ABSTRAK

Sari Devi Aruan, NIM 4173321047 (2021) Pengembangan Instrumen Penilaian Kognitif untuk Mengukur Keterampilan Pemecahan Masalah Siswa pada Materi Hukum Newton di SMA N-8 Medan

Penelitian ini menggunakan pendekatan 4D yang perpanjangan dari *Define,Design,Develop, Dissemination*. Tujuannya ialah mengembangkan instrumen tes untuk mengukur keterampilan pemecahan masalah siswa. Pengumpulan data yang dilakukan melalui validasi teoritik dan validasi secara empiric. Validasi teoritik dilakukan oleh tiga orang pakar/ahli yang menilai instrument yang dikembangkan kemudian dilakukan validasi empirik (ujicoba lapangan) kepada peserta didik. Indikator keterampilan pemecahan masalah siswa yang diteliti meliputi memahami masalah, perencanaan, penyelesaian masalah, dan memeriksa kembali. Hasil persentase menunjukkan bahwa hasil validasi secara teoritik dikategorikan valid. Pada tahap validasi secara empirik dilakukan ujicoba sebanyak dua kali. Dimana pada ujicoba pertama 9 butir valid dam 1 butir invalid. Realibilitas instrumen sebesar 0,915868. Sementara pada ujicoba kedua terdapat 9 butir valid dan 1 butir invalid dengan reabilitas instrument sebesar 0,82686.

Kata Kunci: *Problem Solving,* Instrumen, Reabilitas, Validitas

ABSTRACT

Sari Devi Aruan, NIM 4173321047 (2021) Development of Cognitive Assessment Instruments to Measure Students' Problem Solving Skills on Newton's Law Materials at SMA N-8 Medan

This study uses a 4D approach which is an extension of Define, Design, Develop, Dissemination. The aim is to develop a test instrument to measure students' problem solving skills. Data collection is done through theoretical validation and empirical validation. Theoretical validation was carried out by three experts/experts who assessed the developed instrument and then carried out empirical validation (field trials) to students. The indicators of the problem solving skills of the students studied included understanding the problem, planning, solving problems, and re-examining. The percentage results show that the theoretical validation results are categorized as valid. At the validation stage, empirical trials were carried out twice. Where in the first test 9 items are valid and 1 item is invalid. The reliability of the instrument is 0.915868. While in the second trial there were 9 valid items and 1 invalid item with instrument reliability of 0.82686.

Keywords: *Problem-solving, Instrumen, Reability, Validity*