. The research instruments used in this study consisted of 3 validated instruments, namely the problem solving ability test instrument, CSAT (Collaboration Self-Assessment Tool) questionnaire and collaboration skills observation sheet. The data analysis technique used is one way ANOVA test. Based on the results of the analysis, it can be concluded that there is an effect of the STEM integrated project-based learning model on the problem solving ability and collaboration skills of students on ecosystem material in Class X MIPA SMA Islam Cipasung.

Keywords: Project Based Learning, STEM, Problem Solving Skills, Collaboration Skills