

# MATHEMATICS LITERACY

## – HOW WILL IT INFLUENCE MATHEMATICS TEACHERS?

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*Mathematical Literacy will be a compulsory subject as from 2006 in grades 10 – 12 for learners in South Africa who do not take “pure” Mathematics. This paper reports on a survey that was undertaken to investigate the opinions of local teachers about the inclusion of Mathematics Literacy as a compulsory subject. There seem to be justified concerns amongst teachers, especially mathematics teachers, who will have to play a central role in the implementation of the curriculum. This paper will clarify the real value of Mathematics Literacy, and attempt to enthuse teachers to become excited about the prospects of teaching Mathematics Literacy. It will also report briefly on the in-service training programme in Mathematical Literacy that was developed by the University of South Africa.*

The underlying intention of the policy makers is that Mathematics Literacy will play a vital role in the improvement of the quality of learners' lives. The ideology of the decision makers must be realised in the classrooms, but what are the viewpoints of the educators who must bring this ideology to fruition?

The goals for mathematics proficiency are widespread, but how those goals are being achieved, is subject to heated discussions among educators, education researchers, and members of the public. Often these disputes centre on the content that should be taught and the methods how it should be taught.

Being “mathematically literate” means *being able to use mathematics to make well-founded mathematical judgements* and to engage in mathematics, in ways that enable a person to be a constructive and reflective citizen. It is further concerned with the capacity of an individual to draw upon their mathematical competencies to analyse, reason and communicate ideas effectively by posing, formulating and *solving mathematical problems in a variety of domains and situations*. This entails more than just knowing mathematics at some minimal level, but also *using mathematics in a whole range of situations* (OECD, 2004).

In reality, it is not likely that mathematical literacy is going to be put into practice by someone who does not understand the notion of mathematical literacy and does not believe that it is important to develop students' mathematical literacy. The subject cannot be taught in isolation, and the traditional teaching methods to which many teachers still adhere to, will not be effective. Mathematics Literacy will require a complete new mindset from teachers. What are the links between to

contextual teaching and contextualising knowledge? These are subtle points but pivotal to an understanding of Mathematical Literacy.

Issues that will be addressed are, inter alia:

Are teachers in South Africa adequately informed?

How prepared are teachers for implementation?

What should be done to train teachers?

In what depth must the “maths” be?