ABSTRAK

Diniati, Sheila. 2022. Pengembangan Instrumen Tes *Rigorous Mathematical Thinking* Level Berpikir Kualitatif pada Materi Barisan dan Deret Kelas XI SMA. Skripsi. Program Studi Pendidikan Matematika, Fakultas Keguruan dan Ilmu Pendidikan. Univertas Maritim Raja Ali Haji. Pembimbing I: Assist. Prof. Puji Astuti, S.Pd., M.Sc. Pembimbing II: Assist. Prof. Febrian, S.Pd., M.Sc.

Kata Kunci: Instrumen tes, *Rigorous Mathematical Thinking*, Barisan dan Deret

Tujuan dari penelitian ini ialah untuk mengembangkan instrumen tes *Rigorous Mathematical Thinking* level berpikir kualitatif pada materi barisan dan deret kelas XI SMA yang berkualitas. Jenis penelitian yang digunakan adalah *Research and Development (R&D).* Model penelitian dan pengembangan yang digunakan adalah Model 4D yang dikembangkan oleh Thiagarajan yang terdiri dari empat tahapan yaitu *Define*, *Design*, *Develpment*, dan *Dissemination*. Subjek uji coba penelitian ini adalah peserta didik kelas XI IPS 1 SMA Negeri 4 Tanjungpinang semester genap tahun pelajaran 2021/2022. Teknik pengumpulan data dalam penelitian ini adalah angket dan dokumentasi. Instrumen penelitian yang digunakan berupa lembar validasi instrumen, lembar angket validasi ahli dan lembar hasil uji coba produk. Data dari penilaian lembar validasi instrumen dan lembar agket validasi ahli dianalisis menggunakan skala likert dengan bantuan *Microsoft Word* 2010. Sedangkan data dari penilaian hasil uji coba produk dianalisis menggunakan *software* Anates Uraian versi 4.0.5. penelitian ini menghasilkan isntrumen tes yang berkualitas yang berkriteria valid, reliabel, tingkat kesukaran dan daya pembeda yang baik. Valid dari segi konten, konstruk, dan bahasa berdasarkan penilaian validator dan hasil uji validitas soal. Reliabel berdasarkan hasil uji reliabilitas soal dengan pencapaian kriteria sangat tinggi. Tingkat kesukaran soal yang baik dengan keragaman tingkat kesukaran butir soal yaitu sedang dan mudah. Daya pembeda soal yang baik dengan kesanggupan soal menggolongkan tingkat kemampuan peserta didik. Uji coba produk menghasilkan 20 butir soal uraian dengan alokasi waktu 2×40 menit.

ABSTRACT

Diniati, Sheila. 2022. Development of Rigorous Mathematical Thinking Level Test Instruments for Qualitative Thinking in Class XI High School Sequences and Series Materials. Thesis. Mathematics Education Study Program, Faculty of Teacher Training and Education. Raja Ali Haji Maritime University. Supervisor I: Assist. Prof. Puji Astuti, S.Pd., M.Sc. Supervisor II: Assist. Prof. Febrian, S.Pd., M.Sc.

Keywords: Test instrument, Rigorous Mathematical Thinking, Sequences and Series

The purpose of this study was to develop a Rigorous Mathematical Thinking level test instrument for qualitative thinking on quality grade XI high school grades and series. The type of research used is Research and Development (R&D). The research and development model used is the 4D Model developed by Thiagarajan which consists of four stages, namely Define, Design, Development, and Dissemination. The subjects of this research trial were students of class XI IPS 1 SMA Negeri 4 Tanjungpinang in the even semester of the 2021/2022 academic year. Data collection techniques in this study were questionnaires and documentation. The research instruments used were instrument validation sheets, expert validation questionnaire sheets and product test results sheets. The data from the assessment of the instrument validation sheet and the expert validation questionnaire were analyzed using a Likert scale with the help of Microsoft Word 2010. While the data from the assessment of the product trial results were analyzed using the Anates Description software version 4.0.5. This research produces quality test instruments with valid, reliable, level of difficulty and good discriminatory criteria. Valid in terms of content, construct, and language based on the validator's assessment and the test results of the validity of the questions. Reliable based on the results of the reliability test with the achievement of very high criteria. The level of difficulty of the questions is good with the diversity of the level of difficulty of the items, namely medium and easy. Good discriminatory power of questions with the ability of questions to classify the level of ability of students. The product trial resulted in 20 essay questions with a time allocation of 2×40 minutes.