

ABSTRAK

Al Muqaffi Ahmad Zawalul Ilmi. 2025. **PENGARUH MODEL PEMBELAJARAN PDEODE (*PREDICT, DISCUSS, EXPLAIN, OBSERVE, DISCUSS, EXPLAIN*) TERHADAP KETERAMPILAN PROSES SAINS SISWA PADA MATERI GELOMBANG MEKANIK**

Penelitian ini dilatarbelakangi berdasarkan hasil studi pendahuluan yang dilakukan di SMA Negeri 2 Garut menunjukkan bahwa keterampilan proses sains siswa memiliki rata-rata persentase 40.4% di mana persentase ini masih dikategorikan kurang. Maka dari itu peneliti berinisiatif memberikan solusi untuk mengatasi permasalahan tersebut yaitu dilakukannya penelitian dengan menerapkan model PDEODE (*Predict, Discuss, Explain, Observe, Discuss, Explain*). Tujuan dari penelitian ini adalah untuk mengetahui pengaruh PDEODE terhadap keterampilan proses sains pada materi gelombang mekanik. Penelitian ini mengadopsi metode Kuasi eksperimen dengan desain *post-test only control group*, Populasi penelitian meliputi kelas XI MIPA SMAN 2 garut sebanyak 9 kelas, dan sampel penelitian dipilih menggunakan teknik *purposive sampling* yaitu kelas XI MIPA 5 sebagai kelas eksperimen dan XI MIPA 6 sebagai kelas kontrol. Teknik pengumpulan data dilakukan melalui tes (*post-test*) berupa soal pilihan ganda yang mencakup indikator keterampilan proses sains. Hasil uji hipotesis menggunakan uji-t sampel bebas dan diperoleh $t_{hitung} > t_{tabel}$ yaitu $2,11 > 1,66$ maka dapat disimpulkan bahwa model PDEODE berpengaruh terhadap keterampilan proses sains pada materi gelombang mekanik di kelas XI MIPA SMA Negeri 2 Garut. Pengaruh model PDEODE terhadap keterampilan proses sains terjadi karena model ini memfasilitasi konstruksi pengetahuan, mendorong pemikiran kritis, mengembangkan observasi dan diskusi, serta membangkitkan rasa ingin tahu dan sikap ilmiah, sehingga model PDEODE ini dapat melatih keterampilan proses sains siswa.

Kata kunci: Gelombang Mekanik, Keterampilan Proses Sains, PDEODE

ABSTRACT

Al Muqaffi Ahmad Zawalul Ilmi. 2025. ***THE EFFECT OF PDEODE (PREDICT, DISCUSS, EXPLAIN, OBSERVE, DISCUSS, EXPLAIN) LEARNING MODEL ON STUDENTS' SCIENCE PROCESS SKILLS IN THE TOPIC OF MECHANICAL WAVES***

This research is based on the results of a preliminary study conducted at SMA Negeri 2 Garut which showed that students' science process skills had an average percentage of 40.4%, where this percentage is still categorized as lacking. Therefore, the researcher took the initiative to provide a solution to overcome this problem, namely by conducting research by applying the PDEODE model (Predict, Discuss, Explain, Observe, Discuss, Explain). The purpose of this study was to determine the effect of PDEODE on science process skills in mechanical wave material. This study adopted a Quasi-experimental method with a post-test only control group design. The research population included 9 classes of class XI MIPA SMAN 2 Garut, and the research sample was selected using a purposive sampling technique, namely class XI MIPA 5 as the experimental class and XI MIPA 6 as the control class. The data collection technique was carried out through a test (post-test) in the form of multiple choice questions that included indicators of science process skills. The results of the hypothesis test using the independent sample t-test and obtained $t_{\text{statistic}} > t_{(\alpha, dk)}$, namely $2.11 > 1.66$, it can be concluded that the PDEODE model has an effect on science process skills in mechanical wave material in class XI MIPA SMA Negeri 2 Garut. The effect of the PDEODE model on science process skills occurs because this model facilitates knowledge construction, encourages critical thinking, develops observation and discussion, and arouses curiosity and scientific attitudes, so that this PDEODE model can improve students' science process skills.

Keywords: Mechanical Waves, Science Process Skills, PDEODE