

ABSTRAK**PENGEMBANGAN ALAT PERAGA BERBASIS MONTESSORI SPINDLE BOX PADA MATA PELAJARAN MATEMATIKA KELAS III SD MATERI BILANGAN**

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Penelitian ini dilatarbelakangi oleh tidak adanya alat peraga di sekolah untuk mata pelajaran matematika. Siswa membutuhkan alat peraga dalam pembelajarannya untuk meningkatkan keaktifan dan kreativitas dalam proses pembelajaran berdasarkan hasil wawancara, observasi, kuesioner/angket. Penelitian ini bertujuan untuk (1) menjelaskan prosedur pengembangan alat peraga mata pelajaran matematika kelas III di SD ; dan (2) mengetahui kualitas alat peraga yang dikembangkan untuk mata pelajaran matematika kelas III.

Penelitian ini menggunakan ciri-ciri metode *Montessori* sebagai karakteristik alat peraga dan menggunakan metode penelitian dan pengembangan dengan model penelitian ADDIE. Subjek dari penelitian adalah lima siswa kelas III di SD. Objek dari penelitian ini adalah alat peraga dan album alat peraga yang dikembangkan oleh peneliti. Data yang didapat pada penelitian ini dikumpulkan dengan menggunakan data kuantitatif dan kualitatif. Data kuantitatif dengan menggunakan tes, sedangkan data kualitatif dengan menggunakan wawancara, observasi, kuesioner/angket.

Hasil dari penelitian ini menjelaskan bahwa (1) prosedur penelitian dan pengembangan alat peraga pengenalan bilangan bulat positif dan negatif mata pelajaran matematika kelas III menggunakan langkah ADDIE yaitu *Analyze, Design, Development, Implementation, dan Evaluate* sebagai langkah penelitian dan pengembangan dan memiliki ciri-ciri antara lain: menarik, bergradasi, *auto-correction, auto-education*, dan kontekstual sesuai dengan ciri-ciri metode *Montessori*; (2) kualitas alat peraga pengenalan bilangan bulat positif dan negatif mata pelajaran matematika kelas III mendapatkan skor sebesar 3,13 dengan kriteria “Baik” untuk alat peraga dan skor sebesar 3 dengan kriteria “Baik” untuk album alat peraga berdasarkan skala 4.

Kata kunci: Alat peraga, *Montessori*, matematika, *Spindle Box*, dan bilangan.

ABSTRACT***DEVELOPING THE MONTESSORI-BASED MATHEMATICAL SPINDLE BOX DISPLAY TOOL UNDER THE MATERIALS OF NUMBER FOR THE THIRD GRADE OF ELEMENTARY SCHOOL***

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The conduct of the study has been encouraged by the absence of a display tool for Mathematics in the school. The students need a display in their learning activities so that they will be able to improve their activeness and creativity within the learning process, as having been implied by the results of interview, observation and questionnaire distribution. Therefore, through the conduct of the study the researcher would like to: (1) explain the procedures of the display tool for Third Grade Mathematics in an elementary school; and (2) identify the quality of the display tool that has been developed for the Third Grade Mathematics.

In conducting the study, the researcher applied the characteristics of Montessori Method as the characteristics of the display tool and implemented the ADDIE research and development model. Then, the subjects of the study were five students from the Third Grade of an elementary school while the objects of the study were the display tool and the display tool album that the researcher had developed. The type of the data that had been gathered in the study were the quantitative data and the qualitative. The quantitative data were gathered by means of test, while the qualitative data were gathered by means of interview, observation and questionnaire distribution.

The results of the study show that: (1) the research and development procedures for the display tool of positive and negative integer in the Mathematics for Third Grade that have been designed by implement the ADDIE stages namely Analyze, Design, Develop, Implement and Evaluate have the characteristics of interesting, having gradation, having auto-correction, having auto-education and contextual in accordance to the characteristics of the Montessori method; and (2) the quality of display tool for positive and negative integer in the Mathematics for Third Grade has earned the score 3.13 with the "Good" criteria for the display tool and the score 3 with the "Good" criteria for the display tool album on the basis of 4-scale score.

Keyword: Display Tool, Montessori, Mathematics, Spindle Box and Numbers