THE INFLUENCE OF DISCOVERY LEARNING MODEL TO INCREASE THE LEARNING ACHIEVEMENT WITH COOPERATION AND CURIOSITY OF STUDENTS IN TEACHING OF BUFFER SOLUTION

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ABSTRACT

The objectives of this research are (1) to determine whether there are significant higher of the student's achievement that taught by Discovery Learning model than the student's achievement that taught by direct instruction method (2) To know the student's chemistry achievement that taught by discovery learning model and direct instruction method (3) to investigate the percentage of the cooperation character that can be developed by using Discovery Learning model and (4) to investigate the percentage of the curiosity character that can be developed by using Discovery Learning model. The population of this research were all class in grade XI science on 2nd semester from SMAN 5 Medan. Sample was chosen by purposive random sampling and taken 2 classes from the population. The first class were used as experimental class and second class were used as control class. There were 54 students that coming from the sample. The intruments that used were 20 items of multiple choice test (evaluation test), an observation sheet of student's cooperation character that has 6 indicators and an observation sheet of student's curiosity character that has 4 indicators to observe the development of student's character. In addition, there are questionnaires of cooperation and curiosity character to support the data of observation sheet. In experimental class, the method that used was Discovery Learning model while in control class, the method that used was Direct Instruction method. Before conducting the research, the pretest was done in both classes, and the data was tested by using homogeinity test. The result shows that the sample was homogeneous. Then the research was conducting in both of class and the observation sheet of student's cooperation and curiosity character were done during the process of research in experimental class but in control class, the observation of student's character was not done because the writer assumed that the development of student's character does not occur if the learning process only use direct instruction method. In the last meeting the questionnaire was given to students in experimental class. The increasing of student's achievement (gain) in experimental class is 79% (high) while in control class is 61% (medium). After conducting the teaching-learning process, the posttest was done in both of class. It used SPSS-16 for windows program to calculate the data while the hypothesis testing was tested by using Independent Sample T-Test with one tailed t-test. The results of research are (1) there are significant higher of the student's achievement that taught by Discovery Learning model than the student's achievement that taught by direct instruction method (2) The student's chemistry achievement that taught by discovery learning model is better (100% could pass KKM) than taught by direct instruction method (51% could pass KKM) (3) The development of student's cooperation character that taught by discovery learning model is 64.54% (medium) and (4) The development of student's curiosity character that taught by discovery learning model is 59.41% (medium).