

ABSTRAK

Bail Ihsan. (2026). Analisis Kemampuan Pemecahan Masalah Matematis Siswa SMP Pada Soal Teorema Pythagoras Berorientasi Etnomatematika. Skripsi. Tanjungpinang: Program Studi Pendidikan Matematika, Fakultas Keguruan dan Ilmu Pendidikan, Universitas Maritim Raja Ali Haji. Pembimbing I: Dr. Desi Rahmatina, S.Pd., M.Sc. Pembimbing II: Nur Asma Riani Siregar, S.Pd., M.Pd.

Kata Kunci: Kemampuan pemecahan masalah matematis, Teorema Pythagoras, Etnomatematika

Pendidikan matematika memiliki peran penting dalam mengembangkan kemampuan berpikir siswa, dengan kemampuan pemecahan masalah menjadi salah satu aspek utama yang perlu dikuasai dalam pembelajaran matematika. Penelitian ini bertujuan mendeskripsikan kemampuan pemecahan masalah matematis siswa SMP dalam menyelesaikan soal teorema Pythagoras berorientasi etnomatematika budaya lokal Perahu Jong Kepulauan Riau di SMP Negeri 8 Bintan. Penelitian menggunakan metode deskriptif kualitatif dengan subjek awal 21 siswa kelas VIII B, kemudian dipilih enam siswa sebagai subjek utama berdasarkan kategori kemampuan pemecahan masalah, melalui tes kemampuan pemecahan masalah matematis berdasarkan tahapan Polya, wawancara, dan dokumentasi. Hasil penelitian menunjukkan kemampuan pemecahan masalah matematis siswa terdistribusi dalam tiga kategori: 19,05% tinggi, 14,29% sedang, dan 66,67% rendah. Siswa berkategori tinggi mampu memenuhi keempat tahapan pemecahan masalah Polya, yaitu memahami masalah, merencanakan penyelesaian, melaksanakan rencana, dan memeriksa kembali. Siswa berkategori sedang hanya mampu memenuhi tiga tahapan tanpa mampu memeriksa kembali hasil penyelesaiannya, sedangkan siswa berkategori rendah hanya mampu memenuhi tahap memahami masalah. Konteks etnomatematika Perahu Jong membantu siswa mengenali objek dan situasi permasalahan, namun tidak menjamin ketuntasan penyelesaian masalah secara matematis, terutama pada siswa berkategori sedang dan rendah. Penelitian menyimpulkan bahwa kemampuan pemecahan masalah matematis siswa SMP pada materi teorema Pythagoras masih didominasi kategori rendah, dengan implikasi pentingnya pengembangan soal berorientasi etnomatematika budaya lokal sebagai alternatif strategi pembelajaran yang lebih kontekstual dan bermakna bagi siswa.

ABSTRACT

Bail Ihsan. (2026). *Analysis of Junior High School Students' Mathematical Problem-Solving Ability on Ethnomathematics-Oriented Pythagorean Theorem Problems*. Undergraduate Thesis. Tanjungpinang: Mathematics Education Study Program, Faculty of Teacher Training and Education, Raja Ali Haji Maritime University. Advisor I: Dr. Desi Rahmatina, S.Pd., M.Sc. Advisor II: Nur Asma Riani Siregar, S.Pd., M.Pd.

Keywords: *Mathematical problem-solving ability, Pythagorean theorem, Ethnomathematics*

Mathematics education plays an important role in developing students' thinking skills, with problem-solving ability being one of the key aspects to be mastered in mathematics learning. This study aimed to describe junior high school students' mathematical problem-solving abilities in solving Pythagorean theorem problems oriented toward the local ethnomathematics of the Jong Boat culture of the Riau Islands at SMP Negeri 8 Bintan. The study employed a qualitative descriptive method with an initial subject pool of 21 eighth-grade (VIII B) students, from which six students were selected as the main subjects based on problem-solving ability categories, using a mathematical problem-solving test based on Polya's stages, interviews, and documentation. The findings revealed that students' problem-solving abilities were distributed across three categories: 19.05% high, 14.29% medium, and 66.67% low. Students in the high category were able to fulfill all four of Polya's problem-solving stages: understanding the problem, devising a plan, carrying out the plan, and looking back. Students in the medium category fulfilled only three stages, without checking back their results, while students in the low category only fulfilled the stage of understanding the problem. The Jong Boat ethnomathematics context helped students recognize the objects and situations in the problems but did not guarantee the completeness of the mathematical problem-solving process, particularly for students in the medium and low categories. The study concludes that junior high school students' mathematical problem-solving ability on Pythagorean theorem material remains dominated by the low category, with implications emphasizing the importance of developing local culture-based ethnomathematics-oriented problems as a more contextual and meaningful alternative pedagogical strategy for students.