

**ABSTRAK****PENGEMBANGAN ALAT PERAGA PEMBELAJARAN MATEMATIKA KELAS IV SD  
MATERI BILANGAN DESIMAL BERBASIS METODE MONTESSORI**

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Alat peraga pembelajaran adalah sebuah alat yang dirancang secara sengaja untuk menerapkan konsep dasar pembelajaran. Namun, pada kenyataannya penggunaan alat peraga khususnya untuk pembelajaran matematika materi bilangan desimal sangat terbatas. Oleh sebab itu, penelitian ini bertujuan untuk mengembangkan pengembangan alat peraga *Decimal Fraction Exercise* terkait materi penjumlahan dan pengurangan pada bilangan desimal berbasis metode Montessori. Penelitian dilaksanakan di SD N Selomulyo pada siswa kelas IV tahun ajaran 2018/2019.

Jenis penelitian ini adalah penelitian dan pengembangan. Prosedur pengembangan menggunakan tujuh langkah dari sepuluh langkah penelitian Sugiyono (2010). Langkah-langkah pengembangan penelitian ini adalah (1) potensi dan masalah, (2) pengumpulan data, (3) desain produk, (4) validasi desain, (5) revisi desain, (6) uji coba produk, (7) revisi produk. Instrumen yang digunakan dalam penelitian ini adalah daftar pertanyaan wawancara, observasi, lembar kuesioner dan lembar soal. Wawancara dan observasi digunakan untuk analisis kebutuhan, kuesioner digunakan untuk validasi kualitas papan bilangan desimal oleh dosen ahli Montessori dan guru kelas IV SD N Selomulyo.

Hasil penelitian menunjukkan bahwa produk yang dikembangkan berdasarkan karakteristik alat peraga Montessori seperti menarik, bergradasi, *auto-education*, *auto-correction*, dan kontekstual. Produk papan bilangan desimal berbasis metode Montessori yang dikembangkan dengan kualitas sangat baik dan layak digunakan berdasarkan validasi oleh ahli Montessori, dan guru kelas IV dengan rata-rata penilaian alat peraga 3,95 dan album 3,95 (skala 1-4). Uji coba terbatas menunjukkan hasil yang sangat positif dengan rata-rata pretes 50,8 dan postes 86,7 dengan kenaikan 71 %. Dengan demikian, disimpulkan bahwa alat peraga papan bilangan desimal memiliki kualitas yang sangat baik, layak digunakan dan membantu siswa memahami penjumlahan dan pengurangan bilangan desimal Matematika.

Kata kunci: alat peraga papan bilangan desimal, metode Montessori, penelitian dan pengembangan, Matematika.

**ABSTRACT*****DEVELOPMENT OF MATHEMATICAL LEARNING PROPS CLASS IV SD MATERIAL  
DECIMAL-BASED MONTESSORI METHODS***

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Learning aids are a tool designed intentionally to apply the basic concepts of learning. However, in reality the use of props especially for mathematics learning is very limited decimal number material. Therefore, this study aims to develop the development of Decimal Fraction Exercise props related to the addition and reduction of decimal numbers based on the Montessori method. The study was conducted at SD N Selomulyo in fourth grade students in the 2018/2019 school year.

This type of research is research and development. The development procedure uses seven steps from the ten steps of Sugiyono (2010) research. The steps of developing this research are (1) potential and problems, (2) data collection, (3) product design, (4) design validation, (5) design revision, (6) product trial, (7) product revision . The instrument used in this study was a list of interview questions, observations, questionnaires and questions. Interviews and observations were used for needs analysis, the questionnaire was used to validate the quality of the decimal number board by Montessori expert lecturers and grade IV teachers of SD N Selomulyo.

The results showed that the products developed based on the characteristics of Montessori teaching aids such as interesting, graded, auto-education, auto-correction, and contextual. Decimal number board products based on the Montessori method that are developed with very good quality and suitable for use based on validation by Montessori experts, and grade IV teachers with an average rating of teaching aids 3.95 and an album of 3.95 (1-4 scale). Limited trials showed very positive results with a pretest average of 50.8 and post-test 86.7 with an increase of 71%. Thus, it was concluded that the decimal board display props were of very good quality, suitable for use and helped students understand the addition and subtraction of Math decimal numbers.

Keywords: decimal board number props, Montessori method, research and development, Mathematics.