An IRT model with person-specific item difficulties

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In the Rasch model we assume that the item difficulties are identical for all persons. In empirical applications, model tests usually show that the assumptions of this model do not hold. This also applies to the more liberal Birnbaum model. I present a generalization of the Rasch model in which it is assumed that the item difficulties are person-specific, i.e., in which each item has a latent trait and a latent difficulty variable. The price for such a model is that there are several occasions of measurement with time-invariant item-difficulty factors. The model is applied to the life satisfaction scale of the Freiburger Personality Inventory (FPI). Using the good-bad scale of the multidimensional mood state questionnaire (MDBF), it is also investigated if and how the model can be extended to items with more than two answer categories.