ABSTRACT

QUESTION CLASSIFICATION BASED ON
COGNITIVE LEVEL OF TAXONOMY BLOOM
USING NAIVE BAYES (STUDY CASE: TELKOM UNIVERSITY)

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Bloom's Taksonomi is unity of three domain, which are divided into lower order and high order based on Cognitive Domain of Bloom's Taxonomy. These levels are used to classify learning objectives and become a base for evaluating student achievement. Basically, evaluation student achievement can be done by giving questions. The questions which are given then be classified according to the level in the Cognitive Domain. But, for the case in Telkom University there's no centralized process to control the examination of subject conformity with question validation whether appropriate or not. The use of the Naive Bayes method in classifying questions based on the level on the Cognitive Domain which will later become a prediction model is the solution for this case. The dataset in this research used question of midterm and final exam from Database Systems, Data Structures and Algorithms, Data Structure and Advanced Programming, Database Management, Web Application Development, Object Oriented Programming, and Algorithms and Programming subject for Bachelor of Information Systems at Telkom University from academic year 2012/2013 until 2018/2019. Classification using the naïve bayes method is assisted by features of TF-IDF for word weighting, which results in 85% of precision.

Keyword: bloom's Taxonomy, exam questions, Naive Bayes, machine learning, classification