

ABSTRAK

PENGARUH MODEL *PROBLEM-BASED LEARNING* BERBANTUAN *MULTIPLE REPRESENTATION* TERHADAP KEMAMPUAN BERPIKIR KRITIS SISWA SMP PADA MATERI PERUBAHAN IKLIM

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Penelitian ini bertujuan untuk mengetahui pengaruh pembelajaran *Problem-Based Learning* berbantuan *Multiple Representation* terhadap kemampuan berpikir kritis peserta didik pada materi perubahan iklim. Penelitian ini menggunakan desain *quasi experiment* dengan pola desain *pretest-posttest nonequivalent control group*. Subjek penelitian adalah peserta didik yang terdiri atas 28 peserta didik pada kelas eksperimen dan 28 peserta didik pada kelas kontrol yang dipilih menggunakan teknik *Saturated sampling*. Data kemampuan berpikir kritis diambil menggunakan tes, sedangkan data tanggapan peserta didik diperoleh melalui angket. Hasil analisis data menunjukkan bahwa peningkatan kemampuan berpikir kritis pada kelas eksperimen memperoleh nilai *N-Gain* 0,72 yang termasuk dalam kategori tinggi sedangkan kelas kontrol memperoleh nilai *N-Gain* 0,37 dengan kategori sedang. Hasil uji independent sample t-test diperoleh nilai sig. (2-tailed) sebesar $0,000 < 0,05$ sehingga H_0 ditolak. Hasil tersebut menunjukkan bahwa penerapan model *Problem Based-Learning* dengan pendekatan *Multiple Representation* berpengaruh signifikan terhadap peningkatan kemampuan berpikir kritis peserta didik. Hasil angket tanggapan menunjukkan bahwa peserta didik memberikan respon positif terhadap penerapan model *Problem-Based Learning* dengan pendekatan *Multiple Representation*. Untuk mendukung hasil yang lebih optimal, penerapan model ini perlu disertai dengan pengelolaan waktu dan pendampingan yang lebih terarah, khususnya pada kegiatan diskusi dan penyelidikan, sehingga keterlibatan peserta didik serta pengembangan kemampuan berpikir kritis dapat berlangsung secara lebih maksimal.

Kata Kunci : Berpikir Kritis, *Problem-Based Learning*, *Multiple Representation*

ABSTRACT

THE EFFECT OF THE MULTIPLE REPRESENTATION ASSISTED PROBLEM-BASED LEARNING MODEL ON JUNIOR HIGH SCHOOL STUDENTS' CRITICAL THINKING ABILITIES ON CLIMATE CHANGE

By

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This study aimed to determine the effect of Problem-Based Learning assisted by Multiple Representation on students' critical thinking skills in the topic of climate change. The study employed a quasi-experimental design using a pretest-posttest non-equivalent control group design. The research subjects consisted of 28 students in the experimental class and 28 students in the control class, selected using a saturated sampling technique. Data on critical thinking skills were collected through tests, while students' responses were obtained using a questionnaire. The results showed that the improvement in critical thinking skills of the experimental class achieved an N-Gain score of 0.72, which was categorized as high, whereas the control class obtained an N-Gain score of 0.37, which was categorized as moderate. The results of the independent sample t-test showed a significance value (Sig. 2-tailed) of $0.000 < 0.05$; therefore, H_0 was rejected. These findings indicate that the implementation of Problem-Based Learning with a Multiple Representation approach had a significant effect on improving students' critical thinking skills. The questionnaire results also revealed that students responded positively to the implementation of Problem-Based Learning with a Multiple Representation approach. To achieve more optimal outcomes, the implementation of this model should be accompanied by better time management and more structured guidance, particularly during discussion and investigation activities, so that student engagement and the development of critical thinking skills can be enhanced more effectively.

Keywords: *Critical Thinking, Problem-Based Learning, Multiple Representation*