

Maulidetul Hasanah. 2025. *Pengaruh Model Pembelajaran Problem Based Learning Berbantuan PhET Terhadap Kemampuan Berpikir Kritis Peserta Didik*. Skripsi. Program Studi Pendidikan IPA, Fakultas Keguruan dan Ilmu Pendidikan, Universitas Trunojoyo Madura, Pembimbing : Maria Chandra Sutarja.

ABSTRAK

Kemampuan berpikir kritis peserta didik masih relatif rendah dikarenakan pembelajaran yang berpusat pada guru. Penelitian ini bertujuan untuk mengetahui perbedaan kemampuan berpikir kritis, hasil pembelajaran *PBL* berbantuan PhET terhadap kemampuan berpikir kritis, peningkatan kemampuan berpikir kritis setelah melakukan pembelajaran dengan model *PBL* berbantuan PhET, dan respon peserta didik terhadap model *PBL* berbantuan PhET. Metode yang digunakan adalah quasi eksperimen dengan *non-equivalent control grup design*. Sampel terdiri dari 63 siswa kelas VII SMPN 1 Kamal tahun pelajaran 2024/2025. Instrumen yang digunakan dalam penelitian ini adalah tes kemampuan berpikir kritis, lembar observasi, dan angket. Hasil uji validitas pada modul ajar sebesar 100%, LKPD sebesar 100%, tes kemampuan berpikir kritis sebesar 88,8%, lembar keterlaksanaan pembelajaran sebesar 100%, angket respons peserta didik sebesar 100%. Hasil penelitian diperoleh bahwa kelompok eksperimen memiliki tingkat berpikir kritis lebih tinggi dari pada kelas kontrol (nilai *Mann Whitney U* adalah $0,000 < 0,05$), kemampuan berpikir kritis peserta didik kelas eksperimen berkategori tinggi dengan nilai *N-gain* 0,75, model *PBL* berbantuan PhET mencapai tingkat keberhasilan rata-rata 98%, dan respons siswa terhadap pembelajaran *PBL* respons sangat baik sebesar 87%.

Kata Kunci : Model pembelajaran problem based learning, PhET, Berpikir kritis

Maulidetul Hasanah. 2025. *The Effect of Problem Based Learning Model Assisted by PhET on Students' Critical Thinking Skills*. Thesis. Science Education Study Program, Faculty of Teacher Training and Education, Trunojoyo University Madura, Advisor: Maria Chandra Sutarja.

ABSTRACT

Students' critical thinking skills are still relatively low due to teacher-centered learning. This study aims to determine the differences in critical thinking skills, the results of PhET-assisted PBL learning on critical thinking skills, the improvement in critical thinking skills after learning with the PhET-assisted PBL model, and students' responses to the PhET-assisted PBL model. The method used was a quasi-experimental with a non-equivalent control group design. The sample consisted of 63 seventh-grade students of SMPN 1 Kamal in the 2024/2025 academic year. The instruments used in this study were a critical thinking skills test, observation sheets, and questionnaires. The validity test results for the teaching module were 100%, the student worksheets were 100%, the critical thinking skills test was 88.8%, the learning implementation sheet was 100%, and the student response questionnaire was 100%. The results of the study showed that the experimental group had a higher level of critical thinking than the control class (the Mann Whitney U value was $0.000 < 0.05$), the critical thinking ability of the experimental class students was in the high category with an N-gain value of 0.75, the PhET-assisted PBL model achieved an average success rate of 98%, and the students' response to PBL learning was very good at 87%.

Keywords: Problem based learning model, PhET, Critical thinking