

**KONTRIBUSI KEMAMPUAN PENALARAN MATEMATIS DAN
BERPIKIR KRITIS TERHADAP KEMAMPUAN MENYELESAIKAN
SOAL CERITA *OPEN-ENDED* PADA SISWA KELAS VII SMP NEGERI 1
AMLAPURA**

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ABSTRAK

Rendahnya kemampuan penalaran matematis dan berpikir kritis siswa mengakibatkan rendahnya kemampuan pemecahan masalah khususnya dalam menyelesaikan soal non rutin seperti soal *open-ended*. Penelitian ini bertujuan untuk mengetahui seberapa besar kontribusi kemampuan penalaran matematis dan berpikir kritis secara parsial dan simultan terhadap kemampuan menyelesaikan soal cerita *open-ended*. Jenis penelitian ini adalah penelitian kuantitatif *ex-post facto* dengan analisis regresi linear berganda. Populasi penelitian terdiri atas seluruh siswa kelas VII SMP Negeri 1 Amlapura tahun pelajaran 2024/2025 sebanyak 338 orang. Sampel penelitian terdiri atas 102 orang peserta didik yang ditentukan dengan rumus Slovin dan dipilih melalui *cluster random sampling*. Data kemampuan penalaran matematis, kemampuan berpikir kritis, dan kemampuan menyelesaikan soal cerita *open-ended* dikumpulkan dengan instrumen tes. Analisis data dilakukan untuk mengetahui seberapa besar kontribusi kemampuan penalaran matematis dan berpikir kritis terhadap kemampuan menyelesaikan soal cerita *open-ended* menggunakan bantuan *software SPSS Statistic 25*. Hasil penelitian menunjukkan bahwa kontribusi kemampuan penalaran matematis dan berpikir kritis terhadap kemampuan menyelesaikan soal cerita *open-ended* secara parsial masing-masing sebesar 37,26% dan 47,34%. Selanjutnya ditemukan bahwa kemampuan penalaran matematis dan berpikir kritis terhadap kemampuan menyelesaikan soal cerita *open-ended* secara simultan sebesar 84,6%. Dengan demikian dapat disimpulkan bahwa kemampuan penalaran matematis dan berpikir kritis berkontribusi terhadap kemampuan menyelesaikan soal cerita *open-ended*.

Kata-kata kunci: berpikir kritis, kemampuan menyelesaikan soal cerita *open-ended*, penalaran matematis

CONTRIBUTION OF MATHEMATICAL REASONING AND CRITICAL THINKING SKILLS TO THE ABILITY TO SOLVE OPEN-ENDED STORY PROBLEMS IN GRADE VII STUDENTS OF SMP NEGERI 1 AMLAPURA

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ABSTRACT

The low mathematical reasoning and critical thinking skills of students result in low problem-solving skills, especially in solving non-routine problems such as open-ended problems. This research aims to find out how much the ability to partially and simultaneously contribute mathematical reasoning and critical thinking skills to the ability to solve open-ended story problems. This type of researcher is ex-post facto quantitative research with multiple linear regression analysis. The research population consists of 338 students in grade VII of SMP Negeri 1 Amlapura for the 2024/2025 school year. The research sample consisted of 102 students determined by the Slovin formula and selected through cluster random sampling. Data on mathematical reasoning skills, critical thinking skills, and ability to solve open-ended story problems were collected with test instruments. Data analysis was carried out to find out how much the ability of mathematical and critical thinking to the ability to solve open-ended story problems using the help of SPSS Statistic 25 software. The results showed that the contribution of mathematical reasoning and critical thinking skills to the ability to solve open-ended story problems partially was 37.26% and 47.34%, respectively. Furthermore, it was found that the ability to mathematical reasoning and critical thinking was the ability to solve open-ended story problems simultaneously by 84.6%. Thus, it can be concluded that mathematical reasoning and critical thinking skills contribute to the ability to solve open-ended story problems.

Keywords: critical thinking, open-ended story solving skills , mathematical reasoning