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Contribution to the Creation Of DMX Queries in Mining Student Data

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Abstract. The paper is a contribution to creating DMX queries for mining student data. The focus is placed on the possibilities of data mining techniques applied in e-learning. DMX queries are created and applied against data mining models. The log files of students from Moodle learning management system at Technical Faculty Cacak, University of Kragujevac (Serbia) have been used in the research. The results point to the possibility of applying DMX queries in student data mining and they also imply the possibility of predicable behavior patterns of the students. In addition, the paper presents the contribution of DMX queries in the evaluation of electronic Moodle courses.

Keywords: Data Mining, e-Learning, DMX.

1 INTRODUCTION

Taking into account the fact that modern teaching entails continuous improvement and more effective learning, proper application of information and communication technologies (ICT) offers a possibility of a more dynamic and purposeful teaching method. The application of these technologies is not an end in itself, but serves the purpose of a more creative achievement of pedagogical and educational tasks. The adequate application of modern information and communication technologies provides a possibility for the development of active teaching which results in an entirely new quality of knowledge acquired through student's own participation and engagement in activities.

The rapid proliferation of Internet, aided by the latest technologies, has greatly facilitated distance learning for all levels of education (including primary and secondary education, college education, as well as specialization courses). The fact that the user of electronic course is of the utmost importance entails having comprehensive knowledge about him/her.

In the current century web expansion reached its apex. This requires extensive research of new behavior patterns. Cooley et al. [1] assert that the fact that information is now readily available online has highlighted the significance of behavior pattern analysis.

Nowadays, more and more universities derive benefits from the rapid expansion of e-learning technologies, all with the aim of increasing the flexibility of education.