

**THE DEVELOPMENT OF INNOVATIVE AND INTERACTIVE
LEARNING MATERIAL IN MULTIMEDIA BASED ON TEACHING OF
ACID BASE EQUILIBRIUM**

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ABSTRACT

The development and innovation of learning material based multimedia in acid base equilibrium done to help student in learning . The study is aimed to obtain a good and standart learning material in acid base equilibrium which can improve the student learning outcomes and student motivation to learn. The study was conducted through the development,innovation,integration of learning and multimedia on acid base equilibrium and then trial of the learning material to the student. The population of this study was all of the students in grade XI senior high school. The research sample was taken from SMA N 1 Berastagi, SMA N 2 Kabanjahe, and SMA N 1 Kabanjahe which consist of two classes, the experimental class and control class. The experiment class learn by using the developed and innovated learning material based multimedia, while the control class learn by using chemistry handbook. The results show that : (1) the chemistry books about acid base equilibrium that were analyzed have an average of assesment 4.32 which is considered quite good and do not need to be revised, however there are some weakness on each books that should be developed, (2) the component which are integrated into develop learning material were the integration of relevant laboratory experiment, application, pictures, problems and examples, of evaluation and key answer, and macromedia flash. The integration of multimedia done by make the developed learning material to be an e-book that created using the flip book maker software, (3) the assessment result from the expert validator toward the developed learning material is 4. which is considered valid and do not need to be revised,and the standarization result from student is 3.50 (4)Innovated learning material is found very effective to improve students achievement in chemistry. Students achievement in experimental class which were taught by innovated textbook is found higher that in control class that are taught by ordinary references.

Keywords : Student achievement, acid base equilibrium, innovative and interactive.