

ABSTRAK

Maulida Rahmi Sagala (NIM: 8196176007). Pengembangan Instrumen Literasi Sains Model PISA pada Materi Optik SMA. Tesis. Medan: Program Pascasarjana Universitas Negeri Medan, 2023.

Penelitian bertujuan mengembangkan instrumen tes literasi sains model PISA siswa SMA pada materi Optik yang memenuhi kualifikasi baik (tes standar) meliputi validitas, reliabilitas, tingkat kesukaran, daya pembeda dan efektivitas pengecoh. Jenis penelitian adalah penelitian pengembangan (*Developmental Research*), dengan menggunakan model *Borg and Gall*. Hasil analisis data menunjukkan instrumen tes soal memenuhi kriteria valid dan efektif dengan persentasi keidealan rata – rata 88,7%. Analisis 38 butir soal pada uji kelompok kecil diperoleh 30 butir soal diterima dan 8 butir soal ditolak. Uji kelompok besar diperoleh: (1) 28 butir soal valid (93,3%), 2 soal tidak valid (6,7%). (2) reliabilitas soal termasuk dalam kategori “Sangat Tinggi” dengan nilai sebesar 0,802. (3) 12 (40%) soal dalam kategori mudah, 12 (40%) soal kategori sedang dan 6 (20%) soal kategori sukar. (4) Daya pembeda soal didapatkan 12 (40%) soal dalam kategori baik sekali, 14 (46,7%) soal dalam kategori baik, 1 (3,3%) soal dalam kategori cukup, 1 (3,3%) soal dalam kategori jelek dan 2 (6,7%) soal dalam kategori sangat jelek. (5) 28 (93,3%) soal efektif dan 2 (6,7%) soal tidak efektif. Butir soal yang diterima sebanyak 25 (83,3%) soal, 3 (10%) soal direvisi dan 2 (6,7%) soal ditolak.

Kata Kunci : Instrumen tes literasi sains, PISA, Optik, *Borg and Gall*

ABSTRACT

Maulida Rahmi Sagala (NIM: 8196176003). The Development of Test Instrument Scientific Literacy PISA model for Optical Topic in High School. Thesis. Medan: Postgraduate Programme of Universitas Negeri Medan, 2023.

The study aims to develop instrumen test scientific literacy PISA model for Optical Topic to standard qualifications of good test based in validity, reliability, difficulty index, discrimination index and effectiveness distractor. The type of research is developmental research, using the Borg and Gall model. The results of the test questions meet the valid and effective criteria with an average ideal percentage being 88,7%. Analysis of 38 items in the small group trials showed test obtained 30 items received and 2 items were rejected. The large group test was obtained: (1) 28 valid items (93,3%), 2 invalid items (6,7%). (2) The test having very high reliability is 0.802. (3) 12 (40%) easy items, 12 (40%) medium items and 6 (20%) difficult items. (4) Discrimination index of the questions was obtained by 12 (40%) questions in the excellent category, 14 (46,7%) questions in the good category, 1 (3,3%) question in the enough category, 1 (3,3%) question in the bad category and 2 (6,7%) questions in the very bad category. (5) 28 (93,3%) were effective items and 2 (6,7%) were ineffective items. Items received were 25 (83,3%) questions, 3 (10%) items revised and 2 (6,7%) items rejected.

Keyword : Instrumen Test Scientific Literacy, PISA, Optical, *Borg and Gall*

