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Exploring two foundation phase teachers' selection and use of examples and representations in number-related tasks.

Morrison, Samantha Sarah

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Abstract

National and international studies show that the standard of mathematics teaching and learning in South Africa is very low compared to other countries. These statistics are worrying because mathematics is one of the 'gatekeeper' subjects that determine learners' access to higher learning and a better future.

My study, aimed at exploring two Foundation Phase teachers' selection and use of examples and representations when teaching number, forms part of a longitudinal study currently underway within the Wits Maths Connect Primary (WMC-P) Project. One of the broad aims of the WMC-P Project is to improve primary teachers' mathematics content knowledge and also to see this translated into improved pedagogy on the ground. This qualitative study was carried out within the WMC-P Project's 20-Day in-service training course and one of the ten government schools participating in the broader study.

My study aimed to build on research that has been carried out on teachers' use of examples and representations with a focus on the South African terrain. The dataset comprised of two Foundation Phase teacher's pre-tests, course-work tasks, field notes, and transcripts of observed lessons. Data was analysed using an analytical framework based on current literature related to examples and representations within mathematics teaching. Findings from my study show possible associations between a higher content knowledge score and the extent of a teacher's example space and more coherent connections between different representational forms. More studies around this topic are needed because research shows that teachers' examples and representations in mathematics teaching are important for good teaching and conceptual understanding.