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König, J.; Blömeke, S.; Paine, L.; Schmidt, W. H.; Hsieh, F.-J.

Teacher education effectiveness: quality and equity of future primary and future lower secondary teachers' general pedagogical knowledge.

Blömeke, Sigrid (ed.) et al., International perspectives on teacher knowledge, beliefs and opportunities to learn. TEDS-M results. Dordrecht: Springer (ISBN 978-94-007-6436-1/hbk; 978-94-007-6437-8/ebook). Advances in Mathematics Education, 187-206 (2014).

Summary: For more than two decades, three components of teacher knowledge have been discussed, namely, content knowledge (CK), pedagogical content knowledge (PCK), and general pedagogical knowledge (GPK). Although there is a growing body of analytic clarification and empirical testing with regard to CK and PCK, especially with a focus on mathematics teachers, hardly any attempt has been made to learn more about teachers' GPK. In the context of the Teacher Education and Development Study in mathematics (TEDS-M), Germany, Taiwan, and the United States worked on closing this research gap by conceptualizing a theoretical framework and developing a standardized test of GPK, which was taken by representative samples of future elementary and middle school teachers in these countries. Four task-based subdimensions of GPK and three cognitive subdimensions of GPK were distinguished in this test. TEDS-M data are used (a) to test the hypothesis that GPK is not homogenous but multidimensional and (b) to compare the achievement of future elementary and middle school teachers in Germany, Taiwan and the US. The data revealed that US future teachers were outperformed by both the other groups. They showed a relative strength in one of the cognitive subdimensions, generating strategies to perform in the classroom, indicating that in particular they had acquired procedural GPK during teacher education.

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