



SPOTLIGHT on Matric 2015:

Is our education system failing our learners?

With the minimum pass requirements for matric down to 30% and the dwindling numbers of professionals in mathematics and science, is the school system doing enough to prepare learners for specialising in mathematics and science? – *Vijay Reddy and team*

South Africa's matric pass rate took a further dip, from 75.8% in 2014 to 70.7% in 2015. While this is accompanied by some intervention to improve the numbers, the results are still a cause for concern.

The success of failure: What 'progressed' learners reveal about our education system

Announcing the National Senior Certificate (NSC) matric results for 2015, the Minister of Basic Education, Angie Motshekga, referred to 'progressed learners' who may have contributed to the decrease in the overall pass rate. This highlights the question of what a 'progressed learner' is and what is revealed about them by the matric results.

The Department of Basic Education (DBE) defines progression as '...the advancement of a learner from one grade to the next, excluding Grade R, in spite of the learner not having complied with all the promotion requirements'.

South Africa's policy states that a learner may not spend more than four years in any particular phase and therefore may only fail one grade once. Thereafter, the learners are advanced to the next grade even if they fail to meet the promotion requirements.

The state's intention behind this policy is to uphold the best interests of the learner and to avoid learners dropping out of school unnecessarily, thus giving every learner the opportunity to achieve an exit qualification. However, progression does not guarantee that a learner will attain the National Senior Certificate (NSC) in Grade 12. The learner must comply with the certification requirements, and to this end will be given multiple opportunities to write the NSC.

'Progression' may lead to learners becoming despondent, frustrated and dropping out. Countries such as the USA and Canada also practise progression of learners, referred to as 'social promotion'.

This practice has raised concerns around the struggles faced by these progressed learners when they lack the prerequisite skills and knowledge to enable them to cope with the subject matter. Progression may lead to learners becoming despondent, frustrated and dropping out; and furthermore creates added pressure for teachers in terms of the time required to give the progressed learners extra support.

The argument for progression is based on moving learners through the schooling system. Learners who are retained run the risk of dropping out of their age cohort and ending up in a grade with much younger children, with the associated social and emotional implications.

Class of 2015 numbers

The matriculation class of 2015 showed the largest number of progressed learners since the publication of the



policy in 2013 for the Further Education and Training (FET) phase. Of the 799 306 matric candidates, 65 671 were 'progressed learners'.

Initial analyses of the results contradict certain of the assumptions around these learners. According to DBE, of the progressed learners who wrote the examinations, 22 060 (37.6%) passed, with 3 297 obtaining bachelor passes, 8 473 diploma passes and 10 264 higher certificate passes. Most notably, 1 081 obtained distinctions.

The link between grade repetition and knowledge and ability was investigated by David Lam, Cally Ardington and Murray Leibbrandt in a report titled *Schooling as a lottery:* Racial differences in school advancement in urban South Africa' (2011). Their findings include the disclosure that learning and measured performance generates higher enrolment, higher failure rates, and a weaker link between ability and grade progression. More specifically, the results suggest that grade progression

in African schools is poorly linked to actual ability and learning. These results also point to a system that may be failing certain groups of South African learners.

Matric: Better or worse?

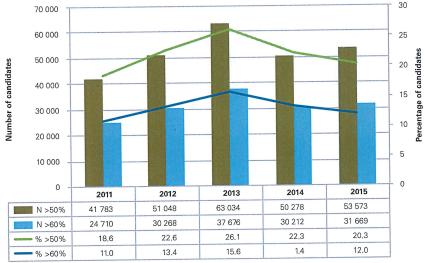
Using the 2011 to 2015 NSC results, we analysed the matric results in terms of meeting the demand for high-level scarce skills in the country – that is to access and achieve success in science, engineering, commerce, health and health-related courses and programmes at tertiary institutions. Access to these programmes depends on high quality school mathematics and science passes, with the knowledge required for these subjects being cumulative and unable to be remediated through catch-up programmes.

The mathematics and physical science performance trends, from 2011 to 2015, for those scoring above 50% and above 60% are shown below. Learners who achieved these results will make up the potential pool to study courses in the science, engineering and technology (SET) areas. It is important to consider both the actual number of learners achieving the requisite passes as well as the percentages (Figures 1 and 2).

What do these two graphs tell us? Firstly, 53 573 (20.3%) mathematics learners and

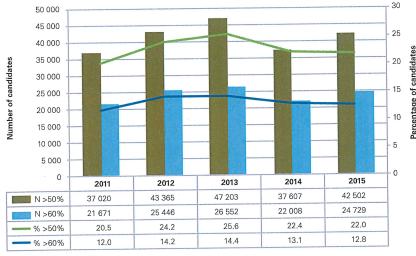
There is a shortage of professionals in the science, engineering, medicine and commerce sectors, and with only 30 000 students potentially accessing these areas, the graduate output in three or four years will not adequately alleviate our skills shortage.

Fig 1 Mathematics performance trends

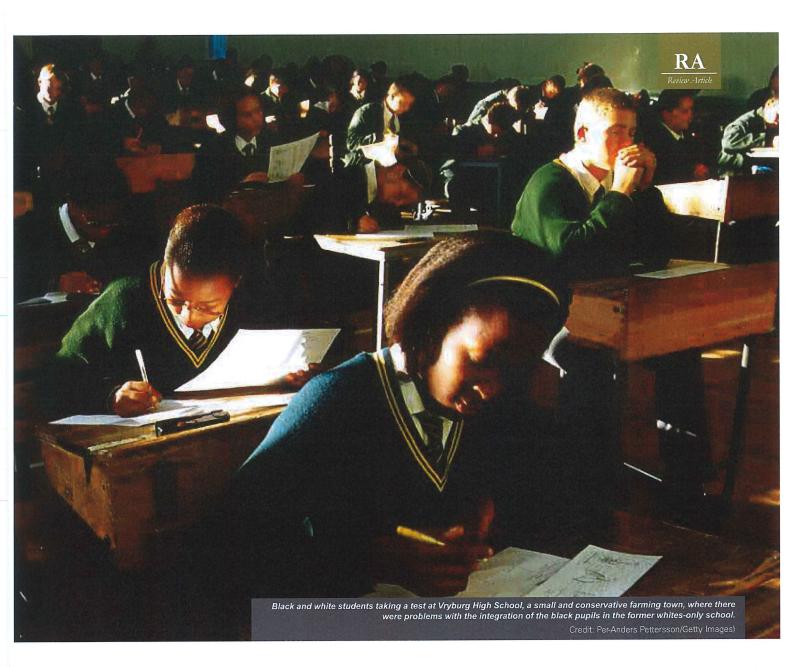


Source: TIMSS-South Africa

Fig 2 Physical science performance trends



Source: TIMSS-South Africa



42 502 (22%) physical science learners passed with a score higher than 50%. Almost half of these learners achieved above 60%, with just over 31 000 (12%) mathematics learners and close to 24 000 (12.8%) physical science learners achieving a score higher than 60%.

Secondly, there was a steady increase in numbers and percentages of learners achieving scores above 50%, from 2011 to 2013. These figures dropped in 2014 with a slight improvement in 2015 — although not to the 2013 levels. Thirdly, while the country boasts a high number of bachelor passes (166 263 in 2015), the pool of students with mathematics passes that meet university criteria to access the SET and health-related courses is only around 30 000.

Conclusion

In South Africa, the jury is still out on the value of progressing learners at the FET phase of schooling. It seems that what is needed is an understanding of what "passing" actually means and, importantly, the factors that influence whether a learner passes or not.

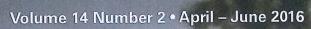
In addition, with the DBE's focus shifting to a differentiated education system rather than the mainstream academic system, the policy of progressing learners may need to be reviewed, as learners who do not meet the requirement for progressing along the academic path may be pushed into the technical and vocational education streams.

There is a shortage of professionals in the science, engineering, medicine and commerce sectors, and with only 30 000 students potentially accessing these areas, the graduate output in three or four years will not adequately alleviate our skills shortage.

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REVIEW

Making sense of racism

Page 8

Remembering 1976: the Soweto uprising and beyond

Page 12

Youth (educational) activism: then and now

Page 26

