

‘Ainul Mashfuufah. 2023. *Analisis Miskonsepsi Siswa pada Konsep Mekanika Menggunakan Four Tier Diagnostic Test Berbantuan CRI Berdasarkan Perbedaan Kemampuan Akademik*. Skripsi, Program Studi Pendidikan IPA, Fakultas Ilmu Pendidikan, Universitas Trunojoyo Madura. Pembimbing: Maria Chandra Sutarja

ABSTRAK

Penelitian ini bertujuan untuk mengetahui kategori miskonsepsi pada konsep gerak dan gaya. Penelitian menggunakan metode deskriptif kuantitatif dan dilaksanakan di UPTD SMPN 2 Bangkalan dengan populasi kelas VII tahun ajaran 2022/2023. Teknik pengambilan sampel menggunakan purposive sampling. Sampel penelitian sebanyak 2 kelas. Pengumpulan data menggunakan instrumen *four tier diagnostic test* berbantuan CRI. Teknik analisis data menggunakan analisis utama kategori miskonsepsi, analisis tambahan kategori paham konsep, tidak paham konsep, dan *error*, serta mendeskripsikan hasil wawancara untuk memperkaya pembahasan alasan terjadinya miskonsepsi dengan kategori tinggi pada tiap soal dari tiap kelas penelitian. Hasil penelitian menunjukkan siswa mengalami miskonsepsi pada konsep gerak dan gaya pada kelas dengan kemampuan akademik paling tinggi sebesar 36% dengan kategori sedang dan siswa dengan kemampuan akademik paling rendah yang diajarkan oleh guru yang sama sebesar 45%. Miskonsepsi siswa terjadi pada sub materi hukum I Newton, hukum II Newton, dan Hukum III Newton. Miskonsepsi siswa disebabkan oleh beberapa faktor diantaranya minat belajar siswa, kemampuan kognitif siswa, konteks materi, sumber belajar, dan proses pembelajaran

Kata Kunci: *CRI, four tier diagnostic test, gerak dan gaya, kemampuan akademik, miskonsepsi.*

'Ainul Mashfuufah. 2023. Analysis of Students' Misconceptions on Mechanics Concepts Using the Four Tier Diagnostic Test Assisted by CRI Based on Differences in Academic Ability. Thesis, Study Program of Science Education, Faculty of Education, University of Trunojoyo Madura. Advisor: Maria Chandra Sutarja

ABSTRACT

This study aims to determine the category of misconceptions about the concept of motion and force. This study used a quantitative descriptive method and was conducted at UPTD SMPN 2 Bangkalan with a population of class VII in the 2022/2023 school year. The sampling method was purposive sampling. The research sample was 2 classes. Data collection used a four-tier diagnostic test instrument assisted by CRI. The data analysis technique used the main analysis of the misconception category, additional analysis of the categories of understanding the concept, not understanding the concept, and errors, in addition to describing the results of interviews to enrich the discussion of the causes of misconceptions with high categories in each question from each research class. The results show that students have misconceptions about the concept of motion and force in the class with the highest academic ability at 36% with a moderate category and students with the lowest academic ability who are taught by the same teacher at 45%. Student misconceptions occur in the sub-materials of Newton's Law I, Newton's Law II, and Newton's Law III. Student misconceptions are caused by several factors including student interest in learning, student cognitive abilities, material context, learning resources, and the learning process.

Keywords: CRI, four-tier diagnostic test, motion and force, academic ability, misconceptions.