

ABSTRACT

Quiz questions are crucial evaluations in measuring student learning development because they are one of the lecturers' benchmarks for providing learning materials. The accuracy of the results of measuring student competency achievement is very important because it will be used as a benchmark for assessment by lecturers, therefore a question instrument that functions well is needed in distinguishing between students who have high abilities and students who have low abilities based on defined criteria. A good question, that is, when a question has a balanced level of difficulty (proportional), it can be said that the question is good.

However, a question should be neither too difficult nor too easy. Problems that are too easy do not encourage students to enhance their efforts to solve them, on the contrary questions that are too difficult cause students to become desperate. On that basis, grouping the level of difficulty of the questions should be done to make a package of questions that fit the portion. The case study taken by the researcher is a Data Warehouse SI Information System at Telkom University. The case study was taken because the Data Warehouse course is a compulsory subject in the Information Studies Program at Telkom University.

To find out the category of questions based on the level of difficulty, whether easy, medium, or difficult, a classification will be carried out. In doing the classification, the writer compares the Naive Bayes algorithm and the Support Vector Machine. The stages in classifying in this research are by way of data pre-processing, data processing, classification and evaluation. From the comparison results obtained the highest accuracy with the algorithm method SVM Classification. The accuracy results obtained from the comparison of the average scores on the algorithm Naïve Bayes (Before SMOTE) of 85.73% and on the SVM algorithm (Before SMOTE) of 85.11%. then for the comparison of the average score on the algorithm Naïve Bayes (After SMOTE) of 88.9% and on the SVM algorithm (After SMOTE) of 97.82%.

Keywords: *Data Warehouse, Telkom University, Question Qualification, Naïve Bayes, Support Vector Machine.*