

ABSTRAK

PENGARUH MODEL *PROBLEM BASED LEARNING* TERINTEGRASI STEAM TERHADAP KETERAMPILAN BERPIKIR KREATIF PESERTA DIDIK KELAS X PADA MATERI EKOSISTEM

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Penelitian ini bertujuan untuk mengetahui pengaruh penggunaan model *Problem Based Learning* (PBL) terintegrasi STEAM terhadap keterampilan berpikir kreatif pada materi ekosistem dan tanggapan peserta didik terhadap model pembelajaran tersebut. Populasi dalam penelitian ini yaitu peserta didik kelas X SMAN 1 Waway Karya semester genap tahun ajaran 2025/2026. Sampel dalam penelitian ini adalah peserta didik kelas X1 sebagai kelas eksperimen berjumlah 36 individu dan kelas X3 sebagai kelas kontrol berjumlah 36 individu yang dipilih dengan teknik *purposive sampling*. Penelitian ini menggunakan desain quasi *experiment non-equivalent control group design with pretest posttest*. Data penelitian berupa data kuantitatif yang diperoleh melalui tes yang dianalisis menggunakan uji *independent sample t-test*. Sementara, data kualitatif diperoleh melalui tanggapan peserta didik terhadap model PBL terintegrasi STEAM dikumpulkan melalui angket dan dianalisis secara deskriptif. Hasil penelitian menunjukkan bahwa penerapan PBL terintegrasi STEAM memberikan pengaruh signifikan terhadap peningkatan kemampuan berpikir kreatif ($t\text{-hitung} > t\text{ tabel}$ 0,05). Selain itu, perolehan hasil uji *effect size* mendapatkan nilai 2,67 yang diinterpretasikan dengan efektivitas besar. Perolehan skor rata-rata *N-Gain* kelas eksperimen yaitu 0,42 (sedang), lebih tinggi daripada kelas kontrol dengan rata-rata *N-Gain* sebesar 0,12 (rendah). Perolehan skor persentase *N-Gain* kemampuan berpikir kreatif kelas eksperimen pada indikator *generating ideas* adalah 53% (sedang), *identifying the quality of ideas* sebesar 42% (sedang), dan *experimenting with ideas* 32% (sedang). Perolehan skor rata-rata tanggapan respon peserta didik adalah 80,35% yang dikategorikan baik.

Kata Kunci: Berpikir Kreatif, Ekosistem, *Problem Based Learning*, STEAM.

ABSTRACT

THE EFFECT OF STEAM INTEGRATED PROBLEM BASED LEARNING ON THE CREATIVE THINKING SKILLS OF 10th GRADE STUDENTS IN THE ECOSYSTEM COURSE

By

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This study aims to determine the effect of using a Problem-Based Learning (PBL) model integrated with STEAM on creative thinking skills in ecosystem-related material and students' responses to this learning model. The population in this study consists of 10th-grade students at SMAN 1 Waway Karya during the second semester of the 2025/2026 academic year. The sample comprises 36 students in class XI (the experimental group) and 36 students in class X3 (the control group), selected using purposive sampling. This study employed a quasi-experimental design with a non-equivalent control group and a pretest-posttest design. The research data consisted of quantitative data obtained through tests and analyzed using an independent samples t-test. Meanwhile, qualitative data were obtained through students' responses to the integrated STEAM PBL model, collected via a questionnaire and analyzed descriptively. The results of the study indicate that the implementation of STEAM-integrated PBL has a significant effect on improving creative thinking skills (t -calculated $0.00 < t$ -table 0.05). Additionally, the effect size test yielded a value of 2.67, which is interpreted as indicating high effectiveness. The average N-Gain score for the experimental class was 0.42 (moderate), higher than that of the control class, which had an average N-Gain of 0.12 (low). The percentage N-Gain scores for the experimental class's creative thinking ability on the generating ideas indicator were 53% (moderate), identifying the quality of ideas at 42% (moderate), and experimenting with ideas at 32% (moderate). The average response score from the students was 80.35%, categorized as good.

Keyword: *Creative Thinking, Ecosystem, Problem Based Learning, STEAM.*