Abstract

The growing interest in the use of Serious Games in education raises many research questions and involves some concerns, particularly the ability to track and understand the path of a learner-player as well as his progress. Moreover, their integration into the learning process remains limited because they do not provide effective features for monitoring learner-player progress in order to show them the consequences of their decisions. Thus, we propose a monitoring system called MOLPP (Monitoring Learner-Player Progress in Serious Games) which adopts a new generic approach based mainly on Anderson's ACT-R theory. The MOLPP system implements the Model Tracing diagnostic methodology derived from Anderson's ACT-R theory to analyze learner-player interactions from the Serious Game environment and match these interactions with the performance model, in order to generate a corrective intervention pertaining to the evaluation mode in the form of immediate feedback by complying with all the production rules of the performance model.

References


Index Terms

Computer Science

Information Systems

Keywords

Serious games, Learner-Player tracking, E-assessment, In-game interactions, Anderson's theory, ACT-R, Production rules, Tracing Model, multi-agents systems.