ABSTRAK

Fahrudin, (2026). Analisis Kemampuan Representasi Matematis Siswa SMP Dalam Masalah Teorema Pythagoras Berbasis Budaya Lokal. Skripsi. Tanjungpinang: Program Studi Pendidikan Matematika, Fakultas Keguruan dan Ilmu Pendidikan Matematika, Universitas Maritim Raja Ali Haji. Pembimbing I: Febrian, S.Pd., M.Sc. Pembimbing II: Mariyanti Elvi, S.Pd., M.Pd

Kata Kunci: Kemampuan Representasi matematis, Teorema Pythagoras, Berbasis Budaya.

Pendidikan matematika memiliki peran fundamental dalam mengembangkan intelektual siswa, dengan kemampuan representasi matematis menjadi kunci penting dalam proses pembelajaran. Penelitian ini bertujuan untuk menganalisis kemampuan representasi matematis siswa SMP dalam menyelesaikan masalah Teorema Pythagoras berbasis budaya lokal di SMP Negeri 54 Batam. Studi menggunakan metode deskriptif kualitatif dengan subjek siswa kelas VIII-3 mengumpulkan data melalui tes kemampuan Representasi matematis, dan wawancara. Hasil penelitian menunjukkansebanyak 23 siswa (68%) berada pada kategori rendah karena hanya mampu memenuhi satu indikator kemampuan representasi matematis meliputi perhitungan matematis menggunakan rumus. 4 siswa (12%) berada pada kategori sedang dengan kemampuan memenuhi dua indikator representasi matematismeliputi,Siswa mampu menuliskan model matematika dan menggunakan rumus dengan cukup tepat, serta melakukan perhitungan numerik secara benar. 7 siswa (20%) berada pada kategori tinggi karena mampu memenuhi seluruh indikator kemampuan representasi matematis, meliputi penyajian masalah dalam bentuk gambar yang relevan dengan konteks budaya lokal. ehingga secara umum dapat disimpulkan bahwa kemampuan representasi matematis siswa SMP masih perlu ditingkatkan dalam menyelesaikan masalah Teorema Pythagoras berbasis budaya lokal.

ABSTRACT

Fahrudin, (2026). Analysis of Junior High School Students' Mathematical Representation Ability in Pythagorean Theorem Problems Based on Local Culture. Thesis. Tanjungpinang: Mathematics Education Study Program, Faculty of Teacher Training and Mathematics Education, Raja Ali Haji Maritime University. Supervisor I: Febrian, S.Pd., M.Sc. Supervisor II: Mariyanti Elvi, S.Pd., M.Pd

Keywords: Mathematical Representation Ability, Pythagorean Theorem, Culture Based.

Mathematics education has a fundamental role in developing students' intellectual abilities, with mathematical representation abilities being an important key in the learning process. This study aims to analyze the mathematical representation abilities of junior high school students in solving local culture-based Pythagorean Theorem problems at SMP Negeri 54 Batam. The study used a qualitative descriptive method with subjects of grade VIII-3 students collecting data through mathematical representation ability tests and interviews. The results showed that 23 students (68%) were in the low category because they were only able to fulfill one indicator of mathematical representation ability including mathematical calculations using formulas. 4 students (12%) were in the medium category with the ability to fulfill two indicators of mathematical representation including, Students were able to write mathematical models and use formulas quite precisely, as well as perform numerical calculations correctly. 7 students (20%) were in the high category because they were able to fulfill all indicators of mathematical representation ability, including presenting problems in the form of images that were relevant to the local cultural context. So in general it can be concluded that the mathematical representation abilities of junior high school students still need to be improved in solving local culture-based Pythagorean Theorem problems