ABSTRAK

**PENGARUH PBL-STEM BERBASIS *SOCIO-SCIENTIFIC ISSUES*
TERHADAP KEMAMPUAN PEMECAHAN MASALAH
PESERTA DIDIK SMP NEGERI 1 GADINGREJO**

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Penelitian ini bertujuan untuk mengetahui pengaruh penggunaan PBL-STEM berbasis *socio-scientific issues* terhadap peningkatan kemampuan pemecahan masalah peserta didik SMP Negeri 1 Gadingrejo. Sampel yang diambil menggunakan teknik *cluster random sampling* dengan jumlah sampel 32 peserta didik kelas VII.1 sebagai kelas eksperimen dan 32 peserta didik kelas VII.2 sebagai kelas kontrol. Desain penelitian yang digunakan *quasy experiment* dengan teknik *pretest-posttest non equivalent control group design*. Data kemampuan pemecahan masalah diukur menggunakan *pretest-posttest* sedangkan data tanggapan peserta didik terhadap penggunaan PBL-STEM berbasis *socio-scientific issues* diukur menggunakan angket. Hasil penelitian menunjukkan peningkatan kemampuan pemecahan masalah peserta didik di kelas eksperimen (0,66 kategori sedang) lebih tinggi dibandingkan kelas kontrol (0,45 kategori sedang). Hasil uji *independent sample t-test* didapatkan nilai *sig. (2-tailed)* 0,00 < 0,05 artinya H_0 ditolak dan H_1 diterima. Dengan demikian, dapat disimpulkan bahwa penggunaan PBL-STEM berbasis *socio-scientific issues* berpengaruh signifikan terhadap peningkatan kemampuan pemecahan masalah peserta didik. Peningkatan indikator kemampuan pemecahan masalah yang paling tinggi adalah merumuskan alternatif strategi (0,81 kategori tinggi) sedangkan yang paling rendah adalah mengevaluasi pemecahan masalah (0,49 kategori sedang). Hasil tanggapan didapatkan hampir semua peserta didik setuju (85,72%) bahwa penggunaan PBL-STEM berbasis *socio-scientific issue* menunjukkan adanya tanggapan positif dan diterima baik oleh peserta didik.

Kata kunci: PBL, STEM, *Socio-Scientific Issues,* Kemampuan Pemecahan
Masalah

ABSTRACT

***THE EFFECT OF PBL-STEM BASED ON SOCIO-SCIENTIFIC ISSUES
ON THE PROBLEM-SOLVING ABILITY OF STUDENTS
AT SMP NEGERI 1 GADINGREJO***

By

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This study aims to determine the effect of using PBL-STEM based on socio-scientific issues on improving students problem-solving abilities at SMP Negeri 1 Gadingrejo. The sample was taken using a cluster random sampling technique with a sample size of 32 students in class VII.1 as the experimental class and 32 in class VII.2 as the control class. The research design used was a quasi-experiment with a pretest-posttest non-equivalent control group design technique. Data on problem-solving abilities were measured using a pretest-posttest, while data on student responses to using PBL-STEM based on socio-scientific issues were measured using a questionnaire. The results showed that the increase in students' problem-solving abilities in the experimental class (0.66 in the medium category) was higher than in the control class (0.45 in the medium category). The results of the independent sample t-test obtained a sig. (2-tailed) value of 0.00 <0.05, meaning that H_0 was rejected and H_1 was accepted. Thus, the use of PBL-STEM based on socio-scientific issues has a significant effect on improving students' problem-solving abilities. The highest increase in problem-solving ability indicators was when formulating alternative strategies (0.81 high category), while the lowest was when evaluating problem-solving (0.49 medium category). The responses showed that almost all students (85.72%) agreed that using PBL-STEM based on socio-scientific issues showed a positive response and was well received by students.

Keyword: *PBL, STEM, Socio-Scientific Issues, Problem-Solving Ability*