ABSTRAK

PENGEMBANGAN PROTOTIPE MODUL PENGGUNAAN SEMPOA UNTUK MEMBANTU SISWA KELAS I SD BERTANGGUNG JAWAB DALAM BERHITUNG PENJUMLAHAN DAN PENGURANGAN

Gregorius Novanda Alvy Kurnia Pradhana
Universitas Sanata Dharma
2020

Penelitian ini dilatarbelakangi oleh kebutuhan guru maupun siswa terhadap media/alat bantu dan sarana panduan dalam pembelajaran matematika untuk materi operasi hitung penjumlahan dan pengurangan. Selain itu, penelitian ini juga dilatarbelakangi oleh kurangnya karakter tanggung jawab siswa dalam belajar. Penelitian ini bertujuan mengembangkan produk prototipe modul sempoa operasi hitung penjumlahan dan pengurangan kelas I SD untuk melatih karakter tanggung jawab dan mengetahui kualitas prototipe modul tersebut.

Penelitian ini dilakukan dengan metode *Research and Development* (R&D). Model yang digunakan untuk pengembangan adalah model ADDIE yang terdiri dari lima langkah, yaitu *Analyze*, *Design*, *Development*, *Implementation*, *Evaluation*. Subjek dalam penelitian ini adalah siswa kelas I SD di Daerah Istimewa Yogyakarta. Objek dalam penelitian ini adalah pengembangan prototipe modul sempoa operasi hitung penjumlahan dan pengurangan kelas I SD untuk melatih karakter tanggung jawab. Teknik pengumpulan data menggunakan teknik observasi, wawancara, dan kuesioner.

Hasil penelitian menunjukkan bahwa prototipe modul sempoa operasi hitung penjumlahan dan pengurangan kelas I SD untuk melatih karakter tanggung jawab dikembangkan menggunakan prosedur pengembangan model ADDIE. Kualitas produk yang dihasilkan masuk ke dalam kategori “Baik” dengan skor rata-rata 3,08 berdasarkan penilaian dari validator ahli sempoa (guru kelas) dan validator ahli matematika. Selain itu, produk yang dihasilkan dapat membantu siswa untuk belajar penjumlahan dan pengurangan menggunakan sempoa dan melatih karakter tanggung jawab.

Kata kunci : penelitian dan pengembangan, prototipe, modul, sempoa, operasi hitung penjumlahan dan pengurangan, tanggung jawab

ABSTRACT

THE DEVELOPMENT OF PROTOTYPE ABACUS APPLICATION MODULE FOR AIDING FIRST-GRADE ELEMENTARY STUDENTS IN BEING RESPONSIBLE IN CALCULATING ADDITION AND SUBTRACTION

Gregorius Novanda Alvy Kurnia Pradhana
Sanata Dharma University
2020

This research is based on the necessity of teachers and students towards media or tools and guidance facility in math learning for arithmetic operation of addition and subtraction material. Moreover, this research is also based on the student's lack of responsibility character in learning. This research aims at developing the prototype product of abacus module of arithmetic operation of addition and subtraction for first-grade elementary students to train the responsibility character and identifying the prototype module quality.

This research was conducted with Research and Development (R&D) method. The model used for the development was the ADDIE model that consists of five steps which are Analyze, Design, Development, Implementation, Evaluation. The subject of this research was first-grade elementary students in Special Region of Yogyakarta. The research object was the development of prototype abacus module of arithmetic operation of addition and subtraction for first-grade elementary students to train the responsibility character. The techniques of data collection used are observation, interview, and questionnaire technique.

The findings of this research indicate that the prototype abacus module of arithmetic operation of addition and subtraction for first-grade elementary students to train the responsibility character is developed by using the model development procedure of ADDIE. The generated product quality belongs to the category of "Good" with the average score of 3,08 based on the assessment of abacus expert validator (classroom teacher) and math expert validator. Furthermore, the generated product is able to aid the students to learn addition and subtraction with the abacus and train the responsibility character.

Keywords : *research and development, prototype, module, abacus, arithmetic operation of addition and subtraction, responsibility*