

Kurnia Fitri Awaliyah. 2021. Analisis Miskonsepsi Siswa pada Konsep Getaran, Gelombang, dan Bunyi Menggunakan *Four Tier Diagnostic Test* di SMPN 2 Palengaan. Skripsi. Program Studi Pendidikan IPA, Fakultas Ilmu Pendidikan, Universitas Trunojoyo Madura. Pembimbing : Yunin Hidayati

### **ABSTRAK**

Rendahnya pemahaman konsep siswa serta konsep dalam IPA yang bersifat abstrak dapat memicu timbulnya miskonsepsi. Penelitian ini bertujuan (1) untuk mengetahui persentase miskonsepsi seluruh siswa konsep getaran, gelombang, dan bunyi, (2) untuk mengetahui persentase miskonsepsi siswa pada setiap butir soal, (3) untuk mengetahui persentase miskonsepsi siswa pada setiap sub-konsep, (4) untuk mengetahui faktor yang menyebabkan siswa mengalami miskonsepsi pada konsep getaran, gelombang, dan bunyi. Penelitian menggunakan metode *mix methods* dan dilaksanakan di SMPN 2 Palengaan dengan populasi siswa kelas VIII tahun ajaran 2020/2021. Teknik pengambilan sampel menggunakan purposive sampling. Sampel penelitian sebanyak 20 siswa. Pengumpulan data menggunakan instrumen *four tier diagnostic test*. Teknik analisis data : (1) data kuantitatif menggunakan rumus persentase, (2) data kualitatif menggunakan Miles and Huberman. Hasil penelitian menunjukkan siswa mengalami miskonsepsi pada konsep getaran, gelombang, dan bunyi sebesar 45%, paham konsep 11,25%, tidak paham konsep 32,75%, dan eror 11% . Miskonsepsi tertinggi terletak pada no soal 2 sebesar 70%, dan miskonsepsi terendah terletak pada no 1 sebesar 25%. Miskonsepsi siswa terjadi dikarenakan (1) Minat Belajar Siswa Rendah pada Materi IPA, (2) Konsep Awal Siswa (Prakonsepsi), (3) Intuisi yang Salah, (4) Kemampuan Siswa dan Guru IPA.

**Kata kunci** : Getaran, gelombang & bunyi. *Four tier diagnostic test*. Miskonsepsi

Kurnia Fitri Awaliyah. 2021. Analysis of Student's Misconceptions On the Motion Concept Using Four Tier Diagnostic Test at SMPN 2 Palengaan. Thesis. Natural Science Education. Education Faculty. University of Trunojoyo Madura. Advisor : Yunin Hidayati

### **ABSTRACT**

The lack of understanding of students concept as well as asbtract concep in science can trigger misconceptions. The aims of the research were to know of (1) to find out the percentage of students misconceptions on the concept of wave vibrations and sound, (2) to find out the percentage of students misconceptions for each item, (3) to find out the percentage of students misconceptions for each sub-concept, (4) to find out the factors that cause students to experience misconceptions. The research used a mix method and was conducted at SMPN 2 Palengaan. The population was eight-grade students in the academy year of 2020/2021. The employed sampling technique was purposive sampling. The sampling consists of 3 classes. Technique of collecting data: (1) quantitative data uses a percentage formula, (2) qualitative data uses Miles and Huberman. The results showed students experienced misconceptions the concept of motion by 45%, scientific conception 11,25%, lack of Knowledge 32,75% and mistake 11%. The highest misconception is in no questions 2 of 70%, and the lowest misconceptions ies in questions 1 of 25%. The misconceptions occured because some factors, they were (1) low students interest, (2) students initial concept (praconceptions), (3) wrong intuition, (4) student and teacher abilities.

**Keywords :** *Four tier diagnostic test.* Misconceptios. Vibrations, waves, and sound.