

Intelligent self-adaptation of user interface complexity in a case-based medical training system

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Abstract

Case based training systems are well accepted in medical education [1]. The complexity of the used cases ranges from simple cases, where all symptoms and findings are presented at once and different questions concerning the diagnoses and/or therapies are to be answered, to very complex cases, where the case is presented in many steps, and each step may include several different kinds of tasks the learners have to accomplish: Determining intermediate and final diagnoses, interpretation of multimedia data gathered by examinations, choosing examinations with the presumably best knowledge gain, controlling the therapies in subsequent consultations, while at the same time justifying all actions. Complex cases are more realistic but have the following disadvantages: the user interface (UI) is typically more complex, the duration of execution by the users is prolonged and the amount of authoring work is increased. The trade-off between the advantages of using realistic, complex cases and these disadvantages depends on the preferences, computer literacy and experiences of the user. To be able to match the needs of different users, we present a technique where the UI complexity of a case can be dynamically adapted to the learner's abilities, i.e. a self-adaptable UI.

Key words

Educational Measurement - Problem-Based Learning - Needs Assessment [I02.594]