

Teachers identifying and responding to learner errors and misconceptions in Numbers, Operations and Relationships in the Intermediate Phase

The purpose of this study was to investigate how Intermediate Phase teachers (Grades 4, 5 and 6) identify and respond to learners' mathematical errors and misconceptions in one content area of mathematics, viz. Numbers, Operations and Relationships (NOR). The NOR area forms the basis for understanding mathematical operations and related concepts and procedures in preparing learners for the Senior Phase.

The ability to distinguish between, and address errors and misconceptions is key to learning and improving learners' mathematical achievements. When teachers identify learners' errors and misconceptions, they can adapt their teaching style and help eradicate errors and misconceptions.

This study focuses specifically on the ways teachers identify the challenges learners face in understanding NOR and explores suitable educational methods to resolve these errors and misconceptions. These methods include learner revision strategies, in which learners engage in 'cognitive conflict' by seeking out and addressing the mathematical and/or cognitive nature of their errors.

Using participatory action research (PAR) as the research strategy, I collected data through interviews, class observations, focus groups and field notes at a primary school. Subsequent analysis suggests that, when teachers attend to learner errors and their reasoning behind their errors, they are able to identify and address misconceptions.

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