

Septiana Alifiyah. 2020. *Analisis Kemampuan Representasi Matematis Peserta Didik Pada Materi Getaran, Gelombang dan Bunyi*. Skripsi, Program Studi Pendidikan IPA, Fakultas Ilmu Pendidikan, Universitas Trunojoyo Madura. Pembimbing 1: Ana Yuniasti Retno Wulandari. dan Pembimbing 2: Wiwin Puspita Hadi.

ABSTRAK

Penelitian ini bertujuan untuk mengetahui tingkat kemampuan representasi matematis, perbedaan setiap jenis kemampuan representasi matematis, dan faktor yang mempengaruhi kemampuan representasi matematis peserta didik kelas VIII UPTD SMPN 3 Bangkalan pada materi Getaran, Gelombang dan Bunyi. Penelitian ini menggunakan metode *mix method* antara kuantitatif dan kualitatif dengan model *dominant-less domonant design*. Data dikumpulkan dengan menggunakan tes kemampuan representasi matematis dengan tiga jenis kemampuan yaitu gambar, verbal dan simbolik dan juga lembar wawancara. Hasil penelitian menunjukkan bahwa: 1) tingkat kemampuan representasi matematis pada materi getaran, gelombang dan bunyi, peserta didik pada kategori tinggi 10%, kategori sedang 70% dan kategori rendah 20%. 2) perbedaan setiap jenis kemampuan representasi matematis, persentasi pada jenis gambar 43,25%, persentase pada jenis verbal 48,50% dan persentasi pada jenis simbolik 55%. Faktor yang mempengaruhi kemampuan representasi matematis peserta didik berdasarkan hasil wawancara yaitu peserta didik cenderung meniru, peserta didik selalu mengatakan mengerti dan pengetahuan awal peserta didik.

Kata Kunci: Kemampuan Representasi Matematis, Materi Getaran Gelombang dan Bunyi

Septiana Alifiyah. 2020. *Analnsis of Mathematical Representation Ability Student of Vibration, Waves and Sound Material*. Thesis, Natural Science Education, Education Faculty, Trunojoo Madura University. 1st Advitor: Ana Yuniasti Retno Wulandari and 2nd Advitor : Wiwin Puspita Hadi.

ABSTRACT

This research aims to determine the level of mathematical representation ability, the different of each type of mathematical representation ability, and the factors affected the mathematical representation ability of student in grade VIII UPTD SMPN 3 Bangkalan on vibration, waves and sounds materials. This research used the method of *mix method* between quantitative dan qualitarive with *dominant-less domonant design* model. Data was colected using a matehematical represenattion ability test with three type of abilities namely images, verbal and symbolic and also interviewers. The results showed that: 1) level of mathematical representation ability vibration, waves and sounds materials, learners in high categories is 10%, medium category is 70% and low category 20%. 2) differences in each type of mathematical representation ability, percentage on type of image 43,25%, percentage on type of verbal 48,50% and percentage on type of symbolic 55%. Factors that effect the mathematical represetation ability of learners based on the interview results were learners tent to cheat, learners always said understand and early knowledge of learners.

Keyword: Mathematical Representation Ability, Vibration Waves and Sounds materials