

ABSTRAK

Destri Baiziah (NIM: 8186175006). Pengembangan Tes Berbasis PISA pada Materi Gelombang Mekanik di SMA. Tesis. Medan: Program Pascasarjana Universitas Negeri Medan, 2021.

Penelitian bertujuan mengembangkan tes berbasis PISA pada materi gelombang mekanik di SMA sesuai dengan standar kualifikasi tes yang baik ditinjau dari segi validitas, reliabilitas, tingkat kesukaran, daya pembeda dan efektivitas pengecoh. Jenis penelitian adalah penelitian pengembangan (*Developmental Reseach*), dengan menggunakan model ADDIE. Teknik analisis data yang digunakan adalah kualitatif dan kuantitatif. Berdasarkan hasil telaah kualitatif, kualitas tes berbasis PISA adalah sangat baik dengan persentasi kevalidan 84,75% berdasarkan hasil validasi oleh 5 orang ahli yang ditinjau segi materi, konstruk dan tata bahasa. Berdasarkan hasil telaah kuantitatif, tes berbasis PISA yang dikembangkan diperoleh analisis validitas empiris butir soal, reliabilitas tes, tingkat kesukaran butir soal, daya pembeda butir soal, dan efektivitas pengecoh sudah memenuhi standar tes yang baik. Hasil penelitian menunjukkan bahwa instrument tes berbasis PISA yang dikembangkan dapat mengukur kompetensi literasi sains siswa yang mencakup 3 indikator yaitu : menjelaskan fenomena ilmiah, mengevaluasi dan mendesain eksperimen dan menginterpretasikan data dan bukti ilmiah. Tingkat kompetensi literasi sains siswa berdasarkan hasil penelitian pada uji coba lapangan diperoleh 26,87 % siswa dengan kompetensi literasi sains tinggi, 26,87% siswa dengan kompetensi literasi sains cukup dan 46,27 % siswa dengan kompetensi literasi sains rendah

Kata Kunci: *Instrumen tes berbasis PISA, Gelombang Mekanik, Validitas, Reliabilitas*



ABSTRACT

Destri Baiziah (NIM: 8186175006). Development of PISA-Based Test on Mechanical Wave Material in Senior High School. Thesis. Medan: State University of Medan Postgraduate Program, 2021.

This study aims to develop a PISA-based test on mechanical wave material in high school in accordance with good test qualification standards in terms of validity, reliability, level of difficulty, discriminatory power and effectiveness of distractors. The type of research is development research (Developmental Research), using the ADDIE model. The data analysis technique used is qualitative and quantitative. Based on the results of the qualitative study, the quality of the PISA-based test was very good with a percentage of validity of 84.75% based on the results of validation by 5 experts who were reviewed in terms of material, construct and grammar. Based on the results of a quantitative study, the PISA-based test that was developed obtained an analysis of the empirical validity of the items, the reliability of the test, the level of difficulty of the items, the discriminating power of the items, and the effectiveness of the distractors that met good test standards. The results showed that the developed PISA-based test instrument was able to measure students' scientific literacy competence which included 3 indicators, namely: explaining scientific phenomena, evaluating and designing experiments and interpreting scientific data and evidence.. The level of scientific literacy competence of students based on research results in field trials obtained 26.87% of students with high scientific literacy competence, 26.87% of students with sufficient scientific literacy competence and 46.27% of students with low scientific literacy competence

Keywords: *PISA-based test instrument, Mechanical Waves, Validity, Reliability*

