

**PENGEMBANGAN *GAME FRACTION SNAKE LADDER* BERORIENTASI
PEMAHAMAN KONSEPTUAL MATEMATIS SISWA PADA MATERI
PECAHAN KELAS IV SD**

Oleh

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ABSTRAK

Penelitian pengembangan ini dilatarbelakangi oleh terbatasnya variasi media pembelajaran digital dalam pembelajaran matematika, yang menyebabkan rendahnya pemahaman siswa khususnya pada materi operasi hitung pecahan, sehingga hasil belajar siswa kurang optimal. Penelitian ini bertujuan untuk mengetahui (1) rancang bangun media *game fraction snake ladder*, (2) kelayakan media *game fraction snake ladder*, dan (3) efektivitas media *game fraction snake ladder* pada pembelajaran matematika materi operasi hitung pecahan siswa kelas IV sekolah dasar. Penelitian ini merupakan penelitian pengembangan yang mengacu pada model ADDIE. Subjek penelitian terdiri atas 24 siswa kelas IV SD Negeri 1 Denbantas. Metode pengumpulan data yang digunakan adalah wawancara, non-tes berupa angket dan metode tes. Teknik analisis data yang digunakan meliputi analisis deskriptif kuantitatif dan statistik inferensial. Hasil penelitian menunjukkan bahwa: (1) rancang bangun media *game fraction snake ladder* berupa media pembelajaran digital berbentuk *game* edukasi yang dikembangkan berdasarkan *flowchart* dan *storyboard* dan diagram alir sesuai alur model ADDIE; (2) hasil uji kelayakan menunjukkan bahwa media *game fraction snake ladder* memperoleh kualifikasi sangat baik berdasarkan penilaian ahli isi/materi pembelajaran 96%, ahli desain pembelajaran 84,5%, ahli media pembelajaran 91%, uji kelompok kecil 93,4%, uji coba perorangan 97,2% sehingga dinyatakan media layak untuk digunakan; (3) hasil uji efektivitas memperoleh nilai t_{hitung} 3,54 dan t_{tabel} 2,068, sehingga $t_{hitung} > t_{tabel}$ yang berarti H_0 ditolak dan H_1 diterima. Hal ini menunjukkan bahwa rata-rata hasil *post-test* siswa setelah menggunakan media *game fraction snake ladder* lebih dari nilai KKTP ($77,5 > 65$). Berdasarkan hasil tersebut, dapat disimpulkan bahwa media *game fraction snake ladder* berorientasi pemahaman konseptual matematis efektif diterapkan pada pembelajaran matematika materi operasi hitung pecahan siswa kelas IV sekolah dasar.

Kata Kunci : Permainan Edukasi, Ular Tangga, Pemahaman Konseptual, Pecahan, ADDIE.

**DEVELOPMENT OF SNAKE LADDER FRACTION GAME ORIENTED
TOWARDS STUDENTS' MATHEMATICAL CONCEPTUAL
UNDERSTANDING OF FRACTION MATERIAL IN GRADE IV
ELEMENTARY SCHOOL**

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ABSTRACT

This development research is motivated by the limited variety of digital learning media in mathematics learning, which causes low student understanding, especially in fraction arithmetic operations, so that student learning outcomes are less than optimal. This study aims to determine (1) the design of the fraction snake ladder game media, (2) the feasibility of the fraction snake ladder game media, and (3) the effectiveness of the fraction snake ladder game media in learning mathematics on fraction arithmetic operations for fourth-grade elementary school students. This research is a development research that refers to the ADDIE model. The research subjects consisted of 24 fourth-grade students of SD Negeri 1 Denbantas. The data collection methods used were interviews, non-tests in the form of questionnaires and test methods. Data analysis techniques used included quantitative descriptive analysis and inferential statistics. The results of the study showed that: (1) the design of the fraction snake ladder game media in the form of digital learning media in the form of educational games developed based on flowcharts and storyboards and flow diagrams according to the ADDIE model flow; (2) the results of the feasibility test show that the fraction snake ladder game media obtained very good qualifications based on the assessment of content/learning material experts 96%, learning design experts 84.5%, learning media experts 91%, small group tests 93.4%, individual trials 97.2% so that the media is declared suitable for use; (3) the results of the effectiveness test obtained a t count value of 3.54 and t table 2.068, so that $t \text{ count} > t \text{ table}$ which means H_0 is rejected and H_1 is accepted. This shows that the average post-test results of students after using the fraction snake ladder game media are more than the KKTP value ($77.5 > 65$). Based on these results, it can be concluded that the fraction snake ladder game media oriented towards mathematical conceptual understanding is effectively applied to mathematics learning on fraction arithmetic operations for fourth grade elementary school students.

Keywords : *Game Education, Snake Ladder, Conceptual Understanding, Fraction, ADDIE*