

ABSTRAK

Tasya Pasaribu, NIM 4182121013 (2022). Pengembangan Instrumen Tes Diagnostik Three-Tier Pada Materi Suhu Dan Kalor Di SMA Swasta Budisatrya Medan.

Tujuan dilakukan penelitian ini adalah untuk mendiagnosa penguasaan konsep siswa pada materi suhu dan kalor. Jenis penelitian ini adalah *Research and development* (R&D) dengan mengikuti prosedur pengembangan Model Brog and Gall yang terdiri dari 10 tahap, yaitu fase potensi dan masalah, fase perencanaan, fase desain tes diagnostik three tier, fase validasi tes diagnostik three tier, fase revisi desain tes diagnostik three tier, fase uji coba skala terbatas, fase revisi tes diagnostik three tier, fase uji skala besar, fase revisi tes diagnostik three tier, fase produk akhir tes diagnostik three tier. Sampel dalam penelitian ini adalah peserta didik kelas XI IPA di SMAS Budisatrya. Instrumen yang digunakan adalah wawancara, angket dan tes. Hasil pengujian validitas isi dari instrumen tes oleh validator ahli mengindikasikan bahwa instrumen tes yang disusun tergolong valid dengan rata-rata 98%, yang artinya tes masuk kategori sangat baik. Dari hasil pengembangan instrumen tes diagnostik *three tier* yang dikembangkan terdapat 22 butir soal tes dapat dikatakan layak. Hasil uji reliabilitas instrument tes pengujian menunjukkan bahwa tes tersebut masuk kategori reliabilitas tinggi, dengan rata-rata 0,81 . Hasil analisis jawaban siswa terhadap instrument tes yang diujikan menunjukkan bahwa; siswa kelas XI IPA SMAS Budisatrya Medan memiliki rata-rata miskonsepsi sebesar 33%, paham konsep sebesar 18%, kurang memahami konsep sebesar 23%, tidak mengerti konsep sebesar 15%, dan menebak sebesar 11%. Dari hasil pengembangan Instrumen Tes Diagnostik Three-Tier disimpulkan bahwa tes dapat digunakan untuk mengidentifikasi dan mengetahui tingkat miskonsepsi siswa.

Kata Kunci : Instrumen Three-Tier, Miskonsepsi, Suhu dan Kalor

ABSTRACT

Tasya Pasaribu, NIM 4182121013 (2022). Development of Three-Tier Diagnostic Test Instruments on Temperature and Heat Materials at Budisatrya Private High School Medan.

The purpose of this research is to diagnose students' mastery of concepts in the material of temperature and heat. This type of research is Research and development (R&D) by following the Brog and Gall Model development procedure which consists of 10 stages, namely the potential and problem phase, the planning phase, the three-tier diagnostic test design phase, the three-tier diagnostic test validation phase, and the design revision phase. three-tier diagnostic test, limited-scale trial phase, three-tier diagnostic test revision phase, large-scale test phase, three-tier diagnostic test revision phase, and three-tier diagnostic test final product phase. The sample in this study were students of class XI science at SMAS Budisatrya. The instruments used are interviews, questionnaires and tests. The results of testing the content validity of the test instruments by expert validators indicate that the test instruments compiled are valid with an average of 98%, which means the test is in the very good category. From the results of the development of the three-tier diagnostic test instrument developed, there are 22 test items that can be said to be feasible. The results of the test instrument reliability test showed that the test was in the high reliability category, with an average of 0.81. The results of the analysis of students' answers to the test instruments tested showed that; students of class XI IPA SMAS Budisatrya Medan have an average of 33% misconceptions, understand concepts by 18%, do not understand concepts by 23%, do not understand concepts by 15%, and guess at 11%. From the results of the development of the Three-Tier Diagnostic Test Instrument, it is concluded that the test can be used to identify and determine the level of students' misconceptions.

Keywords: Three-Tier Instruments, Misconceptions, Temperature and Heat