

ABSTRAK

PENGARUH MODEL *PROBLEM BASED LEARNING* (PBL) BERBANTUAN PLATFORM DIGITAL TERHADAP KEMAMPUAN LITERASI SAINS DAN HASIL BELAJAR KOGNITIF PESERTA DIDIK KELAS VII

Oleh

JESSICA MEGA PUTRI

Tantangan abad ke-21 menuntut peserta didik memiliki literasi sains untuk menghadapi perkembangan teknologi dan ilmu pengetahuan. Namun, kemampuan literasi sains peserta didik masih tergolong rendah, berdampak pada hasil belajar kognitif yang belum optimal. Penelitian ini bertujuan untuk mengetahui pengaruh model *Problem Based Learning* (PBL) berbantuan platform digital terhadap kemampuan literasi sains dan hasil belajar kognitif peserta didik kelas VII. Populasi penelitian adalah seluruh peserta didik kelas VII di SMP Negeri 15 Pesawaran, dengan sampel dua kelas: VII A sebagai kelas eksperimen dan VII D sebagai kelas kontrol. Pemilihan sampel dilakukan secara *purposive sampling* dengan pertimbangan kesetaraan kemampuan akademik. Penelitian ini menggunakan desain *quasi experimental* berbentuk *non-equivalent control group design*, dengan jenis data kuantitatif dan kualitatif. Teknik pengumpulan data dilakukan melalui tes uraian (*pretest* dan *posttest*) dan angket tanggapan peserta didik. Hasil uji *Independent sample t-test* menunjukkan nilai signifikansi (*Sig. 2-tailed*) sebesar $0,000 < 0,05$, yang berarti terdapat pengaruh signifikan. Rata-rata *N-gain* kelas eksperimen sebesar 0,61, lebih tinggi dibandingkan kelas kontrol yang hanya 0,26. Uji *effect size* sebesar 0,88 menunjukkan pengaruh tinggi. Angket menunjukkan respon sangat baik. Dapat disimpulkan bahwa model PBL berbantuan platform digital berpengaruh signifikan terhadap peningkatan kemampuan literasi sains dan hasil belajar kognitif. Penelitian ini dapat menjadi acuan untuk menguji konsistensi efektivitas model pada jenjang atau lingkungan pendidikan yang berbeda.

Kata Kunci: Hasil Belajar Kognitif, Literasi Sains, Platform Digital, *Problem Based Learning*

ABSTRACT

THE EFFECT OF THE PROBLEM-BASED LEARNING (PBL) MODEL ASSISTED BY DIGITAL PLATFORMS ON SCIENTIFIC LITERACY SKILLS AND COGNITIVE LEARNING OUTCOMES OF SEVENTH GRADE STUDENTS

BY

JESSICA MEGA PUTRI

The challenges of the 21st century require students to have scientific literacy to face the development of technology and science. However, students' scientific literacy skills are still relatively low, impacting cognitive learning outcomes that are not optimal. This study aims to determine the effect of the Problem Based Learning (PBL) model assisted by a digital platform on the scientific literacy skills and cognitive learning outcomes of seventh-grade students. The study population was all seventh-grade students at SMP Negeri 15 Pesawaran, with a sample of two classes: VII A as the experimental class and VII D as the control class. The sample selection was carried out by purposive sampling with consideration of equality of academic ability. This study used a quasi-experimental design in the form of a non-equivalent control group design, with quantitative and qualitative data types. Data collection techniques were carried out through essay tests (pretest and posttest) and student response questionnaires. The results of the Independent sample t-test showed a significance value (Sig. 2-tailed) of $0.000 < 0.05$, which means there is a significant effect. The average N-gain of the experimental class was 0.61, higher than the control class, which was only 0.26. The effect size test of 0.88 indicated a high influence. The lift showed a very good response. It can be concluded that the PBL model assisted by a digital platform has a significant effect on improving scientific literacy skills and cognitive learning outcomes. This study can be a reference for testing the consistency of the model's effectiveness at different levels or educational environments.

Keywords: Cognitive Learning Outcomes, Scientific Literacy, Digital Platform, Problem-Based Learning