



eNewsletter of the  
National Science and Technology Forum

## **Background**

The Parliamentary Portfolio Committee on Education was recently (3 February 2010) briefed on the National Senior Certificate Results of 2009, by the Department of Basic Education and UMALUSI.

The minutes can be read on the Parliamentary Monitoring Group (PMG)'s website: [Download](#). And [key extracts](#) from the presentation and the subsequent discussion can be read on the NSTF's website.

In November last year a special Task Team which was set up by the Department of Basic Education completed its [Review of the implementation of the National Curriculum Statement: Report of the Task Team](#).

This review was initiated in response to criticism of the implementation of the National Curriculum Statement, teachers' work overload and learner underperformance in local and international assessments. Ms Angie Motshekga, Minister of Basic Education, announced that from 2010 learner portfolios would be discontinued, and teachers would require only one administrative file... A set of clear, coherent curriculum and assessment documents would be developed, communicated and implemented in 2011. The department was seeking to shift the focus of teachers from being fully administratively compliant but having little time to spend really teaching, to one where effective teaching ensured that pupils were learning. It was looking to provide a uniform set of grading descriptors for all grades and to reassert the role of textbooks. In 2010 the Department would develop a detailed syllabus for implementation in 2011. The Minister noted that the Department was currently refining the norms and standards for educators and were looking at the curricula of Higher Education Institutions and how responsive they were.

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At the previous NSTF workshop held in Pretoria, on 17 AUGUST 2009, presentations were heard by the following speakers:

- Dr Nhlanhla Nduna-Watson, Department of Basic Education
- Dr Eric Khoza, Denel Youth Foundation Training Programme (DYFTP)
- Aarnout Brombacher, Brombacher and Associates
- Dr Vijay Reddy, Director: Education, Science and Skills Development Programme, Human Sciences Research Council (HSRC)

The following issues were identified from the presentations and discussions, for the purpose of formulating recommendations to Government and follow-up discussions:

## **Teacher training and development**

- A national initiative to support and capacitate teachers in the system is urgently needed. This initiative must coordinate the various efforts around the country and draw on the expertise and support of, for example, science centres and subject specialists in higher education.
- Ways should be found of replicating successful models and teaching practice.

- Incentives may be needed to keep capable mathematics and science teachers in the teaching profession, e.g. lucrative bursaries.

### **Effective teaching**

- It is important to consider how learners learn rather than simply measuring the output in terms of examination results. Understanding should be valued, rather than just results. We should start concentrating on improving skills and abilities.
- Consideration was given to adding an additional year of school to enable learners to achieve the requirements to get into tertiary education.

### **Early childhood development and the Foundation Phase**

- The importance of early learning as a foundation should not be overlooked. The earlier the interventions are made, the higher the returns on that investment.

### **Life orientation**

- Life orientation is effectively taught in schools and that the career counselling aspects should not be neglected. Career counselling should empower learners by giving them a vision of what they can become.
- A weakness of life orientation and career guidance is that learners are not adequately advised which subjects to take in order to follow a particular career.

### **Mathematical literacy**

- We need to develop a shared sense of what it means to do mathematical literacy.
- In early discussions between higher education and the DoE, there was an agreement that higher education would be able to ask the DoE for the marks on the second mathematical literacy paper, which would be used as the basis for admission to certain university programmes. This discussion should be resumed.
- Consideration should be given to making mathematical literacy compulsory, as initially envisaged, but taught as a separate life skill from life orientation. Considerations in doing so might include lower time allocation and credit allocation than for other subjects, as well as examination by means of an internal portfolio.

### **Mathematics**

- We need to develop a shared sense of what it means to do mathematics in the modern world.
- Higher education institutions need to start documenting the skills gaps among students so that these issues can be addressed in the school curriculum.
- Developing problem-solving skills must not be neglected in the teaching of mathematics.

### **Physical science**

- Higher education institutions need to start documenting the skills gaps among students so that these issues can be addressed in the school curriculum.
- There may be a need to institute an alternative physical science subject that is more engineering oriented for learners that intend to enter the vocational world and exercise a trade after leaving school.

### **Assessment**

- The issue of assessment and over-assessment in the education system was raised. We have to consider the place of assessment.

## Exemplar papers

- There may have been too much repetition between the exemplar papers and the final papers prepared for the 2008 national senior certificate examination.

## Second opportunities

- There is support for second opportunities at various stages in education. We should perhaps consider which stages those should be, as well as what kind of second opportunities to promote.
- We do not seem to give enough hope to children that fail grade 12 or do not get sufficiently good marks to get into their chosen course of study.

## Focusing on the ultimate objective of education

- Effective education in science and technology is preparation for the world of work. The important issue is not so much the results that learners achieve in matric but what they go on to do afterwards.
- Science, technology, engineering and mathematics (STEM) learning is a means to an end, with the goal of sending learners into society to make a useful contribution.

We hope to take these insights and issues to a new level through our discussions on 10 March 2010, to interact with the Western Cape Education Department and the National Department of Basic Education, and contribute to policy formulation and implementation.

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The NSTF is a broadly-representative stakeholder body for all SETI (science, engineering, technology and innovation) organizations in South Africa, which seeks to influence policy formulation and delivery through conducting workshops and meetings with member organisations and stakeholders. The NSTF was established in 1995, and has a proud history of involvement with SETI policy issues and the promotion of discussion about SETI matters. Read more about the National Science and Technology Forum (NSTF) at [www.nstf.org.za](http://www.nstf.org.za)

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