

Abstract

Essam Kosba

Student Modeling in Web Based Intelligent Tutoring Systems: Review of the Available Techniques

The acceptance of modern pedagogical strategies creates many trends that affect the development of educational software. These trends include the increasing demand on the distance learning programs, the increasing progress in developing of intelligent educational systems, the emerging use of World Wide Web (WWW) as an educational media. Integrating Internet Intelligent educational technologies is one of these important trends. Web-Based Intelligent Tutoring Systems (WBITS) is a research area concerned with building and implementing Intelligent Tutoring Systems (ITS) on the Web, so it is feasible to benefit from both ITS as a human-like teacher in one-on-one base and Internet as an unprecedented worldwide communication media. An important aspect of ITS, either implemented on the Web not, is their ability to provide individualized instruction in a manner similar to what offered by a human instructor. ITS should actively support the student's learning process through tailoring the teaching process carried out to each individual student. Building individual student models is one of the most important features incorporated in these systems. The main purpose of a student model is to provide the tutor with the information necessary to a suitable instructional action. The area of Web-based distance education, where the achievement of better teaching and learning activities are crucial, can be affected positively by the application of student models. Most of the student modeling techniques used with traditional standalone ITS are used also with WBITS. Researchers should direct their efforts to innovate appropriate student modeling techniques that can be applied effectively in Web-based distance education environments.