

DEVELOPMENT OF STUDENT WORKSHEET BASED ON DISCOVERY LEARNING APPROACH IN STOICHIOMETRY LEARNING AT SENIOR HIGH SCHOOL

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ABSTRACT

The objectives of this research contain of two parts, first was to create the proper student worksheet for chemistry learning in topics related stoichiometry by using discovery approach as a learning material referring to K-13. The second was to know the effectivity of this discovery learning worksheet by testing it into the student and comparing the learning outcome result with another student with using conventional worksheet. This research was conducted in SMAN 11 Medan, with the object of this research is X grade in even semester. The Implementation step of the research consisted of, a) Arrangement of student worksheet, b) Arrangement of learning evaluation to measure the achievement of students, c) Instrument testing for experiment and control class, d) Implementing treatment for experiment and control class, e) Implementation of pre-test before teaching treatment and post-test after teaching treatment, f) Data analysis. Steps of arranging worksheet are 1) need analysis, 2) product development, and 3) validation by experts. The total average value of overall validation component of worksheet is 3.34 or about 83.5% it represent that the worksheet is proper to used. Then the instrument test is validated by expert and item validation. The outcome data get after the treatment has conducted for each class, the average mark in experiment class is 24.44 ± 8.56 , while the average mark in control class is 26.25 ± 9.74 . The data then is processed by using SPSS 17 for windows. The data has normal and homogeny, so it continued to t-test for hypothesis testing where the significant level of $\alpha = 0.05$ where the Sign. 0.00 so the H_0 is rejected and H_a is accepted because the value $0.00 < 0.05$. So there is more significance difference learning outcomes using media of student worksheet based on discovery learning approach with student that using conventional student worksheet.

Keywords: *Student Worksheet, Discovery Approach, Stoichiometry Learning*

