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The extent Grade 9 teachers engage with learners' errors in the teaching of mathematics

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Abstract

This study explores the extent to which Grade 9 mathematics teachers engage with learners' errors in the teaching and assessment of mathematics. This qualitative study adopted an exploratory case study design and an interpretive focal lens. The sampling was purposive, and the participants were three Grade 9 mathematics teachers, one from each of three high schools in the Harry Gwala District of KwaZulu-Natal province in South Africa. The instruments used to generate data were semi-structured interviews and classroom observation.

The findings of the study revealed that the level or the extent to which teachers engage with learners' errors depends on 1) teachers' understanding of remedial teaching, which informs 2) teachers' ability to deal with learners' errors and 3) teachers' mathematical knowledge, which is the content and pedagogical knowledge of teaching mathematics. Teachers also engage with learners' errors for the following reasons: 1) to provide remedial teaching, 2) to correct learners' mistakes or errors, 3) to provide feedback to learners, and 4) to promote peer learning. The findings of the study further revealed that teachers have limited time to engage with learners' errors since they are time-bound to curriculum coverage or to finish the Annual Teaching Plan. However, it is important to note that the teachers who participated in the study do not have much knowledge about remedial teaching; therefore, they do not depend on or use remedial teaching to engage with learners' errors. The rationale for why teachers engage with learners' errors that emerged from the study includes correcting learners' errors, providing feedback to learners, and enhancing remediation.

Keywords: Error analysis, Misconception, Assessment, Learning, Feedback.