

Fatimatuz Zahroh. 2020. *Analisis Pemahaman Konsep Siswa SMP Pada Materi Suhu Dan Kalor Berdasarkan Teori APOS*. Skripsi, Program Studi Pendidikan IPA, Fakultas Ilmu Pendidikan, Universitas Trunojoyo Madura.

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ABSTRAK

Penelitian ini bertujuan untuk mendeskripsikan kemampuan dan mengetahui faktor pemahaman konsep siswa pada materi suhu dan kalor berdasarkan teori APOS. Penelitian ini menggunakan metode penelitian *mixed method* dengan desain penelitian *explanatory*, dilaksanakan di UPTD SMPN 278 Jakarta dengan populasi seluruh siswa kelas VII Tahun Ajaran 2019/2020. Sampel penelitian satu kelas menggunakan teknik *purposive sampling*. Instrumen yang digunakan yaitu tes, angket, wawancara. Teknik analisis data menggunakan analisis data kuantitatif dan kualitatif menurut Miles dan Huberman. Hasil penelitian ini menunjukkan bahwa rata-rata hasil tes pemahaman konsep berdasarkan teori APOS yaitu 53,33% siswa melalui tahap aksi; 33,33% siswa melalui tahap proses; 12,28% siswa melalui tahap objek; 2,85% siswa melalui tahap tahap skema. Diketahui bahwa siswa kemampuan sedang memiliki pemahaman konsep pada tahap objek, siswa kemampuan rendah memiliki pemahaman konsep pada tahap proses. Faktor yang mempengaruhi pemahaman konsep siswa pada materi suhu dan kalor yaitu pemahaman terhadap soal yang diberikan, cara menghitung transformasi satuan suhu, penggunaan tanda *plus(+)* dan *minus(-)* pada suhu, miskonsepsi pada konsep kalor, lupa pada rumus yang harus digunakan serta cara penyelesaiannya pada konsep pemuaian, tidak memahami mekanisme perubahan suhu dan hubungannya dengan kalor, kurangnya pemahaman siswa pada konsep perubahan suhu, pemuaian dan kalor.

Kata Kunci: Pemahaman Konsep, Suhu dan Kalor, Teori APOS.

Fatimatuz Zahroh. 2020. *Analysis of Understanding of Junior High School Student Concepts on Temperature and Heat Material Based on APOS Theory*. Thesis, Science Education Study Program, Faculty of Education, Trunojoyo University, Madura.
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ABSTRACT

This study aims to describe the ability of students to understand the concepts of temperature and heat based on APOS theory and determined the factors that influence students' understanding of concepts. This study uses a mixed method research method with an explanatory sequential mixed method research design conducted at UPTD SMPN 278 Jakarta with the population of all VII grade students in the 2019/2020 Academic Year. The research sample of 1 class using purposive sampling technique. The instruments used were concept understanding tests, questionnaires and interviews. Data analysis techniques using quantitative data analysis techniques and qualitative data analysis according to Miles and Huberman. The results of this study indicate that the average test results of understanding concepts based on APOS theory that is 53.33% of students can go through the action stage; 33.33% of students can go through the process stage; 12.28% of students can go through the object phase; 2.85% of students can go through the stages of the scheme, so that it can be seen that students with moderate ability have an understanding of the concept at the object stage and students with low ability have a conceptual understanding at the process stage. Factors that influence students' understanding of the concept of temperature and heat are students' understanding of the given problem, how to calculate the transformation of temperature units, the use of plus (+) and minus (-) signs at temperature, the misconception of the concept of heat, forgetfulness the formula that must be used and how to solve it on the concept of expansion, do not understand the mechanism of changes in the temperature of objects and their relationship with heat and the lack of understanding of students on the concept of changes in temperature, expansion and heat.

Keywords: Concept Understanding, Temperature and Heat, APOS Theory.