

ABSTRAK

HANNA ALFITRA SULAEMAN: “Pengaruh Pembelajaran Proyek Berbasis Etno-STREAM (*Science, Technology, Religion, Engineering, Arts And Mathematics*) Terhadap Peningkatan Keterampilan Proses Sains Pada Pembuatan Peuyeum Bandung”

Penelitian ini bertujuan untuk menganalisis apakah model *Project Based Learning* (PjBL) berbasis pendekatan Etno-STREAM (*Science, Technology, Religion, Engineering, Arts, and Mathematics*) berpengaruh terhadap peningkatan keterampilan proses sains (KPS) peserta didik pada pembelajaran pembuatan peuyeum Bandung. Penelitian menggunakan metode quasi eksperimen dengan desain *non-equivalent control group* dan teknik *purposive sampling*. Subjek penelitian adalah siswa kelas X-10 (kelas eksperimen) dan X-1 (kelas kontrol) di salah satu SMA di Bandung Barat, masing-masing berjumlah 33 orang. Instrumen yang digunakan meliputi lembar observasi, angket refleksi, asesmen produk, dan soal KPS. Indikator KPS yang dikaji mencakup: mengamati, mengontrol variabel, merumuskan hipotesis, melakukan eksperimen, menyimpulkan, dan mengomunikasikan hasil. Hasil menunjukkan bahwa keterlaksanaan model berada pada kategori sangat baik, dengan rata-rata ketercapaian aktivitas siswa 90,88% dan guru 89,3%. Rata-rata skor N-gain kelas eksperimen sebesar 0,70 (kategori tinggi), sedangkan kelas kontrol sebesar 0,50 (kategori sedang). Indikator tertinggi di kelas eksperimen adalah melakukan eksperimen, dan di kelas kontrol adalah mengontrol variabel. Uji Mann-Whitney menghasilkan nilai signifikansi $0,001 < 0,05$, menandakan adanya perbedaan signifikan antara kedua kelas. Rata-rata nilai asesmen produk kelas eksperimen 85 dan kelas kontrol 78,75, keduanya dalam kategori baik. Refleksi siswa menunjukkan tanggapan positif pada aspek *Fact* (58%), *Filling* (55%), *Finding* (58%), dan *Future* (42%). Implikasi hasil penelitian ini menunjukkan bahwa penerapan PjBL berbasis Etno-STREAM pada pembelajaran pembuatan peuyeum Bandung dapat menjadi alternatif pembelajaran yang mendukung penguatan keterampilan proses sains dan memberikan pengalaman belajar yang kontekstual bagi peserta didik.

Kata Kunci: Etno-STREAM, Keterampilan Proses Sains, Pembuatan Peuyeum Bandung, *Project Based Learning*

ABSTRACT

HANNA ALFITRA SULAEMAN: *“The Effect of Ethno-STREAM (Science, Technology, Religion, Engineering, Arts, and Mathematics) Project-Based Learning on the Improvement of Science Process Skills in the Making of Peuyeum Bandung”*

This study examined whether the Project Based Learning (PjBL) model based on the Ethno-STREAM approach (Science, Technology, Religion, Engineering, Arts, and Mathematics) could improve students' scientific process skills (SPS) in learning the production of Peuyeum Bandung. A quasi-experimental method with a non-equivalent control group design and purposive sampling was applied. The participants were 66 tenth-grade students from a senior high school in West Bandung, divided into an experimental class (X-10) and a control class (X-1), each with 33 students. Research instruments included observation sheets, reflection questionnaires, product assessments, and SPS tests, covering indicators of observing, controlling variables, formulating hypotheses, conducting experiments, drawing conclusions, and communicating results. The results showed very good implementation of the model, with average activity achievement of 90.88% for students and 89.3% for teachers. The experimental class achieved an average N-gain score of 0.70 (high), while the control class scored 0.50 (medium). The highest-performing indicator was conducting experiments in the experimental class and controlling variables in the control class. A Mann-Whitney test revealed a significance value of $0.001 < 0.05$, indicating a significant difference between groups. Product assessment scores averaged 85 for the experimental class and 78.75 for the control class, both in the good category. Student reflections also indicated positive responses in aspects of Fact (58%), Feeling (55%), Finding (58%), and Future (42%). These findings suggest that PjBL based on the Ethno-STREAM approach can strengthen students' scientific process skills and provide meaningful, contextual learning experiences in biotechnology.

Keywords: *Ethno-STREAM, Peuyeum Bandung, Project-Based Learning, Science Process Skill*