

Title: Design and Development of an Intelligent Instructive System: (Scholastic Tutor (St*))

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Outlet: Turkish Online Journal of Distance Education-TOJDE October 2011 ISSN 1302-6488 Volume: 12 Number: 4

Date: 2011

Abstract: Intelligent Tutoring Systems (ITS) is an act of impacting knowledge while computer teaches or acts as the tutor which is a supplement to human teachers. The ability to teach each student based on their individual abilities a major advantage posed by ITS and that is why it is being embraced in this work. This work describes the design of an Intelligent Tutoring System that was tagged Scholastic tutor (St*), which has the individual learning and collaborative problem-solving modules. The individual tutoring module was designed to provide appropriate lessons to individuals based on his/her background knowledge level, interest, and learning style and assimilation rate prior to using the tutoring system.

A software agent is used to monitor and process these parameters, arrange the learning topic, and exercises, for each individual. The collaborative problem-based tutoring module was designed to present tutorial problems and provides facilities to assist learners with some useful information and advice for problem solving. This is because the present lecturing methodology which is the conventional teaching methodology provides an interactive classroom setting that promotes the open exchange of ideas and allows for the lecturer to communicate directly with the students but has a great disadvantage of not teaching all the students according to their own learning rate and pace. The intelligent tutor solves this problem by providing individualised learning for each student where they can learn according to their own pace and learning abilities it will provide remedy and advice when learners encounter difficulties during learning session.

The classical model of ITS architecture has four main modules; domain model, student model, tutoring model and the user interface model.