

Intelligent Collaborative E-Learning Solution for Knowledge Improvement of Secondary Education in Sri Lanka

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Secondary schools in Sri Lanka lack reference books and learning materials. The problem has prevailed for quite some time now, causing inequalities in accessing learning materials among students and teachers. Therefore, students' performance at the national examination level has been seriously affected.

Moreover there are many differences between students' abilities, interests, achievements, preferences and learning behaviors. Some need a challenging class for promoting their levels. Some of them want to keep to the working routine while others need to be taught very slowly.

Introduction of collaborative e-learning system helps to minimize these problems of secondary education in Sri Lanka. This collaborative e learning system helps to students to learn at their own pace. Constructing knowledge by collaborative learning and discussions with friends helps to solve their problem immediately. Primary goal of the research is to perform personalizing of distance education system, according to the learning styles of students.

Main steps and requirements in applying business intelligence techniques in process of personalization are identified.

Data mining concerns with developing methods for discovering knowledge from data that comes from educational environment. In this research data mining was used to analyze users' performance. First students' data were collected from database. After preprocessing the data, data mining techniques were applied to discover student clusters. According to the clusters we can identify the group of students who are below the knowledge level and who are in the high knowledge level. After identifying that, administrator can help them to improve their knowledge levels.

Key words: Data-mining, clusters