

MATHEMATICS EDUCATION SEMINAR

Language use in multilingual materials for Foundation Phase Mathematics in South Africa

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1:00 pm in DERR 238

Date

Abstract: The teaching of mathematics, at all levels, is intertwined with the teaching of language. Internationally multilingualism is no longer the extraordinary case and yet language policies for schools remain predominantly monolingual. The South African Language in Education Policy (LiEP) promotes the development all eleven of the South African official languages and, ostensibly, multilingualism. Although there is a spread across all eleven official languages nationally in Foundation Phase (FP) classes, current policy interpretation and implementation, specifically the way in which the schools select a language of teaching and learning (LOLT) and learning material are produced, imposes monolingual education. In the FP context learners are learning language and foundational mathematical concepts simultaneously. Research shows that learners benefit from using their home language *in conjunction with other languages* when doing mathematics. The research reported on in this paper was carried out to investigate the use of written and spoken language in FP mathematics. Published learning and teaching support material were analysed and a survey in 20 schools was carried out to gather data on teacher and learner language use. The curriculum topic of patterns formed the mathematical content context for the investigation. Preliminary analysis shows that there are errors and omissions in publication translations and that variation in language use is present. Findings from this analysis will be interpreted in relation to issues around language use – the question of standardisation of mathematical register and recognition of the role of translanguaging in mathematics classes.

Ingrid Sapire is a mathematics education researcher at Wits University, Johannesburg, South Africa. She has been extensively involved in the development and presentation of materials for mathematics teacher education courses and training programmes, has written and edited primary and high school mathematics text books, and has developed and reviewed on-line interactive mathematics material for teachers and teacher educators. Research projects she has been involved in are the HSRC Grade 6 NW/Botswana comparative study and the Primary Maths Research Project replication study. She was director of the Foundation Phase component of the Gauteng provincial strategy for the improvement of mathematics education in the primary schools and she has worked on multilingual materials for use in Gauteng schools. She is the mathematics team leader for the Programme for Improving Learning Outcomes, which implemented a pilot Mathematics strategy (incorporating bilingual materials) in two provinces in South Africa (KwaZulu Natal and the Northern Cape) in 2015-2017. This strategy will be implemented in the KZN province in 2018.



Next Friday: Doug Ray, Texas State University, *Desmos and GeoGebra in the Classroom Part II*