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Investigating the Precision of the Mathematical Language of Secondary Teachers – A Small Sample Case Study

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ABSTRACT This paper explores the use of exact mathematical language of three secondary teachers by using the conceptual framework of language repertoires: literal, algebraic, graphical and procedural that relate to the various representations of a mathematical object. A repertoire in this study is an inventory of words as a cognitive resource. A questionnaire and two short interviews facilitated the data collection for this explorative mixed methods case study. The results indicate that teachers have a store of mathematical language that they can use in their teaching but they are not able to distinguish between the four language repertoires. Mathematical vocabularies could be classified under the four repertoires but the accuracy of vocabulary used within specific mathematical contexts was problematic. The findings of this study have implications for teaching and learning mathematics, for programmes designed to prepare students for secondary mathematics teaching, and for in-service teachers, and indirectly for learners of mathematics.