

ABSTRAK

EFEKTIVITAS PEMBELAJARAN BERBASIS PROYEK PENGOLAHAN LIMBAH KULIT NANAS DAN AMPAS TEBU DALAM MENINGKATKAN KETERAMPILAN PROSES SAINS SISWA

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Penelitian ini bertujuan untuk mendeskripsikan efektivitas pembelajaran berbasis proyek pengolahan limbah ampas tebu dan kulit nanas dalam meningkatkan keterampilan proses sains siswa SMA. Metode penelitian yang digunakan adalah *Weak Eksperiment* dengan desain *The One Group Pretest-Posttest Design*. Populasi dalam penelitian ini adalah seluruh siswa kelas XI di SMAN 16 Bandar Lampung. Pengambilan sampel dilakukan dengan teknik *purposive sampling* dan kelas XI.F4 dijadikan sebagai sampel penelitian. Teknik analisis data dilakukan dengan uji statistik parametrik uji t dan perhitungan n-gain. Hasil penelitian menunjukkan bahwa nilai rata-rata postes siswa lebih tinggi daripada nilai rata-rata pretes, dengan n-gain rata-rata siswa yaitu sebesar 0,54 yang berkategori sedang. Rata rata persentase respon siswa sebesar 82,55% dan keterlaksanaan pembelajaran sebesar 80,1% berkategori sangat baik dan sangat tinggi. Berdasarkan hasil penelitian ini dapat disimpulkan bahwa pembelajaran berbasis proyek pengolahan limbah kulit nanas dan ampas tebu efektif dalam meningkatkan keterampilan proses sains.

Kata kunci : pembelajaran berbasis proyek, keterampilan proses sains, limbah kulit nanas, limbah ampas tebu

ABSTRACT

THE EFFECTIVENESS OF PROJECT-BASED LEARNING ON THE PROCESSING OF PINEAPPLE PEEL AND SUGARCANE BAGASSE WASTE IN ENHANCING STUDENTS' SCIENCE PROCESS SKILLS

By

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This study aims to describe the effectiveness of project-based learning on the processing of sugarcane bagasse and pineapple peel waste in enhancing the science process skills of high school students. The research method used was a weak experimental design with the One Group Pretest-Posttest Design. The population of this study consisted of all eleventh-grade students at SMAN 16 Bandar Lampung. The sample was selected using purposive sampling, and class XI.F4 was chosen as the research sample. Data analysis was carried out using a parametric t-test and n-gain calculation. The results showed that the average post-test scores were higher than the pre-test scores, with an average n-gain of 0.54, which falls into the medium category. The average percentage of student responses was 82.55%, and the learning implementation rate was 80.1%, categorized as excellent and very high. Based on these results, it can be concluded that project-based learning on the processing of sugarcane bagasse and pineapple peel waste is effective in enhancing students' science process skills.

Keywords : project-based learning, sugarcane bagasse waste, pineapple peel waste, science process skills