Abstract

Computerised adaptive testing (CAT) based on item response theory (IRT) has been recognized as an appropriate tool to construct an optimal test for each examinee. In the presentation the basics of CAT systems and the general algorithm of their functioning are introduced, and their advantages and limitations to psychological testing are considered.

Basic ideas concerning the model of the Visual Constructor of the Adaptive Scripts for human-computer interaction (HCI) are introduced. The Main goal of this constructor is to provide such a tool for a researcher, which gives a possibility to create semistructured and thus flexible test battery, i.e. to create a test, which may be personalised on-line during the process of assessment. A proposed mixed model is based on the integration methodology of expert systems design and IRT model and overcomes certain limitations of the IRT model namely analysing the answers only according to their accuracy. Furthermore, such a combination allows achieving of the more sophisticated personalisation.

Some issues of a general conceptual model framework for psychological adaptive testing system to be developed and a trend line for the future research are also presented.

This research has been conducted within the «NEURE» project, one of the purposes of which was to provide teachers in general and psychologists in particular with the research and psycho-educational tools to assess children's knowledge, skills and abilities or disabilities via testing through Internet environment.

Keywords: CAT, IRT, expert system, HCI