

ZMATH 2013c.00127

Voss, Thamar; Kunter, Mareike

Teachers' general pedagogical/psychological knowledge.

Kunter, Mareike (ed.) et al., Cognitive activation in the mathematics classroom and professional competence of teachers. Results from the COACTIV Project. New York, NY: Springer (ISBN 978-1-4614-5148-8/hbk; 978-1-4614-5149-5/ebook). Mathematics Teacher Education 8, 207-227 (2013).

Summary: This chapter focuses on general pedagogical/psychological knowledge (PPK) as a constitutive element of teachers' professional knowledge. It introduces the conceptualization of PPK used in the COACTIV research program, describes the development of a test directly assessing PPK, and summarizes first findings from a validation study. PPK, as the knowledge needed to create and optimize teaching-learning situations across subjects, is conceptualized as a multifaceted construct including knowledge of classroom management, teaching methods, classroom assessment, and student heterogeneity. A 39-item measure using multiple-choice items, short-answer items, and video-based items was developed to assess this domain of teacher knowledge. Experts rated the items to be relevant for teaching, domain general, and authentic. The measure was then administered to 746 teacher candidates in the context of COACTIV-R. Results provided empirical support for the theoretically derived structure of PPK and showed that the facets of PPK could be assessed with satisfactory reliability, that the measure was sensitive to differences between groups, and that the knowledge assessed did not overlap to any great extent with discriminant constructs. Furthermore, PPK was positively related to the quality of instruction as perceived by students.

Classification: B50 C70 C49

Keywords: pedagogical knowledge; psychological knowledge; classroom management; classroom assessment; teaching methods; learning process; subject-specific teacher knowledge; teaching learning process
doi:10.1007/978-1-4614-5149-5_10