IN THE MEDIA | 30 JANUARY 2025

Reality check – the real story behind the matric results

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South Africans take the annual soaring matric pass rate with a pinch of salt, but the true state of education is even more worrying than most imagine. The rising matric pass rate highlights a deep, systemic problem – the fact that neither universities nor the job market can absorb more than a fraction of new matriculants.

> *"The international evidence on growth suggests that the quality of schooling matters more than the quantity of schooling, and maths and science passes matter the most" - Roy Havemann*

The steep rise in the matric pass rate to a record high of 87.3% in 2024 has been hailed by the Department of Basic Education (DBE) as evidence of a "system on the rise" and as proof that schooling in South Africa "is at its healthiest ever".

This rose-tinted view needs to be punctured. For though there *is* evidence of improvement – more learners are passing Maths than ever before and the inequality gap between rich and poor schools is closing – the big picture remains depressing.

The problem is that while there is a rising tide of matrics equipped with Bachelor passes they are not being sufficiently absorbed into the post-school education and training system or the labour market. And many of those who do make it onto university campuses are dropping out and taking longer to graduate because their schooling has left them insufficiently prepared.

The upshot is that universities are not meeting their graduate targets in engineering and other scientific fields. This has worrying implications for the economy.

It helps to break the problem down. For starters, the proportion of matrics qualifying for university (the Bachelor pass rate) has almost doubled in a decade, from 25.8% of matrics in 2015 to 47.8% in 2024 – the highest level ever. This represents an increase from around 166 000 to 337 000 learners. A rising portion are from poorer no-fee schools (44.6% in 2024 up from 37% in 2023).

While the government is celebrating the soaring Bachelor pass rate, and the fact that the Maths pass rate (with an exam pass mark of 30% of more) has jumped from 55% in 2022 to

63.5% in 2023, and hit 69.1% last year, an improvement is what one would expect given that the proportion of matric candidates taking Maths has been falling as weaker learners opt for the easier subject of Maths Literacy. This leaves a stronger cohort behind.

Maths enrolments dropped from 43% of those who wrote matric in 2019 to 36% in 2024. At the same time, the difference between those who wrote the easier subject of Maths Literacy over Maths widened from about 77 000 learners in 2019 to 160 000 in 2023 and then climbed even further to 191 253 in 2024.

In 2024, Maths enrolments were down 12 338 year on year. Nearly all the other gateway subjects are also down: Life Science (-5,853), Physical Science (-6,962), Economics (-3,032) and Accounting (-3,734). On the other hand, Maths Literacy enrolments rose by 19 504 compared to 2023.

The BER's analysis shows that in 2022, just 20% of the entire matric cohort passed Maths (with a pass mark of 30% or above), which was no better than in 2009, more than a decade earlier.

In 2023, and again in 2024, about 24% of those who wrote matric passed Maths – a notable improvement but off an admittedly low base. (The progress in Physical Science has been less linear and more deeply impacted by the pandemic. Last year, just 21.5% of those who wrote matric passed the subject compared to almost 25% in 2018.)

What a travesty that despite the focus on promoting STEM (science, technology, engineering and mathematics) subjects over the past decade to try to address the country's skills shortage in related fields, South Africa has not been able to channel more than roughly one in five matrics towards passing Physical Science, or one in four to passing Maths.

At the more exacting 60% Maths pass mark (the minimum standard required to cope with tertiary study in engineering, accountancy, computer science and commerce at top universities), the numbers remain woefully small, though they are also edging up incrementally.

In 2022, 12.5% of those who wrote Maths got a pass mark of 60% or more – 4.6% of those who wrote matric in that year. In 2023, this rose to 15.7% of those who wrote Maths and 5.9% of those who wrote matric. In 2024, it inched up further - to 17.7% and 6.3% respectively.

Given annual changes in the size of the matric cohort, it means that despite declines in the proportion of matrics taking Maths the numbers of matrics passing Maths with 60% has risen from 33 874 learners in 2022 to 44 636 last year. While it is appalling that only 6% of matrics achieved high-level Maths passes, at least we're on a clear upward trajectory.

Two main problems remain, however. The first is that the reason for the significant improvement in matric results, especially the leap between 2023 and 2024 from 82.9% to 87.3%, is not clear. The second is that it is still insufficient - the school system just isn't producing enough matrics with high-level Maths and Physical Science passes to meet the available places at universities.

“The international evidence on growth suggests that the quality of schooling matters more than the quantity of schooling, and maths and science passes matter the most,” says Roy Havemann, a growth researcher at the Bureau for Economic Research (BER). “It is, therefore, vital that South Africa’s growth strategy includes raising the quality of education.”

According to the 2022 Department of Higher Education and Training (DHET) report, “Skills Supply and Demand in SA”, the annual intake of universities is typically less than half the number of Bachelor passes. Moreover, around two-thirds of first-year university students are subject to admission requirements that include minimum marks, especially in Maths and Physical Science.

At these minimum benchmarks the school system undersupplies what is needed. The report concedes that some universities are thus forced to relax their Maths and Physical Science requirements to reach their enrolment targets (see Box 1).

Box 1: Harsh trade-offs

Some of the weaker universities are being forced to relax their minimum Maths and Physical Science entry requirements to reach their enrolment targets given that the school system is not producing enough high-level matric passes in these subjects.

A stronger university, like Stellenbosch University, which is heavily oversubscribed relative to its enrolment cap, as set by the Department of Higher Education and Training (DHET), has effectively raised its 2025 Maths selection requirement to about 65% for most BCom degrees. This is not because of low confidence in the academic quality of matriculants, says the Chief Operating Officer, Prof Stan du Plessis, but as “an instrument of enrolment planning”.

In other words, if the university enrolled every applicant who scored 60% and above for Maths it would exceed its enrolment cap and be penalised financially. The tragedy is that the university has the capacity to take more students scoring between 60%-65% for Maths but the DHET’s subsidies would not extend to cover them. The immediate cause of problem is the enrolment cap, but the deeper problem is both fiscal and managerial.

“On an international comparison we are well funded,” says Prof du Plessis. “The allocation of the funding is, however, poor and rewards inefficiency. The financial planning around the subsidy is also poor and causes significant instability. At the same time, more than half of the DHET budget is spent very poorly on NSFAS. So, we have real problems, but they can all be addressed with proper management by the DHET and the universities.”

The upshot is predictable – the university system is failing to meet DHET’s graduation targets in engineering and the sciences. This is extremely bad news for an economy that suffers from a dire shortage of engineers, scientists, actuaries, accountants and STEM teachers. These skills are critical for sustaining key industries and shoring up the country’s waning international competitiveness.

According to DHET’s latest annual report, the number of engineering graduates undershot the department’s 2023/2024 target by 17.5% (by 2,541 students). In the Natural and

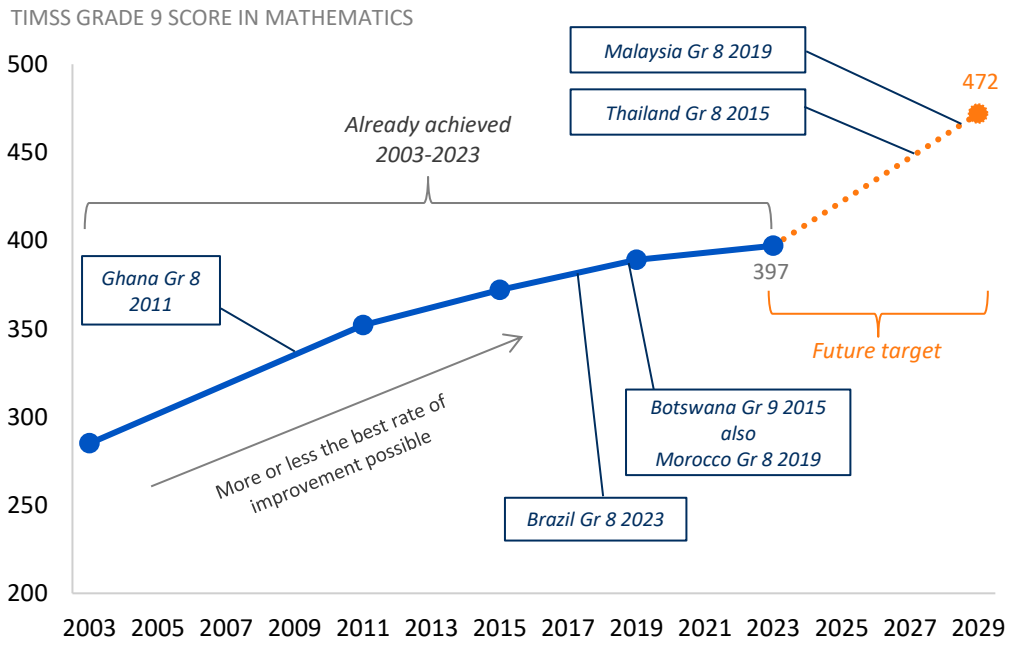
Physical Sciences, the undershoot was 16% (by 1,814 students), with 15 of the country's 26 universities reporting shortfalls of more than 20%.

The DHET pulls no punches in blaming the DBE for this sad state of affairs, claiming that the targets are being missed due to "academically unprepared" students coming up from the school system. In engineering, it says, this caused a high drop-out rate while those students who remained at universities took longer to graduate.

This narrative is completely at odds with the DBE's assessment of the "significant improvement" in learners' Maths performance (and to a lesser extent in Physical Science) in recent years.

South African's Grade 9 Maths and Physical Science scores in the Trends in International Mathematics and Science Study (TIMSS) do indeed show a fast rise from 2011 to 2019 (see Figure 1).

Figure 1: Significant improvement[1]



Source: Department of Basic Education, 2024 NSC Exam Report

These improvements, says the DBE in its 2024 Examination Report, are "indicative of improvements in learning and teaching across the curriculum", given the interconnectedness of subjects.

According to the DBE, the TIMSS results suggest that the skills of learners "have moved up in a linear fashion" and that the upward trend in the matric results is largely because of improvements in the grades below 12 occurring in previous years.

[1] SA's target is for Grade 9s to average 472 TIMSS points for Maths in 2029. This would put us at the same level that Malaysian Grade 8s reached in 2019, a decade earlier.

Prior to 2019, the DBE ascribed these quality gains to better curriculum documents and training; more focused assessment practices; improved subject knowledge among newly graduated teachers; and more children having access to quality textbooks and pre-schooling. The jury is still out on most of these points.

Basic education director-general Hubert Mathanzima Mweli says the 4.4 percentage point spike in the matric pass rate between 2023 and 2024 was due to an “extraordinary and unprecedented” increase in both the intensity and duration of learner support programmes.

But education researchers are having a hard time buying these explanations.

“While there has been a dramatic improvement in the stability of secondary schools, which goes a long way to explaining the consistent improvement over the last decade, no programme I’m aware of explains the large gain in 2024,” says Wits University Professor of Education Policy Brahm Fleisch, “It is unlikely that the school system could’ve improved so much so quickly.”

He suspects that teachers are getting better at “gaming the system” - a suspicion shared by Prof Servaas van der Berg, the head of the Research on Socio-Economic Policy (Resep) unit in the Department of Economics at Stellenbosch University.

Van der Berg is reluctant to take the matric results at face value given ongoing complaints from universities about the lack of preparedness and knowledge of new entrants. In addition, he points out that when the 2024 matric cohort was in Grade 9 (in 2021), systemic testing put them six months behind previous Grade 9 cohorts because of the impact of the pandemic on their schooling.

“All of this is quite worrying,” he says. “I suspect that teachers are increasingly teaching to the test by, for instance, cutting parts of the Grade 11 syllabus to focus on the Grade 12 syllabus earlier.”

Gabrielle Wills, a senior Resep researcher, also doubts that the spike in the 2024 matric results is because learners have suddenly had better access to support programmes. Her work with PhD student Rebecca Selkirk in the recent Resep research compilation, “School completion, the matric and post-school transitions in South Africa”, shows that the improvement in high-level Maths and Physical Science results between 2019-2023 cannot be explained by compositional changes in factors such as age, gender, subject choice or school quintile.

“However, we can’t rule out that educational progress among the learners who moved into matric last year is behind the strong 2024 matric results,” Wills concedes. In other words, it is possible that educational progress pre-pandemic, as reflected in South Africa’s improved performance in international tests of mathematics and literacy, may account for some of these gains.

Whatever the cause, the real issue is that the matric and Bachelor pass rate is rising in the absence of economic growth. This means that thousands of matriculants are washing up on the shores of a post-school education and training (PSET) system and a job market that cannot absorb them.

Wills calls the situation “South Africa’s Neet crisis”, noting that the proportion of recent matriculants (aged 15-24) classified by Stats SA as "Not in Employment, Education, or Training" (Neet) has risen from pre-pandemic levels of around 45% to almost 50% at the start of 2024.

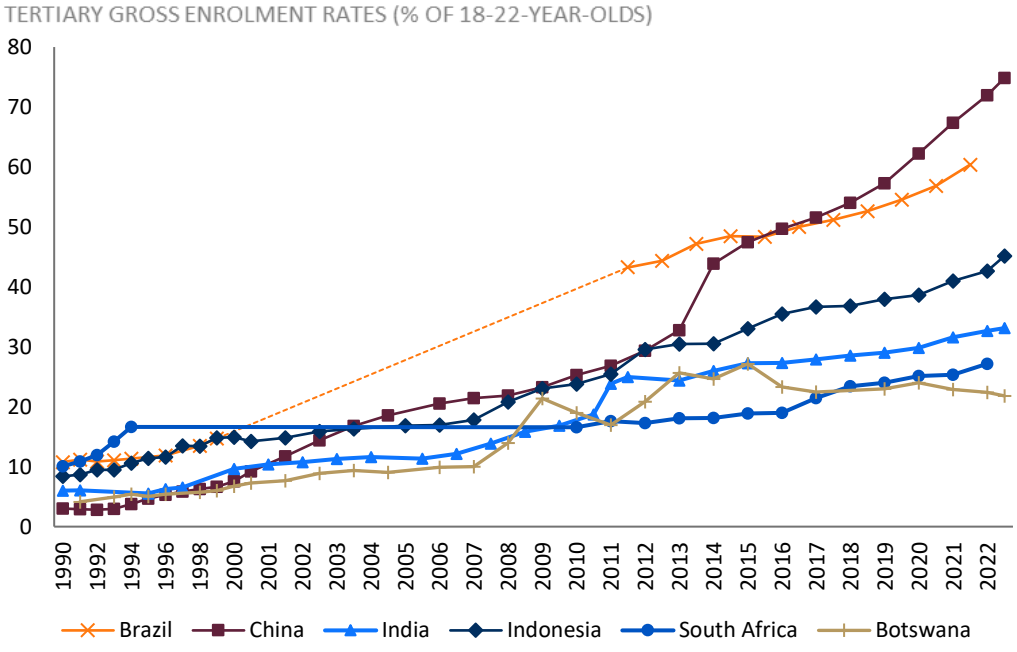
This is partly because jobs for young, unskilled people are so hard to find. Her research shows that while four of every 10 economically active recent matriculants between 2014 and 2018 were employed, by the start of 2024 closer to three of every 10 were employed. In fact, the likelihood of a recent matriculant finding a job is about the same as someone who didn’t have a matric eight to 10 years ago.

From 1995 to 2015, the PSET system - mainly public universities (54%), public technical and vocational education and training colleges (25%), and private universities (12%) - played a strong role in absorbing the youth and keeping them out of the Neet category. But since 2025, that positive enrolment trend has faltered, explains researcher and educational consultant John Kruger.

He estimates that since 2015, enrolment growth in the PSET sector has fallen from 2.23 million students to 2.04 million. This is mainly because enrolments at technical and community colleges have nosedived while public universities have grown enrolments more slowly, well below government’s targets.

So, after being broadly in line with comparator countries’ enrolment rates in the 1990s, South Africa now significantly lags other upper-middle-income countries. In 2021, South Africa’s tertiary gross enrolment rate was just 25.4% compared to 31.6% in India, 41.0% in Indonesia, 56.8% in Brazil and about 67.4% in China. In the innovation and knowledge-driven economies, like the US and Finland, the rate is over 70%.

Figure 2: Lagging the pack



Source: Resep; data from UNESCO Institute for Statistics (UIS) via World Bank Open Data (April 2024)

This is extremely worrying from an economic competitiveness perspective. But it's not as if the higher education sector is underfunded. SA spends $12 497 per student per annum, equivalent to Italy and South Korea but below the OECD average of $18 000. However, at almost 1.5% of GDP, South Africa spends proportionately more on higher education than the OECD average, which is closer to 1%.

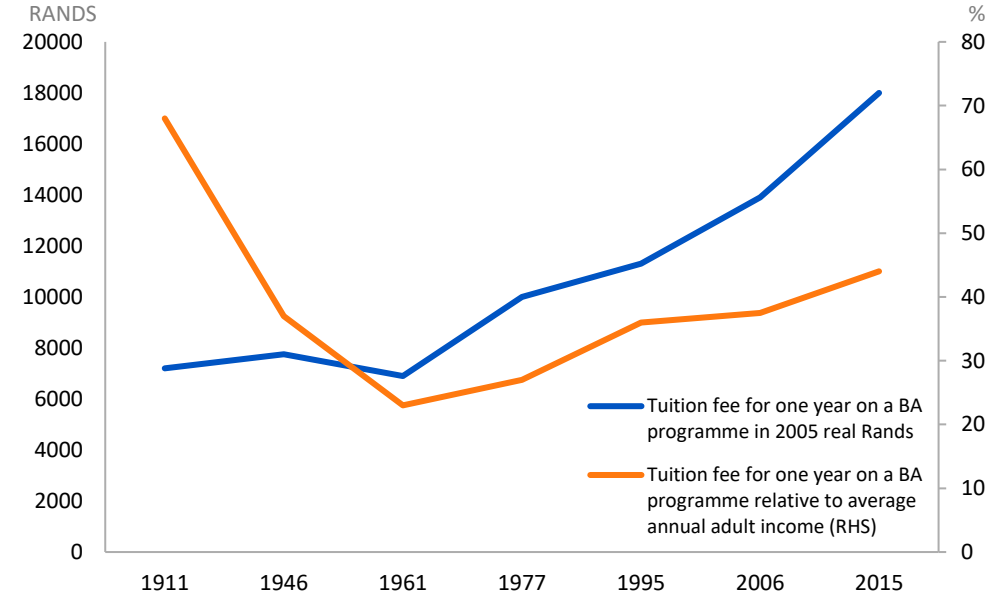
Between 2015/2016 and 2022/2023, South Africa's real spending on PSET grew rapidly (by about 62%), allowing it to increase its share of total education spending from 22% to 30%. However, Kruger notes that the additional spending went mainly to fund student living and study costs and did not enable significant growth in enrolments or quality in the sector.

The shift within government's higher education budget has been stark. In 2017/2018, it allocated R15,4bn to the National Student Financial Aid Scheme (NSFAS) and R31bn to university subsidies. By 2023/2024 NSFAS's budget had swollen more than three-fold to R50.1bn, exceeding the R44.5bn allocated to universities in that year.

So more than half of the DHET's budget goes towards the grossly mismanaged NSFAS at a time when the Bachelor pass rate is exploding, and slow economic growth and mounting debt has forced the National Treasury to cut real spending on PSET.

Caught between declining government subsidies per student, caps on student enrolments, and sharply rising input costs, the university sector has responded by raising its fees. The government responded in 2023 by placing a cap on university's residence fees and has initiated a process to regulate tuition fees as well, even though this would further weaken universities financially.

Figure 3: Affordability gap



Source: Professor Stan du Plessis, COO Stellenbosch University, own calculations

If the National Treasury sticks to its fiscal consolidation plan, higher education's budget is set to decline in real terms over the next three years. This will further limit the sector's ability to absorb the rising numbers of matriculants bubbling up from below.

Clearly, the situation is not sustainable. Something has to give.

Granted, there is much that could be improved by better collaboration, management and planning by DHET, NSFAS and the universities but what is really needed is a massive drive for cost-efficiency by the universities combined with the complete redesign of the unsustainable fee-free model.

Greater improvement in matriculants' university readiness in Maths and Physical Science is also required, and the output of the education system should be better aligned with the needs of the job market.

But smarter policies and better management can take the sector only so far. Above all, what is needed is faster economic growth. Without faster growth that permits some fiscal relaxation, it is hard to see how South Africa will either expand PSET enrolments or dent youth unemployment. But, of course, South Africa's weak education system is itself a cap on the country's growth potential.

There is little doubt that improving the education system is fundamental to faster growth and job creation; that without a quantum improvement in the quality of school passes, especially in subjects like Maths, South Africa will be unable to fuel a modern, fast-growing economy.

Fixing education has never been more imperative.

- *This article first appeared in the Financial Mail of 30 Jan- 5 Feb, 2025*

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Please refer to the glossary on the **BER website** for explanations of technical terms.

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