

## ABSTRAK

### **Fransiska, NIM 419241008 (2023). Pengaruh Model *Problem Based Learning* Berbantuan Media PhET terhadap Kemampuan Pemecahan Masalah Peserta Didik pada Materi Suhu dan Kalor**

Pemilihan model dan media pembelajaran yang kurang bervariasi menyebabkan rendahnya kemampuan pemecahan masalah peserta didik. Penelitian bertujuan untuk mengetahui pengaruh model *problem based learning* berbantuan media PhET terhadap kemampuan pemecahan masalah peserta didik pada materi suhu dan kalor. Jenis penelitian adalah eksperimen semu dengan desain *two group pretest-posttest*. Populasi dalam penelitian adalah seluruh kelas XI yang terdiri dari 4 kelas. Pengambilan sampel menggunakan teknik *simple random sampling* dengan mengambil 2 kelas yaitu kelas XI-A sebagai kelas eksperimen dan kelas XI-B sebagai kontrol. Instrumen yang digunakan adalah tes kemampuan pemecahan masalah berbentuk *essay* sebanyak 7 soal yang sudah divalidasi. Hasil analisis data menunjukkan bahwa model *problem based learning* berbantuan media PhET berpengaruh signifikan pada kemampuan pemecahan masalah peserta didik, sehingga model *problem based learning* berbantuan media PhET memberikan dampak positif terhadap kemampuan pemecahan masalah peserta didik pada materi suhu dan kalor.

Kata kunci : *problem based learning*, media PhET, pemecahan masalah

## ABSTRACT

### **Fransiska, NIM 419241008 (2023). The Effect of Problem Based Learning Model Assisted with PhET Media on Students' Problem Solving in the Material of Temperature and Heat**

The selection of learning models and media that are less varied causes the low ability to solve students' problems. The research aims to determine the effect of problem-based learning models assisted by PhET media on students' problem-solving abilities in the subject matter of temperature and heat. This type of research is a quasi-experimental with two group pretest-posttest design. The population in the study were all class XI consisting of 4 classes. Sampling used simple random sampling technique by taking 2 classes, namely class XI-A as the experimental class and class XI-B as the control. The instrument used is a problem-solving ability test in the form of an essay consisting of 7 validated questions. The results of the data analysis showed that the PhET media-assisted problem-based learning model had a significant effect on students' problem-solving abilities, so that the PhET-media-assisted problem-based learning model had a positive impact on students' problem-solving abilities in the subject matter of temperature and heat.

**Keywords:** problem based learning, PhET media, problem solving

