

# Abstract

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## **Generating Computer-Based Advice in Web-Based Distance Education Environments**

Although Web-Based Distance Education (WBDE) offers many attributes that benefit the learning process over the traditional methods, many barriers still remain, e.g., student's sensation of isolation from the educational environment, their feelings of disorientation and becoming lost in course hyperspace, the resulting communication overhead required from faculty members are some of these barriers. Enabling Web-based distant courseware to play the role of the advisor and provide students and course facilitators with the appropriate feedback is the way to solve these problems. The Implementation of Web-Based Intelligent Tutoring Systems (WBITS) facilitates the development of effective distance learning environments. Incorporating student modeling techniques into Web-based courseware allows students' actions and behavior to be monitored and the needs of each individual to be addressed. Student models can also be used to generate advice to course facilitators in order to improve the effectiveness of WBDE. The goal of this project is to exploit student modeling techniques in order to provide course facilitators with appropriate advice and help them manage, assess, and advise their distance students. Models of students who work with Web-based courses maintained by a Course Management System (CMS) will be extracted based on information provided by the CMS. The resulted models will then be used as a basis for generating computer-based advice to the course facilitators. It is expected that such advice will enable the facilitators to keep close to their distant students and will make possible the students to receive more effective guidance.