

# UPAYA PENINGKATAN KEMAMPUAN PENALARAN DAN KEMAMPUAN PEMECAHAN MASALAH SISWA MELALUI MODEL *PROBLEM BASED LEARNING* (PBL) PADA MATERI PENCEMARAN LINGKUNGAN

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## ABSTRAK

Penelitian ini dilakukan untuk mengkaji bagaimana penerapan pembelajaran melalui model *Problem Based Learning* dalam meningkatkan kemampuan penalaran dan kemampuan pemecahan masalah siswa pada materi pencemaran lingkungan yang dilakukan pada salah satu SMP di Kota Palembang. Penelitian ini menggunakan metode eksperimen semu dengan desain *pretest-posttest nonequivalent control group design*. Subjek dalam penelitian ini siswa kelas VII (N=50) dengan teknik pengambilan sampel menggunakan *purposive sampling*. Pengumpulan data dilakukan melalui tes kemampuan penalaran, tes kemampuan pemecahan masalah, dan penyebaran angket. Teknik pengolahan data dilakukan melalui uji normalitas dan homogenitas, perhitungan N-gain, dan uji-t dua pihak. Hasil penelitian menunjukkan bahwa peningkatan kemampuan penalaran ditunjukkan oleh N-gain kelas eksperimen 0,51 (sedang) dan N-gain kelas kontrol 0,43 (sedang). Peningkatan kemampuan pemecahan masalah ditunjukkan oleh N-gain sebesar 0,62 (sedang) untuk kelas eksperimen dan 0,46 (sedang) untuk kelas kontrol. Jadi, dapat disimpulkan bahwa implementasi model *Problem Based Learning* lebih baik dalam meningkatkan kemampuan penalaran dan kemampuan pemecahan masalah siswa dibandingkan dengan kelas yang tidak menggunakan model PBL.

**Kata kunci:** Model *Problem Based Learning*, Kemampuan Penalaran, Kemampuan Pemecahan Masalah.

**IMPROVEMENT REASONING SKILLS AND PROBLEM SOLVING SKILLS  
STUDENT BY MODEL PROBLEM BASED LEARNING ( PBL )  
IN ENVIRONMENTAL POLLUTION**

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**ABSTRACT**

This research was conducted to examine how the application of learning by Problem Based Learning model can improve reasoning skills and problem solving skills of students on environmental pollution material at one of junior high schools in Palembang. This research used a quasi-experimental method with pretest-posttest nonequivalent control group design. Subjects in this study were seventh grade students (N = 50) and the sampling technique which is used was purposive sampling. Data were collected through reasoning skills test, problem solving skills test, and questionnaire. Data were processed by the test of normality and homogeneity, N-gain, and two-way t-test. The result showed increase of reasoning skills in experimental group with N-gain accuracy 0.51 (medium) and control group with N-gain accuracy 0.43 (medium). Increase of problem solving skills showed in experimental group with N-gain accuracy 0.62 (medium) and control group with N-gain accuracy 0.46 (medium). Thus, it can be concluded that the implementation of Problem Based Learning model may improve the reasoning and problem solving skill of students better than those which didn't use Problem Based Learning model.

**Keywords :** Problem Based Learning Model, Reasoning Skills, Problem Solving Skills