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Analysis of psychometric properties as part of an iterative adaptation process of MKT items for use in other countries.

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Summary: Researchers at the University of Michigan have developed sets of items that can be used to analyze teachers' mathematical knowledge for teaching (MKT). In this paper, we consider what is required in the adaptation of a set of these items for use in a Norwegian context. We discuss how analysis of item difficulty and point-biserial correlation can be applied in combination with qualitative approaches to ensure a high-quality process of piloting adapted MKT items. Findings indicate that researchers who attempt to adapt MKT items for use in cultural contexts other than those for which they were designed need to use different methods to analyze all aspects of the adaptation process. The results from the different analyses conducted might then be used to inform other parts of the process, and this will mean that the process of adapting and piloting items becomes cyclic and iterative.

Classification: B50 D69 D79

Keywords: assessment; teacher knowledge; mathematical knowledge for teaching; psychometric analysis; cross-cultural adaptation; item difficulty; item development

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