

ABSTRAK

YULIA ANGGI SAFITRI: Penerapan Model Pembelajaran *Challenge Based Learning* Untuk Meningkatkan Kemampuan Berpikir Kritis Matematis Siswa. Program Studi Pendidikan Matematika FKIP Universitas Malikussaleh, 2026.

Kemampuan berpikir kritis matematis siswa di SMP Negeri 2 Muara Batu masih tergolong rendah akibat penerapan model pembelajaran yang kurang bervariasi dan penggunaan media pembelajaran yang belum interaktif. Penelitian ini bertujuan untuk mengetahui apakah kemampuan berpikir kritis matematis siswa yang diajarkan melalui model pembelajaran *Challenge Based Learning* berbantuan media teka-teki silang lebih baik secara signifikan dibandingkan dengan pembelajaran konvensional. Penelitian ini menggunakan pendekatan kuantitatif dengan jenis *quasi experiment* dan desain *pretest-posttest control group design*. Sampel penelitian terdiri atas dua kelas VII yang masing-masing berjumlah 18 siswa, yaitu kelas eksperimen dan kelas kontrol. Data dikumpulkan menggunakan tes kemampuan berpikir kritis matematis, kemudian dianalisis dengan uji *N-Gain*, uji normalitas, uji homogenitas, dan *Independent Sample t-test*. Hasil penelitian menunjukkan rata-rata *N-Gain* kelas eksperimen sebesar 69,08% (cukup efektif), sedangkan kelas kontrol sebesar 48,95% (kurang efektif). Hasil uji *Independent Sample t-test* memperoleh nilai t hitung = 2,819 dengan $\text{Sig. (2-tailed)} = 0,008 < 0,05$. Dengan demikian, model pembelajaran *Challenge Based Learning* berbantuan media teka-teki silang secara signifikan lebih baik dalam meningkatkan kemampuan berpikir kritis matematis siswa dibandingkan pembelajaran konvensional.

Kata kunci: *Challenge Based Learning*, teka-teki silang, kemampuan berpikir kritis matematis.

ABSTRACT

YULIA ANGGI SAFITRI: The Implementation of the Challenge Based Learning Model Assisted by Crossword Puzzle Media to Improve Students' Mathematical Critical Thinking Skills. Mathematics Education Study Program, Faculty of Teacher Training and Education, Malikussaleh University, 2026.

Students' mathematical critical thinking skills at SMP Negeri 2 Muara Batu were still relatively low due to the limited variety of learning models and the lack of interactive learning media. This study aimed to determine whether students' mathematical critical thinking skills taught through the Challenge Based Learning model assisted by crossword puzzle media were significantly better than those taught through conventional learning. This study employed a quantitative approach using a quasi-experimental method with a pretest-posttest control group design. The sample consisted of two seventh-grade classes, each comprising 18 students, namely the experimental class and the control class. Data were collected using a mathematical critical thinking skills test and analyzed using the N-Gain test, normality test, homogeneity test, and Independent Samples t-test. The results showed that the average N-Gain score of the experimental class was 69.08% (moderately effective), while that of the control class was 48.95% (less effective). The Independent Samples t-test yielded a t-value of 2.819 with a significance value (Sig. 2-tailed) of $0.008 < 0.05$. Therefore, it can be concluded that the Challenge Based Learning model assisted by crossword puzzle media was significantly more effective in improving students' mathematical critical thinking skills than conventional learning.

Keywords: Challenge Based Learning, crossword puzzle, mathematical critical thinking skills.