

PENGEMBANGAN INSTRUMEN LITERASI

MATEMATIKA SISWA SMP KELAS VII

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ABSTRAK

Penelitian ini dilatarbelakangi oleh rendahnya kemampuan literasi matematika siswa di Indonesia yang tercermin dari hasil studi PISA, serta belum optimalnya instrumen yang digunakan guru dalam mengukur kemampuan tersebut. Tujuan penelitian ini adalah untuk mengembangkan dan menganalisis kualitas instrumen literasi matematika siswa SMP kelas VII. Penelitian ini merupakan penelitian pengembangan (*RnD*) dengan model Tessmer yang meliputi tahap pendahuluan, evaluasi diri, dan evaluasi formatif yang meliputi uji ahli, uji satu-satu dengan sembilan siswa, uji kelompok kecil dengan 30 siswa, dan tahap akhir uji lapangan melibatkan 100 siswa kelas VII di SMP N 1 Sukasada. Instrumen yang dikembangkan berupa tes uraian. Uji kualitas instrumen dilakukan melalui analisis validitas isi menggunakan metode *lawshe*, menunjukkan hasil CVR sebesar 1 untuk semua butir soal, yang artinya semua butir soal valid. Konsistensi Internal Butir memiliki koefisien korelasi *product moment* berkisar 0,285 sampai 0,561 dan tergolong baik karena sudah melampaui *r*-tabel. Nilai reliabilitas untuk keseluruhan butir soal adalah 0,89 yang termasuk dalam kategori sangat tinggi. Tingkat kesukaran soal ada pada kategori sedang dengan kisaran antara 0,24 sampai 0,71. Daya beda butir soal dalam kategori baik dengan kisaran 0,23 sampai 0,76. Hasil perhitungan peluang siswa menggunakan model *partial credit model* (PCM) dengan estimasi abilitas ($\theta = -4$ sampai dengan 4) diperoleh peluang siswa menjawab benar berkisar antara 0,9 sampai dengan 1,0. Dengan demikian dapat disimpulkan instrumen memenuhi karakteristik valid, reliabel, dan layak digunakan untuk mengukur kemampuan literasi matematika siswa SMP kelas VII berbasis indikator PISA.

Kata Kunci: literasi matematika, instrumen tes, validitas, reliabilitas, daya beda, tingkat kesukaran.

DEVELOPMENT OF A MATHEMATICAL LITERACY INSTRUMENT FOR GRADE VII JUNIOR HIGH SCHOOL STUDENTS

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ABSTRACT

This study was motivated by the low level of students' mathematical literacy skills in Indonesia, as reflected in the PISA results, as well as the lack of optimal instruments used by teachers to measure these skills. The purpose of this study was to develop and analyze the quality of a mathematical literacy instrument for seventh-grade junior high school students. This research employed a Research and Development (R&D) method using the Tessmer model, which consists of the preliminary stage, self-evaluation, and formative evaluation stages, including expert review, one-to-one evaluation involving nine students, small group evaluation involving 30 students, and a field test involving 100 seventh-grade students at SMP Negeri 1 Sukasada. The developed instrument was in the form of essay tests. The quality of the instrument was examined through content validity analysis using the Lawshe method, which showed a Content Validity Ratio (CVR) value of 1.00 for all items, indicating that all items were valid. The internal consistency of the items showed product moment correlation coefficients ranging from 0.285 to 0.561 and was categorized as good because all coefficients exceeded the r-table value. The reliability coefficient for the overall instrument was 0.89, which falls into the very high category. The item difficulty levels ranged from 0.24 to 0.71 and were categorized as moderate. The discrimination indices ranged from 0.23 to 0.76 and were categorized as good. The results of the probability calculation using the Partial Credit Model (PCM) with ability estimation ($\theta = -4$ to 4) showed that the probability of students answering correctly ranged from 0.9 to 1.0. Therefore, it can be concluded that the instrument meets the characteristics of being valid, reliable, and feasible for measuring the mathematical literacy skills of seventh-grade junior high school students based on PISA indicators.

Keywords: mathematical literacy, test instrument, validity, reliability, discrimination power, item difficulty.