RESEARCH TITLE

Grade 3 teachers' formative assessment practices in selected mathematics lessons

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ABSTRACT

This study responds to critical knowledge gaps evident in current literature about how formative assessment is enacted by foundation phase teachers in mathematics in South African public schools. Furthermore, the literature study revealed that most of the current research conducted in public primary schools focused on learner performance with emphasis on summative assessment, hence delimiting the importance of formative assessment as a strategic tool in improving learner performance. The aim of this study was to explore how grade three teachers enact formative assessment in mathematics teaching. I therefore investigated teachers' understanding of formative assessment, what teachers know about how children learn mathematics, how teachers use their knowledge of children's thinking to plan and enact formative assessment and what support is needed by grade three teachers to enact formative assessment in mathematics classrooms. Cultural Historical Activity Theory (CHAT) as propounded in third generation activity theory (AT) by Engeström (1987) served as the analytical framework for this study. Third generation AT which focuses on the interaction between a person or group (subject), a goal, motivation, or problem (object) and mediational interaction with (tools) as well as the intersection with the activity system leading to (outcome/s). This heuristic assisted me to conduct a systemic analysis of all inter-dependencies that had a bearing on how grade 3 teachers enacted formative assessment and what additional support they required to enact formative assessment in mathematics classrooms. This study followed a case study research design through a qualitative research approach. I started with a sample of 12 teachers in a selected school district in Tshwane in the Gauteng Province. The teachers were selected through a convenience sampling technique. The data was collected through two focus group interviews from these twelve teachers (divided into six each) as a pilot exploration. I then selected four teachers through purposive sampling. Data was collected through lesson observation, document analysis and four stimulated recall interviews from these four teachers. The data was analysed through content analysis technique, utilising Microsoft Macros which assisted me to segment all the data. I thereafter conducted pattern matching of the data. Finally, the data was coded, categorised and thematised. The core finding demonstrated that,

although teachers know about how children learn and that they can align their teaching to how children learn, they struggle to enact formative assessment effectively. Furthermore, while teachers recognise the importance of formative assessment, they do not implement formative assessment skills in an integrated way. The core finding of the study was that teachers' formative assessment practices are constrained by tensions of the activity system. This study contributes to the body of knowledge of formative assessment by highlighting relevant discords around challenges and successes pertaining to the enactment of formative assessment. The study also contributes to the research methodological body of knowledge on classroom observation of formative assessment where researchers will be able to replicate this study in different contexts. Finally, the study contributes by way of recommending strategies to policy makers and curriculum designers and education planners on the need to integrate formative assessment in a balanced way focusing on assessment for learning to enhance the quality of teaching and learning, hence improving learners' performance.

Keywords: Cultural historical activity theory, formative assessment, foundation phase, mathematics, assessment for learning, integrated, pedagogy, learner performance

The full thesis can be found at http://hdl.handle.net/10210/296503