

## ABSTRACT

This research report presents a qualitative study that was conducted at a primary school in Johannesburg, South Africa as part of an error analysis action research. The focus of the study is on the teaching of fractions, directed at teachers' resourcing of learners' mathematical thinking. Emphasis is put on the teachers' ability to professionally notice and intervene based on what they have observed. The study aims to investigate the extent to which the teachers' professional noticing was successful in improving the learners' performance on fractions. A group of 60 grade 7 learners were sampled to draw data for this study.

This study was grounded on the constructivist theory of learning and teaching and was supported by literature on professional noticing. The study's data is constituted from analyses of different methods, beginning with a pre-test which was used to identify the learners' errors, then interviews which were utilised to interpret learners' responses to the pre-test, thereafter an intervention lesson was used to address the errors observed and lastly a post-test to compare the performance results of learners in the pre-test with the post-test.

The learners' significant improvement on the post-test performance suggests that their cognitive level on fractions concepts had also enhanced. Thus suggesting that resourcing of learners' thinking when teaching fractions had a positive impact on their understanding. Moreover, the study confirms that teachers' ability to professionally notice creates a favourable environment in enhancing learners' conceptual knowledge.

