ABSTRAK

Muliani, Putu Lia (2026), *Pengembangan Instrumen Literasi Matematis untuk Peserta Didik Tingkat SMP*. Tesis, Penelitian dan Evaluasi Pendidikan Program Pascasarjana, Universitas Pendidikan Ganesha.

Tesis ini sudah disetujui dan diperiksa oleh Pembimbing I: Prof. Dr. Ni Made Sri Mertasari, M.Pd. dan Pembimbing II: Dr. Nyoman Trisna Herawati, S.E., Ak., M.Pd.

Kata-kata kunci: literasi matematis, *graded response model*, instrumen uraian, peserta didik SMP.

Penelitian ini bertujuan untuk mengembangkan instrumen literasi matematis bentuk uraian untuk peserta didik SMP dengan pendekatan *Graded Response Model* (GRM). Literasi matematis dalam penelitian ini mencakup indikator pemahaman bilangan, operasi hitung, interpretasi informasi kuantitatif, dan penerapan konsep matematika dalam kehidupan sehari-hari. Pengembangan instrumen menggunakan model *formative research* yang meliputi tahap pendahuluan, evaluasi diri, dan evaluasi formatif. Instrumen disusun dalam tiga seri soal yang masing-masing berisi 10 butir soal uraian. Uji coba empiris melibatkan 160 peserta didik kelas VII. Analisis butir soal dilakukan dengan menerapkan GRM. Hasil uji coba lapangan menunjukkan bahwa: (1) seluruh butir soal dinyatakan valid; (2) konsistensi internal terkategori baik; (3) reliabilitas instrumen sangat baik yang menunjukkan kestabilan dalam pengukuran; (4) indeks daya beda terkategori baik dimana butir-butir soal di masing-masing seri yang dibuat mampu membedakan peserta didik kelompok atas dan kelompok bawah; (5) taraf kesukaran bervariasi sehingga dapat mengukur kemampuan pada rentang yang luas; dan (6) probabilitas menjawab benar sesuai GRM meningkat seiring peningkatan kemampuan dari $\theta = -3$ hingga $\theta = 3$ pada setiap kategori penilaian. Hasil uji validitas konkuren melalui SEM-PLS menunjukkan bahwa seri tiga berhubungan signifikan dengan hasil belajar matematika dengan koefisien jalur 0,270 dan *p-value* 0,000. Nilai R^2 sebesar 0,132 menunjukkan bahwa model SEM-PLS dengan instrumen seri tiga mampu menjelaskan 13,2% variasi hasil belajar matematika. Seri satu dan seri dua tidak siginifikan karena *p-value* diperoleh secara berturut-turut adalah 0,069 dan 0,070. Berdasarkan hasil tersebut, instrumen yang dikembangkan dinyatakan layak digunakan untuk memberikan gambaran kemampuan literasi matematis peserta didik SMP.

ABSTRACT

Muliani, Putu Lia (2026), *Development of Mathematical Literacy Instrument with Graded Response Model for Junior High School Students. Thesis, Research and Evaluation of Postgraduate Program Education, Ganesha University of Education.*

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Keywords: mathematical literacy, grade response model, essay-based instrument, junior high school students.

This study aimed to develop a mathematical literacy assessment instrument in the form of essay questions for junior high school students using the Graded Response Model (GRM) approach. Mathematical literacy in this study encompasses indicators of number understanding, arithmetic operations, interpretation of quantitative information, and the application of mathematical concepts in daily life. The instrument was developed using the formative research model, which consists of the preliminary stage, self-evaluation, and formative evaluation. The instrument was designed in three test series, each consisting 10 essay items. The empirical field testing involved 160 seventh-grade students. Item analysis was conducted using the Graded Response Model (GRM). The field test results showed that: (1) all items were declared valid; (2) internal consistency was in the good category; (3) the instrument demonstrated excellent reliability, indicating stable measurement; (4) the discrimination index was categorized as good, meaning that each test series and its items were able to distinguish between high- and low-ability students; (5) the difficulty levels varied, enabling the instrument to measure abilities across a wide range of ability levels; and (6) the probability of obtaining correctly, as model by the GRM, increased along with students' ability levels ranging from $\theta = -3$ to $\theta = 3$ for each response category. The results of concurrent validity testing using SEM-PLS indicated that the third series was significantly associated with mathematics achievement, with a path coefficient of 0.270 and a p-value of 0.000. The R^2 value of 0.132 indicates that the SEM-PLS model using the third series instrument explained 13.2% of the variance in mathematics achievement. The first and the second series were not significant, as their p-values were 0.069 and 0.070. Based on these findings, the developed instrument is considered appropriate for providing an overview of junior high school students' mathematical literacy abilities.