

ABSTRAK

Cecep Nugraha. 2025. **PENGARUH MODEL PEMBELAJARAN *CONNECTING, ORGANIZING, REFLECTING, AND EXTENDING* (CORE) TERHADAP PEMAHAMAN KONSEP SISWA PADA MATERI GELOMBANG MEKANIK**

Penelitian ini dilatarbelakangi oleh rendahnya pemahaman konsep siswa. Hal ini dibuktikan dengan studi pendahuluan berupa wawancara dan tes pemahaman konsep. Peneliti berupaya memberi solusi dengan menggunakan model pembelajaran CORE. Tujuan dari penelitian ini untuk mengetahui pengaruh model pembelajaran *connecting, organizing, reflecting, and extending* (CORE) terhadap pemahaman konsep siswa pada materi gelombang mekanik. Metode penelitian yang digunakan adalah kuasi eksperimen dengan desain penelitian *post-test only control group design*. Populasi penelitian ini seluruh kelas XI MIPA berjumlah lima kelas. Sampel penelitian menggunakan teknik *cluster random sampling* dan terpilih kelas XI MIPA 1 sebagai kelas eksperimen dan kelas XI MIPA 4 sebagai kelas kontrol. Pemahaman konsep siswa diukur menggunakan instrumen berbentuk uraian yang mengacu pada indikator menurut Anderson dan Krathwohl. Teknik analisis data yang digunakan adalah uji prasyarat yang terdiri dari uji normalitas menggunakan *Chi-Square* dan uji homogenitas menggunakan uji Fisher. Uji hipotesis menggunakan uji statistik yaitu uji t bebas dengan taraf signifikansi ($\alpha = 0,05$). Hasil uji hipotesis menggunakan uji t menunjukkan bahwa $t_{hitung} > t_{tabel}$ yaitu $7,29 > 1,997$ sehingga H_a diterima. Artinya pada taraf kepercayaan 95% disimpulkan bahwa ada pengaruh model CORE terhadap pemahaman konsep siswa pada materi gelombang mekanik di kelas XI SMAN Jatininggal tahun ajaran 2024/2025. Hal tersebut karena model pembelajaran CORE mampu membantu siswa membangun pengetahuannya melalui pengalaman belajar yang bermakna, seperti penyelidikan ilmiah dan kegiatan reflektif.

Kata kunci: Gelombang Mekanik, Model Pembelajaran CORE, Pemahaman Konsep.

ABSTRACT

Cecep Nugraha. 2025. **THE INFLUENCE OF THE CONNECTING, ORGANIZING, REFLECTING, AND EXTENDING (CORE) LEARNING MODEL ON STUDENTS' CONCEPTUAL UNDERSTANDING IN MECHANICAL WAVES**

This research is motivated by the low level of students' conceptual understanding. This was evidenced by a preliminary study in the form of interviews and conceptual understanding tests. The researcher seeks to provide a solution by implementing the CORE (Connecting, Organizing, Reflecting, and Extending) learning model. The aim of this study is to determine the effect of the CORE learning model on students' conceptual understanding of mechanical wave material. The research method used was a quasi-experimental design with a post-test only control group design. The research population consisted of all five classes of grade XI MIPA. The research sample used cluster random sampling, with class XI MIPA 1 selected as the experimental class and class XI MIPA 4 as the control class. The research sample was selected using cluster random sampling, with class XI MIPA 1 chosen as the experimental class and class XI MIPA 4 as the control class. Students' conceptual understanding was measured using an essay-type instrument based on indicators from Anderson and Krathwohl. The data analysis techniques used include prerequisite tests such as the normality test using Chi-Square and the homogeneity test using Fisher's test. The hypothesis testing used an independent t-test with a significance level ($\alpha = 0,05$). The results of the hypothesis test using the t-test showed that $t_{\text{statistic}} > t_{\text{table}}$, namely $7.29 > 1.997$, so the alternative hypothesis (H_a) is accepted. This means that at a 95% confidence level, it can be concluded that the CORE model has a significant effect on students' conceptual understanding of mechanical wave material in class XI of SMAN Jatinunggal in the 2024/2025 academic year. This is because the CORE learning model helps students construct their knowledge through meaningful learning experiences, such as scientific inquiry and reflective activities.

Keywords: Mechanical Waves, CORE Learning Model, Conceptual Understanding,