ABSTRAK

Firda Rahma Aulia (1212060040) : Pengaruh Model Pembelajaran *Predict-Observe-Explain* (POE) Terhadap Peningkatan Keterampilan Proses Sains Peserta Didik Pada Materi Sistem Peredaran Darah Manusia

Pembelajaran sains abad ke-21 menuntut peserta didik tidak hanya menguasai konsep, tetapi juga memiliki keterampilan proses sains sebagai wujud kemampuan berpikir ilmiah. Penelitian ini bertujuan untuk menganalisis pengaruh model pembelajaran *Predict-Observe-Explain* (POE) terhadap peningkatan keterampilan proses sains pada materi sistem peredaran darah manusia. Penelitian menggunakan metode *quasi experiment* dengan pendekatan kuantitatif. Sampel ditentukan melalui *purposive sampling* yang melibatkan peserta didik kelas XI SMAN 4 Sukabumi semester ganjil tahun ajaran 2025/2026. Instrumen penelitian meliputi lembar observasi keterlaksanaan pembelajaran, tes keterampilan proses sains, dan angket respon peserta didik. Hasil penelitian menunjukkan bahwa keterlaksanaan pembelajaran pada kelas eksperimen berada pada kategori sangat baik, dengan aktivitas guru sebesar 94,3% dan aktivitas peserta didik sebesar 96%. Peningkatan keterampilan proses sains pada kelas eksperimen memperoleh nilai *N-Gain* sebesar 0,70 (kategori sedang), lebih tinggi dibandingkan kelas kontrol sebesar 0,55. Respon peserta didik terhadap penerapan model POE berada pada kategori sangat baik dengan persentase 85,16%. Hasil uji hipotesis menunjukkan nilai Sig. (2-tailed) 0,00 < 0,05 sehingga Ho ditolak dan Ha diterima, diperkuat oleh nilai *effect size* dalam kategori sangat besar. Berdasarkan hasil tersebut, dapat disimpulkan bahwa model pembelajaran POE berpengaruh positif terhadap peningkatan keterampilan proses sains peserta didik pada materi sistem peredaran darah manusia. Penelitian ini memberikan manfaat sebagai alternatif strategi pembelajaran untuk mengoptimalkan keterampilan proses sains, serta menjadi referensi bagi guru dalam merancang pembelajaran yang lebih aktif, ilmiah, dan berpusat pada peserta didik sesuai tuntutan kurikulum abad ke-21.

Kata Kunci: Keterampilan Proses Sains, *Predict-Observe-Explain* (POE), Sistem Peredaran Darah Manusia

ABSTRACT

Firda Rahma Aulia (1212060040) : *The Effect of the Predict-Observe-Explain (POE) Learning Model on Improving Students Science Process Skills on the Human Circulatory System*

Twenty-first-century science learning requires students not only to master concepts but also to develop science process skills as a manifestation of scientific thinking abilities. This study aimed to analyze the effect of the Predict-Observe-Explain (POE) learning model on the improvement of students' science process skills in the topic of the human circulatory system. The study employed a quasi-experimental method with a quantitative approach. The sample was determined using purposive sampling, involving eleventh-grade students of SMAN 4 Sukabumi in the first semester of the 2025/2026 academic year. The research instruments included an observation sheet of learning implementation, a science process skills test, and a student response questionnaire. The results showed that the implementation of learning in the experimental class was categorized as very good, with teacher activity reaching 94.3% and student activity 96%. The improvement of science process skills in the experimental class obtained an N-gain score of 0.70 (moderate category), which was higher than that of the control class at 0.55. Students' responses to the implementation of the POE model were also categorized as very good, with a percentage of 85.16%. The hypothesis testing results showed a Sig. (2-tailed) value of 0.00 < 0.05, indicating that H_0 was rejected and H_a was accepted, supported by a very large effect size.Based on these findings, it can be concluded that the POE learning model has a positive effect on improving students' science process skills in the topic of the human circulatory system. This study provides an alternative instructional strategy to optimize science process skills and serves as a reference for teachers in designing more active, scientific, and student-centered learning in accordance with the demands of the 21st-century curriculum.

Keywords: *Science Process Skills, Predict-Observe-Explain (POE), Human Circulatory System*