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**A method for learning scenario determination and modification in intelligent tutoring systems.**

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Summary: Computers have been employed in education for years. They help to provide educational aids using multimedia forms such as films, pictures, interactive tasks in the learning process, automated testing, etc. In this paper, a concept of an intelligent e-learning system will be proposed. The main purpose of this system is to teach effectively by providing an optimal learning path in each step of the educational process. The determination of a suitable learning path depends on the student's preferences, learning styles, personal features, interests and knowledge state. Therefore, the system has to collect information about the student, which is done during the registration process. A user is classified into a group of students who are similar to him/her. Using information about final successful scenarios of students who belong to the same class as the new student, the system determines an opening learning scenario. The opening learning scenario is the first learning scenario proposed to a student after registering in an intelligent e-learning system. After each lesson, the system tries to evaluate the student's knowledge. If the student has a problem with achieving an assumed score in a test, this means that the opening learning scenario is not adequate for this user. In our concept, for this case an intelligent e-learning system offers a modification of the opening learning scenario using data gathered during the functioning of the system and based on a Bayesian network. In this paper, an algorithm of scenario determination (named ADOLS) and a procedure for modifying the learning scenario AMLS with auxiliary definitions are presented. Preliminary results of an experiment conducted in a prototype of the described system are also described.

*Classification:* U50 U70 R50

*Keywords:* e-learning system; intelligent tutoring system; learning scenario; personalization

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