ABSTRACT

Education system on school today is still taught by book and verbal delivery by teacher itself. This problem can make incomprehension and lack of interest in learning the lesson, especially in biological lesson on genetics chapter. The learning media that given by teacher is still lacking to support student to achieve the maximum achievement. So, interesting media is needed which aim to grow the interest of learning and improve student understanding in genetics chapter. The alternative learning media that can be used to improve understanding is by educational game. In the process of developing, that educational game is using waterfall development method and flash-based. Waterfall method is selected because it is process of making each stage that is systematic, which mean every stage is linked to each other, so it can make developing system easier. The result of research was educational game “The Adventure Of Cali-Cali” was tested for student to find out the improvement of learning achievement. From the data obtained in the result of pretest showed they were still had not understood the genetics chapter that was taught by teacher. This is evidenced by 90.3% of students not reach the assessment standard yet. Then, given game treatment, where posttest showed 6.50% of students not reach the assessment standard. From the comparison, the result of the pretest and posttest shows improvement of learning achievement was increased to 83.8%. The data of pretest and posttest was tested quantitatively using SPSS with dependent t-test which serves to determine the difference in mean values between the two groups of data that is pretest and posttest. From the dependent t-test statistic test have been obtained that there were two significant differences between average score of pretest and posttest, while questionnaire data have been tested qualitatively to know student opinions. With this educational media, expected student can understood the biological lesson especially in genetics chapter.

Keyword: Educational Media, Educational Game, waterfall method, Flash, pretest, posttest, dependent t-test.