

## ABSTRACT

### POCKETBOOK DEVELOPMENT BASED ON SCAFFOLDING TO IMPROVE MATHEMATICS CONCEPT UNDERSTANDING

By

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The purpose of this research is to develop *pocket book* scaffolding-based to improve understanding of mathematical concepts. Collecting data using interview techniques, questionnaires and concept understanding ability tests. The data analysis technique used is descriptive statistics and t-test. The process of developing this media uses the ADDIE model (analyze, design, develop, implement, and evaluate). Based on the research, the data obtained from the validation of pocket book based on scaffolding by two validators is 77% with valid information. Meanwhile, the results of teacher and student responses related to scaffolding-based pocket books obtained an average percentage 80,56% and 84,82% with practical criteria. Then for the level of effectiveness of scaffolding-based pocket books on understanding mathematical concepts using t-test with the results  $t_{count} = 2,48$  ( $t_{count} > t_{table} = 1,99$ ). The ability to understand the concept of students in the experimental class increased by 24,99. While the ability to understand the concept of students in the control class increased by 17,76. It can be concluded that scaffolding-based pocket books have an effect on increasing understanding of mathematical concepts.

Keywords: *Pocket book*, *Scaffolding*, Concept Understanding

## ABSTRAK

### PENGEMBANGAN *POCKETBOOK* BERBASIS *SCAFFOLDING* UNTUK MENINGKATKAN PEMAHAMAN KONSEP MATEMATIS

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Tujuan penelitian ini adalah mengembangkan *pocket book* berbasis *scaffolding* untuk meningkatkan pemahaman konsep matematis. Pengumpulan data menggunakan teknik wawancara, angket dan tes kemampuan pemahaman konsep. Teknik analisis data yang digunakan adalah statistik deskriptif dan uji-*t*. Proses pengembangan media ini menggunakan model ADDIE (*analyze, design, develop, implement, dan evaluate*). Berdasarkan penelitian diperoleh data hasil validasi *pocket book* berbasis *scaffolding* oleh dua validator yaitu sebesar 77% dengan keterangan valid. Sedangkan hasil tanggapan guru dan peserta didik terkait *pocket book* berbasis *scaffolding* memperoleh presentase rata-rata 80,56 % dan 84,82 % dengan kriteria praktis. Kemudian untuk tingkat keefektifan *pocket book* berbasis *scaffolding* terhadap pemahaman konsep matematis menggunakan uji-*t* dengan hasil  $t_{hitung} = 2,48$  ( $t_{hitung} > t_{tabel} = 1,99$ ). Kemampuan pemahaman konsep peserta didik pada kelas eksperimen meningkat sebesar 24,99. Sedangkan kemampuan pemahaman konsep peserta didik pada kelas kontrol meningkat sebesar 17,76. Dapat disimpulkan *pocket book* berbasis *scaffolding* memberikan pengaruh terhadap peningkatan pemahaman konsep matematis.

Kata Kunci: *Pocket book, Scaffolding, Pemahaman Konsep*