

Risa Elvina Ayu Indah Sari. 2022. *Penerapan Collaborative Problem Solving Berbantuan Media PhET untuk Meningkatkan Keterampilan Pemecahan Masalah Siswa SMP*. Skripsi, Program Studi Pendidikan IPA, Fakultas Ilmu Pendidikan, Universitas Trunojoyo Madura. Pembimbing: Ana Yuniasti Retno Wulandari.

ABSTRAK

Keterampilan pemecahan masalah merupakan salah satu keterampilan yang sangat penting untuk dimiliki siswa, sebab keterampilan ini dapat membantu siswa dalam menyelesaikan masalah di pembelajaran maupun kehidupan sehari-hari. Tujuan penelitian ini adalah untuk meningkatkan keterampilan pemecahan masalah siswa kelas VIII-C SMPN 1 Singgahan di Desa Mulyoagung, Kecamatan Singgahan, Kabupaten Tuban pada materi Getaran dan Gelombang. Jenis penelitian ini yaitu penelitian kuantitatif menggunakan metode *Pre-Eksperimental* dengan desain *One-Group Pretest-Posttest*. Populasi penelitian yaitu seluruh kelas VIII SMPN 1 Singgahan Tahun Ajaran 2021/2022. Pengambilan sampel menggunakan teknik *purposive sampling*. Sampel penelitian kelas VIII-C sebanyak 31 siswa. Data dikumpulkan menggunakan tes, observasi, dan angket. Hasil penelitian menunjukkan bahwa: 1) terdapat perbedaan keterampilan pemecahan masalah siswa sebelum dan setelah diterapkannya model *Collaborative Problem Solving* berbantuan media PhET dengan hasil $t_{hitung} < -t_{tabel}$ ($-84,52 < -2,04$) dan *sig. (2-tailed)* $0,00 < 0,05$, maka H_0 ditolak dan H_1 diterima. 2) terdapat peningkatan keterampilan pemecahan masalah siswa setelah diterapkan model *Collaborative Problem Solving* berbantuan media PhET dengan hasil N-gain sebesar 0,60 di kategori sedang. 3) keterlaksanaan proses pembelajaran model *Collaborative Problem Solving* berbantuan media PhET memperoleh persentase 100% dengan kategori sangat baik. 4) Pembelajaran model *Collaborative Problem Solving* berbantuan media PhET mendapat respons siswa sebesar 86,93 dengan kategori sangat baik.

Kata Kunci: Getaran dan Gelombang, Media Phet, Model *Collaborative Problem Solving*, Keterampilan Pemecahan Masalah

Risa Elvina Ayu Indah Sari. 2022. *Application of Collaborative Problem Solving Assisted by PhET Media to Improve Problem-Solving Skills for Junior High School Students*. Thesis, Science Education Study Program, Faculty of Education, Trunojoyo University Madura. Supervisor: Ana Yuniasti Retno Wulandari.

ABSTRACT

Problem-solving skills are one of the most important skills to be conquered by students to have because these skills can help students solve problems in learning and everyday life. This study aimed to improve the problem-solving skills of class VIII-C students of SMPN 1 Singgahan in Mulyoagung Village, Singgahan District, Tuban Regency on the subject of Vibration and Waves. The type of this research is a quantitative research using Pre-Experimental with a One-Group Pretest-Posttest design. The research population is all class VIII SMPN 1 Singgahan for the 2021/2022 academic year. The sampling used was a purposive sampling technique. The research sample for class VIII-C was 31 students. Data were collected using tests, observations, and questionnaires. The results showed that: 1) there were differences in students' problem-solving skills before and after the implementation of Collaborative Problem Solving the PhET-assisted $t_{count} < -t_{table}$ ($-84.52 < -2.04$) and sig. (2-tailed) $0.00 < 0.05$, then H_0 rejected and H_1 accepted. 2) there is an increase in students' problem-solving skills after applying the Collaborative Problem Solving assisted by PhET media with an N-gain result of 0.60 in the medium category. learning process Collaborative Problem Solving assisted by PhET media obtained a percentage of 100% with a very good category. 4) Learning the Collaborative Problem Solving with the help of PhET media received a student response of 86.93 with an excellent category.

Keywords: *Vibration and Waves, Phet Media, Collaborative Problem Solving, problem-solving Skills*