Based on Cognitive Load Theory Constructing Real-time Learning Efficiency Diagnoses for recommend e-Learning System

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Abstract:

The objective of this study is to identify the limitations of the existing IRT-adaptive learning system. The current system places significant emphasis on mechanical aspects such as reliance on large sample sizes, test difficulty, and discrimination analysis. However, this approach tends to overlook the psychological characteristics of individual learners. The system has been designed and developed with the guiding principle of Expert Reverse Effect in cognitive load orientation. Firstly, the system focuses on real-time diagnosis of learning effectiveness. Secondly, the system, which is based on cognitive load, has been enhanced. However, it should be noted that the diagnosis mode of the system is only suitable for assessment items that involve single learning concepts and explicit solution steps, and not for items in the format of yes/no or multiple-choice.

Keywords:

E-learning environment, cognitive load, learning theories, cognitive architecture.