

## **Empirical research on the model of elementary school mathematics teaching materials' difficulty**

Qing-You Cai

Southwest University, Chongqing, China [cqy316@163.com](mailto:cqy316@163.com)

Difficulty is the important indicator for evaluating mathematics teaching materials, which has referential significance for analyzing the students' burden of school work, writing and revising mathematics teaching materials and implementing mathematics curriculum reform. However, very little attention of research at home and abroad had been paid to it. The purpose of this study was to build a new model of the difficulty for characterizing the elementary school mathematics teaching materials scientifically. Therefore, a questionnaire was designed, based on the literature analysis, expert interviews and related research conclusions, to survey the key factors affecting elementary school mathematics teaching materials' difficulty. In data analysis, some statistical methods were employed, such as exploratory and confirmatory factor analysis. A new model of elementary school mathematics teaching materials' difficulty was constructed with nine key affecting factors and three difficulty dimensions including the difficulty of content, worked examples and exercises.

**Keywords:** elementary school mathematics, teaching materials' difficulty, model