ABSTRAK

EFEKTIVITAS MODEL PEMBELAJARAN BERBASIS PROYEK PEMANFAATAN LIMBAH INDUSTRI TEPUNG TAPIOKA DAN GULA DALAM MENINGKATKAN KETERAMPILAN BERPIKIR KREATIF SISWA SMA

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Model pembelajaran berbasis proyek (PBP) merupakan pendekatan kontekstual yang melibatkan siswa secara aktif dalam memilih topik, merancang solusi, memecahkan masalah, serta menghasilkan produk nyata dalam waktu tertentu. PBP dinilai mampu meningkatkan rasa ingin tahu dan pemahaman siswa, serta mendorong pengembangan keterampilan berpikir kreatif. Namun, penerapannya di sekolah masih terbatas. Penelitian ini bertujuan untuk mendeskripsikan efektivitas model PBP dalam meningkatkan keterampilan berpikir kreatif siswa pada materi pengolahan limbah industri tepung tapioka dan gula. Metode yang digunakan adalah *weak experiment* dengan desain *One Group Pretest-Posttest Design*. Sampel penelitian adalah siswa kelas XI-6 yang dipilih melalui teknik *purposive sampling.* Analisis data dilakukan melalui uji-t dan perhitungan n-gain. Hasil penelitian menunjukkan bahwa rata-rata nilai postest lebih tinggi daripada pretest, dengan nilai n-gain sebesar 0,765 berkategori tinggi. Keterlaksanaan pembelajaran sebesar 82,45% berkategori sangat tinggi dan respon siswa sebesar 83,5% berkategori sangat baik. Dengan demikian, dapat disimpul-kan bahwa model pembelajaran berbasis proyek efektif dalam meningkatkan keterampilan berpikir kreatif siswa.

Kata Kunci: Keterampilan berpikir kreatif, limbah industri tepung tapioka, limbah industri gula, pembelajaran berbasis proyek

ABSTRACT

EFFECTIVENESS OF PROJECT-BASED LEARNING ON THE UTILIZATION OF TAPIOCA FLOUR AND SUGAR INDUSTRY WASTE TO ENHANCE CREATIVE THINKING SKILLS IN HIGH SCHOOL STUDENTS

By

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Project-Based Learning represents a contextual instructional approach that actively involves students in selecting topics, designing solutions, solving problems, and producing tangible outcomes within a predetermined timeframe. This model has been recognized for its potential to enhance students' curiosity, deepen conceptual understanding, and foster the development of creative thinking skills. Nevertheless, its application in school settings remains limited. This study aims to examine the effectiveness of the PBL model in enhancing students' creative thinking skills on the subject of industrial waste processing of tapioca flour and sugar. The research employed a weak experimental method using a One Group Pretest-Posttest Design. The sample consisted of students from class XI-6, selected through purposive sampling techniques. Data analysis was conducted using the t-test and n-gain calculation. The findings indicated that the average posttest scores were significantly higher than the pretest scores, with an n-gain score of 0.765, which falls into the high category. The implementation of the learning process reached 82.45%, categorized as very high, while the student response rate reached 83.5%, categorized as very good. Based on these results, it can be concluded that the project-based learning model is effective in improving students' creative thinking skills.

Keywords: Creative thinking skills, tapioca starch industry waste, sugar industry waste, project-based learning