

## ABSTRAK

Noi, Hadrianus. (2015). *Pengembangan Alat Peraga Pembelajaran Matematika SD Materi Perkalian Berbasis Metode Montessori*. Skripsi. Yogyakarta: Program Studi Pendidikan Guru Sekolah Dasar, Universitas Sanata Dharma.

**Kata kunci:** penelitian dan pengembangan, Metode Montessori, alat peraga perkalian, Matematika

Rendahnya mutu pendidikan di Indonesia dalam bidang matematika tercermin pada buruknya prestasi siswa. Pembelajaran yang seharusnya memperhatikan tingkat perkembangan siswa justru menyimpang. Siswa usia sekolah dasar seharusnya perlu menggunakan alat bantu berupa alat peraga untuk membantu memahami konsep abstrak dalam matematika. Metode Montessori merupakan salah satu metode yang menekankan pada penggunaan alat peraga dalam pembelajaran. Melihat kenyataan yang ada di lapangan alat peraga Montessori hanya terdapat di sekolah Montessori dengan biaya yang mahal. Penelitian ini mengembangkan alat peraga perkalian berbasis metode Montessori yang bertujuan untuk mengetahui ciri-ciri dan kualitas alat peraga yang layak digunakan. Penelitian dilakukan di SD BOPKRI Gondolayu terhadap siswa kelas III tahun ajaran 2014/2015 selama tujuh bulan.

Jenis penelitian yang digunakan yaitu penelitian dan pengembangan (*R&D*). Penelitian dan pengembangan ini terdiri dari lima tahapan antara lain (1) potensi masalah, (2) perencanaan, (3) pengembangan desain alat peraga, (4) validasi produk, dan (5) uji coba terbatas. Hasil dari penelitian dan pengembangan ini berupa prototipe alat peraga papan perkalian berbasis metode Montessori.

Hasil penelitian ini menunjukkan bahwa alat peraga papan perkalian memiliki lima ciri, antara lain, menarik bagi siswa, bergradasi, memiliki pengendali kesalahan dan dapat digunakan secara mandiri oleh siswa. Kualitas alat peraga papan perkalian ditunjukkan dengan perolehan skor validasi 3,73 dalam kategori “sangat baik”. Terdapat perbedaan nilai ketika uji coba terbatas, skor *pretest* menunjukkan rerata 58,21 sedangkan *posttest* menunjukkan rerata 97,82. Oleh sebab, itu dapat disimpulkan bahwa alat peraga papan perkalian sudah layak digunakan dan dapat melalui tahap uji coba yang lebih luas.

## ABSTRACT

Noi, Hadrianus. (2015). *Development of Elementary School Mathematic Learning Aid for Multiplication Based on Montessori Method*. A thesis. Yogyakarta: Elementary Teacher Education Study Program, Sanata Dharma University.

**Keywords:** research and development method, Montessori method, material, multiplication, Mathematic

The poor quality of Indonesian education system in the field of Mathematics is indicated by student achievement. Education system which should pay much attention to students' development deviates from what it is supposed to do. Elementary school students are supposed to be taught using learning aid in to help students understand the abstract concept of Mathematics. Montessori Method is a method which emphasizes on the use of learning aid in a learning process. Considering the fact that Montessori learning aid is expensive and can only be found in Montessori school, this research aims to develop a learning aid for multiplication lesson based on Montessori Method and to identify characteristics and quality of the learning aid to know whether it is worth using. The research is conducted in BOPKRI Gondolayu Elementary School with the subject of the third grade Elementary School students year 2014 / 2015 for seven month.

The research method employed in this study is research and development ( R&D). It consists of five steps namely (1) identifying research problems, ( 2) planning, ( 3) product development, ( 4) product validation, and ( 5) limited field testing. The result of this research is in a form of a prototype of a learning aid in a form of multiplication board which is developed based on Montessori Method.

The results of this research show that this learning aid in the form of multiplication board possesses five characteristics. Those characteristics are drawing students attractive, having gradation, having an error controller feature and the quality of being able to be operated independently by students. This learning aid is proven to obtain validation score of 3.73 which makes it be categorized in 'very good' scoring category. There is a difference between pre-test and post-test score. The average of pre-test score is 58.21 while the average of post-test score is 97.82. Therefore, it can be concluded that this learning aid is worth using and it is very possible to be tested further.