

**PENGEMBANGAN INSTRUMEN TES BERBASIS HOTS (*HIGH ORDER THINKING SKILLS*) PADA MATERI GELOMBANG MEKANIK
DI KELAS XI SMA NEGERI 7 MEDAN TP. 2020/2021**

ABSTRAK

Penelitian ini bertujuan untuk mengembangkan instrumen tes berbasis HOTS pada materi gelombang mekanik yang layak berdasarkan validitas, reliabilitas, daya beda, tingkat kesukaran, dan efektivitas pengecoh. Penelitian ini merupakan penelitian pengembangan dengan model pengembangan ADDIE (*Analyze, Design, Development, Implementation, Evaluation*). Instrumen penelitian yang digunakan dalam penelitian ini adalah angket validasi ahli, instrumen HOTS, dan angket respon siswa. Uji validasi ahli dilakukan kepada 3 orang ahli, uji kelompok kecil dilakukan pada 10 siswa kelas XI MIPA 1 SMA Negeri 7 Medan dan uji kelompok besar dilakukan kepada 34 siswa kelas XI MIPA 1 SMA Negeri 7 Medan. Hasil penelitian menunjukkan bahwa berdasarkan validasi ahli instrumen tes sangat valid dengan presentase 89,44 %. Berdasarkan hasil implemetasi uji kelompok besar diperoleh 19 (59 %) soal valid, reliabel dengan nilai 0,8112 dengan kategori reliabilitas tinggi, daya pembeda soal antara 0,235 sampai 0,82, tingkat kesukaran soal antara 0,08 sampai 0,824 dan efektivitas pengecoh soal baik. Instrumen tes yang dikembangkan mendapat respon siswa dengan kategori sangat baik dengan rata-rata 83,22 %. Dengan demikian, dapat disimpulkan instrumen tes yang dikembangkan layak digunakan dalam pembelajaran.

Kata kunci: ADDIE, HOTS, Daya beda, Reliabilitas, Tingkat kesukaran, Validitas,



**THE DEVELOPMENT OF HOTS-BASED TEST INSTRUMENT ON
MECHANICAL WAVE MATERIAL OF THE 11TH GRADE
AT SMA NEGERI 7 MEDAN TP. 2020/2021**

ABSTRACT

This research aims to develop a HOTS-based instrument test on mechanical wave materials that are feasible based on validity, reliability, different power, level of difficulty, and effectiveness of distractors. The type of design research is research and development using ADDIE (Analyze, Design, Development, Implementation, Evaluation) model. The research instruments used in this research were expert validation questionnaires, HOTS instruments, and student response questionnaires. The expert validation test was conducted on 3 experts, the small group test was conducted on 10 students of class XI MIPA 1 SMA Negeri 7 Medan and the large group test was conducted on 34 students of class XI MIPA 1 SMA Negeri 7 Medan. The results showed based on the expert validation the instrument test was very valid with a percentage of 89,44%. Based on the results of the implementation of the large group test, 19 (59%) questions were valid, reliable with a value of 0.8112 with a high reliability category, the discriminatory power of questions was between 0,235 to 0,82, the level of difficulty of the questions was between 0,088 to 0,824 and the effectiveness of distractors. good matter. The instrument test developed received student responses in the very good category with an average of 83,22%. Thus, it can be concluded that the instrument test developed is suitable to use in learning.

Keywords: ADDIE, HOTS, Different power, Reliability, Level of difficulty, Validity

