

ABSTRAK

PENGEMBANGAN INSTRUMEN TES DIAGNOSTIK *FOUR-TIER* DILENGKAPI *SELF-DIAGNOSIS SHEET* UNTUK MENGIDENTIFIKASI MISKONSEPSI PESERTA DIDIK PADA MATERI GERAK LURUS

Oleh

INTAN KHASANA

Penelitian ini bertujuan untuk mengembangkan instrumen tes diagnostik *four-tier* dilengkapi *self-diagnosis sheet* untuk mengidentifikasi miskonsepsi peserta didik pada materi gerak lurus yang valid, reliabel, dan praktis. Penelitian pengembangan ini menggunakan 4 tahapan pengembangan yang diadaptasi dari Thiagarajan (1974), yakni: (1) *define*; (2) *design*; (3) *develop*; (4) *disseminate*. Validasi produk dilakukan oleh dua dosen ahli pendidikan fisika dan satu guru mata pelajaran fisika untuk menilai aspek konstruk, materi, dan bahasa. Berdasarkan hasil validasi ahli instrumen tes diagnostik *four-tier* dilengkapi *self-diagnosis sheet* memiliki hasil sebesar 92,3% dinyatakan sangat valid. Instrumen tes diagnostik *four-tier* dilengkapi *self-diagnosis sheet* untuk mengidentifikasi miskonsepsi peserta didik diujicobakan kepada 36 peserta didik dan selanjutnya dianalisis menggunakan model *Rasch* dengan berbantuan *software Ministep 5.6.2*. Berdasarkan hasil analisis data uji coba diperoleh sebanyak 25 butir soal instrumen tes diagnostik *four-tier* dinyatakan valid. Soal-soal pada instrumen tes diagnostik *four-tier* pada materi gerak lurus dinyatakan reliabel dengan nilai *alpha Cronbach* sebesar 0,86 dengan kategori sangat bagus. Uji kepraktisan instrumen tes diagnostik *four-tier* dilengkapi *self-diagnosis sheet* pada materi gerak lurus ini memperoleh presentase rata-rata sebesar 96,5% dengan kategori sangat praktis. Produk akhir dari instrumen yang telah dikembangkan telah memenuhi standar kelayakan instrumen yaitu valid, reliabel, dan praktis.

Kata kunci: Instrumen Tes Diagnostik *Four-Tier*, *Self-Diagnosis Sheet*, Miskonsepsi, Gerak Lurus.

ABSTRACT

DEVELOPMENT OF A FOUR-TIER DIAGNOSTIC TEST INSTRUMENT EQUIPPED WITH A SELF-DIAGNOSIS SHEET TO IDENTIFY STUDENTS' MISCONCEPTIONS ON LINIER MOTION MATERIAL

By

INTAN KHASANA

This study aims to develop a four-tier diagnostic test instrument equipped with a self-diagnosis sheet to identify students' misconceptions on straight motion material that is valid, reliable, and practical. This development research uses 4 stages of development adapted from Thiagarajan (1974), namely: (1) define; (2) design; (3) develop; (4) disseminate. Product validation was carried out by two physics education expert lecturers and one physics subject teacher to assess the construct, material, and language aspects. Based on the results of expert validation, the four-tier diagnostic test instrument equipped with a self-diagnosis sheet has a result of 92.3% which is declared very valid. The four-tier diagnostic test instrument equipped with a self-diagnosis sheet to identify students' misconceptions was tested on 36 students and then analyzed using the Rasch model with the help of Ministep 5.6.2 software. Based on the results of the trial data analysis, 25 items of the four-tier diagnostic test instrument were declared valid. The questions on the four-tier diagnostic test instrument on straight motion material were declared reliable with a Cronbach alpha value of 0.86 in the very good category. The practicality test of the four-tier diagnostic test instrument equipped with a self-diagnosis sheet on straight motion material obtained an average percentage of 96.5% in the very practical category. The final product of the instrument that has been developed has met the instrument eligibility standards, namely valid, reliable, and practical.

Keywords: Four-Tier Diagnostic Test Instrument, Self-Diagnosis Sheet, Misconceptions, Linier Motion.