

COMPUTERIZED ADAPTIVE TESTING

Juliana Guimarães LABARRÈRE¹
Cibele Queiroz DA-SILVA²
Denise Reis COSTA³

- **ABSTRACT:** The Computerized Adaptive Tests (CAT) describe a class of electronic exams in which the items are selected according to the test taker ability. In that respect his or her proficiency is interactively measured. In order to implement the CAT it is necessary to set up a sound collection of items (Item Bank). Such items must possess both pedagogic and psychometric quality. For the CAT, Item Response Models (IRM) are very important for calibrating the items. In the IRM the probability of answering an item correctly grows with the test taker ability. Once the items in the Item Bank were calibrated it is possible to release an online estimate of the test taker ability. The methodology also makes possible the comparison of the abilities of different examinees. Using simulated data and also real data we analyze the errors in the estimates of examinees abilities submitted to both CAT and traditional exams.
- **KEYWORD:** Computerized adaptive testing; item response theory; computerized evaluation.

¹ Universidade de Brasília – UnB, Centro de Seleção e de Promoção de Eventos da UnB (CESPE), CEP: 70910-900, Brasília, DF, Brasil. E-mail: ju.labarrere@gmail.com

² Universidade de Brasília – UnB, Departamento de Estatística, CEP:70910-900, Brasília, DF, Brasil. E-mail: cibeleqs@umb.br, cibeleqs@gmail.com

³ Universidade de Campinas – UNICAMP, Departamento de Estatística, CEP: 13083-859, Campinas, SP, Brasil. E-mail: denise.reis@gmail.com