

Khoirun Nisak. 2023. *Analisis Pemahaman Konsep Siswa pada Materi Getaran, Gelombang, dan Bunyi Menggunakan Teori APOS Ditinjau dari Gaya Kognitif*. Skripsi, Program Studi Pendidikan IPA, Fakultas Ilmu Pendidikan, Universitas Trunojoyo Madura. Pembimbing: Maria Chandra Sutarja

ABSTRAK

Penelitian ini bertujuan untuk mengetahui pemahaman konsep siswa pada materi getaran, gelombang, dan bunyi menggunakan teori APOS ditinjau dari gaya kognitif. Metode penelitian yang digunakan yaitu kuantitatif dengan desain deskriptif. Populasi pada penelitian yakni siswa kelas VIII SMP Techno Insan Kamil Tuban, dengan menggunakan teknik *non probability sampling* jenis *purposive sampling*. Subjek penelitian berjumlah 40 siswa. Data pemahaman konsep dikumpulkan menggunakan tes, dan data gaya kognitif menggunakan *GEFT* (*Group Embedded Figure Test*), serta dilakukan wawancara sebagai data tambahan. Berdasarkan hasil penelitian dapat disimpulkan bahwa: (1) sebesar 35% siswa berada pada kategori gaya kognitif *Field Independent* (FI) dan sebesar 65% berada pada kategori *Field Dependent* (FD); (2) Tahapan akhir APOS pada tiap indikator pemahaman konsep siswa FI dan FD berturut-turut yakni pada indikator menjelaskan sebesar 57,14% dan 34,62%, pada indikator menafsirkan sebesar 28,57% dan 11,54%, pada indikator membandingkan sebesar 71,43% dan 23,08%, pada indikator mengklasifikasi sebesar 71,43% dan 11,54%, serta pada indikator menarik inferensi sebesar 28,57% dan 3,85%.

Kata Kunci: Gaya Kognitif, Getaran, Gelombang, dan Bunyi, Pemahaman Konsep, Teori APOS

Khoirun Nisak. 2023. *Analysis of Students' Conceptual Understanding on Vibration, Wave and Sound Material Using APOS Theory in Terms of Cognitive Style*. Thesis, Science Education Study Program, Faculty of Education, University of Trunojoyo Madura. Advisor: Maria Chandra Sutarja

ABSTRACT

The aims of this research was to determine students' conceptual understanding on vibrations, waves, and sound material used the APOS theory, based on cognitive style. The type of this research was quantitative research with descriptive design. The research population was eight grade students of SMP Techno Insan Kamil Tuban, selected through non-probability sampling used purposive sampling. The number of samples was 40 students Conceptual understanding data were collected through tests, while cognitive style data were gathered using the Group Embedded Figure Test (GEFT), supplemented by interviews. The result showed that: (1) 35% of students were categorized as having a Field Independent (FI) cognitive style, while 65% fell into the Field Dependent (FD) category. (2) The final stages of APOS for each indicator of conceptual understanding in both FI and FD students were as follows for the explaining indicator 57.14% and 34.62% respectively, for the interpreting indicator 28.57% and 11.54% respectively, for the comparing indicator 71.43% and 23.08% respectively, for the classifying indicator 71.43% and 11.54% respectively, and for the making inferences indicator 28.57% and 3.85% respectively

Keywords: *Cognitive Style, Vibrations, Waves, and Sound, Conceptual Understanding, APOS Theory*