# ABSTRAK

## PENGEMBANGAN PROGRAM PEMBELAJARAN BERBASIS PROYEK PENGOLAHAN LIMBAH SAYURAN UNTUK MENINGKATKAN KREATIVITAS ILMIAH SISWA

**Oleh**

**ANADIA ROSARIA**

Penelitian ini bertujuan untuk mengembangkan program pembelajaran berbasis proyek pengolahan limbah sayuran untuk meningkatkan kreativitas ilmiah siswa. Metode penelitian yang digunakan yaitu metode campuran (*mixed methods*) dengan desain *embedded experimental model* menurut Creswell. Subyek pada penelitian ini yaitu pada sebelum intervensi melibatkan 10 guru IPA dan 28 siswa SMP di Kabupaten Tanggamus dan selama intervensi melibatkan 32 siswa kelas IX A di SMPN 1 Kotaagung Timur. Teknik analisis data kuantitatif dengan Uji *Paired Sample T-Test* dan data kualitatif menggunakan teknik analisis deskriptif kualitatif. Hasil penelitian sebelum intervensi menunjukkan bahwa program pembelajaran berbasis proyek pengolahan limbah sayuran untuk meningkatkan kreativitas ilmiah memiliki karakteristik yang valid ditinjau dari aspek kesesuaian isi dan konstruksi. Hasil penelitian selama intervensi menunjukkan bahwa pembelajaran berbasis proyek pengolahan limbah sayuran efektif dalam meningkatkan kreativitas ilmiah ditinjau dari *n-Gain* sebesar 0,87 berkriteria tinggi, uji-t sebesar 27,073 yang artinya terdapat perbedaan yang sangat signifikan pada nilai *pretest* dan *posttest* kreativitas ilmiah, serta *effect size* sebesar 0,96 berkategori efek besar. Keefektifan program pembelajaran juga didukung dengan keterlaksanaan program pembelajaran selama intervensi yang ditinjau dari penilaian kinerja guru sebesar 89% berkriteria tinggi, penilaian kinerja siswa sebesar 89% berkriteria tinggi, dan penilaian pembuatan produk sebesar 87,65% berkriteria sangat tinggi. Hasil penelitian setelah intervensi didapatkan bahwa pembelajaran berbasis proyek pengolahan limbah sayuran dalam meningkatkan kreativitas ilmiah mendapatkan respon positif dari siswa sebesar 95% berkriteria sangat tinggi. Berdasarkan hasil penelitian tersebut disimpulkan bahwa program pembelajaran berbasis proyek pengolahan limbah sayuran yang dikembangkan memiliki karakteristik yang valid, terlaksana dengan sangat baik, efektif, dan mendapat respon positif dari siswa dalam meningkatkan kreativitas ilmiah siswa.

Kata kunci: pembelajaran berbasis proyek, limbah sayuran, kreativitas ilmiah

## *ABSTRACT*

### *DEVELOPMENT OF PROJECT-BASED LEARNING PROGRAM FOR VEGETABLE WASTE TREATMENT TO IMPROVE STUDENT SCIENTIFIC CREATIVITY*

***By***

**ANADIA ROSARIA**

This study aims to develop a learning program based on a vegetable waste processing project to enhance students' scientific creativity. According to Creswell, the research method used is a mixed method with an embedded experimental model design. The subjects of this study were before the intervention involving 10 science teachers and 28 junior high school students in Tanggamus District and during the intervention involving 32 class IX A students at SMPN 1 Kotaagung Timur. Quantitative data analysis techniques with Paired Sample T-Test and qualitative data using qualitative descriptive analysis techniques. The results of the research before the intervention showed that the vegetable waste processing project-based learning program to increase scientific creativity has valid characteristics in terms of the suitability of content and construction. The results of the study during the intervention showed that the vegetable waste processing project-based learning was effective in increasing scientific creativity in terms of the n-Gain of 0.87 with high criteria, the t-test of 27.073, which means that there is a very significant difference in the pretest and posttest scores of scientific creativity, and an effect size of 0.96 is in the large effect category. The effectiveness of the learning program is also supported by the implementation of the learning program during the intervention, in terms of the teacher's performance assessment of 89% with high criteria, 89% of student performance ratings with high criteria, and an assessment of product creation by 87.65% with very high criteria. After the intervention, the results of the study found that the vegetable waste processing project-based learning to increase scientific creativity received a positive response from students of 95% with very high criteria. Based on the results of this study, it was concluded that the vegetable waste processing project-based learning program developed had valid characteristics, was very well implemented, effective, and received positive responses from students to increasing students' scientific creativity.



*Keyword: project based learning, vagetable waste, creativity imagination*