

ABSTRAK

SORAYA BELIANDA SALSABILA: Pengaruh Model Pembelajaran *Prediction, Observation, dan Explanation (POE)* terhadap Pemecahan Masalah dan *Self-Efficacy* Siswa pada Materi Laju Reaksi. **Program Studi Pendidikan Kimia FKIP Universitas Malikussaleh, 2026.**

Penelitian ini bertujuan untuk mengetahui pengaruh model pembelajaran *Prediction Observation Explanation (POE)* terhadap kemampuan pemecahan masalah dan *self-efficacy* siswa pada materi laju reaksi. Model pembelajaran POE diterapkan karena memberikan kesempatan kepada siswa untuk membuat prediksi, melakukan pengamatan, dan menjelaskan hasil pengamatan sehingga siswa terlibat secara aktif dalam membangun pemahaman konsep, menyelesaikan permasalahan, serta meningkatkan keyakinan terhadap kemampuan dirinya.

Penelitian ini merupakan penelitian kuantitatif dengan metode pra-eksperimen menggunakan desain *intact group comparison*. Penelitian dilaksanakan di SMA Negeri 1 Muara Batu pada semester genap tahun ajaran 2025/2026. Sampel penelitian terdiri atas kelas XI-A1 sebagai kelas eksperimen yang memperoleh pembelajaran menggunakan model POE dan kelas XI-A2 sebagai kelas kontrol yang memperoleh pembelajaran konvensional melalui diskusi dan demonstrasi. Instrumen penelitian berupa 10 soal uraian untuk mengukur kemampuan pemecahan masalah dan 26 pernyataan angket untuk mengukur *self-efficacy* siswa. Data dianalisis menggunakan analisis statistik deskriptif, uji normalitas, uji homogenitas, *Independent Samples t-Test*, dan uji *Mann-Whitney*.

Hasil penelitian menunjukkan bahwa rata-rata kemampuan pemecahan masalah siswa pada kelas eksperimen sebesar 76,07, sedangkan kelas kontrol sebesar 61,14. Hasil uji *Independent Samples t-Test* memperoleh nilai signifikansi sebesar $0,000 < 0,05$, sehingga terdapat pengaruh yang signifikan model pembelajaran POE terhadap kemampuan pemecahan masalah siswa. Rata-rata *self-efficacy* siswa pada kelas eksperimen sebesar 74,89, sedangkan kelas kontrol sebesar 67,83. Hasil uji *Mann-Whitney* memperoleh nilai signifikansi sebesar $0,001 < 0,05$, sehingga terdapat pengaruh yang signifikan model pembelajaran POE terhadap *self-efficacy* siswa. Dengan demikian, model pembelajaran POE memberikan pengaruh yang signifikan terhadap kemampuan pemecahan masalah dan *self-efficacy* siswa pada materi laju reaksi.

Kata Kunci: model POE, kemampuan pemecahan masalah, *self-efficacy*, laju reaksi, pembelajaran kimia.

ABSTRACT

SORAYA BELIANDA SALSABILA: The Effect of the Prediction, Observation, and Explanation (POE) Learning Model on Students' Problem-Solving Skills and Self-Efficacy in the Reaction Rate Topic. Chemistry Education Study Program FKIP, Universitas Malikussaleh, 2026.

This study aimed to determine the effect of the Prediction Observation Explanation (POE) learning model on students' problem-solving ability and self-efficacy in the reaction rate topic. The POE learning model was implemented because it provides students with opportunities to make predictions, conduct observations, and explain their findings. These activities actively engage students in constructing conceptual understanding, solving problems, and strengthening their confidence in their own abilities.

This study employed a quantitative approach using a pre-experimental method with an intact group comparison design. The study was conducted at SMA Negeri 1 Muara Batu during the second semester of the 2025/2026 academic year. The research sample consisted of class XI-A1 as the experimental group, which was taught using the POE learning model, and class XI-A2 as the control group, which received conventional instruction through discussion and demonstration. The research instruments consisted of 10 essay questions to measure problem-solving ability and a 26-item questionnaire to measure students' self-efficacy. The data were analyzed using descriptive statistics, normality and homogeneity tests, an Independent Samples t-Test, and the Mann–Whitney U test.

The results showed that the mean problem-solving score of the experimental group was 76.07, while that of the control group was 61.14. The Independent Samples t-Test produced a significance value of $0.000 < 0.05$, indicating that the POE learning model had a significant effect on students' problem-solving ability. The mean self-efficacy score of the experimental group was 74.89, while that of the control group was 67.83. The Mann–Whitney U test produced a significance value of $0.001 < 0.05$, indicating that the POE learning model had a significant effect on students' self-efficacy. Therefore, the POE learning model had a significant effect on students' problem-solving ability and self-efficacy in the reaction rate topic.

Keywords: POE learning *model*, problem-solving ability, self-efficacy, reaction rate, chemistry learning.