

**THE USE OF *ANDROID-BASED* LEARNING MEDIA ON CHEMICAL BONDING TO INCREASE STUDENT MOTIVATION AND LEARNING OUTCOMES DURING *ONLINE LEARNING***

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**ABSTRACT**

This study aims to determine the student learning outcomes enhancement and student motivation using Android-based learning media by using problem based learning model on chemical bonding. The subjects of this study were students of class X SMAS Budi Satrya Medan. The research sample was taken by purposive sampling of two classes, namely class X MIA 1 as the control class and class X MIA 2 as the experimental class with the Problem Based Learning learning model. This study used test and non test instrument. The test instrument in the form of multiple choice question sheets that had tested the validity, reliability, different power and difficulty level. The non test instrument contains a student motivation questionnaire. Based on the results of the data prerequisite test, it is known that the data from the pretest, posttest and gain results in the control class and the experimental class are normally distributed and homogeneous. The hypothesis test used in this study is the t-test of the right side with the acquisition of  $t_{count} > t_{table}$ , namely  $13.13 > 1.994$ , then  $H_a$  is accepted and the increase in learning outcomes (gain) from the experimental class is 75% with average 81,6 while in the control class it is obtained 49% with average 68 and the correlation test between motivation with student learning outcomes enhancement obtained  $r_{count} > r_{table}$  ( $0,75 > 0,27$ ) where  $H_0$  is rejected and  $H_a$  is accepted. Therefore it can be concluded that there is an enhancement in the learning outcomes of students who are taught using Android-based learning media and there is a positive significant correlation between motivation with student learning outcomes enhancement.

**Keywords:** *Android-Based Learning Media*, Learning Outcomes, Motivation