ABSTRACT

Mathematics learning in schools is often faced with challenges, such as teaching methods that are less varied and limited learning media. This leads to difficulties for students in understanding the material, as well as a decline in their interest in mathematics and an increase in anxiety when solving problems. Therefore, innovation in teaching methods is essential, one of which is the use of interactive and enjoyable technology-based learning games. This game is expected to increase students' motivation to learn mathematics in a more engaging way. This study proposes the development of an Android-based educational game called MathGo, which is developed using the Multimedia Development Life Cycle (MDLC) cycle and Construct 2 software. The results of black-box testing indicate that all functions work well and according to the specified requirements. Additionally, the questionnaire results show that the system achieved a success rate of 91.75%, which is classified as very good. Statistical analysis using the Paired Sample T-test method shows a p-value < 0.01, meaning the Alternative Hypothesis (Ha) is accepted, indicating a significant difference between the pretest and posttest results. This supports the hypothesis that the implementation of this game has a positive impact on mathematics learning.

Keywords: ***mathematics, learning game, android, MDLC, construct 2, black box testing***