



Adaptación de la prueba TIMSS para la evaluación de la competencia matemática en alumnos de magisterio [

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text (article)

Analítica

INTRODUCTION. The foundation of mathematical pedagogical knowledge that a teacher must have is based in a special way on the knowledge he/she has about the contents of the subject. The objective of this paper is the elaboration of a diagnostic test of mathematical abilities, based on the selection and adaptation of some of the items of the Trends in International Mathematics and Science Study (TIMSS) 2011, as well as the technical aspects from the application of the Rasch model. **METHOD.** The items of the elaborated test were selected following the original structure of blocks of content and cognitive domain established in the framework of the official TIMSS 2011 test (Mullis, Martin, Ruddock, O'Sullivan, & Preuschoff, 2009). The translation and adaptation procedure has been developed in order to ensure greater linguistic validity. The study was carried out with a sample of 477 students enrolled in the first year of the different Bachelordegrees of Primary Education School Teacher that are offered in universities across the Autonomous Community of Madrid (Spain). **RESULTS.** We considered two types: multiple-choice items and constructed response items. Given the characteristic of the format it has been necessary to assess the reliability of the correction made by the evaluators to guarantee the agreement in their correction. **DISCUSSION.** The Rasch model used for the validation of the test has allowed us to generate evidence that shows a high degree of reliability, pointing out the differences in behavior between the multiple-choice items and the constructed response items (elements that require students to construct their own written response). The model allowed us to classify the results of the items by level of difficulty, which facilitates an interpretation of the results according to both the content domain and the cognitive domain

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Tipo Audiovisual: TIMSS competencia matemática modelo de Rasch adaptación de pruebas formación docente
TIMSS compétence mathématique modèle de Rasch adaptation des tests formation initiale des enseignants
TIMSS Mathematical competence Rasch model Assessment adaptation Pre-service teacher preparation

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