Using Custom-Built Intelligent Tutoring Systems (ITSs) to Bring Relevance to and Improve Engagement and Participation of Learners in Introductory Accounting

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Abstract

This study outlines the development and initial implementation of an Intelligent Tutoring System (ITS) designed specifically for introductory accounting. The ITS is a computer-based problem-solving environment for capital investment decision-making (CID), in which a student solves a problem and receives individualised feedback and support from the system, similar to working with a human tutor in a one-on-one situation. The system tracks the student's performance, and generates a model of the student's knowledge, which is used to adapt the instructional session to the needs and abilities of each student. The system has been designed to provide students with an enhanced problem-solving tool to be able to apply theoretical material in a ‘real-life’ simulated environment. The paper provides a description of ASPIRE the authoring and deployment computer environment for the ITS, the process of creating the Capital Investment Tutor is then discussed with a preliminary evaluation of results.

Keywords: Constraint-based authoring system, capital investment decision making, accounting education, intelligent tutoring systems.