

**PEMBELAJARAN MATERI PEMBANGUNAN BERKELANJUTAN
MENGUNAKAN BOTANICAL ECO-GAMIFICATION UNTUK
MENINGKATKAN KOMPETENSI ESD, KREATIVITAS DAN
ENGAGEMENT MAHASISWA**

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Diajukan untuk memenuhi sebagian syarat untuk memperoleh gelar
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Sebuah Tesis yang diajukan untuk memenuhi salah satu syarat memperoleh gelar Magister Pendidikan (M.Pd.) pada Fakultas Pendidikan Matematika dan Ilmu Pengetahuan Alam

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PEMBELAJARAN MATERI PEMBANGUNAN BERKELANJUTAN MENGGUNAKAN
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ABSTRAK

Kompetensi *Education for Sustainable Development* (ESD) dan keterampilan kreativitas menjadi salah satu kompetensi kunci untuk menghadapi masa depan khususnya bagi generasi Z. Penerapan kompetensi tersebut pada jenjang pendidikan memiliki hambatan yakni kurangnya sumber belajar yang mendukung ESD, dan karakteristik generasi Z yang membutuhkan pembelajaran aktif berbasis teknologi. Untuk mengatasi hambatan tersebut, dikembangkan sumber belajar yang mendukung ESD di kebun Botani UPI serta pembelajaran aktif berbasis gamifikasi yang dinamakan program Botanical Eco-gamification. Tujuan dari penelitian ini ialah menjelaskan penerapan program Botanical Eco-gamification dan efektivitasnya dalam meningkatkan kompetensi ESD, keterampilan kreativitas, dan *engagement* mahasiswa pada materi pembangunan berkelanjutan. Metode penelitian yang digunakan ialah penelitian kuantitatif dengan *one-group pretest-posttest design* dengan instrumen berupa tes, kuesioner dan penugasan. Hasil penelitian menunjukkan pembelajaran materi pembangunan berkelanjutan melalui program Botanical Eco-gamification memiliki pengaruh yang signifikan untuk meningkatkan hasil belajar mahasiswa pada kategori sedang (*N-Gain: 0,33*) dari hasil belajar awal pada kategori baik (67,04) menjadi kategori sangat baik (81,93) setelah perlakuan. Mahasiswa merespon program yang dilaksanakan baik dalam meningkatkan keterampilan kreativitas (76,29) dan pelaksanaan program secara umum sangat baik (86,79).

Kata Kunci: Kompetensi ESD; Keterampilan Kreativitas; *Engagement*; Gamifikasi; *Outdoor Learning*; SDGs.

ABSTRACT

Education for Sustainable Development (ESD) competencies and creativity skills are one of the key competencies for facing the future, especially for generation Z. The application of these competencies at the educational level has obstacles, namely the lack of learning resources that support ESD, and the characteristics of generation Z which requires active learning based on technology. To overcome these obstacles, learning resources that support ESD were developed in the UPI Botanical garden as well as gamification-based active learning called the Botanical Eco-gamification program. The aim of this research is to explain the application of the Botanical Eco-gamification program and its effectiveness in increasing ESD competence, creativity skills and student engagement in sustainable development material. The research method used is quantitative research with a one-group pretest-posttest design with instruments in the form of tests, questionnaires and assignments. The research results show that learning sustainable development material through the Botanical Eco-gamification program has a significant influence on improving student learning outcomes in the medium category (N-Gain: 0.33) from initial learning outcomes in the good category (67.04) to the very good category (81.93) after treatment. Students responded well to the program in improving creativity skills (76.29) and the implementation of the program was generally very good (86.79).

Keywords: ESD Competency; Creativity Skills; Engagement; Gamification; Outdoor Learning; SDGs

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