

Azhar Husnun Mawaddah. 2024. *Implementasi STEM-PjBL Berbantuan KIT Teralist-STEM untuk Meningkatkan Keterampilan Proses Sains Siswa*. Skripsi, Program Studi Pendidikan IPA, Fakultas Ilmu Pendidikan, Universitas Trunojoyo Madura. Pembimbing: Mochammad Yasir

ABSTRAK

Keterampilan proses sains merupakan kemampuan seseorang untuk memperoleh pengetahuan berdasarkan proses mengamati, mengklasifikasi, mengukur, memprediksi, menyimpulkan dan mengkomunikasikan suatu peristiwa. Paduan proses pembelajaran berbasis proyek dengan mengintegrasikan elemen-elemen STEM adalah upaya mengenalkan STEM pada siswa agar dapat menyelesaikan permasalahan. Penelitian ini bertujuan untuk mempelajari penerapan model STEM-PjBL berbantuan KIT Teralist-STEM dalam meningkatkan keterampilan proses sains siswa di SMPN 1 Kamal. Penelitian ini bersifat kuantitatif dengan desain penelitian *pre-eksperimental design* dan model *one group pretest-posttest*. Populasi pada penelitian ini yaitu siswa kelas IX SMPN 1 Kamal pada tahun ajaran 2023/2024 dengan sampel berjumlah 30 siswa. Peneliti melakukan pembelajaran pada materi teknologi ramah lingkungan menggunakan model STEM-PjBL yang pelaksanaannya diamati dan diukur perbedaan serta peningkatan keterampilan proses sains siswa. Teknik pengumpulan data melalui tes, observasi, angket dan dokumentasi untuk mengumpulkan bukti-bukti eksplisit. Analisis data melalui uji *paired sample t test* dan *N-Gain Score*. Hasil penelitian menunjukkan bahwa terdapat perbedaan keterampilan proses sains dengan sig. $0,000 \leq 0,05$ dan terjadi peningkatan berdasarkan *N-Gain score* 0,47 dengan kategori sedang. Keterlaksanaan pembelajaran STEM-PjBL sebesar 96,67 termasuk dalam kategori sangat baik dengan hasil respons siswa sebesar 80,14% pada kategori baik. Simpulan penelitian ini yaitu penerapan model STEM-PjBL berbantuan KIT Teralist-STEM mampu meningkatkan keterampilan proses sains siswa.

Kata kunci: keterampilan proses sains, KIT Teralist-STEM, STEM-PjBL

Azhar Husnun Mawaddah. 2024. Implementation of STEM-PjBL Assisted by the Teralist-STEM KIT to Improve Students' Science Process Skills. Thesis, Science Education Study Program, Faculty of Education, Trunojoyo University Madura. Advisor: Mochammad Yasir

ABSTRACT

Science process skills are a person's ability to acquire knowledge based on the process of observing, classifying, measuring, predicting, concluding and communicating an event. The combination of project-based learning processes by integrating STEM elements is an effort to introduce STEM to students so that they can solve problems. This study aims to study the application of the STEM-PjBL model assisted by the Teralist-STEM KIT in improving students' science process skills at SMPN 1 Kamal. This research is quantitative with a pre-experimental design and a one-group pretest-posttest model. The population in this study were grade IX students of SMPN 1 Kamal in the 2023/2024 academic year with a sample of 30 students. The researcher conducted learning on environmentally friendly technology material using the STEM-PjBL model whose implementation was observed and measured the differences and improvements in students' science process skills. Data collection techniques through tests, observations, questionnaires and documentation to collect explicit evidence. Data analysis through paired sample t-test and N-Gain Score. The results showed that there were differences in science process skills with sig. $0.000 \leq 0.05$ and there was an increase based on the N-Gain score of 0.47 with a moderate category. The implementation of STEM-PjBL learning of 96.67 is included in the very good category with student response results of 80.14% in the good category. This study concludes that the application of the STEM-PjBL model assisted by the Teralist-STEM KIT can improve students' science process skills.

Key words: KIT Teralist-STEM, science process skills, STEM-PjBL