

ABSTRACT

Natalin Pertiwi Siahaan, Reg. Number 4183332001 (2022). The Development of Android Based Learning Media by Construct 2 Software in Reaction Rate Material.

This study aims: (1) To analyze the student needs analysis based on the syllabus and teacher interviews regarding the existence of learning media, (2) To determine the validity of android-based media using construct 2 software on the reaction rate material, (3) To find out whether student learning achievement using android-based learning media is higher than the KKM. The development of this learning media uses the Research and Development (R&D) method with a 4D model (define, design, develop and disseminate). The population in this study were students of class XI IPA SMA Sultan Iskandar Muda Medan. This research is a type of research one-group pretest -posttest design. The analysis technique used is One sample t-test; where the experimental class is given learning media that has been developed. The results of the media feasibility analysis; 1) Content feasibility with a mean value of 4.208 with a good category, 2) language with a mean value of 4,433 with a good category, 3) presenting with a mean value of 4.416 with a good category ,4) graphics with a mean value of 5 with a very good category. By using android based learning media on reaction rate material, it was obtained an increase in learning achievement of 71.48% with the highest score of 100 and the lowest score of 65 where the posttest average value of 81.93 had passed the KKM of 75. Hypothesis testing which is done produces the values of $t_{count} = 4.7$ and $t_{table} = 2.04$ are obtained. It can be concluded that $t_{count} > t_{table}$ then H_a is accepted and H_o is rejected. So it can be concluded that student learning achievement using android-based learning media are higher than the KKM value.

Keywords: Learning Media, Research and Development (R&D), Construct 2, Reaction Rate