ABSTRACT

Education is an important role in transmitting knowledge to its students and to measure how well the student understands, hence testing is needed based on the cognitive level of knowledge. In measuring the cognitive level, it can be applied with reference to the Revised Bloom's Taxonomy which explains the regulation of learning processes and targets. Then by testing knowledge through the questions that have been made, it is necessary to classify the questions into several cognitive levels according to Revised Bloom's Taxonomy to determine the learning process and understanding of each individual. The many types of questions that are formed make classification difficult because the method is still done manually, therefore machine learning is needed. This study will focus on the classification of questions from the History subject at the high school level. The dataset used is a matter of History sourced from internet searches about USBN, PAS, PTS, and so on. This study focuses on RBT C4 to C6 only. This study uses the K-Nearest Neighbor algorithm to obtain accuracy and with the imbalance of data in the dataset, an oversampling method using SMOTE will also be used. The accuracy results obtained are precision is 76%, recall is 76%, f1-score is 74%, accuracy is 76%.

*Keywords—**question classification, KNN, high school history, SMOTE, RBT***