

COMMENT | 3 FEBRUARY 2024

Education and growth – some ideas on how to improve results

Peter Courtney | p.sr.courtney@gmail.com

South Africa's rising matric pass rate conceals a more urgent challenge: sustaining an education system that can finance itself in an era of national fiscal consolidation. This comment proposes identifying exceptionally bright primary school learners for financial prioritisation to enable them to attend the best public high schools in the country. Such an approach would produce graduates who can enter and complete tertiary education—particularly in STEM subjects—and ultimately strengthen lifetime earnings and future tax contributions. A self-sustaining education system requires that public investment in basic education generates positive returns through increased productivity and corresponding revenue, which in turn supports the constitutional imperative of equitable education for all. Simply expanding the pool of matriculants will not, on its own, guarantee long-term sector sustainability; targeting those most likely to excel addresses both the economic imperatives and the constitutional mandate of the sector.

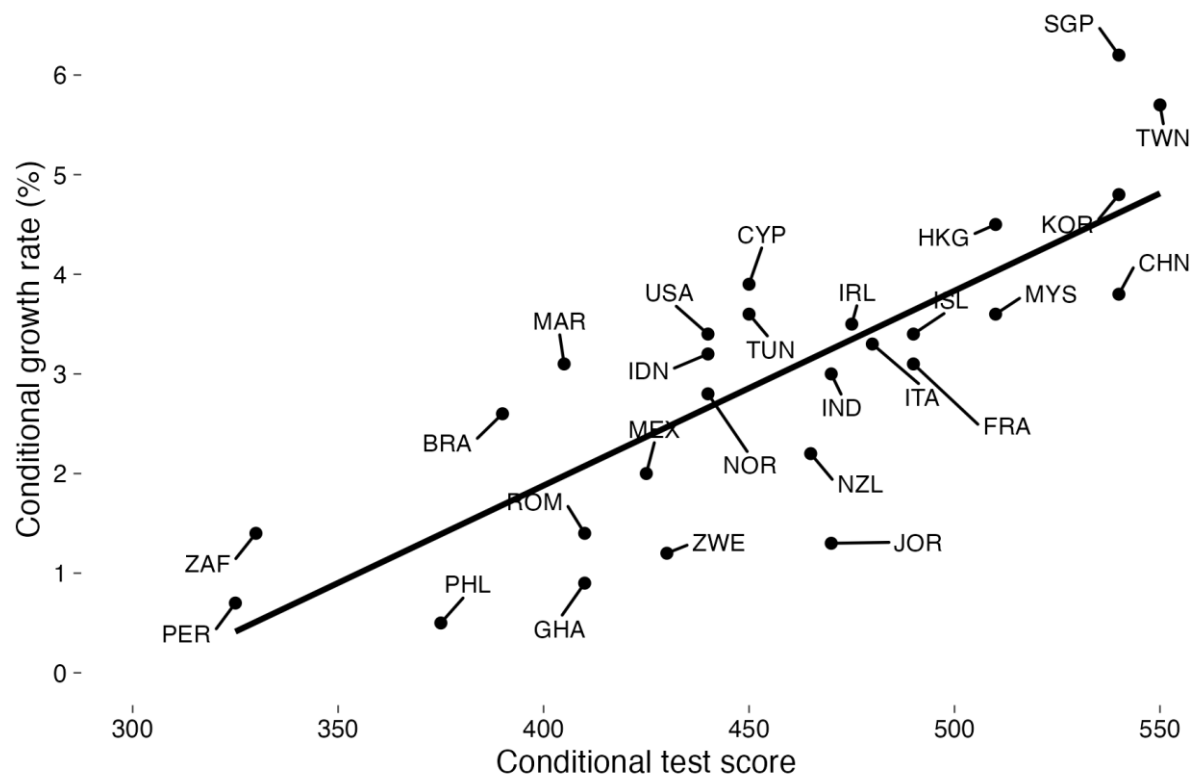
EDUCATION AND ECONOMIC GROWTH

There is an established link between the quality of education and economic growth.

Cross-country evidence shows that the relationship between total years of schooling and economic growth is weak. In contrast, there is a strong positive relationship between test scores and growth (Hanushek and Woessmann, 2021).

Consequently, evaluating the education system's effectiveness should rely less on the headline count of matriculants and more on the number of learners adequately prepared for higher education. With 20.4% of black learners completing three-year degrees within the allocated time (Department of Higher Education, 2023, pg. 65), it is evident that even among the small group who manage to enter university, many are inadequately prepared for higher studies.

Figure 1 There is a correlation between test scores and growth



THE PROGRAMME

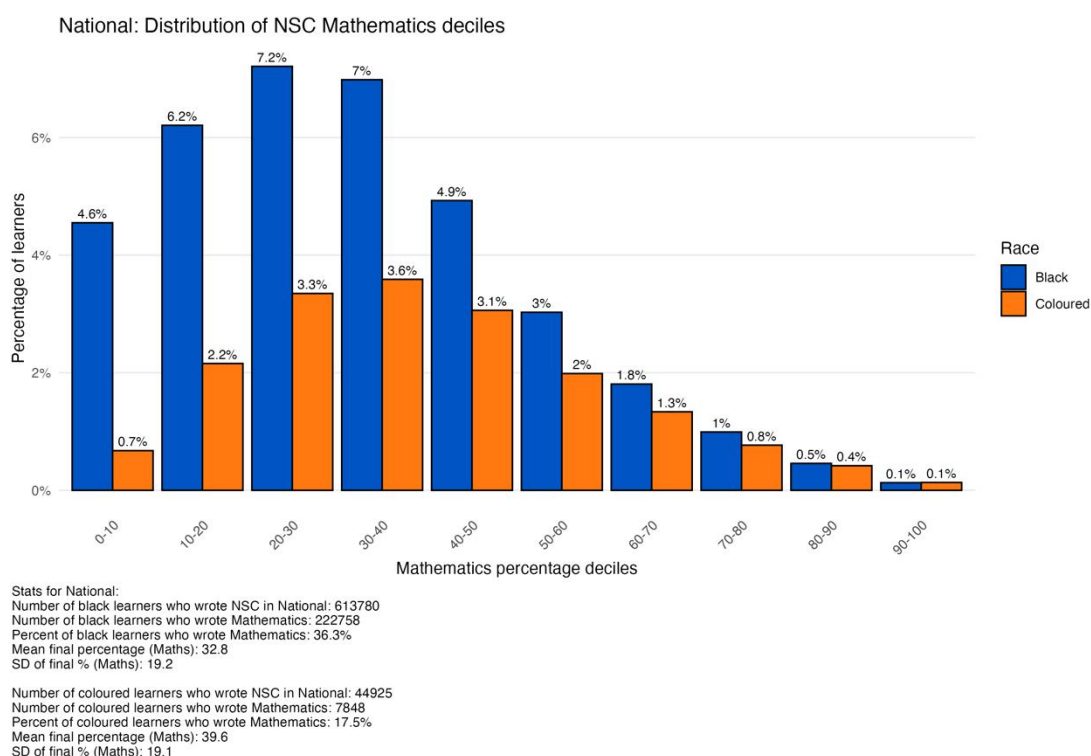
This programme would follow the successes of international examples such as magnet schools in the United States or selective schools (trường chuyên) in Vietnam. The earmarked funds would come with a requirement for schools to expand enrolment to prevent zero-sum allocation. Although concerns about equity remain, this initiative would target talented learners from historically disadvantaged backgrounds and no-fee schools, striving to reconcile economic sustainability and social inclusion. While South Africa's education system has recorded substantial average improvements, only 0.6% of black learners (3606) and 0.5% of coloured learners (248) achieved above 80% in NSC Mathematics in 2023, (see Figure 2). This policy could ensure that high-achieving learners obtain the support they need to deliver the long-term financial returns essential to sustaining and improving the education system for future generations.

Bringing academically talented pupils to the best schools need not be unfeasible. In the Western Cape there are likely at least 300 pupils meeting the criteria who already perform well enough to manage the academic transition without extensive external help. For those who do require additional bridging, top-performing schools are perhaps best equipped to provide extra classes or tutoring. This approach is far more cost-effective than expecting under-resourced schools to develop these advanced capabilities on their own.

Socio-emotional support is perhaps more crucial. Shifting to a high-achieving school is likely to be emotionally taxing. The programme would need dedicated counsellors to help pupils navigate socio-emotional hurdles, equipping them with strategies to allow them to flourish in these new environments. This would ensure that bright children do not slip through the cracks simply because of their background.

Importantly, this proposal neither neglects nor derails broader improvements to education. We also need black elites — academically gifted students who become tomorrow’s leaders, doctors, accountants, engineers (and taxpayers) and who can plough back support into their communities. Focusing on a smaller cohort of high-potential pupils at an early stage is the cheapest way to accelerate their development into this leadership cadre, especially compared with waiting for the entire system to rise to the same standard.

Figure 2 Improving pass rates amongst black and coloured children is vital



EDUCATION SYSTEM SELF-SUFFICIENCY

A self-sustaining education system demands that the eventual tax revenues attributable to its recipients’ improved earnings outweigh the initial cost of their schooling. Despite the seemingly straightforward nature of this requirement, it is not guaranteed in the South African context. Three structural factors render the achievement of self-sufficiency particularly challenging.

First, the substantial level of public expenditure on schooling means that a high threshold must be met before the national investment in education yields returns. In 2021, South Africa spent 6.5% of its GDP on public education, placing the country 18th globally in terms of education spending as a percentage of GDP (UNESCO, 2024). The cost of educators alone equals about 10% of the total budget.

South Africa’s progressive tax schedule—9% of the population contribute 40% of total tax and 20% of taxpayers pay 75% of PIT—concentrates the responsibility for future tax revenue on a relatively small group of high-earning taxpayers, who were typically high-achieving students. This creates

significant pressure on the education system to adequately support and develop these future taxpayers. While prioritising relatively gifted learners may initially seem inequitable—given its potential to favour those from privileged backgrounds or with innate advantages—the broader aim of such interventions is to drive economic growth rather than merely transfer resources to those already better off. In this context, South Africa’s progressive tax system is likely to offset any perceived inequity by redistributing the economic gains to benefit the wider population.

Third, the labour market exhibits exceptionally convex returns to education, with tertiary degrees commanding substantially higher earnings premia and lower unemployment probabilities relative to secondary schooling, see figure 3. Even substantial improvements in learning at the lower end of the skill distribution may fail to translate into meaningful gains in future tax returns. This may explain why South Africa’s exceptional improvements in education have not translated into rapid economic growth, as most evidence suggests it should (Hanushek and Woessmann, 2021).

“Grassroots” level interventions

In South Africa, the transformation in sports is also evident in the practice of sending talented players from grassroots programs to top schools, which further aids in their development and exposure. This initiative bridges the gap between talent and opportunity by providing young athletes with high-quality training facilities, education, and competitive play that are often available at these prestigious institutions.

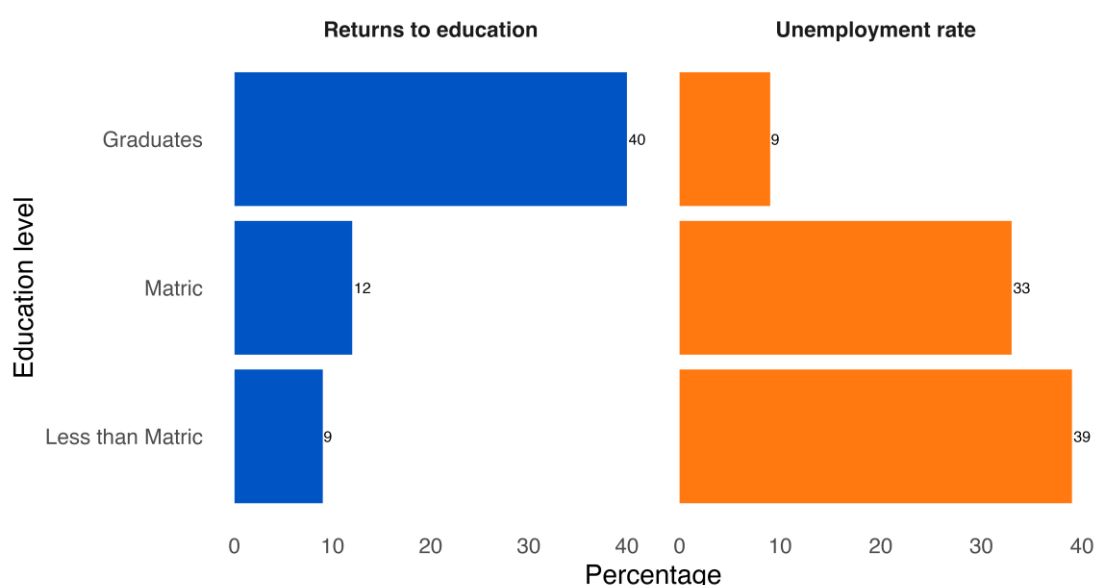
One notable example is the case of Siya Kolisi, who was scouted from his humble beginnings in Zwile township near Port Elizabeth and received a scholarship to the elite Grey High School. This opportunity was pivotal for Kolisi, as it not only honed his rugby skills but also provided him with academic and social experiences that were crucial for his growth both on and off the field. Today, Kolisi is celebrated not only as the captain of the South African national team that won the 2019 Rugby World Cup but also as a symbol of hope and transformation in South African sports.

Similarly, the cricket sector has seen players like Temba Bavuma, who was identified for his cricketing talent in the township of Langa, Cape Town, and subsequently received a scholarship to attend the prestigious St. David’s Marist Inanda in Johannesburg. This move was instrumental in Bavuma’s development as he was exposed to superior coaching and competitive cricket, which helped him to eventually become the first black African captain of the South African national cricket team. These examples underscore the significant role that educational scholarships at top schools play in the sports transformation agenda of South Africa, ensuring that the future of sports is not only diverse but also rich with the talent nurtured from the grassroots level.

Broad-based black economic empowerment (B-BBEE) aims to correct historical injustices in part by ensuring that black professionals occupy leadership roles in both the public and private sectors. At the highest levels of the labour market, this is determined through “Management Control” requirements, which assign points for board composition and executive appointments that seek to reflect the racial diversity of the country. Yet these measures, by focusing on top-tier positions, require the continued strength of a pipeline of highly skilled black professionals ready to assume such roles. In reality, the overall number of qualified candidates remains constrained—only 17% of South Africa’s chartered accountants, for example, are black—underscoring the need for strong, early investments in human capital. Without consistent and widespread educational opportunities for black learners, efforts to place more black professionals in top corporate & government roles risk becoming unsustainable.

To address these deeper structural barriers, affirmative action at the elite level must be preceded and supported by significant affirmative interventions early in the life cycle of learners and future leaders. These include identifying academically gifted primary school pupils, providing them with the necessary financial and psychosocial support, and ensuring they can access rigorous secondary schooling that prepares them for tertiary study. This way, the flow of high-achieving black individuals—who can go on to secure the professional qualifications and leadership positions required by B-BBEE and other empowerment initiatives—remains continuous rather than sporadic. Strengthening this pipeline is thus not merely a matter of fairness: it is also an economic imperative to sustain and deepen the broader objectives of transformation policies and to ensure that the country’s top positions can be filled by a truly representative cohort of leaders.

Figure 3 South Africa has high returns to education



Source: author’s illustration based on Statistics SA Quarterly Labour Force Survey (2023); Montenegro and Patrinos (2014); Stats SA (2024).

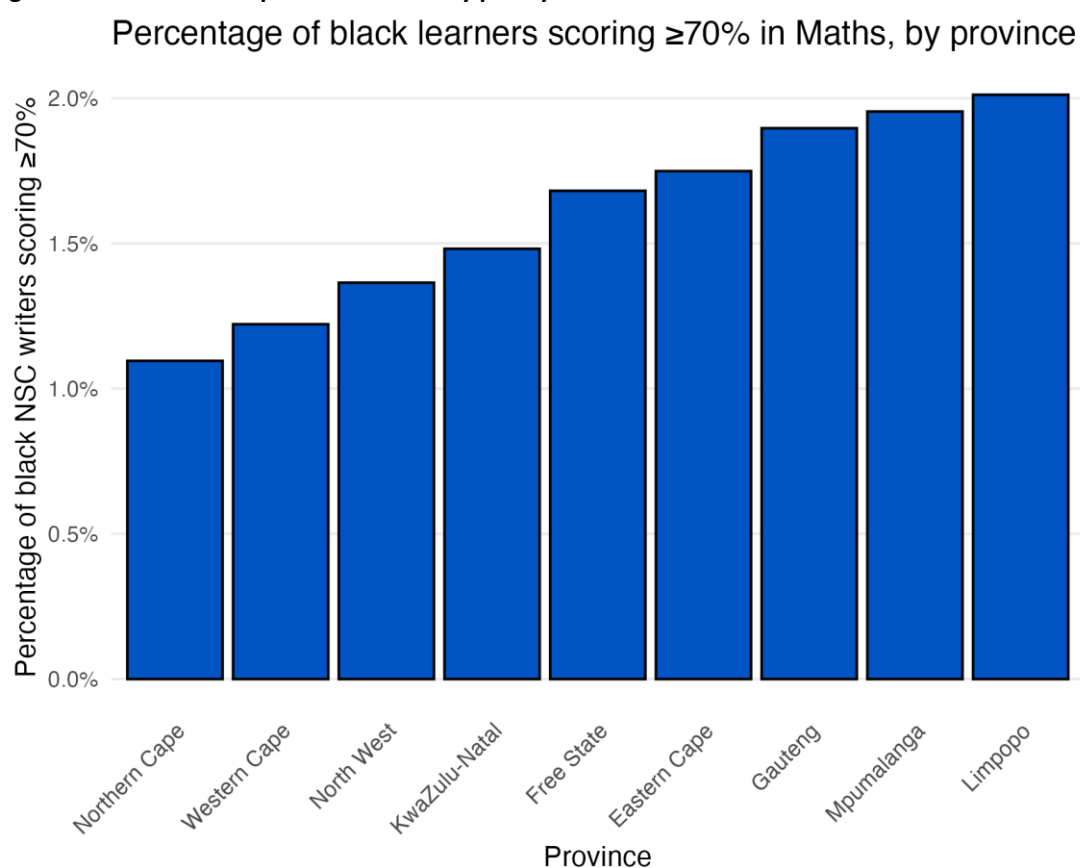
Focusing on the matric certificate may yield short-term improvements in pass rates, but it does not necessarily increase the pool of top earners who can contribute significantly to the sustainability of the education system. By contrast, the marginal learner positioned to complete tertiary education—especially in high-demand STEM fields—can potentially achieve a far greater increase in earnings and thus expand the net tax base.

PILOTING IN THE WESTERN CAPE

At present, only the Western Cape has the learner assessment infrastructure needed to identify highly talented students in primary school. The Western Cape Education Department administers systemic assessments that could be used to select Grade 6 learners exceptionally gifted in mathematics. These learners would then receive transport, fee support, and psychosocial services to help them excel

in the province's top high schools. The top schools, in turn, would be incentivised to expand enrolment to accommodate these additional learners, thereby preventing the policy from displacing other students. This expansion would be supported by the allocation of appropriate capital. The Western Cape is also an ideal province to pilot the project as Quintile 5 schools perform similarly to Norway in mathematics (TIMSS assessments, 2019) while the average school performs at the level of Morocco (Mullis et al., 2020). The Western Cape should perhaps also be particularly concerned about producing one of the lowest proportions of black NSC Mathematics results above 70%, as shown in figure 3.

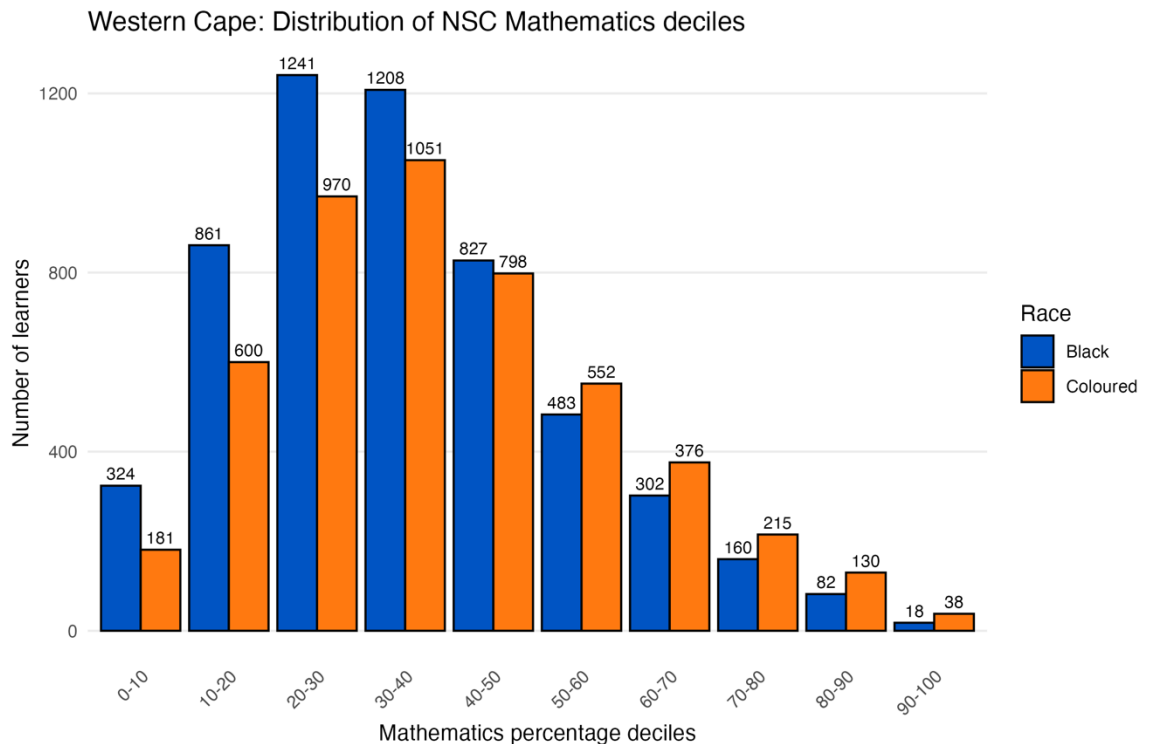
Figure 3 The Western Cape scores relatively poorly



Numerator is black learners scoring $\geq 70\%$ in Maths. Denominator = all black NSC writers.

In 2023, only 100 black learners (out of 22,798) and 168 coloured learners (out of 27,326) who sat for the matric exams in Western Cape public schools achieved above 80% in mathematics (an 'A'), while a further 383 coloured and 260 black learners scored above 70%, see figure 4. These small numbers suggest that a relatively modest investment could potentially double the number of outstanding achievers from previously disadvantaged backgrounds. To meet this goal, 300 exceptional learners could be identified every year from the Grade 6 cohort, such that after five years—with one new cohort in each year of high school—the programme would be funding 1,500 learners.

Figure 4 Similarly, there are low number of top black and coloured mathematics students



Stats for Western Cape:
 Number of black learners who wrote NSC in Western Cape: 22798
 Number of black learners who wrote Mathematics: 5506
 Percent of black learners who wrote Mathematics: 24.2%
 Mean final percentage (Maths): 35.3
 SD of final % (Maths): 18

Number of coloured learners who wrote NSC in Western Cape: 27326
 Number of coloured learners who wrote Mathematics: 4911
 Percent of coloured learners who wrote Mathematics: 18%
 Mean final percentage (Maths): 39.7
 SD of final % (Maths): 19.2

FINANCING

Given that top public schools in the Western Cape charge between R30,000 and R80,000 per year, a conservative assumption is that the programme would cost R100,000 per selected learner per year—to cover school expansion, fees, transport, and related expenses. The total cost would thus be R150 million per annum, amounting to less than half a per cent of the province's R30.5 billion education budget. For all of these options, it is critical that schools demonstrate enrolment expansion to qualify. There are broadly four pathways to funding this programme:

1) Government-funded scholarships:

The WCED or the government more broadly funds the project. Political will and careful budgeting are necessary to secure resources, but the WCED's ability to manage funding improves stability.

2) Philanthropically-funded scholarships:

Philanthropic entities such as large foundations sponsor disadvantaged learners. While this option brings external capital, donor retention and administrative overhead can pose challenges. Schools would need to build relationships with donors or the centralised programme and provide transparent reporting to sustain support.

3) Private tax-deductible donations:

Section 18A of the Income Tax Act allows individuals and corporations to deduct up to 10% of their taxable income for qualifying donations. This option incentivises private contributions through tax relief. Delayed rebates may deter donors. A central philanthropic fund could provide bridging finance to address delayed tax rebates, easing cash flow challenges for donors.

4) Matching private tax-deductible donations:

A hybrid model matches Section 18A donations with a central fund, doubling the impact of private contributions. For instance, a donor in the 40% tax bracket giving R100,000 effectively contributes only R20,000 out of pocket, with R40,000 matched by SARS and another R40,000 by the central fund. Sustaining a credible and well-managed matching fund is essential.

Mitigating risks and improving implementation

Addressing existing restrictions on Section 18A donations—such as WCED’s 2014 circular prohibiting fee funding—will require clarification. Solutions include creating "diversity trusts" or bursary funds, with safeguards to prevent abuse (e.g., requiring affidavits from donors).

Table 1: Funding options

Option	How Fees are paid	Main advantage	Principal challenge
Government-funded fee exemptions	Provincial budget (WCED)	Large-scale reach, direct public support	Requires significant public funding
Philanthropically-funded fee exemptions	External philanthropic donors	Alternative to government resources	Reliant on donor interest and continuity
Private tax-deductible donations	Section 18A donations from individuals/companies	Leverages tax incentives	Possible donor cash flow issues around receipt of tax return
Matching tax-deductible donations	Donors + matching from central fund	Plausibly doubles donation impact	Needs dedicated matching fund management

CONCLUDING REMARKS

Establishing a self-sustaining education system in South Africa requires more than an upward shift in matric pass rates: it demands the deliberate and equitable cultivation of learners who can excel in higher education, particularly in fields that yield high future earnings. Importantly, this proposal neither neglects nor derails broader improvements to education. South Africa’s education system has, in fact, improved dramatically over the past three decades, yet this improvement has not occurred at the top of the learning and income ladders. We also need black elites — academically gifted students who become tomorrow’s leaders, doctors, accountants, engineers (and taxpayers) and who can plough back support into their communities. Focusing on a smaller cohort of high-potential learners at an early stage is the cheapest way to accelerate their development into this leadership cadre, especially compared with waiting for the entire system to rise to the same standard.

A programme of this kind shifts priorities away from the matric pass rate towards earlier learning, creating more accountability for primary school outcomes. And by investing in a visible group of future high performers, the hope is that the system as a whole would gain momentum from their successes. Early identification and carefully targeted investments in these learners—combined with appropriate expansion of enrolment and sufficient psychosocial support—offer a pragmatic strategy to grow the future base of top earners and thus expand the long-run tax revenue essential for educational funding. In this way, self-sufficiency and social inclusion become complementary objectives rather than competing priorities.

References

- Department of Higher Education. 2023. 2000 to 2021 First Time Entering Undergraduate Cohort Studies for Public Higher Education Institutions; date last accessed May 13, 2024, at <https://www.dhet.gov.za/HEMIS/2000%20TO%202021%20FIRST%20TIME%20ENTERING%20UNDERGRADUATE%20COHORT%20STUDIES%20FOR%20PUBLIC%20HEIs.pdf>
- Hanushek, E. A. and Woessmann, L. 2021. Education and Economic Growth, in *Oxford Research Encyclopedia of Economics and Finance*, Oxford University Press
- Mullis, I. V. S., Martin, M. O., Ruddock, G., O’Sullivan, C. Y., and Preuschoff, C. 2020. *TIMSS 2019 International Results in Mathematics and Science*, Chestnut Hill, MA, TIMSS & PIRLS International Study Center, Lynch School of Education, Boston College