

Utilization of Intelligent Tutoring System (ITS) in mathematics learning

ABSTRACT

Intelligent Tutoring Systems (ITS) represent some of the knowledge and reasoning of good one-to-one human tutors, and consequently are able to coach students in a more detailed way as compared to the Computer Assisted Instructions (CAI) packages. Canfield (2001) defines ITS as a system that is able to diagnose and adapt to student's knowledge and skills. According to Canfield, ITS is able to provide precise feedbacks when mistakes are made and able to present new topics when the student is ready to learn. ITS is part of a new breed of instructional computer programs. This paper discusses the benefits of using an ITS as complement to the use CAI materials such as the courseware in promoting the learning of mathematics. Benefits of using an ITS have been proven in aspects such as generating useful feedbacks to students in learning mathematics, assisting learning of higher order subject matter and cultivating higher order skills, offering a learning environment that motivates learners, giving useful instant feedback to learners, and providing positive effects on student's achievement.

Keyword: Intelligent Tutoring System; Computer Assisted Instruction; Technology in Mathematics Education; Information Communication Technology in Education; Tools in Mathematics Learning