

Cognitrone: Issues of test fairness and construct validity

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Abstract

Tests which measure attention have a long tradition in psychological assessment. The test Cognitrone is based on the theoretical model by Reulecke (1991), which considers concentration as a state of actively focused attention that is mainly described by three variables: (1) energy, (2) functions and (3) precision. These three variables have to be coordinated deliberately and continuously during an activity. The test is meant to allow for a quantification of the variable "energy" in the sense of the time needed to complete the task. In this paper, first test-theoretical analyses of this scaling fairness of the variable "energy" are presented. In order to do so the authors resort to two IRT models: (1) the logistic Rasch model and (2) an enhanced version of the Rasch model for reaction times (see Jansen & Glas, 2000). The results of these two test-theoretical analyses are compared to each other and discussed with regard to the construct validity and scaling fairness of the variable "energy" following Reulecke (1991).

References

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