GUIDELINES FOR THE EVALUATION OF INTELLIGENT E-LEARNING SYSTEMS

F. de Arriaga, A. Arriaga, and M. El Alami

Abstract

A new generation of Intelligent E-Learning System (ILS)s, based on Multi-Agent Systems, with an enhanced functionality due also to the use of cognitive modelling has emerged. Several authors have approached the evaluation of those systems with a limited purpose, due to their complexity. Institutions like APA, AERA and NCME publish the 1999 Standards for Educational and Psychological Testing but they did not yet include appropriate methods for the evaluation of performance assessment in complex environments. The paper describes some guidelines for the evaluation of complex and even fuzzy ILS. The guidelines attempt to conduct the evaluation process in two levels: the functional level and the overall level. The guidelines are used for the overall evaluation of a complex Intelligent E-Learning System, detailing major steps of the assessment. The results prove that the guidelines can be used for most big systems providing not only a performance index of the system, but also giving indications of possible or necessary improvements for the future.

Keywords
Evaluation, assessment, intelligent e-learning systems, complex systems, fuzzy evaluation, multi-agent systems