

PENGARUH PEMBELAJARAN BERBASIS PROYEK TERHADAP  
KETERAMPILAN BERPIKIR KRITIS SISWA PADA MATERI  
PENCEMARAN & DAUR ULANG

**Abstrak**

Penelitian ini bertujuan untuk menganalisis pengaruh pembelajaran berbasis proyek terhadap keterampilan berpikir kritis siswa. Keterampilan berpikir kritis siswa terhadap materi pembelajaran, penggunaan struktur logika dan pengalaman, dapat membentuk peserta didik menjadi pribadi mandiri dan bertanggung jawab. Keterampilan berpikir kritis yang digunakan menurut Paul & Elder (Inch *et.al.*, 2006) berkaitan dengan 8 fungsi berpikir kritis yaitu *Question at issue, Purpose, Information, Concepts, Assumptions, Points of view, Interpretation and Inference*, serta *Implication and consequence*. Metode penelitian yang digunakan adalah Weak experiment dengan desain One group pretest-posttest design. Penelitian dilakukan di SMA Negeri 15 Bandung pada kelas X MIA 1 dengan jumlah siswa 33 orang, dipilih berdasarkan tehnik Cluster random sampling. Hasil penelitian menunjukkan pembelajaran berbasis proyek secara signifikan berpengaruh terhadap peningkatan keterampilan berpikir kritis siswa pada materi pencemaran & daur ulang limbah. Keterampilan berpikir kritis siswa di akhir pembelajaran secara keseluruhan mengalami peningkatan ( $g_{\text{kritis}} = 0,43$ ) pada  $\alpha = 0,05$ . Keterampilan berpikir kritis siswa sebelum pembelajaran (*pretest* = 54,3%) lebih rendah dibandingkan setelah pembelajaran berbasis proyek dilakukan (*posttest* = 74%). Keterlaksanaan sintaks pembelajaran berbasis proyek dalam kelas penelitian terlaksana dengan sangat baik (86%). Proyek siswa menghasilkan produk daur ulang limbah anorganik dan organik Hasil analisis terhadap tanggapan siswa di akhir pembelajaran menunjukkan respon positif terhadap pembelajaran berbasis proyek yang telah dilaksanakan.

**Kata Kunci:** *Pembelajaran berbasis proyek, Keterampilan berpikir kritis, Pencemaran lingkungan, Daur ulang limbah.*

# THE INFLUENCE OF PROJECTS BASED LEARNING TO STUDENT CRITICAL THINKING ON POLLUTION & WASTE RECYCLING

## Abstract

This study aims is to analyze the effect of project-based learning on critical thinking skills of junior high school students. Student's critical thinking skills on learning materials, the use of logical structure and experience, can form learners into independent and responsible individuals. Critical thinking skills used in this research by Paul & Elder (Inch *et al.*, 2006) relate to 8 critical thinking functions: Question at issue, Purpose, Information, Concepts, Assumptions, Points of view, Interpretation & Inference, and Implication & consequence. The research method used was Weak experiment with One group pretest-posttest design. The research was conducted in SMA Negeri 15 Bandung in class X MIA 1 with 33 students which selected based on Cluster random sampling technique. The results showed that project-based learning significantly influenced the improvement of students' critical thinking skills on pollution & waste recycling materials. The students' critical thinking skills at the end of learning overall improved ( $g_{critical\ thinking} = 0.43$ ) at  $\alpha = 0.05$ . The students' critical thinking skills before learning ( $pretest = 54.3\%$ ) were lower than after project-based learning ( $posttest = 74\%$ ). The implementation of the project-based learning syntax in the research class performed very well (86%). The student project produces inorganic and organic waste recycling products The analysis results of the student responses at the end of the learning show a positive response to the project-based learning that has been implemented.

**Keywords:** *Project-based learning, Critical thinking skill, Environmental pollution, Waste recycling.*