## A mixed bag for SA education

Matric examinations are looming with all the stress that these bring to our young people.

But one of the successes of post-apartheid South Africa is the number of people passing their matric exams (as well as those doing well enough to go to university), providing them with a start in their adult life.

Between 2009 and 2017 the number of people passing matric in public schools grew by nearly 20\%. The jump in the number of people who passed well enough to attend university was even more impressive, rising from 107000 in 2009 to 172000 in 2018 (an increase of 43\%).

However, there are still serious questions around quality and throughput rates. Although the number of people sitting for Independent Examination Board (IEB) qualifications are much smaller than the number sitting government exams, the proportion who pass well enough to go to university is far higher, raising questions around quality of government school examinations. For example, nearly $90 \%$ of those who sit for the IEB school-leaving certificate pass well enough to go to university, compared to a third who sit the government exams.

But many public schools are poorly resourced, especially in comparison with some independent schools, lacking access to libraries, science laboratories, and sports field, all necessary to give a young person a well-rounded school education.

There are also serious questions about the quality of school leavers, and whether they are equipped to be able to succeed in either tertiary education or the world of work. This has serious implications, not only for these individuals, but for the success of South Africa as a prosperous society.

Fixing the South African schooling system, is a challenge, and there are a number of interventions which must be implemented. The power of teaching unions (such as the South African Democratic Teachers' Union) needs to be reined in. Too often the interests of children are forgotten.

In addition, we need to give parents both greater control over their children's schooling and how they choose this schooling. This can be done by strengthening governing bodies, but most importantly introducing education vouchers. This will allow parents to have greater choice over their children's education, through greater competition in the sector.
— Marius Roodt

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## Education

## Global comparisons

| Public spending on education as a proportion of GDP and of total government spending, selected countries, 2016 |  |  |
| :---: | :---: | :---: |
| Country | Proportion of GDP | Proportion of total government spending |
| Australia | 5.2\% | 13.9\% |
| Brazil | 5.9\% | 15.7\% |
| Chile | 4.9\% | 19.6\% |
| Denmark | 7.6\% | 13.8\% |
| France | 5.6\% | 9.7\% |
| Germany | 4.9\% | 11.1\% |
| Ghana | 6.2\% | 21.0\% |
| Hong Kong | 3.3\% | 18.1\% |
| Indonesia | 3.6\% | 20.6\% |
| Ireland | 4.9\% | 13.0\% |
| Israel | 5.7\% | 14.3\% |
| Italy | 4.1\% | 8.0\% |
| Japan | 3.6\% | 9.2\% |
| Kazakhstan | 3.0\% | 13.9\% |
| Lithuania | 4.5\% | 13.2\% |
| Mexico | 5.3\% | 19.1\% |
| Pakistan | 2.5\% | 12.6\% |
| Poland | 4.9\% | 11.6\% |
| South Africa | 5.9\% | 18.1\% |
| Spain | 4.3\% | 9.5\% |
| Switzerland | 5.1\% | 15.5\% |
| Turkey | 4.4\% | 13.1\% |
| Uganda | 2.3\% | 10.9\% |
| United Kingdom | 5.6\% | 13.8\% |
| United States | 5.0\% | 13.5\% |

Source: World Bank, wdi. worldbank.org/tables, World Development Indicators 2018, Table 2.7: Education Inputs, accessed 6 November 2018

## Education

## Government spending

| $\begin{array}{r}\text { Public education spending as a } \\ \text { proportion of total government } \\ \text { spending and the bachelor's }\end{array}$ |  |
| :---: | :---: | :---: |
| pass rate, 1996/97-2018/19 |  |$]$| Bachelor's |
| :---: |
| pass rate |

Source: Department of Basic Education (DBE), Macro Indicator Trends in Schooling: Summary Report 2011, 2011, p63; National Treasury, Budget Review 2010, 17 February 2010, px; Budget Review 2011, 23 February 2011, px; Budget Review 2012, 22 February 2012, px; Budget Review 2013, 27 February 2013, px; Budget Review 2014, 26 February 2014, pxii; Budget Review 2015, 25 February 2015, pv; Budget Review 2016, 24 February 2016, pv; Budget Review 2018, 21 February 2018, p57
a IRR calculations.
b Enables a person to study for a bachelor's degree.
As can be seen from the table above, there is no clear link between spending on education and the proportion of people who pass well enough to go to university. The rise in the proportion of people who gain bachelor's passes may be because of an improvement in teaching, but it could as likely be due to a lowering of standards. If it is the latter (which is possible) this has serious implications for South Africa as the country attempts compete for investment with other middle-income and emerging markets.

## Education

Public education spending as a proportion of total government spending and the bachelor's pass rate, 1996/97-2017/18


## Literacy

|  | Literacy rates ${ }^{\text {a }}$ of people aged 15 and above by race and province, 2016 |  |  |  |  |  |
| :--- | :--- | :--- | :---: | :---: | :---: | :---: |
| Race | Literacy status | Eastern Cape | Free State | Gauteng | KwaZulu-Natal | Limpopo |
| Black | Proportion literate | $74.8 \%$ | $79.6 \%$ | $88.8 \%$ | $78.3 \%$ | $77.8 \%$ |
| Coloured | Proportion literate | $86.3 \%$ | $82.1 \%$ | $95.1 \%$ | $95.0 \%$ | $88.8 \%$ |
| Indian/Asian | Proportion literate | $94.6 \%$ | $94.5 \%$ | $95.5 \%$ | $91.3 \%$ | $87.0 \%$ |
| White | Proportion literate | $98.9 \%$ | $97.0 \%$ | $98.3 \%$ | $98.3 \%$ | $97.9 \%$ |
| Total | Proportion literate | $77.2 \%$ | $81.5 \%$ | $90.6 \%$ | $80.7 \%$ | $78.4 \%$ |
| Race | Literacy status | Mpumalanga | North West | Northern Cape | Western Cape | South Africa |
| Black | Proportion literate | $77.7 \%$ | $75.9 \%$ | $74.9 \%$ | $89.3 \%$ | $80.9 \%$ |
| Coloured | Proportion literate | $88.0 \%$ | $83.6 \%$ | $75.4 \%$ | $85.7 \%$ | $85.8 \%$ |
| Indian/Asian | Proportion literate | $93.7 \%$ | $92.3 \%$ | $89.3 \%$ | $95.4 \%$ | $92.8 \%$ |
| White | Proportion literate | $98.2 \%$ | $98.3 \%$ | $98.3 \%$ | $99.0 \%$ | $98.4 \%$ |
| Total | Proportion literate | $79.5 \%$ | $78.0 \%$ | $77.4 \%$ | $89.3 \%$ | $83.3 \%$ |

Source: IHS Global Insight Southern Africa, Regional eXplorer version 1160
a According to Global Insight, the table above reflects the functional literacy rate of those aged 15 and above - which measures the number of people in a region who have completed their primary education (grade 7), and are thus deemed functionally literate. If someone is functionally literate, they are assumed to have reading and writing skills, enabling them to manage daily life and employment.

## Education

## Matric results

| National Senior Certificate examination results (new curriculum), 2008-18 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | —Highe | rtificate sion ${ }^{\text {b }}$ |
| Year | Candidates | Number | Proportion | Number | Proportion |
| 2008 | 533561 | 334744 | 63\% | 107274 | 20\% |
| 2009 | 552073 | 334718 | 61\% | 109697 | 20\% |
| 2010 | 537543 | 364513 | 68\% | 126371 | 24\% |
| 2011 | 496090 | 348114 | 70\% | 120767 | 24\% |
| 2012 | 511152 | 377829 | 74\% | 136047 | 27\% |
| 2013 | 562112 | 439779 | 78\% | 171755 | 31\% |
| 2014 | 532860 | 403874 | 76\% | 150752 | 28\% |
| 2015 | 644536 | 455825 | 71\% | 166263 | 26\% |
| 2016 | 610178 | 442672 | 73\% | 162374 | 27\% |
| 2017 | 534484 | 401307 | 75\% | 153610 | 29\% |
| 2018 | 512735 | 400632 | 78\% | 172043 | 34\% |
| 2008-18 | -3.9\% | 19.7\% | 25\% | 60.4\% | 67\% |

Source: DBE, Report on the National Senior Certificate Examination Results, 2009, January 2010, p39; National Senior Certificate Examination Report 2018, 3 January 2019, Table 7.2.2, p48
a In order to be granted an NSC, a pupil needs to achieve $40 \%$ in three subjects, one of which must In order to be granted an NSC, a pupil needs to achieve 40\% in three subjects, one of which must be their home language, and achieve 30\% in three additional subjects. Pass figures include higher certificate, diploma and bachelor's passes.
b This allows a person to study for a higher certificate. The minimum admission requirement is an NSC with a minimum of $30 \%$ in the language of learning and teaching.
c This allows a person to study for a diploma. The minimum requirement is an NSC with a minimum of $30 \%$ in the language of learning and teaching and $40 \%$ or more in four other subjects.
d Or university entrance pass, which allows a person to study for a bachelor's degree. The minimum requirement is an NSC with a minimum of $30 \%$ in the language of learning and teaching and $50 \%$ or more in four or more 20-credit subjects.

| Independent Examinations Board ${ }^{\text {a }}$ Senior Certificate |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| examination results, 2008-18 |  |  |  |  |  |  |
|  | Number of | Number of |  |  | - Bach | s pass ${ }^{\text {b }}$ |
| Year | schools | candidates | Number | Proportion ${ }^{\text {c }}$ | Number | Proportion ${ }^{\text {d }}$ |
| 2008 | 159 | 8001 | 7763 | 97\% | 6169 | 79\% |
| 2009 | 168 | 8056 | 7848 | 97\% | 6410 | 80\% |
| 2010 | 172 | 8209 | 8076 | 98\% | 6693 | 82\% |
| 2011 | 173 | 8434 | 8281 | 98\% | 6763 | 82\% |
| 2012 | 177 | 8957 | 8796 | 98\% | 7488 | 84\% |
| 2013 | 181 | 9580 | 9443 | 99\% | 8150 | 85\% |
| 2014 | 191 | 9976 | 9814 | 98\% | 8524 | 85\% |
| 2015 | 194 | 10212 | 10038 | 98\% | 8707 | 85\% |
| 2016 | 237 | 11021 | 10871 | 99\% | 9654 | 88\% |
| 2017 | 212 | 11464 | 11322 | 99\% | 10146 | 89\% |
| 2018 | 249 | 11514 | 11390 | 99\% | 10437 | 91\% |
| 2008-18 | 56.6\% | 43.9\% | 46.7\% | 2\% | 69.2\% | 15\% |

Source: Independent Examinations Board (IEB), email communication, 23 November 2018; Politicsweb ( $90.65 \%$ candidates receive degree passes - IEB), 3 January 2019
a The IEB is the examining body of independent (or private) schools, although only a small minority of independent schools write IEB exams.
b Bachelor's passes are officially known as passes with matriculation endorsement, or endorsements, and were formerly known as passes with matriculation exemption, or exemptions. Students who obtained university entrance passes achieved marks high enough to gain entry to university.
c Proportion of total candidates passing grade 12.
d The proportion of pupils who gained passes enabling them to study at university for bachelor's degrees.

## Education

## Throughput

| The grade 1 class of 2007 |  |  |
| :--- | :---: | :---: |
| Class progress | Number | Proportion |
| Grade 1 in 2007 | 1171323 | $100.0 \%$ |
| Grade 10 in 2016 | 1104749 | $94.3 \%$ |
| Grade 11 in 2017 | 892784 | $76.2 \%$ |
| Grade 12 in 2018 | 643802 | $55.0 \%$ |
| NSC candidates who wrote in 2018 | 512735 | $43.8 \%$ |
| NSC passes in 2018 | 400632 | $34.2 \%$ |
| Bachelor's passes in 2018 | 172043 | $14.7 \%$ |

Source: DBE, Education Statistics in South Africa at a Glance in 2007, January 2009, Table 5, p9; School Realities 2016, September 2016, Table 4, p3; School Realities 2017, March 2018, Table 4, p3; School Realities 2018, March 2019, Table 4, p3; National Senior Certificate Examination Report 2018, 3 January 2019, Table 10.2.2, p51

This table indicates the very low throughput of people who enter Grade One. The culling of learners becomes pronounced after Grade Ten, and barely one-in-ten of 2007's Grade One class managed to gain a bachelor's pass in matric, in 2018. The large-scale culling of learners would not inherently be a problem if people who struggled academically were placed into artisanl streams but this unlikely. Far more likely is that people who leave in Grade Ten do not enter another educational establishment. Given South Africa's very high unemployment rate it is also very unlikely that such people manage to find employment.


## Education

| The grade 12 class of 2018 |  |  |
| :--- | :---: | :---: |
| Achievement | Number | Proportion $^{\mathrm{a}}$ |
| Higher Certificate admission | 86790 | $16.9 \%$ |
| Diploma admission | 141700 | $27.6 \%$ |
| Bachelor's admission | 172043 | $33.6 \%$ |
| NSC $^{\text {b/Endorsed Certificate }}{ }^{\text {c }}$ | 228 | $0.0 \%$ |
| Passed $^{\text {Failed }}$ | 400761 | $78.2 \%$ |
| Total $^{\text {d }}$ | $\mathbf{1 1 1 9 7 4}$ | $21.8 \%$ |

Source: DBE, National Senior Certificate Examination Report 2018, 3 January 2018, Table 7.2.2, p48 a IRR calculations.
b Refers to the 68 candidates who passed but did not satisfy the minimum requirements for admission to university to study for a higher certificate, diploma, or bachelor's degree.
c The remaining 125 candidates qualified for the Endorsed Certificate - this is for candidates who cannot, despite concessions granted, meet the stipulated NSC requirements (endorsed NSC candidates only need to offer five subjects, with a minimum pass of $30 \%$ in those five subjects).
d Full-time candidates only.

| Throughput ${ }^{\text {a }}$, 1995-97 and 2016-18 |  |  |  |
| :---: | :---: | :---: | :---: |
| The grade $10^{\text {b }}$ class of 199 | mbers) | The grade $10^{\text {b }}$ class of 2016 (numbers) |  |
| Grade 10 enrolment 1995 | 719190 | Grade 10 enrolment 2015 | 1104749 |
| Matric candidates 1997 | 559233 | Matric candidates 2017 | 512735 |
| Matric passes 1997 | 264795 | Matric passes 2017 | 401435 |
| Bachelor's passes 1997 | 70127 | Bachelor's passes 2017 | 153610 |
| Maths passes 1997 | 116836 | Maths passes 2017 | 135638 |
| The grade $10^{\text {b }}$ class of 199 | portions) ${ }^{\text {c }}$ | The grade $10^{\text {b }}$ class of 2016 (proportions) ${ }^{\text {c }}$ |  |
| Grade 10 enrolment 1995 | 100.0\% | Grade 10 enrolment 2015 | 100.0\% |
| Matric candidates 1997 | 77.8\% | Matric candidates 2017 | 46.4\% |
| Matric passes 1997 | 36.8\% | Matric passes 2017 | 36.3\% |
| Bachelor's passes 1997 | 9.8\% | Bachelor's passes 2017 | 13.9\% |
| Maths passes 1997 | 16.2\% | Maths passes 2017 | 12.3\% |

Source: South Africa Survey 2002/2003, pp247, 255; South Africa Survey 2001/2002, p260; DBE, School Realities 2016, September 2016, Table 4, p3; National Senior Certificate Examination Report 2018, 3 January 2019, Table 7.2.2, pp47-48; Table 7.3.6, p59
a The table compares the throughput of the grade 10 cohorts of 1995 and 2014, showing pupils registered in each cohort who went on to become matric candidates and how many obtained matric, bachelor's, and maths passes. For example, 719190 grade 10s were enrolled in 1995. Of those, 559233 became matric candidates in 1997. Some 264795 passed matric, with 70127 obtaining bachelor's passes, and 116836 passing maths. In 2014, there were 1139872 grade 10s and 610 178 went on to become matric or NSC candidates in 2016.
b The minimum duration of an NSC or matric is three years, from grade 10 to 12.
c IRR calculations.

## Education

## Independent schools

| Independent schools ${ }^{\text {a }}$ by province, 2000 and 2018 |  |  |  |
| :--- | :---: | :---: | :---: |
| Province | 2000 | 2018 | Change |
| Eastern Cape | 39 | 199 | $410.3 \%$ |
| Free State | 61 | 70 | $14.8 \%$ |
| Gauteng | 365 | 759 | $107.9 \%$ |
| KwaZulu-Natal | 198 | 189 | $-4.5 \%$ |
| Limpopo | 60 | 163 | $171.7 \%$ |
| Mpumalanga | 62 | 112 | $80.6 \%$ |
| North West | 36 | 69 | $91.7 \%$ |
| Northern Cape | 24 | 37 | $54.2 \%$ |
| Western Cape | 126 | $\mathbf{1 8 6 5}$ | $111.9 \%$ |
| South Africa | 971 | $92.1 \%$ |  |

Source: DBE, Education Statistics in South Africa at a Glance, 2000, p1; School Realities 2018, March 2019, Table 2, p1
a Independent or private schools are owned by individuals or organisations and are established in line with section 29(3) of the Constitution and section 45 of the South African Schools Act of 1996. Section 46 of the Act states that an independent school must not have standards inferior to those of comparable public schools, its admission policy must not discriminate on grounds of race, and it must comply with the grounds for registration of the provincial education department it is registered under.

The growth of independent schools is an indication of how parents have lost faith in the public system. Between 2000 and 2018 the number of indendent schools almost doubled. It is clear that parents are increasingly looking for alternatives outside of the public system.


## Education

| Public and independent school results, 1994-2017 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | - P | hools | - Inde | t schools |
| Year | Pass | Bachelor's pass | Pass | Bachelor's pass |
| 1994 | 58\% | 18\% | 94\% | 70\% |
| 1995 | 53\% | 15\% | 95\% | 70\% |
| 1996 | 54\% | 15\% | 97\% | 72\% |
| 1997 | 47\% | 13\% | 97\% | 71\% |
| 1998 | 49\% | 13\% | 99\% | 76\% |
| 1999 | 49\% | 12\% | 99\% | 74\% |
| 2000 | 58\% | 14\% | 99\% | 76\% |
| 2001 | 62\% | 15\% | 99\% | 78\% |
| 2002 | 69\% | 17\% | 99\% | 76\% |
| 2003 | 73\% | 19\% | 98\% | 78\% |
| 2004 | 71\% | 18\% | 99\% | 80\% |
| 2005 | 68\% | 17\% | 98\% | 78\% |
| 2006 | 66\% | 16\% | 98\% | 76\% |
| 2007 | 65\% | 15\% | 99\% | 79\% |
| 2008 | 63\% | 20\% | 97\% | 79\% |
| 2009 | 61\% | 20\% | 97\% | 80\% |
| 2010 | 68\% | 24\% | 98\% | 82\% |
| 2011 | 70\% | 24\% | 98\% | 82\% |
| 2012 | 74\% | 27\% | 98\% | 84\% |
| 2013 | 78\% | 31\% | 99\% | 85\% |
| 2014 | 76\% | 28\% | 98\% | 85\% |
| 2015 | 71\% | 26\% | 98\% | 85\% |
| 2016 | 73\% | 27\% | 99\% | 88\% |
| 2017 | 75\% | 29\% | 99\% | 89\% |

Source: DBE, email communication, 20 June 2013; National Senior Certificate Examination: 2015 Technical Report, January 2016, Table 13.1.4, p4; IEB, email communication, 23 November 2018


## Education

## Higher education

| Higher education participation rates ${ }^{\text {a b }}$ by race, 2002 and 2016 |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{array}{r} -20-24 \\ \text { in the } \end{array}$ | olds ntry |  | rolled in cation | -Parti | rate |
| Race | 2002 | 2016 | 2002 | 2016 | 2002 | 2016 |
| Black | 3594000 | 4479344 | 399915 | 701474 | 11.1\% | 15.7\% |
| Coloured | 358000 | 425581 | 38329 | 61960 | 10.7\% | 14.6\% |
| Indian/Asian | 96000 | 107110 | 47706 | 50450 | 49.7\% | 47.1\% |
| White | 283000 | 303254 | 179380 | 152487 | 63.4\% | 50.3\% |
| Total ${ }^{\text {b }}$ | 4333000 | 5315289 | 667182 | 975837 | 15.4\% | 18.4\% |

Source: Stats SA, General Household Survey 2002, 15 December 2003, p2; Census 2011: Census in Brief, 30 October 2012; Mid-year population estimates 2016, Statistical release P0302, 25 August 2016, Table 10, p9; DHET, www.dhet. gov.za, Table 2.12 for all institutions to 2nd order CESM (Enrolment, 2002 and 2016), accessed 22 November 2018
a The proportion of people aged between 20 and 24 who are enrolled in public universities.
b Includes unspecified population groups.
One of the successes of post-apartheid South Africa has been the increase in the number of people involved in tertiary education. There may be questions around quality but this is something that we can consider a success of the post-1994 era. For a country at South Africa's stage of development we have a well-developed unviversity sector which must be harnessed for the country to reach its potential.

| Undergraduate degrees, diplomas and certificates awarded by all universities $^{\text {a }}$ by field of study, 1996 and $2016{ }^{\text {bc }}$ |  |  |  |
| :---: | :---: | :---: | :---: |
| Field of study | 1996 | 2016 | Change |
| Agriculture and related sciences | 1215 | 3636 | 199.3\% |
| Architecture and environmental design | 1322 | 2564 | 93.9\% |
| Business, commerce and management | 13913 | 42610 | 206.3\% |
| Communication, journalism and related studies | 768 | 3208 | 317.7\% |
| Computer and information sciences | 1697 | 5373 | 216.6\% |
| Education | 19005 | 27810 | 46.3\% |
| Engineering | 5110 | 12386 | 142.4\% |
| Family ecology and consumer sciences | 728 | 739 | 1.5\% |
| Health professions and clinical sciences | 6772 | 9588 | 41.6\% |
| Language, linguistics and literature | 5722 | 2384 | -58.3\% |
| Law | 5097 | 7105 | 39.4\% |
| Life and physical sciences | 3577 | 5550 | 55.2\% |
| Mathematics and statistics | 1010 | 673 | -33.4\% |
| Philosophy, religion and theology | 1681 | 3780 | 124.9\% |
| Psychology | 4020 | 4061 | 1.0\% |
| Public management and services | 5896 | 6596 | 11.9\% |
| Social sciences | 6467 | 8086 | 25.0\% |
| Visual and performing arts | 1290 | 2667 | 106.7\% |
| Total | 85989 | 148773 | 73.0\% |

Source: DHET, www.dhet.gov.za, Table 2.13 for all institutions to 2nd order CESM (Graduates, 1996 and 2016), accessed 22 March 2018
a Includes universities of technology.
b Undergraduate awards.
c In 2008 the Higher Education Management Information System (HEMIS) revised the South African Classification of Education Subject Matter (CESM), reducing the number of subject matter categories from 22 to 20. These revisions were implemented in the 2010 HEMIS database. As a result, the 1996 and 2006 figures have been adjusted to reflect the new subject categories.

