

## ABSTRAK

**HANIFATI ZOHRINAL HAQ:** “Pengaruh Pembelajaran Proyek Berbasis *Environmental-STREAM (Science, Technology, Religion, Engineering, Arts, Mathematics)* Terhadap Peningkatan Keterampilan *Problem Solving* Pada Pembuatan *Ecoprint*”

Penelitian ini bertujuan untuk mengkaji peningkatan keterampilan *problem solving* peserta didik melalui penerapan model PjBL berbasis E-STREAM. Penelitian ini menggunakan metode kuasi eksperimen dengan desain *non-equivalent control group* serta teknik *purposive sampling*. Subjek penelitian meliputi siswa kelas X-4 (kelas eksperimen) dan X-5 (kelas kontrol) di salah satu SMA Kota Bandung dengan masing-masing berjumlah 34 orang. Instrumen penelitian mencakup lembar observasi, modul ajar, tugas kinerja, dan tes *problem solving*. Indikator keterampilan yang diukur meliputi *define the problem, explore the problem, plan the solution, implement the plan, dan evaluate*. Hasil penelitian menunjukkan keterlaksanaan pendekatan berada kategori sangat baik, dengan rata-rata ketercapaian aktivitas peserta didik sebesar 89,5% dan guru sebesar 89,6%. Rata-rata skor *N-gain* pada kelas eksperimen mencapai 0,58 (kategori sedang), sedangkan pada kelas kontrol sebesar 0,28 (kategori rendah). Indikator dengan capaian tertinggi pada kedua kelas adalah pada aspek *evaluate*. Uji *Independent Samples T-Test* menghasilkan nilai signifikansi  $0,00 < 0,05$ , yang menunjukkan adanya perbedaan signifikan antara kedua kelas. Rata-rata nilai asesmen produk pada kelas eksperimen adalah 61,45% (kategori cukup baik), sedangkan pada kelas kontrol sebesar 58,33% (kategori kurang). Refleksi peserta didik menunjukkan respon positif pada aspek *Fact* (85%), *Feeling* (74%), *Finding* (82%), dan *Future* (65%). Penelitian ini dapat dijadikan strategi pembelajaran alternatif yang efektif untuk mendorong peserta didik meningkatkan keterampilan *problem solving* serta menghubungkan konsep sains dengan permasalahan nyata, khususnya yang berkaitan dengan isu lingkungan.

Kata Kunci: *Problem solving, Pembuatan Ecoprint, PjBL, Environmental-STREAM*

## ABSTRACT

**HANIFATI ZOHRINAL HAQ:** *“The Impact of Environmental-STREAM (Science, Technology, Religion, Engineering, Arts, Mathematics) Project-Based Learning on the Improvement of Problem-Solving Skills in Ecoprint Creation”*

*This study aims to examine the improvement of students' problem-solving skills through the implementation of the E-STREAM-based PjBL model. This study employed a quasi-experimental method with a non-equivalent control group design and used purposive sampling. The research subjects consisted of students in Class X-4 (experimental group) and Class X-5 (control group) at a high school in Bandung, with 34 students in each class. Research instruments included observation sheets, teaching modules, performance tasks, and problem-solving tests. The measured skill indicators included defining the problem, exploring the problem, planning the solution, implementing the plan, and evaluating. The results showed that the implementation of the approach was in the very good category, with an average achievement rate of 89.5% for students and 89.6% for teachers. The average N-gain score in the experimental class reached 0.58 (moderate category), while in the control class it was 0.28 (low category). The indicator with the highest achievement in both classes was in the “evaluate” aspect. The Independent Samples T-Test yielded a significance value of  $0.00 < 0.05$ , indicating a significant difference between the two classes. The average product assessment score in the experimental class was 61.45% (fairly good category), while in the control class it was 58.33% (poor category). Student reflections showed positive responses in the aspects of Fact (85%), Feeling (74%), Finding (82%), and Future (65%). This study can serve as an effective alternative learning strategy to encourage students to improve their problem-solving skills and connect scientific concepts with real-world problems, particularly those related to environmental issues.*

**Keywords:** *Problem solving, Ecoprinting, PjBL, Environmental-STREAM*