

# Abstract for the EMPG 1999 Meeting in Mannheim

## **Item Selection in IRT Models for Measuring Change**

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Subject of this paper are certain topics concerning the measurement of change for categorical variables by Item Response Models. The experimental design used for this is the most simple design: a  $2 \times 2$ -design with measurements at two different timepoints in two different groups. For measurement of change with categorical variables mainly two Item Response Models are proposed: The LLTM (Linear Logistic Test Model) and the LLRA (Linear Logistic model with Relaxed Assumptions). Both models were developed by G. H. Fischer. In both cases change is measured by using an existing group structure, assuming that inside of these groups the amount of change is the same for all members of the group. There can be a systematic error distorting the measurement, if a) the assumed group structure is wrong and a different group structure was convenient for measuring change, or if b) there does not exist any kind of group structure at all. In this case, there would be a parameter measuring change for every person. In literature this phenomenon is called modifiability. In this paper strategies are presented for selecting a set of items- resp. persons- minimizing this bias. These strategies include certain methods of correspondence analysis, and certain tests of fit for the Rasch model. It will be examined if these strategies are suitable for our purpose.