

https://dspace.org/

Exploring teachers' interpretations and implementations of the intended mathematical literacy curriculum

Mthethwa, Themba M

2014-11-13
http://hdl.handle.net/10539/15873

Downloaded from a DSpace repository. https://dspace.org/

ABSTRACT

This study aims at investigating the question: How do Mathematical Literacy (ML) teachers interpret, experience and implement the intended Mathematical Literacy curriculum in Grades 10 – 12? The study draws from a socio-cultural perspective to analyse the ML Curriculum and teachers' interpretations of the ML curriculum. It draws largely from Basil Bernstein's (1975; 1982; 1996) framework of knowledge system and the Third International Mathematics and Science Study (TIMSS) (1996) framework of curriculum analysis.

The study consists of three phases: The first phase involved 60 teachers across schools in the East London (Eastern Cape) district of South Africa. The teachers' views and experiences of Mathematical Literacy, as expressed in questionnaires, were analysed, using the Statistical Package for Social Sciences (SPSS) programme. In the second phase, seven teachers were purposefully selected for interviews from the sixty teachers who had participated in the first phase. The third phase involved consecutive lesson observations with two teachers selected from the seven teachers who had participated in the second phase.

Results show that teachers have different views and understandings of the Mathematical Literacy curriculum, and also have different ways of implementing the subject. Teachers' mathematical backgrounds were found to have a great influence on how teachers implement Mathematical Literacy. The study illuminates connections and disconnections between the intended curriculum and the implemented curriculum, and furthermore shows that teachers' interpretations and recontextualisations of the intended curriculum in classroom contexts are key to the nature of the curriculum that is implemented. The study explores five important areas which relate to how teachers interpret, experience and implement Mathematical Literacy. These areas are: (i) Teacher Knowledge; (ii) Teaching and Learning of Mathematical Literacy; (iii) Recontextualising and reproducing the curriculum; (iv) Mathematisation in Mathematical Literacy and (v) Content and contexts of Mathematical Literacy. The study concludes with recommendations for classroom practice and for further research.