

**PEMBEKALAN KOMPETENSI *EDUCATION FOR SUSTAINABLE DEVELOPMENT* (ESD) DAN HASIL BELAJAR SISWA PADA MATERI PERUBAHAN LINGKUNGAN DI SMA**

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diajukan untuk memenuhi sebagian syarat untuk memperoleh gelar Magister  
Pendidikan Biologi



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Sebuah Tesis yang diajukan untuk memenuhi salah satu syarat memperoleh gelar Magister Pendidikan (M.Pd.) pada Departemen Pendidikan Biologi

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**ABSTRAK**

Penelitian ini bertujuan untuk menganalisis pembekalan kompetensi ESD dan hasil belajar siswa pada materi perubahan lingkungan. Metode penelitian yang digunakan dalam penelitian ini adalah metode *pre experimental* dengan desain penelitian “*The One-Group Pretest-Posttest Design*”. Subjek penelitian adalah siswa kelas X di salah satu SMA di Kota Bandung yang berjumlah 29 orang yang dipilih secara *purposive sampling*. Data dikumpulkan melalui instrumen yaitu: tes tertulis pada aspek pengetahuan dan kompetensi berpikir sistem, lembar *peer assessment* pada aspek sikap, lembar observasi pada aspek keterampilan, dan angket respons terhadap proses pembelajaran. Data kompetensi ESD berpikir sistem, pengetahuan, dan sikap dianalisis dengan N-Gain dengan cara menghitung proporsi untuk setiap kategori. Hasil analisis N-Gain pada aspek pengetahuan dan sikap menunjukkan 48,27% siswa kategori sedang. Hasil analisis N-Gain pada kompetensi berpikir sistem menunjukkan 51,72% siswa pada kategori rendah. Berdasarkan hasil observasi aspek keterampilan diperoleh rata-rata 84,20, 85% siswa merespons positif terhadap proses pembelajaran ESD. Hasil penelitian menunjukkan kompetensi ESD dan hasil belajar siswa SMA secara umum meningkat, sehingga dapat disimpulkan bahwa pembekalan kompetensi ESD dan hasil belajar siswa pada materi perubahan lingkungan berdampak positif terhadap proses belajar siswa.

**Kata kunci:** Kompetensi ESD, kompetensi berpikir sistem, hasil belajar, perubahan lingkungan, pembelajaran biologi terintegrasi ESD

# **THE EQUIPMENT OF EDUCATION FOR SUSTAINABLE DEVELOPMENT (ESD) COMPETENCY AND LEARNING OUTCOMES OF STUDENTS ON THE ENVIRONMENTAL CHANGES MATERIAL IN HIGH SCHOOL**

## **ABSTRACT**

This study aim is to analyze the equipment of ESD competency and student learning outcomes on environmental change material. The research method was used the pre experimental method with the research design The One-Group Pretest-Posttest Design in this study. The research subjects were class X students in one of the high schools in Bandung, twenty-nine students were selected by purposive sampling. Data was collected through instruments, namely: written tests on aspects of knowledge, system thinking competency, peer assessment sheets on aspects of attitude, observation sheets on aspects of skills, and questionnaire responses to the learning process. Data of ESD competency in systems thinking, knowledge, and attitude were analyzed by N-Gain with calculating proportions for each category. The results of the N-Gain analysis on aspects of knowledge and attitudes showed that 48.27% of students were in the medium category. The results of the N-Gain analysis on ESD competency in system thinking showed 51.72% of students in the low category. Based on the results of observation of the aspects of skills obtained an average of 84.20, 85% of students responded positively to the learning process of ESD. The results showed the ability of ESD and the learning outcomes of high school students in general to improve, so it can be concluded that the equipment of ESD competencies and student learning outcomes on environmental change material has a positive impact on student learning processes.

**Keywords:** ESD competency, system thinking, learning outcomes, environmental change, ESD integrated biology learning

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