

Ega Indah Sevtelia. 2026. Pengaruh Model *PBL* Berbantuan Media Pembelajaran *Mixed Reality Edugame (MRE)* Terhadap Keterampilan Berpikir Kritis Siswa. Skripsi, Program Studi Pendidikan IPA, Fakultas Keguruan dan Ilmu Pendidikan, Universitas Trunodjoyo Madura. Pembimbing: Badrud Tamam.

ABSTRAK

Ilmu Pengetahuan Alam (IPA) merupakan disiplin ilmu yang mengkaji makhluk hidup, benda, dan berbagai fenomena alam melalui pendekatan ilmiah, sehingga menuntut siswa memiliki keterampilan berpikir kritis untuk menganalisis informasi, mengevaluasi permasalahan, serta menghubungkan konsep dengan fenomena di lingkungan sekitar. Penelitian ini bertujuan untuk mengetahui pengaruh penerapan model *Problem Based Learning (PBL)* berbantuan *Mixed Reality Edugame (MRE)* terhadap keterampilan berpikir kritis siswa pada materi ekosistem laut. Penelitian ini menggunakan pendekatan kuantitatif dengan desain *Nonequivalent Control Group Design*. Sampel penelitian terdiri atas 25 siswa kelas VII C sebagai kelas kontrol dan 25 siswa kelas VII D sebagai kelas eksperimen. Instrumen penelitian meliputi soal *pretest-posttest*, lembar observasi keterlaksanaan pembelajaran, dan angket respons siswa. Analisis data dilakukan menggunakan uji normalitas, uji homogenitas, uji independent sample *t-test*, dan uji *N-Gain*. Hasil penelitian menunjukkan nilai signifikansi sebesar 0,000 ($<0,05$), sehingga terdapat pengaruh signifikan penerapan model *PBL* berbantuan *MRE* terhadap keterampilan berpikir kritis siswa. Rata-rata *N-Gain* kelas eksperimen sebesar 0,6 (kategori sedang), sedangkan kelas kontrol berkategori rendah. Keterlaksanaan pembelajaran memperoleh persentase 75% dan respons siswa sebesar 72,9%, keduanya berkategori baik. Dengan demikian, penerapan model *PBL* berbantuan *MRE* efektif dalam meningkatkan keterampilan berpikir kritis siswa pada materi ekosistem laut.

Kata Kunci: kemampuan analitis, media pembelajaran imersif, pembelajaran inovatif, ekosistem laut.

Ega Indah Sevtelia. 2026. *The Effect of the Problem-Based Learning Model Assisted by Mixed Reality Edugame (MRE) Learning Media on Students' Critical Thinking Skills*. Undergraduate Thesis, Science Education Study Program, Faculty of Teacher Training and Education, University of Trunojoyo Madura. Advisor: Badrud Tamam.

ABSTRACT

Science is a discipline that studies living organisms, objects, and various natural phenomena through a scientific approach. Therefore, students are required to develop critical thinking skills to analyze information, evaluate problems, and relate concepts to phenomena in their surrounding environment. This study aimed to determine the effect of implementing the Problem Based Learning (PBL) model assisted by Mixed Reality Edugame (MRE) on students' critical thinking skills in the marine ecosystem topic. This study employed a quantitative approach using a Nonequivalent Control Group Design. The research sample consisted of 25 students from Class VII C as the control group and 25 students from Class VII D as the experimental group. The research instruments included pretest-posttest tests, a learning implementation observation sheet, and a student response questionnaire. The data were analyzed using the normality test, homogeneity test, independent samples t-test, and N-Gain analysis. The results showed a significance value of 0.000 (<0.05), indicating that the implementation of the PBL model assisted by MRE had a significant effect on students' critical thinking skills. The experimental group obtained an average N-Gain score of 0.6 (moderate category), while the control group was categorized as low. The implementation of learning achieved a percentage of 75%, and students' responses reached 72.9%, both categorized as good. Therefore, the implementation of the PBL model assisted by MRE was effective in improving students' critical thinking skills in the marine ecosystem topic.

Keywords: Analytical skills, immersive learning media, innovative instruction, marine ecosystem