

THE DEVELOPMENT OF INNOVATIVE E-BOOK ON CHEMICAL BONDING MATERIAL TO INCREASE STUDENT MOTIVATION AND LEARNING OUTCOMES

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ABSTRACT

This study aims to study the learning outcomes and student motivation to use text books in schools and e-books that have been developed. The population in this study were all students of class X MIA (Specialization in Mathematics and Natural Sciences) of SMAN 3 MEDAN who won 2 classes. The sample used in this study was taken by purposive sampling of two classes, namely the control class and the experimental class. The control class learns using text books in school. The experimental class learns using an e-book that has been developed. Each class consists of 35 students. The instrument used in this study was a test instrument and a non-test instrument. The multiple choice test instrument rounds 20 valid and reliable questions with a reliability of 0.85. The non-test instrument used forms a validated student motivation questionnaire to measure student motivation or interest in learning chemistry. Based on the results of the data requirements test, the pretest and posttest test results in the control class and experiment were normally distributed and homogeneous. Hypothesis testing with a significant level of 0.05 for increasing student learning outcomes obtained $t_{count} > t_{table}$, which is $7.92 > 1.992$ means H_a is accepted. Likewise for students who get motivation $8.04 > 1.992$ means H_a is accepted.

Key word : *Innovative, E-Book, Student Motivation, Learning Outcomes, Chemical Bonding.*