Abstract

Traditionally, e-Learning content is delivered without taking the learner’s traits into account. Content delivered to the learner should be personalized based on the learner profile so that learning can be effective. Also, assessment of a learner’s learning objective is normally done by posing a set of questions without documenting the student’s capabilities. A school of thought envisages assessing the real caliber of the student by posing questions that are linearly complex as the number of questions posed increase. This paper discusses the application of stochastic process model and Bayesian belief networks for learner assessment. The authors also discuss how it can be integrated into ongoing research into application of mobile agent technology in implementing case-based reasoning for content delivery in e-Learning systems. The implementation observations of such implementation vis-à-vis traditional assessment are also documented.

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**Index Terms**

Computer Science  
Artificial Intelligence
Key words

Bayesian Networks  
e-Learning  
Mobile

Agent  
Stochastic Process