

Obsession with pass rates a national folly

Nick Taylor,
11 January 2010

Why the pass rate on its own is a misleading indicator

The obsession with the matric pass rate by both the Department of Basic Education and the public is not only misleading but encourages what economists call ‘gaming the system’. Widespread gaming led to large increases in the pass rate in the years 1999-2003. To give an example: principal A enrols 10 candidates and 5 pass, giving a pass rate of 50%; principal B holds back her risky candidates, enrolling only 7 and 4 pass, giving a pass rate of 57%. Although B is praised for the higher pass rate, she enrolled and passed fewer candidates. When the school’s reputation rests on a single number then principals must be tempted to tweak the figures, even if this results in prejudicing their own learners. There is evidence that the pass rate improvements in 2010 are at least partly attributable to gaming, or what the DBE calls ‘culling’, despite its protestations to the contrary.

A far better picture of the health of the system would be obtained by looking at the numbers enrolling and passing each year and at the quality of those passes. The pass rate is an efficiency measure and is therefore not unimportant, but only makes sense if both numbers and quality are increasing off the current very low base.

Changes in numbers

In order to understand the numbers we distinguish between part time and full time candidates (Table 1).

Table 1: Full time and part time candidates, 2008-2010

2008			2009			2010		
FT	PT	Total	FT	PT	Total	FT	PT	Total
588 643	1116	589 759	580 937	39 255	620 192	559 166	82 835	642 001

Source: DBE, 2011

Overall, full time numbers are dropping in most provinces, while PT numbers are increasing even faster, resulting in an increase in total growth of 30 433 (5.2%) in 2009 and 21 809 (3.5%) in 2010. It is good that second chance candidates are given the opportunity to register part time. Of concern, however, is the drop in full time registrations, decreasing by 7 706 (1.3%) in 2009 and a much larger 21 771 (3.7%) in 2010 (Table 2). Since it is only those candidates who write in a full time capacity who are counted in calculating pass rates, moving candidates to part time status is one way of manipulating the pass rate.

Table 2: Trends in number of full time enrolments, 2008-2010

Province	2008	2009	2010	Increase 08 to 09	Increase 09 to 10	Pass rate change 09-10
EC	62 982	71 115	68 294	8 133	-2 821	7.3
FS	31 205	30 462	28 448	-743	-2 014	1.3
GT	103 836	101 269	94 642	-2 567	-6 627	6.8
KZN	151 778	139 908	130 302	-11 870	-9 606	9.6
LP	90 368	93 409	95 869	3 041	2 460	9.0
MP	58 459	55 729	54 542	-2 730	-1 187	8.9
NW	34 244	31 418	29 601	-2 826	-1 817	8.2
NC	10 363	10 766	10 406	403	-360	11.0
WC	45 408	46 861	47 062	1 453	201	1.1
Total	588 643	580 937	559 166	-7 706	-21 771	7.1

Source: DBE, 2011

Only two provinces – Limpopo and Western Cape – showed increases of full time registrations in both 2009 and 2010, and, while these were modest, they indicate that schools in these provinces are attempting to provide more children with greater educational opportunities.

A second way of manipulating pass rates is to screen learners at the end of Grade 11, and there is evidence that this is happening on a large scale, with a falloff in school enrolment between Grades 11 and 12 of around one-third across the country (DBE, 2010). While it is true that some of these learners will be transferring to FET colleges or entering the labour market, the end of Grade 9 or 10 would be more logical places to do so and the huge drop at the end of Grade 11 is indicative that something else is happening. This is a massive waste of potential and its reduction should be a priority for the school system. Unfortunately, an exclusive focus on the pass rate provides a strong incentive for principals to withhold opportunity by failing students in Grade 11, or to insist that they register as part time candidates.

Changes in quality

It is instructive to examine two indicators of systemic quality, although there are others that could be used. First, the numbers of matriculants obtaining a Bachelor level pass increased by 22 000 (26%) in 2008, 2 423 (2%) in 2009 and 16 674 (15%) in 2010 (Table 3). These are students who qualify to apply for Bachelor registration, as distinct from those who may register for Diplomas or Certificates, or who pass without qualifying for tertiary studies.

Table 3: Matriculants qualifying for Bachelor entrance

Year	Number	Increase	Per cent increase
2007	85 000		
2008	107 274	22 274	26.2
2009	109 697	2 423	2.3
2010	126 371	16 674	15.2

Source: DBE, 2011

The rapid spike in Bachelor level passes is not necessarily a positive development, considering the difficulties experienced by the universities over the last two years with large increases in numbers of ill prepared first year entrants. A better view of quality is given by the numbers registering for and passing mathematics (Table 4), and here there is a real problem, as the Minister acknowledged last week.

Table 4: Numbers writing and passing mathematics, 2008-2010

	Candidates			Passed \geq 30%			Passed \geq 40%		
	2008	2009	2010	2008	2009	2010	2008	2009	2010
Numbers	298 921	282 699	263 034	136 503	133 505	124 749	89 788	78 784	81 277
Increase 08 to 10			-35 887			-8 756			-8 511

Source: DBE, 2011. The report does not give passes at $\geq 50\%$, which would be a better indicator, given that the universities set this as a criterion for entry into science and most professions.

Nearly 36 000 fewer candidates registered to write maths in 2010 compared with 2008, and nearly 9 000 fewer passed. This indicates that principals are directing students away from maths towards maths literacy. This practice dramatically narrows student options for further study. Seen in this light, it is clear that the increases in Bachelor level passes in the last three years are largely in the humanities, with fewer students qualifying to enter science and the professional fields of study.

Recommended indicators for tracking school performance

The DBE is to be commended for producing at such short notice a very detailed and insightful report on the 2010 National Senior Certificate results. However, closer analysis shows that the use of improved pass rates to declare victory by the Minister hides a multitude of problems in the system, and that the results are not nearly as positive as they appear at first glance.

South Africa's schooling crisis manifests itself at the end of high school in the low proportion of young citizens entering tertiary education, particularly in areas of scarce skills. Top priority should therefore be given to:

- improving throughput rates in the FET phase (Grades 10 to 12),
- increasing the number of NSC passes, and

- improving the quality of passes. The key to quality lies not only in increasing numbers taking mathematics and science, but also in improving the standards of teaching and learning in these subjects and, even more important, in the languages and in the language of instruction in particular. Without proficiency in the language of instruction candidates are unable to rise to the levels of analytical thought required at the top end of the school system and beyond, and poor language skills are a root cause of the failure of so many children to make adequate progress in further and higher education.

These are the targets that schools and provincial departments of education should be setting themselves. The country's single-minded focus on pass rates frustrates these goals, to the great detriment of the life chances of individual students and of national development.

Reference

DBE. (2010). Education Statistics in South Africa 2009. Pretoria: Dept of Basic Education.

DBE. (2011). Report on the National Senior Certificate Results 2010. Pretoria: Dept of Basic Education.

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