

Reliability in the Rasch Model

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Abstract: This paper deals with the reliability of composite measurement consisting of true-false items obeying the Rasch model. A definition of reliability in the Rasch model is proposed and the connection to the classical definition of reliability is shown. As a modification of the classical estimator *Cronbach's alpha*, a new estimator *logistic alpha* is proposed. Finally, the properties of the new estimator are studied via simulations in the Rasch model.

Keywords: Cronbach's alpha; Rasch model; reliability;

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