

ABSTRAK

Syifa Nurendah Solihat “Peningkatan Keterampilan Proses Sains Siswa Melalui Model Pembelajaran *Project Based Learning* (PjBL) pada Topik Pencemaran Air”

Keterampilan proses sains menjadi salah satu kompetensi penting abad-21 yang berperan dalam mendukung kemampuan peserta didik dalam memecahkan masalah secara ilmiah. Namun kenyataannya, keterampilan proses sains peserta didik masih tergolong rendah dan kepedulian akan lingkungan masih kurang. Penelitian ini bertujuan untuk menganalisis peningkatan keterampilan proses sains peserta didik melalui model *Project Based Learning* (PjBL). Metode penelitian yang digunakan yaitu *quasi experimental* dengan desain *non-equivalent control group*. Sampel terdiri atas dua kelas yang dipilih menggunakan teknik *purposive sampling*. Hasil penelitian menunjukkan keterlaksanaan pembelajaran pada kelas eksperimen diperoleh persentase sebesar 100% pada kinerja guru dan 93% pada aktivitas peserta didik, sedangkan pada kelas kontrol keterlaksanaan pembelajaran diperoleh persentase sebesar 100% pada kinerja guru dan 95% pada aktivitas peserta didik, keduanya berada dalam kategori “sangat baik”. Peningkatan keterampilan proses sains pada kelas eksperimen memperoleh nilai *N-Gain* sebesar 0,74 (tinggi) dan kelas kontrol memperoleh nilai *N-Gain* sebesar 0,64 (sedang). Berdasarkan hasil uji *Independent t-test* diperoleh nilai Sig. (2-tailed) $0,00 < 0,05$, maka H_0 ditolak H_1 diterima. Hasil respon peserta didik kelas eksperimen terhadap pembelajaran memperoleh kriteria sangat baik dengan nilai rata-rata sebesar 81,73%. Berdasarkan hasil penelitian dapat disimpulkan bahwa terdapat perbedaan peningkatan keterampilan proses sains peserta didik melalui model pembelajaran *Project Based Learning* (PjBL) pada topik pencemaran air dengan kegiatan *grey water recycle*

Kata Kunci : Keterampilan Proses Sains, *Project Based Learning* (PjBL), Pencemaran Air



ABSTRACT

Syifa Nurendah Solihat *“Improving Students Science Process Skills Through the Project-Based Learning (PjBL) Model on the Topic of Water Pollution”*

Science process skills are one of the important competencies of the 21st century that play a role in supporting students' ability to solve problems scientifically. However, in reality, students' science process skills remain relatively low, and environmental awareness is still insufficient. This study aims to analyze the improvement of students' science process skills through the Project-Based Learning (PjBL) model. The research method used is a quasi-experimental design with a non-equivalent control group. The sample consists of two classes selected using purposive sampling techniques. The results showed that the implementation of learning in the experimental class achieved a percentage of 100% in teacher performance and 93% in student activities, while in the control class, the implementation of learning achieved a percentage of 100% in teacher performance and 95% in student activities, both of which were categorized as “very good.” The improvement in science process skills in the experimental class obtained an N-Gain value of 0.74 (high), and the control class obtained an N-Gain value of 0.64 (moderate). Based on the results of the Independent t-test, the Sig. (2-tailed) value was $0.00 < 0.05$, so H_0 was rejected and H_1 was accepted. The response of students in the experimental class to the learning process met the criteria for “very good” with an average score of 81.73%. Based on the research results, it can be concluded that there is a difference in the improvement of students' science process skills through the Project-Based Learning (PjBL) model on the topic of water pollution with grey water recycling activities.

Keywords: Science Process Skills, Project Based Learning (PjBL), Water Pollution

