NATIONAL ASSEMBLY

FOR ORAL REPLY

QUESTION 67

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(INTERNAL QUESTION PAPER: 05/2013)

Mr P F Smith (IFP) to ask the Minister of Basic Education:

(1) What are the performance objectives she has agreed to with the President in the fields of (a) mathematics and (b) science outcomes in respect of the basic education system;

(2) whethershe is meeting these objectives; if not, why not; if so, what are the relevant details? NO434E

REPLY:

(1) (a) I have met the targets in terms of my performance objectives with the President by increasing the number of learners writing Mathematics from 224 621 in 2011 to 225 830 in 2012 nationally. In addition, I have increased the number of learners passing the subject from106 327 in 2011 to 121 957 in 2012 nationally. Furthermore, although still not satisfactory, the quality of these passes has improved, with a smaller proportion of candidates achieving low level passes.

(b) Similarly, the performance in Physical Science increased from 96 441 in 2011 to 109 918 in 2012.

(2) We have introduced a number of interventions, aligned to *Action Plan 2014, towards the realisation of Schooling 2025*, which are aimed at increasing the number of learners passing Mathematics and Science in our system. In addition to sustained support in respect of improving the quality and quantity of performance in the schooling system at all levels, we have developed

a quarterly reporting system based on learner performance at distrcit and provincial level. Among these interventions aimed at improving the quality of learning and teaching, we have provided over 4 million texts in Mathematics and Physical Science to Grade 10 o 12 learners in the last financial year. We have directly provided include the development and distribution of Mind the Gap study guides in Life Science, Geography, Economics and Accounting and Science. We have also widely provided examination exemplars, model answers and other interventions through the integrated National Strategic for Learner Achievement with a range of quality improvement interventions at all levels in the schooling system. Details of the various interventions are included in the quarterly reports presented by the Department of Basic Education to the Portfolio Committee on Basic Education on a quarterly basis.

We have also made inroads in terms of general improvements in quality and have improved the number and quality of passes in general , despite tremendous challenges in the system

- In 2002, just over 41% of 22 to 25 year-olds in the general population achieved a National Senior Certificate pass. This has increased to just under 47% in 2011.
- In terms of Bachelors passes, the Goal in 2014 is that 32% of learners who sit the National Senior Certificate to achieve a pass high enough to make them eligible to be admitted to a Bachelors programme a higher education institution. **136 047 Bachelor level passes in 2012 equated to** 26.6 % of Grade 12 candidates in 2012. 15 280 more bachelor passes were achieved in 2012 than in 2011.The sector is therefore on track to achieving its target for 32% of Grade 12 graduates able to be admitted for Bachelors degree studies. The trend has been that this indicator moved from 19.9% in 2008 to 24.3% in 2011 and 26.6% in 2012 . The age admission policy effects just over a decade before 2012 result in a percentage being used in respect of this critical indicator.
- In 2009, 14% of young people in the appropriate population cohort of 18 year olds obtained a **Grade 12 mathematics pass**. It must be noted that this figure is not a proportion of those who wrote. **This increased to 15.3%** in 2012 - without taking into account the forthcoming supplementary exam figures. Improving the pipeline of those taking mathematics is a critical priority of the Department as this requires better career and subject choice, as well as the creation of a solid foundation and confidence of learners and teachers in Dinaledi schools - as well as the support of those smaller school s in the system which consistently produce

African learners taking and passing mathematics. This will ensure that our goal of achieving 20% of the Grade 12 cohort passing Mathematics in the medium term.

- In 2009, 13% of young people in the appropriate population cohort of 18 year olds obtained a **Physical Science** pass. This figure is not a proportion of those who wrote. This proportion has remained stable even though the number of students passing the subject has increased from 81 356 in 2009 to 119 918 in 2012.
- International assessments also indicate progress and provide independent confirmation that we have exceeded the target for achievement in Trends in Mathematics and Science Study which has predominantly developed countries participating. In addition to the above average improvement by South Africa from 2002 to 2011 (50% more than the average grade improvement expected over a four year period on average, albeit from a low base),TIMMS shows that mathematics performance improved from 285 in 2002 to 352 in 2011, and Science performance improved from 268 in 2002 to 332 in 2011.
    - For TIMSS 1995, 1999 and 2002, the average score remained the same – perhaps due to the structural and educational changes in the country since 1994.
    - Between TIMSS 2002 to 2011, there was an **increase** in achievement scores.
    - Score distribution: the **scores at the lower end increased.**
    - TIMSS estimates within a 4-year cycle a country could expect up to 40 point improvement – i.e. improve by one grade level.
    - South African scores improved by around 60 points – indicating a **performance improvement of 50% more** than average (1.5 grade levels) between 2002 and 2011, albeit off a low base

- **Pass rates are improving**

    - In terms of mathematics pass rates, The number of passes in Mathematics in 2012 was 121 970. This is 17 937 more than the 104 033 of 2011. The pass rate for Mathematics was 54% in 2012. This is an improvement from 46.3% of 2011.

- The number of passes in Physical Science was 109 918 in 2012. This is 13 477 more than the 96 441 of 2011. The pass rate for Physical Science in 2012 was 61.3%. It was 53.4% in 2011.
- A total of 136 047 Bachelor passes was recorded in 2012. It was 120 767 in 2011. This is an increase of 15 280 learners. The sector is therefore on track to achieving its target for 32% of Grade 12 graduate able to be admitted for Bachelor degree studies.
- Comparing the achievements of 2012 to that of 2011, the following is a confirmation of the improvement in quality, equity and quantity:
  - 15 280 more bachelor passes
  - Nine of the gateway subjects improved at 30% achievement level.
  - Eight of the gateway subjects improved at the 40% achievement level.
  - 17 937 more candidates passed Mathematics (at 30%)
  - 13 175 more candidates passed Mathematics (at 40%)
  - 13 477 more candidates passed Physical Science (at 30%)
  - 8 967 more candidates passed Physical Science (at 40%)
  - Increase in the distinction rate across key subjects.
  - Of the 81 districts, only three performed below 50% (5 in 2011)
  - Number of districts performing above 80% increased from 21 to 28.
  - The Gini coefficient decreased from 0.192 to 0.169.