

ABSTRAK

Cahya, Putu Dara Mangku Rila (2020). Pengembangan Instrumen Kemampuan Numerik dan Hasil Belajar Matematika Materi Pengolahan Data Siswa Kelas V. Tesis, Pendidikan Dasar, Program Pascasarjana, Universitas Pendidikan Ganesha Singaraja.

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Kata-kata kunci: kemampuan numerik, hasil belajar matematika

Penelitian ini merupakan penelitian pengembangan yang dilakukan guna menghasilkan instrumen yang dapat digunakan untuk mengetahui kemampuan numerik dan hasil belajar matematika siswa kelas V SD. Instrumen kemampuan numerik disusun berdasarkan dimensi serta indikator kemampuan numerik yang terdiri dari perhitungan secara matematis, berpikir logis, pemecahan masalah, dan mengenali pola-pola numerik serta hubungan-hubungannya sedangkan instrumen hasil belajar matematika disusun berdasarkan kompetensi dasar dan indikator yang berkaitan dengan materi pengolahan data. Instrumen disajikan dalam bentuk tes pilihan ganda biasa berjumlah 30 butir soal dengan 4 pilihan jawaban. Kerangka konsep pengembangan instrumen mencakup tahapan analisis kebutuhan, analisis teoritik, menyusun kisi-kisi, mengimplementasikan kisi-kisi menjadi butir soal, dan validasi. Model pengembangan yang diimplementasikan adalah model pengembangan 4D oleh Thiagarajan yang terdiri dari *define*, *design*, *develop*, dan *dissemination*. Disebabkan karena masa pandemic Covid-19, maka tahap *dissemination* yang mana seharusnya dilakukan validasi lapangan tidak bisa dilakukan. Proses validasi instrumen dilakukan berupa uji validitas isi (*content*) dengan teknik *Lawshe* untuk menghitung *Content Validity Ratio* (CVR), dan uji reliabilitas oleh *expert* dengan menggunakan rumus KR20. Tim expert melibatkan 3 orang dosen ahli dan 3 orang guru kelas V. Hasil penelitian ini menunjukkan bahwa seluruh butir soal pada instrumen kemampuan numerik memiliki validitas isi dengan nilai $CVR = 0,67$, $CVI = 0,67$ dan reliabilitas yang tinggi dengan nilai $r_i = 0,85$. Hasil instrumen hasil belajar matematika juga memiliki validitas isi dengan nilai $CVR = 0,67$ dan reliabilitas yang tinggi dengan nilai $r_i = 0,81$.

ABSTRACT

Cahya, Putu Dara Mangku Rila (2020). The Development of Numerik Ability Instrument and Mathematic's Learning Result of Data Processing Material of Fifth Grade Elementary School Students. Thesis, Primary Education, Post Graduated, Ganesha University of Education Singaraja.

This thesis was approved by 1st mentor Prof. Dr. Ida Bagus Putu Arnyana, M.Si. and 2nd mentor Prof. Dr. Nyoman Dantes.

Keywords: numeric ability, mathematic learning result

This research was a developmental research to produce an instrument which could be used to acknowledge the numeric ability and mathematic learning result of the students in fifth grade of elementary school. The instrument of the numeric ability was made based on basic competence and the indicators which consists of calculation in mathematics way, logical thinking, problem solving, and recognize numeric patterns and the rerelationships. Besides mathematics learning result instrument arranged based on basic competence and indicators which is related to the material of data processing. The instrument was given in the form of multiple choices in 30 questions of four option answers. The concept of development instrument consists of the needs analysis, theoretic analysis, made the exam content outline, changed the exam content outline to be question, and validation. Developmental model applied was 4D developmental model by Thiagarajan which consists of define, design, develop, and dissemination. It is caused by the pandemic of covid 19, thus dissemination step which was supposed to do content validation could not be conducted. Validation instrument process was done in the form of content validation test by using Lawshe technic to count content validity ratio (cvr) and reliability test done by the expert by using formula of KR20. The expert team involved 3 experienced lecturers and 3 elementary teachers in fifth grade. This research showed that all of the questions in the numeric ability instrument had Validity content of CVR point = 0,67, CVI point = 0,67, and high point reliability $r_1 = 0,85$. The result of mathematic learning instrument also had high content validation in point cvr 0,67 and high point reliability $r_1 = 0,81$.