

ABSTRACT

DEVELOPMENT OF EDUCATIONAL GAMES IN MATHEMATICS SUMMARY MATERIAL CLASS 1 ELEMENTARY SCHOOL USING CONSTRUCT 2

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In the early stages of children's basic education, they face challenges in learning counting skills. Mathematics is one of the subjects that play a crucial role in the educational curriculum, starting from the elementary level up to higher education. Mathematical knowledge has broad applications in solving various everyday life problems, making it essential both in the current context and in the future. To address the challenges of learning counting skills in first-grade elementary school students, the creation of an educational game called "AjarMat," using Construct 2, is an appropriate solution. This game is specifically designed to help students learn addition operations interactively and enjoyably. It is hoped that the game "AjarMat" can become a new learning tool for first-grade students, sparking their enthusiasm for learning mathematics. The educational game "AjarMat" is designed in a 2D format using Construct 2 and follows the Game Development Life Cycle (GDLC). This research presents an educational learning medium in the form of a game focused on number recognition and simple addition operations. The testing methods conducted in this research include the System Usability Scale (SUS) and Black Box Testing. Black Box Testing was performed to test all page displays within the game, using 16 different test cases. The test results indicated positive outcomes. After summarizing the calculations, the game "AjarMat" received a score of 72.261 from 21 respondents. This score demonstrates that the game achieved an acceptable rating and reached a grade C. This is proven after using the game the average value of students is 87.85, this shows student learning outcomes. Based on these results, it can be concluded that the game "AjarMat" is a good and suitable game to be used.

Keywords: *Black Box Testing, Construct 2, Game, Educational Game, Mathematics Learning, Elementary School, System Usability Scale (SUS)*