ABSTRACT

DEVELOPMENT OF CUBAR MATH EDUCATIONAL GAMES USING THE GDLC METHOD

Oleh

MUKHLIS ADHE PURWANTO
16102163

Gadgets are digital devices used as communication and learning tools. The use of gadgets in children is often used as a means of playing Games. To avoid addiction to playing Games. So, educational Games can be one of the answers for adjusting to children's conditions today. In this study the authors created a math educational Game "CUBAR" using the GDLC (Game Development Life Cycle) web development method. System testing uses black box testing with the result that all system displays work according to their functional requirements. Application testing was tested on 39 respondents from grade 5 SDN 4 Kalibagor using a 5 session scheme and 2 types of calculation questions, the first type with relatively easy questions with 2 variables and 1 operator, and the second type with 3 variables and 2 operators. Each session has 12 calculation questions and each session has a different composition of the number of types of questions. The average result of students' late speed in answering questions in the first session was 5613 miliseconds, the second session was 6487 miliseconds, the third session was 10596 miliseconds, the fourth session was 10081 miliseconds, the fifth session was 13480 miliseconds. The average speed for each session is the first session 3331 milliseconds, the second session 4363 milliseconds, the third session 5716 milliseconds, the fourth session 6107 milliseconds, the fifth session 8086 milliseconds. This means that the more composition of questions with relatively difficult types of questions, the more time it takes students to calculate. The number of sessions is a variation of many types of difficulty levels that affect the amount of time students need to answer questions quickly and accurately in each session.

Keyword: Games, Mathematics, Web Applications, GDLC