ABSTRAK

PENGARUH PENDEKATAN STEM *(SCIENCE, TECHNOLOGY, ENGINEERING AND MATHEMATIC)* BERBANTU E-LKPD TERHADAP KEMAMPUAN LITERASI SAINS PESERTA DIDIK PADA MATERI EKOSISTEM

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Penelitian ini bertujuan mengetahui pengaruh pendekatan STEM berbantu E-LKPD terhadap kemampuan literasi sains peserta didik materi ekosistem. Penelitian dilaksanakan di SMAN 1 Pasir Sakti tahun ajaran 2024/2025. Desain penelitian yang digunakan yaitu quasi eksperimen dengan teknik *pretest-posttest non-equivalent control group design*. Sampel diambil menggunakan teknik *purposive sampling* dengan kelas X2 sebagai kelas eksperimen dan kelas X8 sebagai kelas kontrol. Jenis data berupa data kuantitatif dan kualitatif. Data dianalisis secara statistik menggunakan uji *Independent Sample T-test* pada taraf signifikansi 5%. Hasil nilai *pretest-posttest* pada kelas eksperimen yang menggunakan pendekatan STEM mendapat nilai *N-Gain* sebesar 0,56 termasuk kategori sedang, lebih tinggi dibandingkan kelas kontrol, yaitu dengan nilai *N-Gain* 0,38 termasuk kategori sedang. Uji *Independent Sample T-test* terhadap skor *N-Gain* siswa menunjukan hasil sig. (2-*tailed*) 0,00< 0,05 maka membuktikan bahwa terdapat perbedaan yang signifikan pada rata-rata peningkatan kemampuan literasi sains antara kelas eksperimen dan kelas kontrol. Uji *effect size* didapatkan nilai 2,81 dengan kriteria "besar". Hasil data angket tanggapan peserta didik diperoleh rata rata persentase sebesar 80,28% dengan kategori baik. Berdasarkan hasil tersebut, dapat disimpulkan bahwa pendekatan STEM berbantu E-LKPD berpengaruh terhadap peningkatan kemampuan literasi sains peserta didik pada materi ekosistem.

Kata Kunci: E-LKPD, Ekosistem, Literasi Sains, Pendekatan STEM

ABSTRACT

THE EFFECT OF THE STEM APPROACH (SCIENCE, TECHNOLOGY, ENGINEERING AND MATHEMATICS) ASSISTED BY E-LKPD ON THE SCIENCE LITERACY SKILLS OF STUDENTS ON ECOSYSTEM MATERIAL

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This study aims to determine the effect of the STEM approach assisted by E-LKPD on the science literacy skills of students on ecosystem material. The research was conducted at SMAN 1 Pasir Sakti in the 2024/2025 school year. The research design used was quasi experiment with pretest-posttest non-equivalent control group design technique. The sample was taken using purposive sampling technique with class X2 as the experimental class and class X8 as the control class. The types of data are quantitative and qualitative data. The data were statistically analysed using the Independent Sample T-test test at the 5% significance level. The results of the pretest-posttest scores in the experimental class using the STEM approach got an N-Gain value of 0.56 including the medium category, higher than the control class, which was with an N-Gain value of 0.38 including the medium category. Independent Sample T-test test on students' N-Gain scores showed sig. (2-tailed) 0.00 <0.05, proving that there is a significant difference in the average increase in science literacy skills between the experimental and control classes. The effect size test obtained a value of 2.81 with 'large' criteria. The results of questionnaire data on students' responses obtained an average percentage of 80.28% in the good category. Based on these results, it can be concluded that the STEM approach assisted by E-LKPD has an effect on improving students' science literacy skills on ecosystem material.

Keywords: *E-LKPD, Ecosystem, Science Literacy, STEM Approach*