

PENGARUH PEMBELAJARAN BERBASIS PROYEK TERHADAP KEMAMPUAN LITERASI SAINS SISWA SMA KELAS X PADA SUBMATERI PENCEMARAN AIR

ABSTRAK

Penelitian ini bertujuan untuk mengetahui pengaruh pembelajaran berbasis proyek terhadap kemampuan literasi sains siswa SMA kelas X pada submateri pencemaran air. Metode penelitian yang digunakan adalah *pre-experimental design*, dimana hanya terdapat satu kelas eksperimen, tanpa kelas kontrol. Data diperoleh dari tes *pretest* dan *posttest multiple choice* kompetensi literasi sains, *pretest* dan *posttest* sikap siswa terhadap sains, keterlaksanaan sintaks pembelajaran berbasis proyek, dan respon siswa terhadap model pembelajaran berbasis proyek. Keterlaksanaan sintaks model pembelajaran berbasis proyek mencapai 89% dan termasuk pada kategori sangat baik. Hasil pengolahan angket respon siswa terhadap model pembelajaran berbasis proyek didapatkan 79,25% siswa memberikan respon dalam kategori baik terhadap pelaksanaan model pembelajaran berbasis proyek. Peningkatan kemampuan literasi sains siswa dilihat dengan menghitung N-gain tes *multiple choice* dan tes angket sikap siswa. N-gain untuk tes *multiple choice* kompetensi literasi sains adalah 0,43, artinya peningkatan yang terjadi termasuk pada kategori sedang, sedangkan N-gain untuk tes sikap siswa terhadap sains diperoleh 0,26, termasuk pada kategori rendah. Perhitungan uji t' untuk tes *multiple choice* literasi sains adalah 6,86, sehingga $t' > 1,70$. Perhitungan uji t untuk tes sikap siswa terhadap sains adalah 3,03 dengan t tabel= 1,67, sehingga t hitung $> t$ tabel. Dengan demikian, hipotesis nol (H_0) ditolak, artinya model pembelajaran berbasis proyek memberikan pengaruh yang signifikan terhadap kemampuan literasi sains siswa SMA kelas X pada submateri pencemaran air.

Kata Kunci: *Literasi Sains, Pembelajaran Berbasis Proyek, Pencemaran Air*

THE EFFECT OF PROJECT-BASED LEARNING TOWARDS STUDENTS' SCIENTIFIC LITERACY ABILITY GRADE X IN WATER POLLUTION SUBTOPIC

ABSTRACT

This study aimed to determine the effect of project-based learning towards scientific literacy ability of high school students grade X in water pollution subtopic. This research used pre-experimental design method, that used one class as experiment class, and there are no control class. The datas obtained from pretest and postest in the multiple choice form based on competency aspects of scientific literacy, and students' attitudes toward science, performance of project-based learning syntax, and students' response towards project-based learning model. The performance of project-based learning syntax is 89%, this score means that the performance of project-based learning syntax did well. The result of students' response questionnaire toward project-based learning model is 79,25%, students showed good response to this learning. Increased ability scientific literacy of students seen by calculating the N-gain test multiple choice and test students' attitudes toward science questionnaires. Multiple choice N-gain of competency of scientific literacy is 0,43, this score meaning that the increase that occurred included in the medium category, whereas N-gain of students' attitudes toward science gained 0,26, this score meaning that the increase that occurred included in the low category. The calculation of t' test to multiple choice scientific literacy is 6,86, so that $t' > 1,70$. t test calculation to test of students' attitude towards science is 3,03 with t table = 1,67, so that $t < t$ table. Thus, the null hypothesis (H_0) is rejected, it means project-based learning model provides a significant effect in the ability of scientific literacy of high school students grade X in water pollution subtopic.

Keywords: Scientific Literacy, Project-based Learning, Water Pollution