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Teacher professional noticing and mathematical knowledge for teaching directed numbers at Grade 8

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ABSTRACT

This study investigated teachers' professional noticing skills and mathematical knowledge for teaching (MKT) directed numbers at grade 8. The focus was on the professional noticing skills and MKT that teachers displayed in their teaching as well as how their level of professional noticing and MKT can be explained. A qualitative case study design was employed for this study. The study drew its theories and analytical tools from Thomas, Jong, Fisher and Schack's (2017) professional noticing and MKT framework. This framework informed this study in formulation of research questions, data analysis and presentation of findings. Data for this study was a secondary data whose primary source was the project Mathematics Performance Lag Advance Programme (MPLAP). The lesson transcripts of two teachers involved in the MPLAP project were the sources of data for this study. Deductive content analysis was conducted on the data to provide answers regarding teachers' professional noticing skills and MKT as well as explaining each teacher's level of professional noticing and MKT.

The findings of this study revealed the differences in teachers' professional noticing skills and MKT. The difference was in the way teachers implemented their instruction, how they adjusted tasks during the teaching and learning process and whether their instructional practices linked to learners' mathematical learning progression. Relying on chorused responses from learners seemed to affect teachers' professional noticing skills and MKT.