

**WHAT DO TEACHERS OF MATHEMATICS KNOW? INSIGHTS AND
ISSUES FROM ATTEMPTS TO MEASURE MATHEMATICS TEACHERS'
KNOWLEDGE**

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This talk discusses insights afforded by and challenges associated with, attempts to measure teachers' knowledge for teaching mathematics using pen and paper instruments. I draw on examples of such instruments that have included open ended, Likert type, and multiple-choice items, and that have considered widely accepted components of teachers' knowledge such as content knowledge and pedagogical content knowledge, as well as incorporating aspects typically associated with the affective domain such as confidence and beliefs. The conceptual underpinnings and development of two instruments that comprised various combinations of these knowledge and item types are described. Issues include: the differing affordances of holistic and analytic conceptions of teachers' knowledge; the entailment of affect in knowledge; the limitations of inferring knowledge from teacher behaviours (including responses to pen and paper instruments); and the contentious and subjective nature of such inferences in relation to some aspects of knowledge.

References

Austin, J. L., & Howson, A. G. (1979). Language and mathematical education. *Educational Studies in Mathematics*, 10, 161-197.