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PENGEMBANGAN BAHAN AJAR BERPIKIR KOMPUTASIONAL BERMUATAN ELEMEN BILANGAN MATEMATIKA BERBASIS CS *UNPLUGGED* PADA FASE C DI SEKOLAH DASAR

SKRIPSI

diajukan untuk memenuhi sebagian syarat untuk memperoleh gelar
Sarjana Program Studi S1 Pendidikan Guru Sekolah Dasar

oleh
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UNIVERSITAS PENDIDIKAN INDONESIA
KAMPUS TASIKMALAYA

2024

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ABSTRAK

Penelitian ini dilandasi oleh adanya kebutuhan bahan ajar pembelajaran informatika yang belum tersedia di sekolah. Di tengah perkembangan teknologi yang kian pesat, proses berpikir komputasional merupakan keterampilan fundamental pada abad 21. Penelitian ini bertujuan untuk mengembangkan bahan ajar berpikir komputasional bermuatan elemen bilangan matematika berbasis CS *Unplugged* pada fase C di sekolah dasar. Bahan ajar ini mengintegrasikan pembelajaran informatika yang menjadi fokus utama, dengan pembelajaran matematika yang diambil beberapa muatannya. Penelitian ini menggunakan metode *Educational Desain Reasearch* (EDR). Dengan menggunakan EDR, terdapat tiga tahapan, diantaranya adalah *Analysis and Exploration, Design and Construction, Evaluation and Reflection*. Data dalam penelitian ini dikumpulkan melalui wawancara pendidik, studi dokumentasi, validasi para ahli, dan angket respon pendidik serta peserta didik saat uji coba. Hasil validasi para ahli, bahan ajar mendapatkan hasil persentase 79% dari ahli meteri pembelajaran informatika dengan kategori layak, 71% dari ahli materi pembelajaran matematika dengan kategori layak, dan 84% dari ahli desain bahan ajar dengan kategori sangat layak. Adapun, pada saat implementasi siklus satu mendapatkan persentase 88% dari respon pendidik dengan kategori sangat baik dan 56% dari peserta didik dengan kategori cukup. Pada siklus dua, 98% dari pendidik dengan kategori sangat baik, dan 89% dari peserta didik dengan kategori sangat baik. Dari data yang telah dihimpun menunjukkan bahwa Bahan Ajar Berpikir Komputasional Bermuatan Elemen Bilangan Matematika Berbasis CS Unplugged Pada Fase C di Sekolah Dasar layak dan sangat baik untuk digunakan dalam integrasi pembelajaran informatika dengan pembelajaran matematika.
Kata Kunci: Bahan Ajar; Berpikir Komputasional; CS *Unplugged; Unplugged;*

ABSTRACT

This research is motivated by the need for instructional materials for informatiCS education that are currently unavailable in schools. Amid the rapid technological advancement, computational thinking is a fundamental skill in the 21st century. This study aims to develop instructional materials for computational thinking infused with mathematical number elements based on CS Unplugged for Phase C in elementary schools. The instructional materials integrate informatiCS learning, which is the primary focus, with elements of mathematiCS learning. This research employs the Educational Design Research (EDR) method. Utilizing EDR, the process consists of three stages: Analysis and Exploration, Design and Construction, and Evaluation and Reflection. Data for this study were collected through interviews with educators, documentation studies, validation from experts, and questionnaires from both educators and students during the trials. The results of expert validation indicated that the instructional materials received a percentage of 79% from informatiCS learning experts, categorized as feasible; 71% from mathematiCS learning experts, also categorized as feasible; and 84% from instructional design experts, categorized as very feasible. During the implementation phase, Cycle One received a percentage of 88% from educators, categorized as very good, and 56% from students, categorized as sufficient. In Cycle Two, the results improved to 98% from educators, categorized as very good, and 89% from students, categorized as very good. The collected data demonstrate that the instructional materials for computational thinking infused with mathematical number elements based on CS Unplugged for Phase C in elementary schools are suitable and highly effective for integrating informatiCS learning with mathematiCS education.

Keywords: *Computational Thinking; CS Unplugged; Instructional Materials; Unplugged*

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