# ABSTRAK

**Nurul Salsabila:** Pengaruh Model Pembelajaran *Problem Based Learning* (PBL) terhadap Kemampuan Berpikir Kritis dan Keaktifan Peserta Didik Pada Materi Larutan Elektrolit dan Non elektrolit. **Program Studi Pendidikan Kimia Universitas Malikussaleh.**

Penelitian ini bertujuan untuk mengetahui pengaruh model *Problem Based Learning* (PBL) terhadap Kemampuan Berpikir Kritis dan keaktifan peserta didik pada materi larutan elektrolit dan non elektrolit. Penelitian dilakukan semester genap tahun ajaran 2024/2025. Jenis penelitian ini menggunakan *quasi eksperimental* dengan desain penelitian *non equivalen control group design*. Teknik pengambilan sampel dilakukan dengan cara *purposive sampling*. Sampel penelitian ini adalah kelas X1 sebagai kelas eksperimen dan kelas X2 sebagai kelas kontrol dengan jumlah masing-masing 20 peserta didik. Instrument pengumpulan data yang digunakan yaitu soal tes kemampuan berpikir kritis kimia dan lembar observasi keaktifan.sebelum instrument diujikan kepada sampel penelitian, tes tersebut diuji coba dengan kelompok peserta didik yang sudah mempelajari materi tersebut. Jenis uji yang dilakukan yaitu uji validitas, uji reliabilitas, tingkat kesukaran dan daya beda soal. Berdasarkan beberapa uji yang telah dilakukan dari 10 soal terdapat 7 soal yang dinyatakan valid dan 3 soal yang dinyatakan tidak valid. Hasil penelitian menunjukkan bahwa kemampuan berpikir kritis dan keaktifan peserta didik pada kelas eksperimen yang menggunakan model *Problem Based Learning* (PBL) lebih baik dibandingkan kelas kontrol. Rata-rata nilai pretest kelas eksperimen sebesar 45,14 (kategori cukup) meningkat menjadi 83,43 (kategori sangat baik) pada posttest. Sementara itu, kelas kontrol mengalami peningkatan dari 46,86 (kategori cukup) menjadi 67,29 (kategori baik). Keaktifan peserta didik pada kelas eksperimen memperoleh rata-rata nilai 77 (kategori baik), sedangkan kelas kontrol sebesar 72 (kategori baik). Uji normalitas dan homogenitas menunjukkan data berdistribusi normal dan homogen. Hasil uji hipotesis menggunakan uji t menyatakan bahwa nilai signifikan = 0,001 < 0,05 sehingga $H_o$ ditolak $H_1$ diterima yang menunjukan model pembelajaran *Problem Based Learning* (PBL) berpengaruh secara bersamaan terhadap keaktifan pada materi larutan elektrolit dan non elektrolit.

**Kata Kunci:** Model *Problem Based Learning* (PBL), Kemampuan Berpikir Kritis dan Keaktifan, larutan elektrolit dan non elektrolit.

## *ABSTRACT*

**NURUL SALSABILA:** The Influence of the Problem Based Learning (PBL) Model on Students' Critical Thinking Skills and Activeness in the Topic of Electrolyte and Nonelectrolyte Solutions Chemistry Education Study Program, Universitas Malikussaleh**.**

This study aims to determine the influence of the Problem Based Learning (PBL) model on students' critical thinking skills and activeness in the topic of electrolyte and nonelectrolyte solutions. The research was conducted in the even semester of the 2024/2025 academic year. This study employed a quasi-experimental design with a non-equivalent control group design. The sampling technique used was purposive sampling. The research sample consisted of class X1 as the experimental class and class X2 as the control class, each consisting of 20 students. The instruments used for data collection were a critical thinking test in chemistry and an observation sheet for student activeness. Before being used in the study, the test instrument was piloted on a group of students who had previously studied the material. The types of tests conducted included validity test, reliability test, difficulty level, and item discrimination index. Based on the analysis, 7 out of 10 test items were declared valid, while 3 items were invalid. The results of the study show that the critical thinking skills and student activeness in the experimental class using the Problem Based Learning (PBL) model were better than those in the control class. The average pretest score of the experimental class was 45.14 (categorized as fair), which increased to 83.43 (categorized as very good) in the posttest. Meanwhile, the control class showed an improvement from 46.86 (fair) to 67.29 (good). Student activeness in the experimental class achieved an average score of 77 (good), while the control class scored 72 (good). The normality and homogeneity tests indicated that the data were normally distributed and homogeneous. The hypothesis test using the t-test showed that the significance was $0.001 < 0.05$, thus $H_0$ was rejected and H1 was accepted. This indicates that the Problem Based Learning (PBL) model has a significant effect on students' activeness in learning the topic of electrolyte and nonelectrolyte solutions.



**Keywords**: Problem Based Learning (PBL), Activeness, Critical Thinking Skills, Electrolyte and Nonelectrolyte Solutions.