IMPLEMENTATION OF INTELLIGENT TUTORING
SYSTEM USING CONCEPTUAL MAP MODEL

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Abstract

A conventional learning systems simply give the results of student learning achievement without giving advice what supposed to be studied next. So that the development of student ability is very dependent on teaching materials provided by a teacher or a tutor.

In this final project, built a web-based intelligent tutoring system and a conceptual map model algorithm was used to map the ability of students to the topics which have been determined. The first step is made the observation dataset, the relationship between the topic and degree of relationship of a test item with some topics. Then, in order to mapping the students' abilities, first, they have to work on the pre-test. Arranging pre-test using the algorithm which is called Feasible Time First (FTF). This algorithm always produces a pre-test which the total time in accordance with the time entered, although the pre-test has a relevance below the minimum limit of the expected relevance. After the students work on pre-test, then the last step is to evaluate the results of pre-test and then mapped into a conceptual map. So that, the system can resulting an learning advice and students can learn independently and perform in accordance with the desired acceleration.

The questions and materials used as the references is the subject of mathematics for elementary school Grades 1-3. Results obtained from the implementation of intelligent tutoring system using conceptual map model can facilitate students's understanding of the weakness of a particular material so that can be generated suggestions for students to enhance learning ability.
Keywords: Intelligent Tutoring System, conceptual map, Web-based learning, e-learning, students.