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Quality in basic education outcomes and basic education budget frameworks

Preface

This publication is one of two research papers that address quality in the health and basic education sectors. This follows the thematic focus of equity in the 2021 annual Budget Brief series. Given the centrality of quality for basic education and health, UNICEF South Africa is dedicated to developing several research interventions that summarise the status quo, present the most up-to-date research, and put forward appropriate and context-specific recommendations for addressing quality deficits.

Key messages and recommendations

Research approach to this study

This paper is centred on the most recent systematic review of performance in the basic education sector. This approach allowed us to extract the key verifiable findings and to relate this to national and provincial expenditures that support these interventions. The idea was to analyse whether national and provincial basic education budget frameworks support the interventions that have been identified as mediating quality in the basic education sector. Finally, the paper looked at international and domestic indicators related to quality and related data.

This five-year review on the extent to which budget frameworks in basic education support the overall goal of quality education has produced several interesting findings on the link (or lack thereof) between budgets and quality outcomes, the state of performance information in the sector, and the most recent quantitative evidence on components of quality education that should be supported.


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A systematic review of performance in the basic education sector, 2022.

A recently completed systematic review published in 2022 identified a small number of factors that show up in multiple studies as having an effect on quality outcomes. These include

- Interventions at lower levels of schooling (primary schooling) and in the core subjects of literacy and numeracy have a higher estimated impact than those at higher levels.
- Language-oriented interventions in primary schools can produce impact beyond the language area, capitalising on the well-known link between language and mathematical ability.
- Decreasing class size and the teacher-learner ratio can have noticeable impacts on learner outcomes.
- Well-designed and used learner teacher support materials (LTSMs) are more cost-effective and often have more impact on learner performance than more complex (and expensive), multi-component interventions.

The systematic review suggests that if government wants to focus on interventions for which there is solid South African quantitative evidence of impact on learning outcomes, it should concentrate its public financing on teacher development initiatives, LTSM, and perhaps learner-targeted support.

The results of the systematic review must be placed in a context where quantitative research did not always produce the same results. For example, research in developed countries suggests that infrastructure spending does not affect the quality of learning and earlier South African studies confirmed these results.

Another example of contradictory findings relate to teacher qualifications and experience: the latest systematic review for South Africa suggest that the

qualifications of educators are, arguably, more important for quality education than years of experience. There are, however, many earlier findings that suggested that educational qualifications are less decisive. The same can be said for the importance of learner: educator ratios.

What is indisputable-after close to three decades of political freedom and democracy-is that learners' performance continues to differ substantially between the schools serving poor, overwhelmingly black communities, and those serving white and black learners from better-off families.

Finally, this research report contends that a focus on quality learning should not override government's other responsibilities towards children. Schools that lack basic decent infrastructure and starving school learners negate children's rights to dignity, health, and safety and much else. Further, carefully designed and implemented research using sophisticated econometric techniques cannot be the only guide to effective interventions.

Key financing trends in national and provincial education budgets, 2016-2021

While the scope of this review does not include actual modelling of the relationship between budgets and quality outcomes, detailed attention was paid to recent financing trends in public education.

First, adjustments based on the sector-specific Basic Education Price Index suggest that total spending on education increased by only 3 percent over the period 2009-2018 in terms of purchasing power. Real spending per learner fell by 2,3 percent, with more than 70 percent of the decrease in spending per learner resulting from salary increases.

Second, the absence of any public/private weighting in the formula for the education component of the provincial equitable share results in a situation where the wealthier provinces receive more for each public school learner than provinces with few learners in independent schools.

Third, teachers' pay scales are uniform across provinces, but the budget allocations for teacher salaries are decided and paid in the provincial sphere. The personnel budgets for schools serving poorer learners tend to be lower than those for higher-quintile schools because of both higher learner: teacher ratios and lower-qualified, and thus lower-paid, teachers.

Four, school salaries account for an estimated 3.5 percent of South Africa's gross domestic product (GDP). This is roughly equivalent to what the South African government spends on child grants overall as a percentage of GDP. The two key determinants of the size of the salary budget are (a) the number of teachers, and (b) teachers' pay scales.

Five, the policy in respect of Non-Personnel and Non-Capital (NPNC) funding has become increasingly progressive over time. The use of nationally-calculated quintiles aims at achieving equity for learners but places a greater financial burden on the poorer provinces. At the provincial level, the quintile 1 NPNC amount per learner is, in real terms, lower in 2021 (at R1 525) than in 2007 (R1 608). Further, while the nominal amount allocated for LTSM in the national DBE budget has increased in most years, when adjusted for inflation the trend is downward, except for FY2021.

Six, the NPNC subsidy alone, at less than 10 percent of the provincial education budget, will not achieve meaningful improvements in the quality of teaching at the majority of schools where performance is poor. The budget for quality teachers also needs to favour the poorer schools.

The state of performance information in the national and provincial education budgets, 2016-2021

On the issue of the availability and quality of performance information, the findings point to a mixed picture.

One, South Africa has data for very few of the SDG education-quality related indicators. Examination of

the indicators suggests that neither the SDG indicators, nor South Africa's domestic education indicators are well-focused to measure progress in provision of quality education. While access is clearly an important issue to monitor, access is of limited benefit if the quality of the education accessed is poor.

Two, South Africa's domestic performance indicators include very few related to quality, and government does not seem to have a consolidated set of provinces' annual performance on the standard performance indicators.

Three, to better link enrolment and quality, researchers have suggested a new indicator, "effective enrolment", that combines access and quality, namely "the proportion of children in the population (whether in or out of school) who reach specified literacy and numeracy benchmarks."

So, what does this research report say about the budget frameworks in basic education and whether these actually support a quality framework and outcomes? The picture remains complex, although some trends are noticeable:

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- While the latest review suggests that the focus should be on primary school interventions, there is no evidence that the basic education sector funds the primary and secondary schools differently or unequally.

- Existing budget frameworks do provide for core spending items such as LSTMs, but this report raises the issue of their adequacy and the fact that such budgets were subject to corrosive inflation effects.

- While improving the qualification of educators has come out strongly in the systematic review, this research report contends that the official bursary scheme for teachers cannot meet this demand and that more financing should be set aide for in-service training.

- While disagreements are likely to persist about the relative importance of infrastructure spending in determining learner outcomes, the report notes that infrastructure spending must provide the bare necessities, and this should be non-negotiable in education financing frameworks.

- While there is now explicit recognition that smaller classes should be the norm, existing financing frameworks have not yet recognised that the learner: teacher ratios have grown faster for schools in the lower quantiles as opposed to quintile 4 and 5 schools, thus introducing further inequity.

- The only conditional grant that focuses on quality is the Maths, Science and Technology (MST) grant, but it is relatively small and only targets learners who take these technical subjects.

- This report further recognises that while separate funding for HIV &AIDS awareness was critical at the height of the pandemic, a more strategic goal would be to include this component into schools' life skills orientation, thus releasing additional funding for quality education initiatives.

The Government of the Republic of South Africa acknowledges that while almost all children attend school, the country is "severely underperforming" in terms of delivering quality education. Tweaks in the financing of basic education suggested above can go a long way towards supporting the ultimate goal of quality education in South Africa.

Based on the key findings above, the Government of the Republic of South Africa is encouraged to

- **Re-think its redress funding model as encompassing more than simply the non-personnel part of the basic education budget.** This means in particular the progressive allocations for teachers. This could be done both through revisions to the formula for the education component of the provincial equitable share, combined with a change in the methods used to allocate teachers and the associated budgets across schools in the different quintiles.

- **Institute immediate measures to ensure that all teachers have the required competency levels** – spanning skills, knowledge, and commitment. While this report recognises attempts to introduce performance-related increments, ensuring that the quality of teachers is constantly upgraded must remain a top national and provincial priority.

- **Consider integrating the content of the HIV & AIDS Life Skills awareness raising into the existing life skills orientation curriculum.** This would release additional funding for quality interventions in the basic education sector, including expanding the scope of the Maths, Science and Technology grant.

- **Consider introducing a new indicator, "effective enrolment", that combines access and quality,** namely the proportion of children in the population (whether in or out of school) who reach specified literacy and numeracy benchmarks.

- **Put more effort into developing, using, and monitoring education indicators relating to quality education.** This needs to be done within both provincial and national government.

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01

Section 1: **Introduction**

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The macro-economic and budgetary context

The FY2022[1] budget and associated medium-term expenditure framework (MTEF) provides for a sharp contraction in spending in FY2023 even in nominal terms. National Treasury foresees compensation of employees increasing by only 2,4 percent in FY2022, well below inflation. In FY2023, it will actually decrease by 1,6 percent. The provincial equitable share, which has education as its biggest single component, will increase by only 1 percent per year in nominal terms.

In this context, prioritisation is essential.

Box 1: National and provincial government's responsibilities

In broad terms, the national department of basic education (DBE) is responsible for overall policy development, oversight, and coordination. The provincial departments (PDEs) are responsible primarily for implementation. Each sphere is responsible for allocating the necessary budgets for fulfilling its functions.

Most of the PDEs' budgets comes ultimately from national treasury. Every provincial department – not only PDEs – receives a portion of the province's "equitable share" of nationally-collected revenue. This money is channelled to them through the provincial treasuries which, in turn, receive the funding from the national treasury. In education there are also quite a few conditional grants. These funds are channelled through the national DBE and supplement the equitable share funds.

Provinces have more decision-making power over the funds channelled via the provincial treasury than over the conditional grants channelled via national DBE. However, the provinces' powers are weakened when overall provincial budgets are constrained, and national DBE policy requires provinces to allocate funding in a particular way.

Expressed more positively, national DBE can exert strong influence over how provinces allocate even the equitable share.

The overall shape and size of provincial education budgets

PDE budgets account for just over 40 percent of all provincial budgets combined throughout the period (Figure 1). Limpopo and Eastern Cape, the two poorest provinces, allocate a larger share of their budgets to education than all other provinces. Despite the higher share going to education, the poorer provinces have lower per-learner expenditure.

The public ordinary school budget accounts for more than 70 percent of provinces' education budgets throughout the period. (See Figure 2) For Eastern Cape, KwaZulu-Natal, Mpumalanga, and Limpopo education usually accounts for more than 80 percent. There is some convergence across the provinces over the period, and the overall trend is downwards.

[1] The paper adopts the convention of referencing financial years as FY with the year number indicating the relevant financial year. For example, FY2016 refers to 2016/17.

Figure 1. Education as a share of provincial budgets by province, FY2016-FY2021

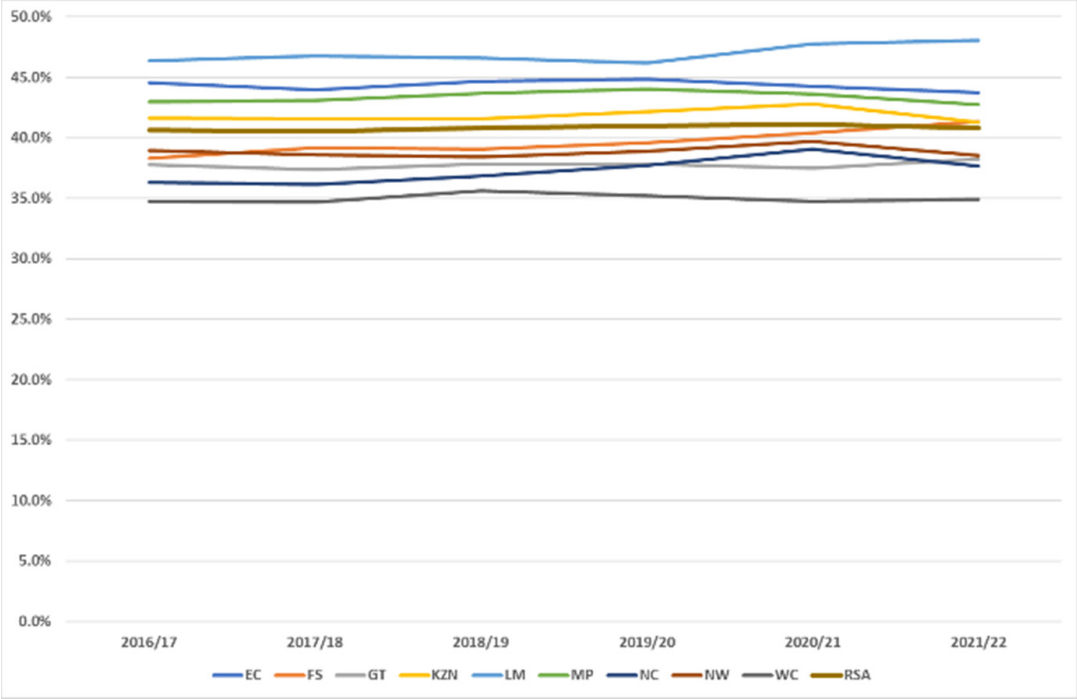


Figure 2. Public ordinary school programme as a percentage of education budget by province, FY2016-FY2021

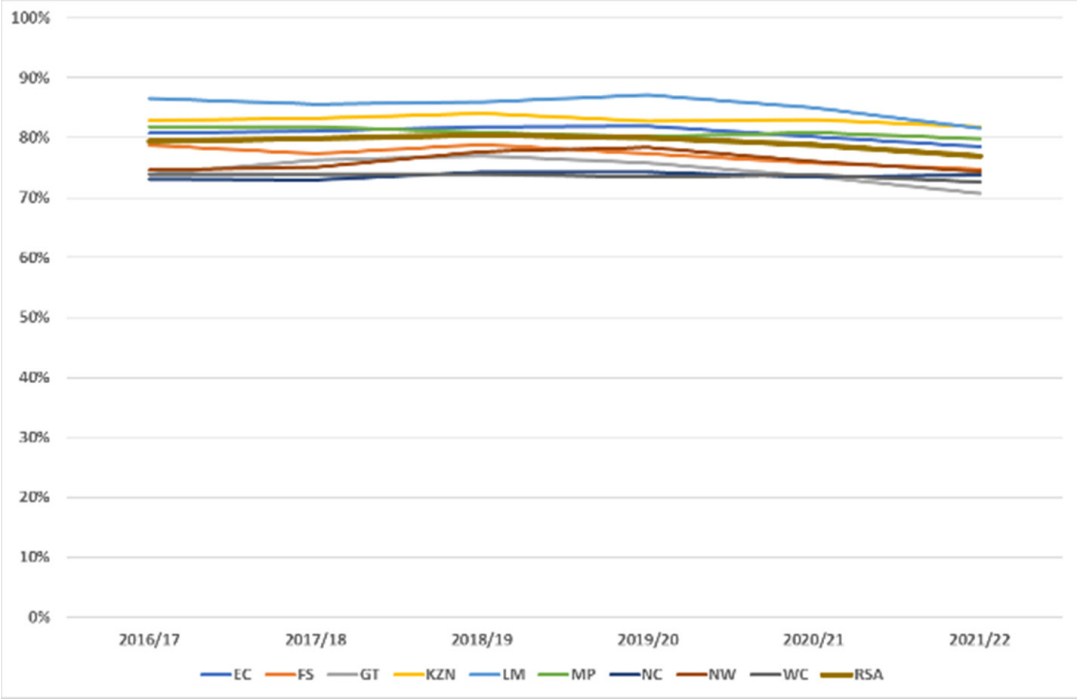
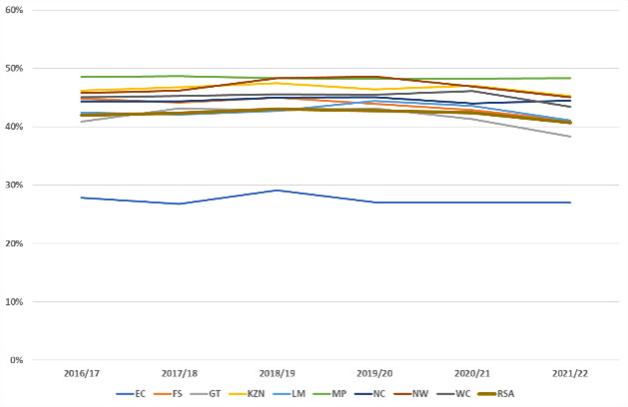


Figure 3. Primary as a percentage of public ordinary school programme by province, FY2016-FY2021



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Eastern Cape is a significant outlier in terms of the share of the public ordinary school programme budget allocated for primary ordinary school education. (See Figure 3) It allocates less than 30 percent of the programme budget to primary schools, whereas all other provinces allocate between 40 percent and 50 percent. This is probably explained by Eastern Cape classifying combined schools as secondary although they include both primary and secondary grades. Combined schools account for approximately 40 percent of learners in Eastern Cape compared to an overall average of 10 percent.

In broad terms, there are strong similarities between the education budgets of different provinces. All allocate a substantial proportion of their budget education, and more than 70 percent of the education budget to the public ordinary school programme. The proportions allocated have remained fairly stable over the period FY2016-FY2021.

Conditional grant funding as part of the quality equation

Conditional grants are used to ensure that funding is allocated to interventions that national government considers so important that it cannot leave their funding to the discretion of provinces. If improving the quality of education is a key priority of government, we can expect at least some of the conditional grants to relate to this.

There are currently five conditional grants in education (Figure 4). The largest is the education infrastructure grant. This grant is not the only money government allocates to school infrastructure. National DBE also has a separate budget that it uses to contract with service providers to build, repair and upgrade school infrastructure in the provinces.


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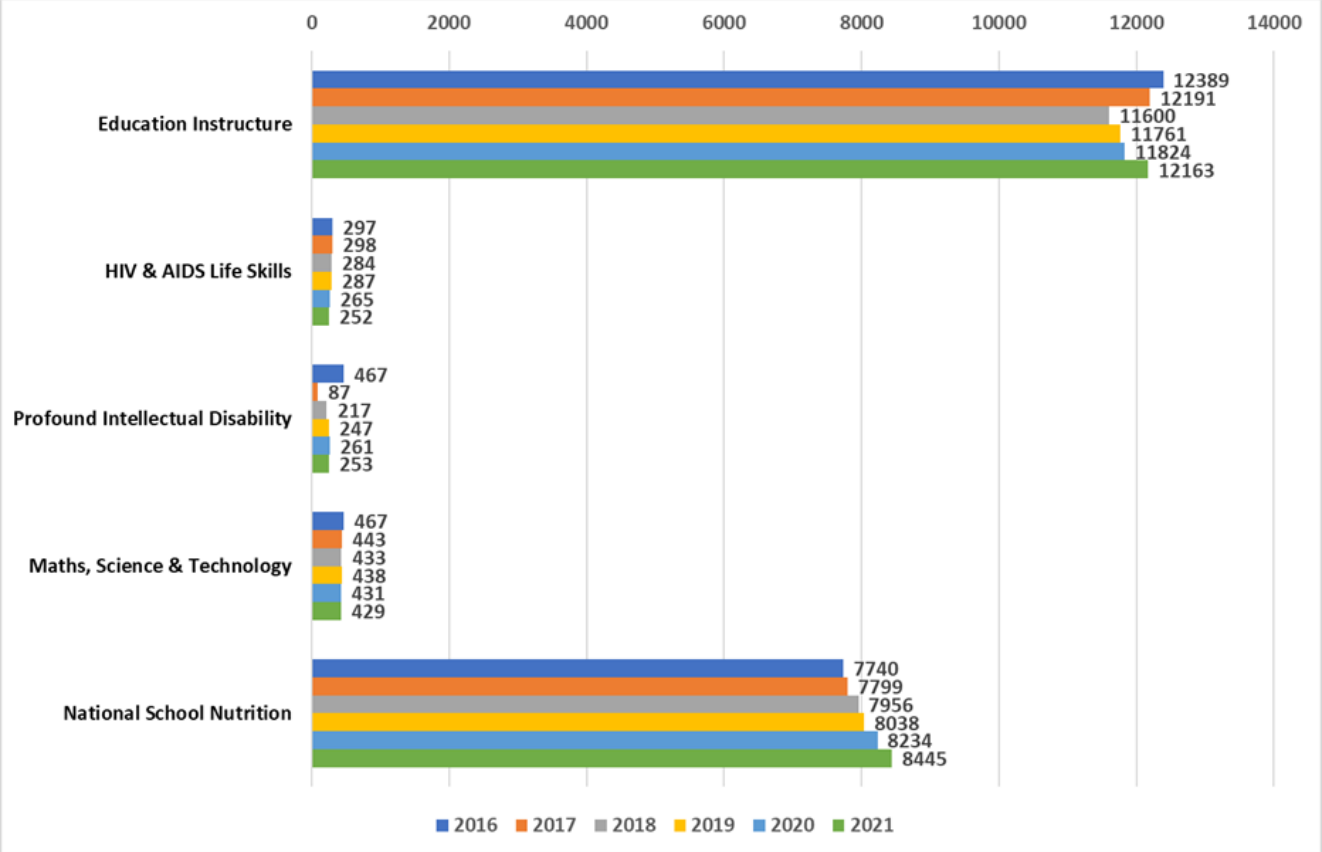
Figure 4. Key basic education conditional grants FY2016-FY2021, adjusted for inflation (in 2022 rands)



There is conflicting evidence as to whether or not infrastructure affects the quality of learning. Research in developed countries suggests that it does not do so. However, in these countries infrastructure spending is mainly used for improving the quality of existing infrastructure. In South Africa, in contrast, infrastructure spending is often necessary to ensure that even basic infrastructure exists, as too many schools still do not have decent – if any – toilets, reliable water supply or electricity. Further, research in South Africa has found that learners at schools with non-standard classrooms tend to perform worse than those with none. Availability of telecommunication and electricity and use of bricks and mortar for the school buildings also affect performance, especially in poorer areas.[2]

The second largest conditional grant is for the National School Nutrition Programme (NSNP). A recent systematic review[3] of South African research does not identify nutrition as a proven facilitator of quality learning. However, hungry children will struggle to concentrate on their studies. Lack of adequate nutrition at the earliest ages also affects physical and mental development. Further, a focus on quality learning cannot override government's other responsibilities towards children and citizens in general. Schools that lack basic decent infrastructure and starving school learners negate children's rights to dignity, health, and safety and much else.

The Maths, Science and Technology (MST) is clearly linked to quality education. It is relatively small in comparison to the school nutrition and infrastructure grants. Furthermore, its main target is secondary learners. Essentially, it reaches only the (relatively small number of) learners who are focusing on these topics.

The HIV & AIDS Life Skills grant is not focused on quality education. It was introduced at the peak of the HIV & AIDS pandemic. Its purpose is providing "comprehensive sexuality education and access to sexual and reproductive health services to learners", supporting "the provision of employee health and wellness programmes for

[2] Bhorat & Oosthuizen, 2008.
[3] Besharati, Fleisch & Tsotsotso, 2022. "Chapter 2: Interventions to improve learner achievement in South Africa: A systematic meta-analysis" in Maringe F (ed). Systematic Reviews of Research in Basic Education in South Africa. Stellenbosch: African Sun Media.

educators", and mitigat[ing] the impact of HIV and TB..." At this point, the grant could be done away with, and the services mainstreamed, for example within the life skills orientation curriculum in respect of sexuality education.

The grant for children with profound intellectual disabilities was introduced after a court ordered that these children be provided for.[4] It targets a relatively small proportion of learners.

Takeaways

- PDE budgets account for just over 40 percent of all provincial budgets combined throughout the period. Yet, despite a higher share of their budgets going to education, the poorer provinces have lower per-learner expenditures.

- Research in developed countries suggests that infrastructure does not affect the quality of learning. In South Africa, in contrast, infrastructure spending is often necessary to ensure that even basic infrastructure exists.

- A focus on quality learning cannot override government's other responsibilities towards children. Schools that lack basic decent infrastructure and starving school learners negate children's rights to dignity, health, and safety and much else.

- The services that are meant to be funded by the HIV & AIDS Life Skills grant could be mainstreamed, for example within the life skills orientation curriculum in respect of sexuality education.

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[4] Western Cape Forum for intellectual Disability v Government of the Republic of South Africa and Another (2011 (5) SA 87 (WCC)) [2010] ZAWCHC 544; 18678/2007 (11 November 2010).

02

Section 2: **Performance of the basic education system in South Africa**

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In 2013, the DBE published a report[5] that assessed South Africa's basic education system using UNESCO's newly developed General Education Quality Analysis/Diagnosis Framework (GEQAF). The report echoed other analyses in its conclusion that South Africa had made considerable progress since the height of apartheid in achieving near-universal access to education. However, it was "severely underperforming" in terms of delivering quality education.

In 2003, South Africa's Grade 8 learners scored lower than any of the other 45 participating countries in both subjects in the Trends in International Maths and Science Study (TIMSS). In 2011, South Africa was second from the bottom, after Honduras. there was no improvement in the Trends in International Mathematics and Science Study (TIMSS) in 2019.

Similarly, in 2006, South Africa's Grade 6 learners scored lowest in the Progress in International Reading Literacy Study (PIRLS), with more than three-quarters (78%) scoring below the low benchmark score. None of the African language schools achieved a mean score higher than 400.

South African learners also perform below par on the Southern and Eastern Africa Consortium for Monitoring Educational Quality (SACMEQ) tests when compared to other, poorer countries in the region. In 2007, South Africa was third last out of ten countries in terms of the proportion of Grade 6 learners found to be functionally literate.

The South African government allocates a relatively large share of its budget to education when compared to other middle-income countries. However, the performance of South Africa's learners is worse than comparable countries despite some of these countries spending much less on education. SACMEQ found that only just over a quarter (27%) of grade 6 learners had "higher order" reading skills, compared to over half (53%) in the much poorer Tanzania.

The picture is exacerbated by unequal performance between schools within South Africa. Already by 2002 government was funding more or less the same number of teachers per 1 000 learners in historically black and historically white schools. However, twenty years later, learners' performance continues to differ substantially between the schools serving poor, overwhelmingly black, communities, and those serving white and black learners from better-off families.

Geographical location is also a factor. SACMEQ's 2007 tests for mathematics and language teachers of Grade 6 learners found that rural teachers in South Africa scored lower than all other countries except Zanzibar on mathematics.

Public schools account for close to 95 percent of all learners in ordinary[6] schools, and in post-apartheid South Africa government subsidies are meant to favour the poorer schools. If this is indeed the case, why is the budget not providing for quality education for poor, black and rural children?

Progress on key basic education quality indicators

Goal 4 of the Sustainable Development Goals (SDG) is to "ensure inclusive and equitable quality education and promote lifelong learning opportunities for all." 5 of the 12 education-related SDG indicators relate to quality.

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[5] Department of Basic Education. 2013. General Education System Qualify Assessment: Country Report South Africa. Pretoria.
[6] Not special i.e. not for children with disabilities who cannot be mainstreamed.

Table 1. SDG indicators potentially related to quality education

Number	Indicator
4.1.1	Proportion of children and young people (a) in grades 2/3; (b) at the end of primary; and (c) at the end of lower secondary achieving at least a minimum proficiency level in (i) reading and (ii) mathematics, by sex
4.1.2	Completion rate (primary education, lower secondary education, upper secondary education)
4.5.1	Parity indices (female/male, rural/urban, bottom/top wealth quintile and others such as disability status, indigenous peoples and conflict-affected, as data become available) for all education indicators on this list that can be disaggregated
4.a.1	Proportion of schools offering basic services, by type of service
4.c.1	Proportion of teachers with the minimum required qualifications, by education level

South Africa's 2019 Country Report has data for only two school quality-related sub-indicators for at least one date within the period 2015-2021. The first, (Indicator 4.c.1 on teacher qualification), shows 91 percent of permanent educators had the minimum required teacher qualification in 2017, but does not disaggregate by education level. The second, (Indicator 4.a.1 on school infrastructure) shows relatively pleasing performance on electricity, water and sanitation, but only a third of schools had computers by 2017.

The global SDG dashboard[7] has information on only four education indicators for South Africa. None of the reported indicators relates to quality.

Indicators in South Africa's own policy

Of the 27 goals in South Africa's Action Plan to 2019: Towards the Realisation of Schooling 2030, less than half (13) relate to performance or participation outcomes. The rest relate to process.[8]

In FY2016, there were nine standard provincial performance indicators for the public ordinary schooling system. Only four indicators had an apparent link to quality education. Two of these indicators related to the percentage of children aged 9 and 12 respectively in the appropriate grade, and two to the number of educators trained in literacy and numeracy. Provinces seemed to differ as to whether they interpreted the latter as the number of educators receiving training in the year concerned, or instead the overall number of teachers with the training.

By FY2021, the four previous quality-linked indicators had disappeared. One of the two new indicators related to Funza Lushaka bursary holders placed in schools within six months upon completion of studies. This is a process indicator – relating to placement – rather than an indicator relating directly to the quality of teaching.

A consolidated set of provinces' annual performance on the standard performance indicators does not seem to exist. Previously the information was collated on a quarterly basis by the Department of Performance Monitoring and Evaluation (DPME) and made available on their website. This is no longer the case. Neither DPME nor DBE were able to make the information available for this research report.

In 2012, education researchers[9] suggested an indicator, which they call "effective enrolment" that combines access and quality. The measure would reflect the proportion of children in the population (whether in or out of school) who reach specified literacy and numeracy benchmarks. This indicator is not yet being used.

[7] https://dashboards.sdgindex.org/profiles/south-africa/indicators
[8] Statistics South Africa. 2019. Sustainable Development Goals Country Report. Pretoria Statistics South Africa. 2019. Sustainable Development Goals Country Report. Pretoria.
[9] Spaull & Taylor (2012), cited in Department of Basic Education. 2013. General Education System Qualify Assessment: Country Report South Africa. Pretoria

Takeaways

- Government acknowledges that while almost all children attend school, the country is "severely underperforming" in terms of delivering quality education."
- South Africa consistently ranks close to the bottom in international tests such as TIMSS and PIRLs, and also performs below average when compared to other, poorer countries in Southern Africa. It does so despite some of these countries spending much less on education.
- Within South Africa, learners' performance continues to differ substantially between the schools serving poor, overwhelmingly black communities, and those serving white and black learners from better-off families.
- South Africa has data for very few of the SDG education-quality related indicators.
- South Africa's domestic performance indicators include very few related to quality, and government does not seem to have a consolidated set of provinces' annual performance on the standard performance indicators.
- Researchers have suggested a new indicator, "effective enrolment", that combines access and quality, namely the proportion of children in the population (whether in or out of school) who reach specified literacy and numeracy benchmarks.

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Section 3: **Determinants of learner performance in SA schools: the latest quantitative evidence**

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In education, unlike in some other sectors, there are common-sense indicators for measuring performance, namely learners' results on tests and pass rates. These indicators are especially useful when they are standardised in some way. For example, all Grade 12 students write one of two standardised set of examination papers, the National Senior Certificate or Independent Examinations Board. Similarly, the PIRLS, TIMSS and SACMEQ assessments use the same tests and measures across different countries.

A recent systematic review and meta-analysis[10] of the available (mainly econometric) South African evidence on school performance as measured by learners' results or pass rates identified 165 effects of 37 different interventions between 1994 and 2016.[11]

The research reviewed is not restricted to the most-often used measure of success, the final Grade 12 examinations. Focusing on these examinations is a problem because so many learners leave the system before reaching this point. Schools also often disallow weaker learners who are less likely to pass from writing, or even from progressing to, Grade 12. This pushes up their pass rates, but not the number of learners receiving a quality education.

The systematic review explored the available evidence on eight types of interventions.

Table 2. Categories of education interventions from the systematic review, 2022

Learner-targeted support	Supplementary enrichment classes or tutoring, scholarships, bursaries and support to disadvantaged-but-promising learners. (Usually funded by private sector or donors, and targeted at individual learners rather than a school or community)
Teacher development initiatives	Pre-service and in-service training, provision of additional teachers/ assistants
Learning & teaching study material (LTSM)	Textbooks, workbooks, study guides, lesson plans, science-kits, computers, multi-media accessories, educational toys, reading books, etc.
Management & governance	Training of principals and school management teams, introduction of new systems
Infrastructure & facilities	Building, upgrading, expanding and refurbishing schools, classrooms, administration blocks, toilets, science labs, sporting facilities, libraries atmosphere, cleanliness, size, lighting, order and other environmental aspects of schools.
Structural reforms	Programmes for district development, introduction of language policy, systematisation of learner assessments, performance rewards, de-centralisation of functions and other structural changes to improve management and accountability
Community & family involvement	Interventions aimed at strengthening school governing boards (SGBs), which often include parents and other local authorities.
Integrated School Development	Multi-layered programmes that combine three or more of the above interventions

[10] Besharati, Fleisch & Tsotsotso, 2022. "Chapter 2: Interventions to improve learner achievement in South Africa: A systematic meta-analysis" in Maringe F (ed). Systematic Reviews of Research in Basic Education in South Africa. Stellenbosch: African Sun Media.
[11] The review focused primarily on econometric evidence and analysis. Relatively strict criteria were used in respect of design and methodology in determining which studies merited inclusion in the review.

The overall conclusions were that:

- Interventions at lower levels of schooling and in the core subjects of literacy and numeracy have higher impact on learner outcomes than those at higher levels.
- Language-oriented interventions in primary schools can produce impact beyond the language area, thus capitalising on the oft-cited link between language and mathematical ability.
- Decreasing class size and the teacher-learner ratio can have a noticeable impact.
- Well-designed and used LTSMs are more cost-effective and often have more impact on performance than more complex (and expensive), multi-component interventions.

The review suggests that if government wants to focus on interventions for which there is solid South African quantitative evidence of impact on learning outcomes, it should concentrate its public financing on teacher development initiatives, LTSM, and perhaps learner-targeted support.

Learner-targeted support generally refers to initiatives directed at individual learners rather than all learners in a particular school or area. It is not suggested as a focus here because it is usually funded by donors rather than by government. Further, while there are evaluations showing a measurable impact on learning outcomes for the school-based Dinaledi programme, the review questions the reliability of these evaluations.

This research report focuses, therefore, primarily on teacher development and LTSM, with special focus on lower grades. For each of the relevant categories the brief identifies (government) budget allocations that might fund such interventions, and describes the trends in these budget items.

Box 2: Should scientific research be the primary guide for design of policies and budgets?

Carefully designed and implemented research using sophisticated econometric techniques cannot be the only guide to effective interventions. Firstly, not everything can be measured quantitatively in a way that can be used for this strict type of proof. Secondly, even if something can be measured, the research may not yet have been done, or may not meet all the strict criteria of the systematic review. Yet it might be effective.

An example of an interventions that must surely be funded even if not supported by the systematic review is the National School Nutrition Programme.

As Nobel Laureate in economics, Angus Deaton, wrote in 2009: *"[E]xperiments have no special ability to produce more credible knowledge than other methods, and … actual experiments are frequently subject to practical problems that undermine any claims to statistical or epistemic superiority."*[12]

Takeaways

- In education, unlike in some other sectors, there are common-sense indicators for measuring performance, namely learners' results on tests and pass rates.
- The findings of recent systematic review of the available South African evidence on school performance suggests that government should concentrate its public financing on teacher development initiatives and LTSM, with special focus on lower grades.
- The usefulness of systematic reviews is somewhat limited due to the plethora of conflicting empirical evidence on key variables such as learner: teacher ratios, the role of educator qualifications, class size, and educator experiences.
- Carefully designed and implemented research using sophisticated econometric techniques cannot be the only guide to effective interventions.

[12] Deaton AS. 2009. Instruments of development: Randomization in the tropics, and the search for the elusive keys to economic development. NBER Working Paper No. 14690

04

Section 4: **Prioritising policy interventions with clear quality impacts and reviewing existing budgetary support**

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Government's five-year macro-policy framework, the Medium Term Strategy Framework (MTSF), has Education, Skills and Health as Priority 3.

In the MTSF for 2014-2019, many of the school-related outcomes of the implementation plan relate to quality interventions. These include provision of lesson plans, development and revision of materials, assessment, and professional teacher development for teaching reading and numeracy.

The current MTSF, which spans 2019-2024, has as its first school education-related priority "having capable and committed teachers in place." This is, the evidence shows, an important precondition for quality education. The MTSF notes that the budget for teachers increased faster than inflation in the previous period but was still not sufficient to keep up with increases in the number of learners and personnel costs. It warns that if these increases are not addressed, "recent gains in the school system will be reversed."

The current MTSF also notes progress in access to LTSM, but states that "significant gaps remain".

Box 3: Basic Education Price Index

Use of Statistics South Africa's standard consumer price index (CPI) in calculating real trends from the nominal budget numbers produces some misleading results because salaries, which account for about 80 percent of the basic education budget, have generally increased more than inflation even if the "pay progression" for teachers is excluded. The standard CPI thus under-estimates the number of teachers that the budgets of later years can "buy". Researchers have therefore developed a Basic Education Price Index which takes education's above-average cost increases into account. Use of this index to adjust budget numbers gives a better estimate of how many teachers a particular budget can pay for.

Teacher-related development interventions

The systematic review describes this intervention area as covering pre-service and in-service training, increasing the number of teachers, assistants, and the like so as to reduce educator-learner ratios and class sizes, offer extra remedial classes and attend to the needs of individual learners.


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Teacher salaries and pay scales

School salaries account for an estimated 3.5 percent of South Africa's gross domestic product (GDP).[13] The two key determinants of the size of the salary budget are (a) the number of teachers, and (b) teachers' pay scales.

Teachers' pay scales are agreed upon in the national Public Sector Coordinating Bargaining Council and Education Labour Relations Council. The pay scales are uniform across provinces, although the budget allocations for teacher salaries are decided and paid in the provincial sphere.

In the late 2000s DBE tried to introduce a system in which quality teaching would be rewarded through an increase in the pay of the teacher concerned. Additional funding for salaries was allocated for this purpose. After objections from the unions, the additional funding was used instead to fund regular increments based on years of service. These "pay progression" increments were in addition to the inflation-plus annual increases in pay scales for both new recruits and those already in service.

In 2019, "pay progression" increased from 1 percent every

[13] Spaull N, Lilenstein A & Carel D. 2020. The Race Between Teacher Wages and the Budget: The case of South Africa 2008-2018. Research on Socioeconomic Policy (RESEP). Stellenbosch University. Stellenbosch.

three years to 1,5 percent every three years. At the time, the increase was estimated to amount to about R1 billion extra per year. The cost will increase over time because each 1,5 percent increase includes a 1,5 percent increase on all previous such increases. These budget increases have no clear link to quality education unless one argues that teachers who are paid well will be motivated to teach better.

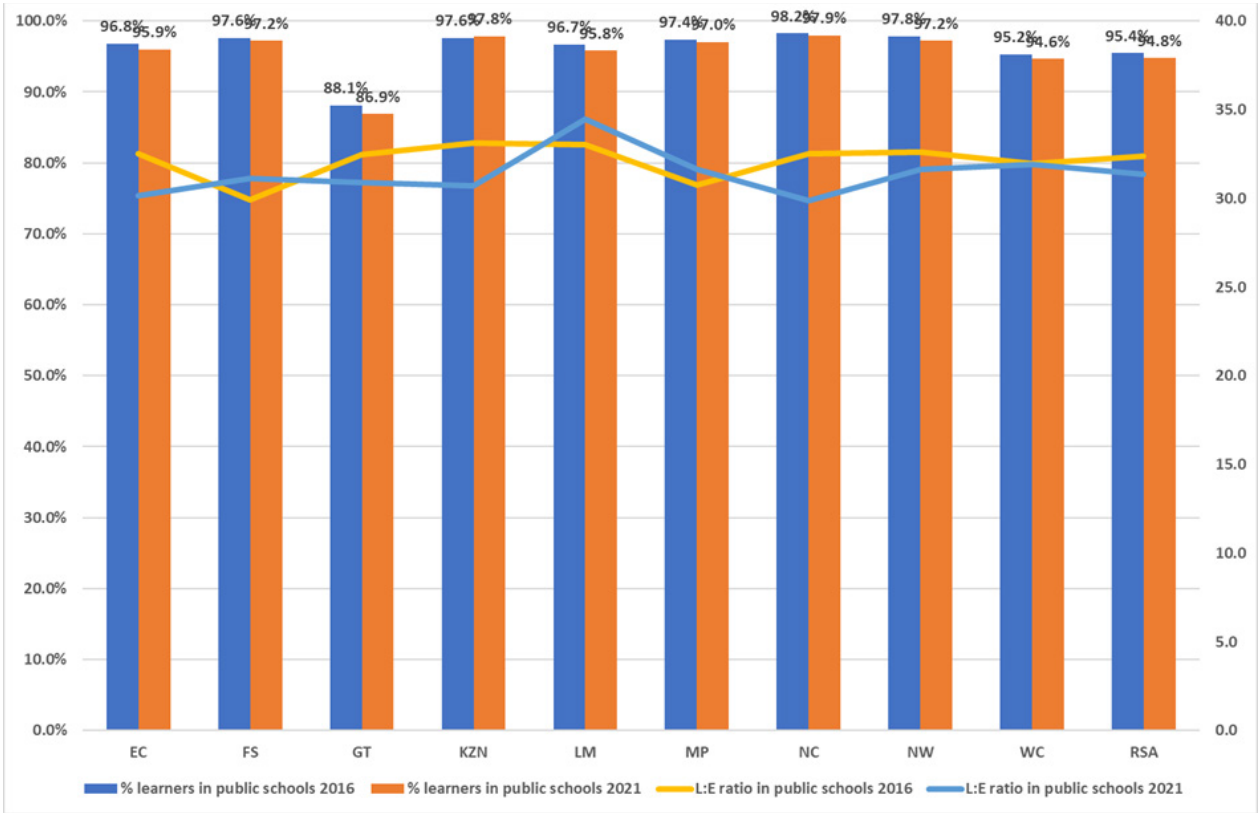
The learner-educator ratio

Nationally, the number of teachers has been declining since at least 2013 while enrolment increased with population growth.[14] In public primary schools the ratio increased by 1,5 percentage points between 2012 and 2016 and in secondary schools by 1,3 percentage points between 2010 and 2016. The ratio grew faster for the lower-quintile schools than for those in quintiles 4 and 5.

The education component of the provincial equitable share is based on (a) the size of the school-age population in the province; and (b) school enrolments (both public and independent) for the previous year. However, because provincial education departments do not employ any teachers in independent schools, the salary burden of a particular province is dependent on the number of learners (and thus teachers required) in the public school sector. This means that provinces with a larger percentage of learners in independent schools will receive relatively more per public school learner than provinces with few learners in independent schools.

The share of ordinary school learners who are attending public rather than independent schools decreased over the period 2016-21 in all provinces except KwaZulu-Natal (Figure 5). The share is much lower for Gauteng than for all other provinces. In budget terms, this means that the budget burden is lower for Gauteng as wealthier independent schools receive no subsidy and independent schools serving poorer communities receive less than their public equivalents.

Figure 5: Share of learners and learner: educator ratios by province, 2016 and 2021



Source: Own calculations based on data from Department of Basic Education. School Realities, 2016 and 2021

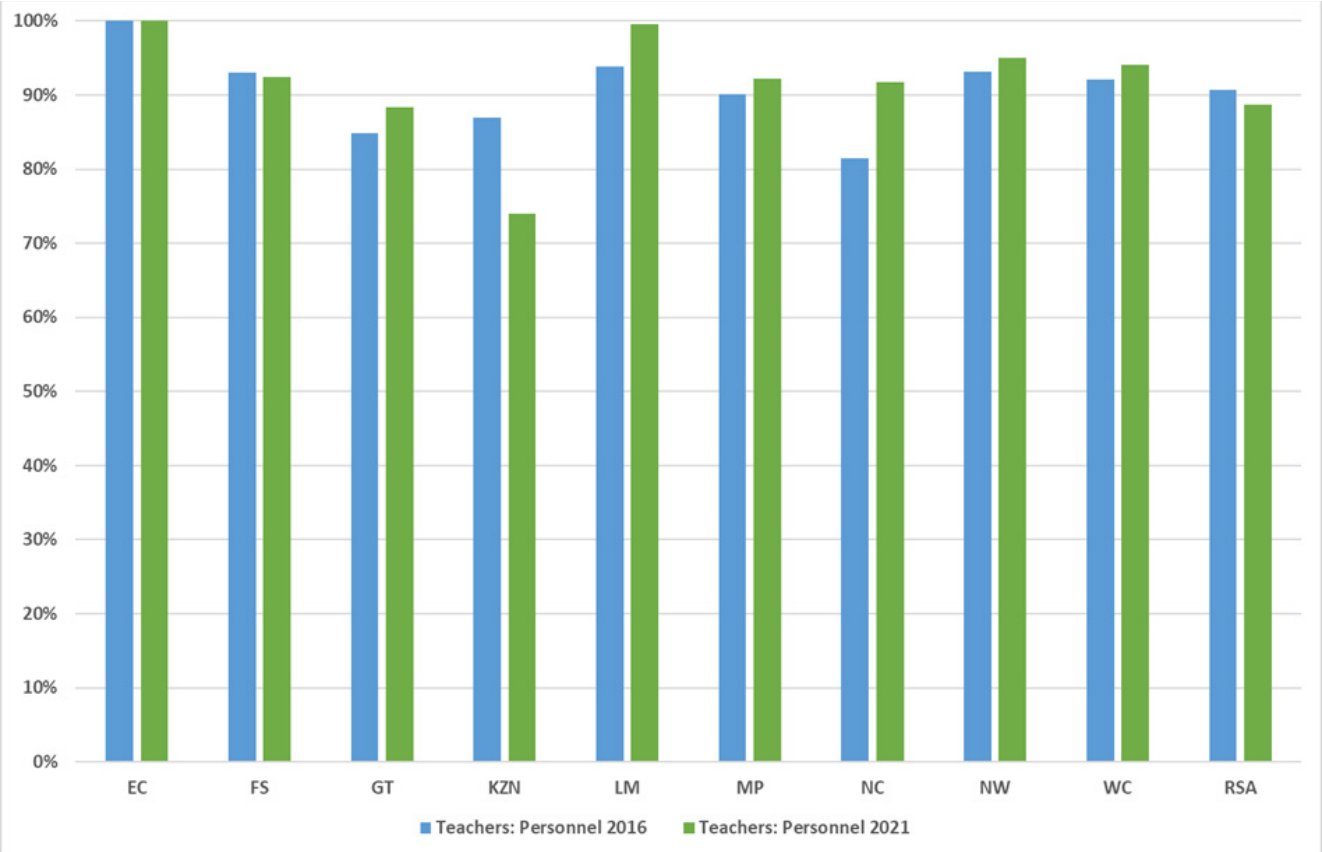
[14] Gustaffson M. October 2017. Personnel spending pressures: Hiring and promotion cuts with enrolment growth.

Nationally, education has a (soft) norm of 85:15 as the ratio for teachers: public service employees. On average, educators earn more than the public service employees, so a higher ratio of teachers to other employees tends to increase the budget that a province requires. Quality education comes at a cost!

The published provincial budgets do not distinguish between the budgets for teachers and those for other staff. However, the difference between the teacher count published in "School Realities" and the staff count for the public schools budget programme should reflect administrators based in head and district offices as well, perhaps, as teachers not based in schools. The "School Realities" number for public schools should be less than the number of staff reflected in the budget programme.[15]

For South Africa as a whole the ratio of teachers to all staff falls slightly between 2016 and 2021 (Figure 6). This suggests some recognition of the importance of teachers for education outcomes. However, the very large decrease in KwaZulu-Natal appears to have skewed the country-wide pattern as the majority of provinces show small increases.[16]

Figure 6: Number of teachers in "School Realities" as percentage of personnel in public school budget, 2016 and 2019



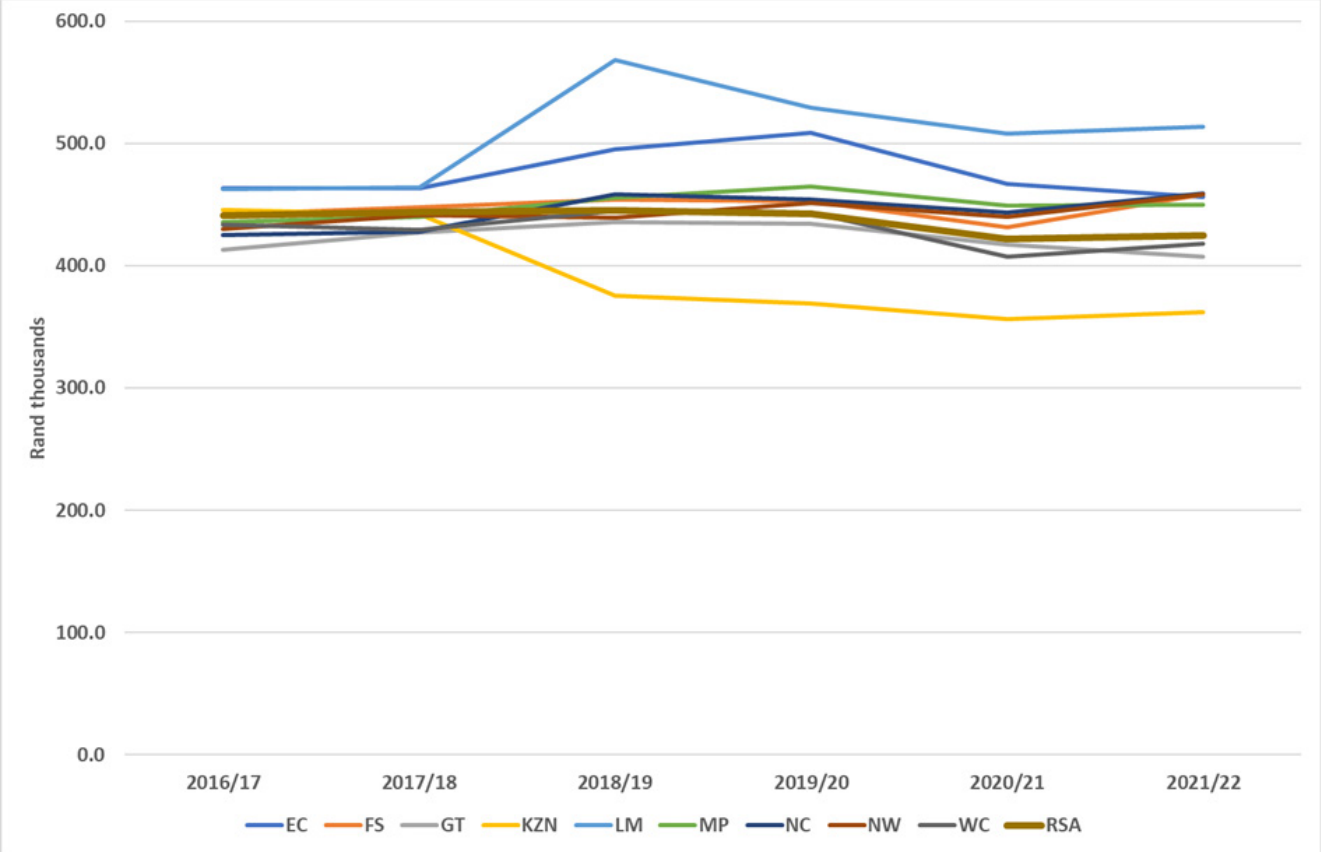
Source: Own calculations based on data from Source: Department of Basic Education. School Realities, 2016 and 2019, and National Treasury consolidated spreadsheets of provincial education budgets.

[15] It is not clear if the "School Realities" includes teachers employed by school governing bodies.
[16] Eastern Cape seems to have more teachers than total staff in both 2016 and 2019. It seems that one or both of the sources for this province's numbers are incorrect.

In the absence of teacher-specific budget allocations, we use the overall compensation of employees budgets and the overall staff numbers for the public school programme to look at trends in total compensation.

By FY2021 the mean salary for all provinces combined was marginally lower than in FY2016 after adjustments using the standard inflation rate. (The thicker brown line in Figure 7 shows the trend for the country as a whole.) Limpopo and Eastern Cape generally have higher than average salaries across the period. KwaZulu-Natal is similar to the other provinces in the first years, but in FY2018 shows a dramatic decrease which carries over into later years. This pattern is probably explained by the province's employment of (lower-paid) food handlers and data-capturers funded through an increase in the NSNP grant rather than additional teaching staff.

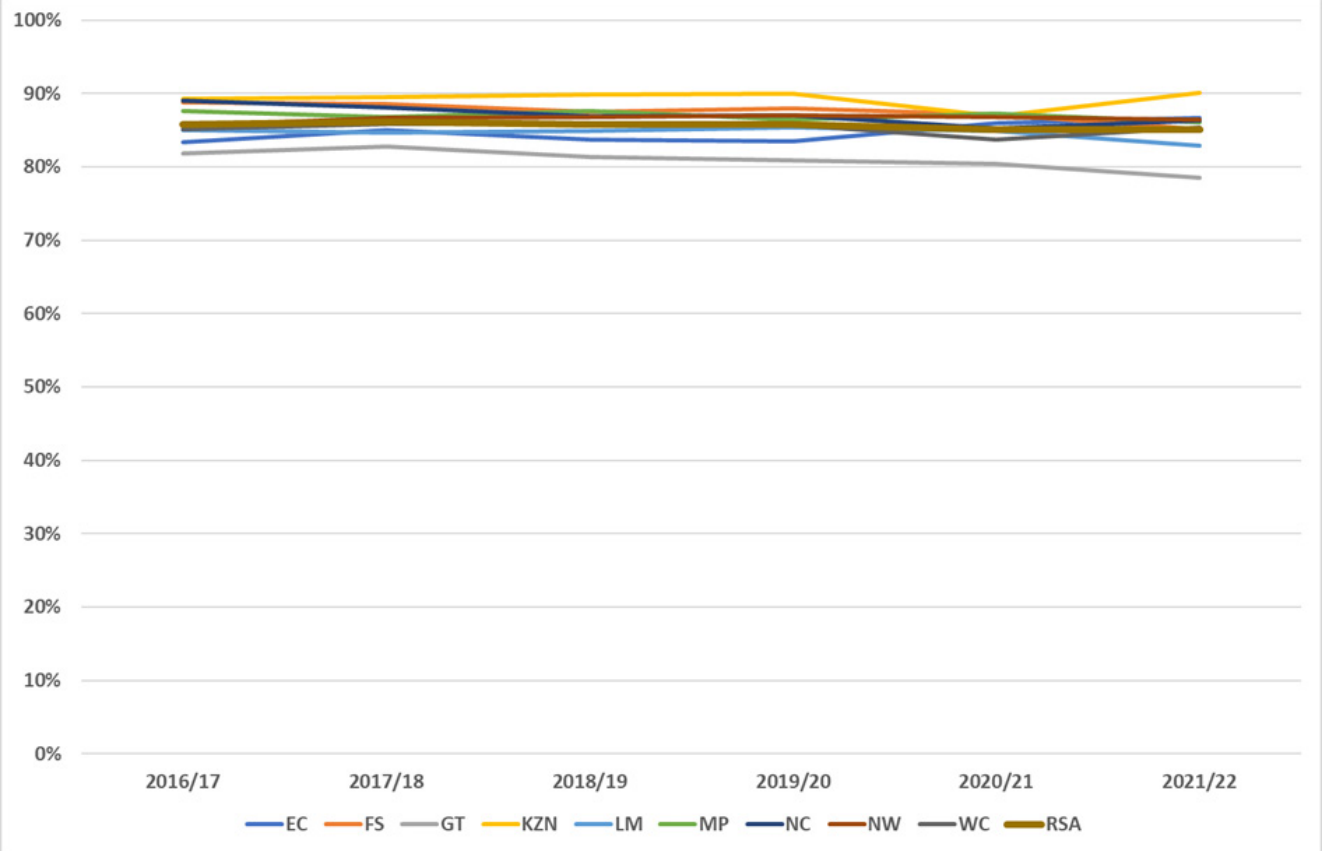
Figure 7: Mean real compensation per employee in public school budget programme, FY2016-FY2021



Source: Own calculation based on data from National Treasury spreadsheets of provincial education budgets FY2016-FY2021 and Statistics South Africa's historical CPI table.

All the provinces – except Gauteng in FY2021 – allocate more than 80 percent of the public ordinary schools programme budget to compensation of employees. The disparities between Gauteng and the other provinces increase over time.

Figure 8: Compensation of employees as a percentage of public ordinary schools budget by province, FY2016-FY2021



Source: Own calculation based on data from National Treasury spreadsheets of provincial education budgets FY2016-FY2021

Adjustments based on the sector-specific Basic Education Price Index[17] suggest that total spending on education increased by only 3 percent over the period 2009-2018 in terms of purchasing power. Because learner numbers increased even faster, real spending per learner fell by 2,3 percent. More than 70 percent of the decrease in spending per learner was a result of the salary increases.

Provincial education departments responded to the increased costs through formal or informal hiring freezes. Principals, deputy principals and heads of department were the most likely to be affected because these staff members tend to have higher salaries. For example, a head of department earns, on average, 35 percent more than an ordinary teacher, while principals and deputy principals earn even more. Some provinces were affected more than others. Thus, the percentage of Limpopo schools without a principal more than doubled, from 11 percent in 2012 to 23 percent in 2018. In Gauteng and Western Cape fewer than 1 percent of schools did not have a principal.

Principals, deputy principals and heads of department tend to spend less time teaching than ordinary teachers. This should have reduced the impact on teaching. Nevertheless, class sizes increased over the period.

Aggregate and average provincial estimates do not reveal how funding and teachers are distributed across schools. Analysis of school-specific Western Cape allocations for staff found that in FY2014, the mean amount per learner in quintile 2 schools was 94 percent of the overall mean amount, and 104 percent for quintile 5. The actual range is larger than ten percentage points as most quintile 5 schools have additional teachers (and thus expenditure per learner) funded through fee and other revenue. The inequality in funding between schools reflects differences

[17] Spaull N, Lilenstein A & Carel D. 2020. The Race Between Teacher Wages and the Budget: The case of South Africa 2008-2018. Research on Socioeconomic Policy (RESEP). Stellenbosch University. Stellenbosch.

in both the number of learners per teacher and the average pay of teachers in the different quintiles.

In-service training of teachers

Information on the number and cost of teachers does not directly address the quality of teachers. Key advisors of the DBE[18] are of the opinion that qualifications of educators are far more important for quality education than years of experience (which the pay progression increment rewards). Qualifications are also seen are more important than learner: educator ratios. A large number of poorly capacitated teachers will not provide quality education in a context where research has revealed serious deficits in teachers' knowledge and competence.

Upgrading of teacher competence cannot rely only on the production of new teachers through the Funza Lushaka Scheme. Serious efforts are needed in respect of in-service training for the much larger numbers of existing teachers, with extra attention paid to teachers in rural areas.

There are four performance indicators for the South African Council for Educators (SACE), which falls under and receives funding from the DBE.[19] Only one of these relates (weakly) to quality, namely the "number of educators oriented and signed up on the continuing professional teacher development system per year." The DBE's FY2016 budget vote records that the Council would receive R9,3 million and R9,8 million respectively in this and the following year for the continuing professional teacher development system. This funding, which came from donors, would not continue into later years.

More recently, the Auditor-General found material misstatements in the performance information in respect of professional development in SACE's FY2021 annual financial report.[20]

More and better teachers

National Treasury's budget vote for FY2016 notes that the South African Schools Act aims to ensure that "all learners have the right of access to quality education without discrimination." At present a large number of South African children do not enjoy this right.

The Non-Personnel and Non-Capital (NPNC) subsidy alone, at less than 10 percent of the provincial education budget, will not achieve meaningful improvements in the quality of teaching at the majority of schools where performance is poor. The budget for quality teachers, who are key to improving education outcomes, also needs to favour the poorer schools. These learners arguably need more, and more qualified, teachers than those serving children from better-off households.

For effective teaching to occur sufficient teachers need to be present at school, use the available time for academic purposes and convey enthusiasm about learning to their children (i.e., they must be motivated) and have sufficient subject knowledge and pedagogical knowledge (i.e., they must be capable).

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[18] Crouch L & Mabogoane T. 1998. 'No Magic Bullets, Just Tracer Bullets: The Role of Learning Resources, Social Advantage and Education Management in Improving the Performance of South African Schools'.
[19] The allocation for 2021/22 was just under R18 million.
[20] South African Council of Educators. October 2022. Presentation to Education Portfolio Committee.

Research using Western Cape expenditure data for FY2016 went beyond the published data to arrive at a more comprehensive picture of the amounts allocated by government to individual schools.[21] In particular, it included consideration of expenditure on teachers, learner subsidies and capital in addition to the NPNC.[22] The overall conclusion was that schools in Quintiles 2-4 were relatively under-resourced compared to quintiles 1 and 5. With only a small number of learners in quintile 1 schools in the Western Cape, overall government funding was regressive. The inequities increased when non-government funding – especially fees – was included.

Analysis of the FY2022 budget documents reveals further planned decreases in the real value of the budget allocated for education at national and provincial level.[23] The extra R24,6 billion allocated in 2022/23 to assist provinces meet their education costs will, as in the past, likely be spent mainly on teacher pay. Meanwhile spending on textbooks and teacher training – the two key interventions highlighted by the empirical evidence – fall.

Funds have been allocated for a large number of teaching assistants. This forms an important part of the temporary Presidential Employment Initiative in the wake of COVID-19. The assistants must have a Grade 12 qualification. The impact of this intervention on quality may be limited to the extent that it is the quality of teaching rather than number of teachers that makes the real difference.

Poor performance remains a serious problem for the majority of poor schools in South Africa. Budgets can assist in addressing this only if redistribution extends beyond the NPNC school allocations. In particular, the formula for the education component of the equitable share needs to be adjusted in line with the provincial quintile distribution of learners, and poorer schools should be favoured in terms of the teacher compensation budget, so that these schools have both a larger number of teachers, and teachers who teach effectively.

Funza Lushaka bursaries

The Funza Lushaka bursaries are specifically for teacher training in respect of "priority subjects" such as mathematics and science. The national DBE channels the funding for these bursaries[24] through the National Student Financial Aid Scheme.

The national DBE vote of FY2016 refers to the plan to increase the number of qualified teachers aged 30 and below recruited into the public service from 8 000 in FY2014 to 10 800 in FY2018. The stated intention then was to award 39 000 Funza Lushaka bursaries over the three years of the MTEF.

The increase in the number of bursaries was facilitated by President's Zuma proclamation that fees would not increase in the year following the first FeesMustFall protests. A larger number of bursaries could therefore be funded without increasing the budget amount.

The allocation for Funza Lushaka has increased each year in nominal terms (See Table 3). However, the increase dropped to 1,3 percent – well below inflation – in FY2021. Since FY2017, the number of bursaries has generally been on a downward trend. In FY2021, it was well below the 12 500 predicted a few years before.

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[21] DG Murray Trust. 2017. Expenditure 2016/17. Are allocations efficient for improving outcomes? What is the evidence that spending is pro-poor? Commissioned by DGMT for the Western Cape Department of Education.
[22] Expenditure on the NSNP was, however, excluded as WCED's data does not allow this disaggregation. Most of the expenditure on learner transport was also excluded.
[23] Sachs M, Ewinyu AK & Shedi O. 2022. Spending choices in budget 2022. SCIS Working Paper Series Number 30. Southern Centre for Inequality Studies, Wits University.
[24] It also, it seems, provides an additional amount for NSFAS's administration costs.

Table 3. Budget and beneficiary numbers for Funza Lushaka, FY2016-FY2021

National budget – DBE	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021
NSFAS transfer (Rm)	1043.6	1095.8	1159.3	1224.3	1291.6	1308.0
Number of bursaries awarded	14343	15134	13070	12954	13085	11500
Average per bursary (R000)	72.760	72.407	88.699	94.511	98.708	113.739
% change nominal average bursary		-0.5%	22.5%	6.6%	4.4%	15.2%
% change in real average bursary		-6.3%	18.1%	1.9%	0.3%	11.6%

The DBE website[25] attributes decreases in the numbers funded to "the general increase in university costs." However, universities usually set fee increases in line with the relatively low rates recommended by the Minister of Higher Education every year since "FeesMustFall." This suggests that it is some other, non-fee, element of "university costs" that has increased.

Bursaries for prospective teachers can enhance the quality of education in terms of both the number and quality of educators. However, both older and newer teachers who themselves received poor quality education when at school are unlikely to deliver quality education.

Learning & teaching study material interventions

The systematic review describes these interventions as including development and provision of textbooks, workbooks, study guides, lesson plans, science-kits, computers, multi-media accessories, educational toys, and reading books, among others. Research in South Africa has confirmed that LTSM – even something as simple as having one's own textbook – can improve learner performance at both the primary and secondary levels.[26]

LTSM form part of the non-personnel non-capital (NPNC) costs, alongside costs such as electricity and other utilities. Above-inflation increases in teacher salaries and utilities such as electricity introduce the threat that LTSM will be "squeezed out". This is especially the case where the overall budget envelope is constrained.

Attempts to protect and increase LTSM expenditure are complicated by the diverse ways in which the different school costs are covered. The provincial government pays salaries directly to teachers. In contrast, NPNC costs are sometimes channelled through the schools' own budgets and sometimes paid directly by government. In addition, national DBE covers some LTSM expenditures in its own budget.

Box 3: How are public ordinary schools' costs covered?

There are three broad categories of expenditure at school level:

Personnel costs – for both educators and non-educators – are paid directly to the employee concerned by the provincial government, except where schools have sufficient own revenue from fees or other sources to hire additional staff.

Non-personnel recurrent costs are covered by schools and/or the provincial government. Schools that comply in part or in full with section 21 of the South African Schools Act receive a direct NPNC transfer from government. They manage the funds themselves. For other schools, the funds

[25] https://www.gov.za/about-government/government-programmes/funza-lushaka-bursary-programme
[26] See, for example, Van der Berg S. 2008. 'How Effective Are Poor Schools? Poverty and Educational Outcomes in South Africa', Studies in Educational Evaluation 34: 145–154, and Pellicer M & Piraino P. 2015. 'The effect of non-personnel resources on educational outcomes: Evidence from South Africa.' A Southern Africa Labour and Development Research Unit Working Paper Number 144. Cape Town: SALDRU, University of Cape Town.

are not handed over to the school but instead managed by the province. Schools that receive direct transfers from their provincial education department can also ask that government manage part of their NPNC funding so that they can benefit from the lower prices suppliers give government.

Capital, or infrastructure, costs are covered primarily through conditional grants. These funds are usually managed by the PDE (direct grant) or DBE (indirect grant) where intermediaries are used to implement the national conditional grant.

National Norms and Standards for School Funding

Chapter 4 of the South African Schools Act of 1998 states that funding for public schools should favour the poorest schools. The gazetted National Norms and Standards for School Funding (NNSF) of the same year came into effect in January 2000. The NNSF provided that 60 percent of the available resources go to schools serving the poorest 40 percent of learners. The NPNC allocations for learners in the bottom quintile were to be seven times larger than those in the top quintile.[27]

The policy became increasingly progressive in respect of NPNC funding. The shift to nationally- rather than provincially-calculated quintiles resulted in allocations in quintile 1 becoming 2.3 times more equal across provinces in 2006 than in 2002.

In 2007, government introduced a no-fee policy for schools in the bottom two quintiles. The measure was later extended to quintile 3 schools. Meanwhile, NPNC allocations to schools almost doubled between 2002 and 2008 for the nine provinces combined.

Today schools in the bottom three quintiles all receive the same allocation, while schools in quintiles four and five receive increasingly smaller amounts. The impact of this progressivity is limited because this category accounts for less than 10 percent of school expenditure. Meanwhile many schools in quintiles 4 and 5 charge fees far higher than the difference between their subsidy and that of no-fee schools. These fees can be used, among others, to supplement both materials and staffing. The tax breaks wealthier parents receive on donations to their children's school are a further implicit subsidy.

The use of nationally-calculated quintiles places a greater financial burden on the poorer provinces. The 2021 regulations show Western Cape has only 40 percent of its learners in quintiles 1 to 3, and Gauteng only 47 percent. In contrast, Limpopo has 77 percent.

Calculations based on the national ordinary schools databases[28] show even greater disparities than those published in the regulations.[29] The calculations suggests that 96 percent of learners in Limpopo attend schools in quintiles 1-3, and 92 percent in Eastern Cape. For the country as a whole, 73 percent of public school learners are in schools in quintiles 1-3.

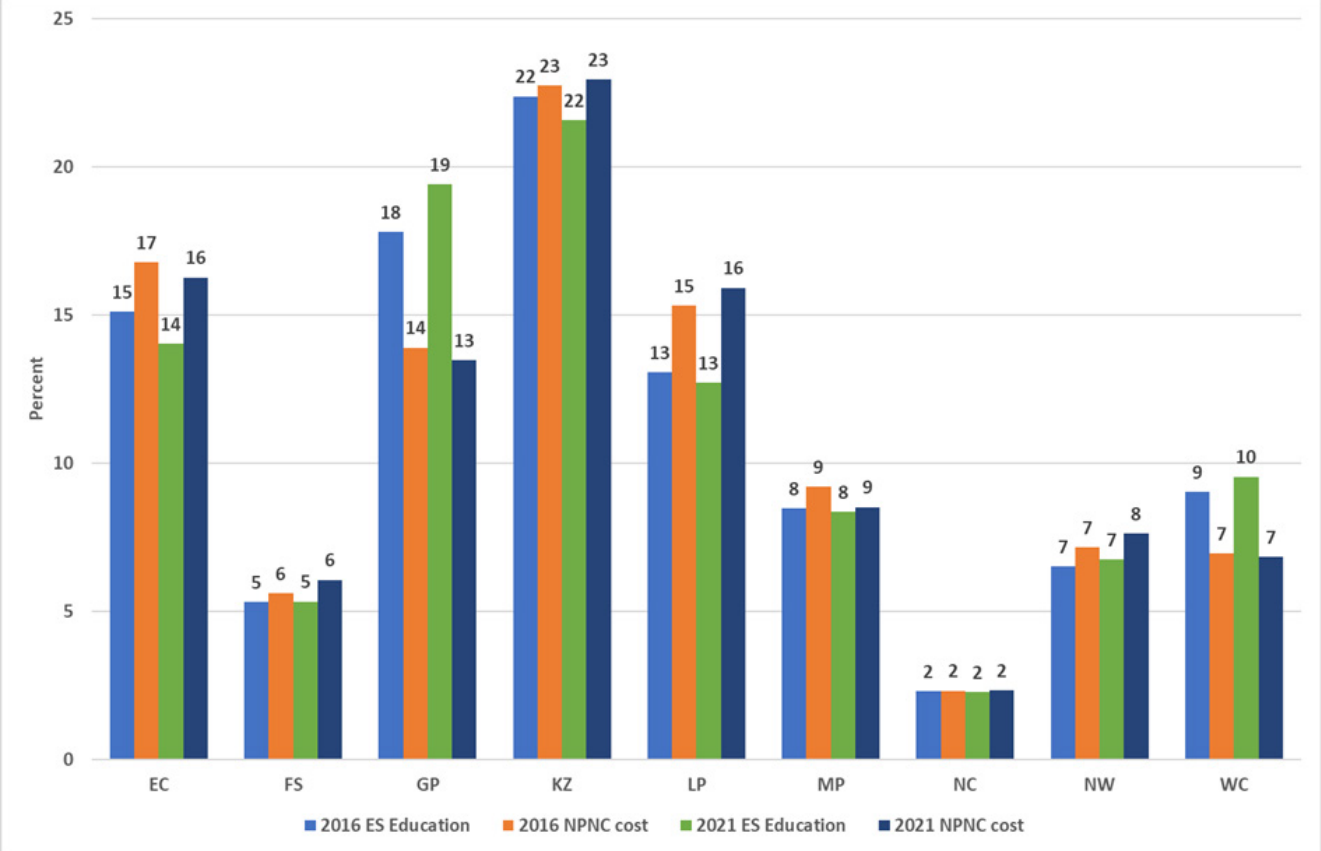
The relative financial burden placed on the poorer provinces is further increased by the wealthier provinces having a higher share of learners in elite private schools that do not receive any funding from government. The absence of any weighting for either quintile or the public: private ratio in the education component of the equitable share means that the poorer provinces incur a higher relative financial burden per learner, but do not receive more per learner in their equitable share. In contrast, the formula for the health component includes a poverty-related weighting based on coverage by medical aid.[30]

Figure 9 compares the provincial distribution of the education component of the equitable share for 2016 and 2021 with the total estimated cost of the NPNC subsidies calculated using the quintile distribution in the school databases. Five provinces appear to receive their expected share of the education component funding. In contrast, Gauteng and Western Cape receive more than their expected share while Eastern Cape and Limpopo receive noticeably less. The disparities between the expected and actual shares are in most cases larger in 2021 than in 2016.

[27] Wildeman RA. 2008. Reviewing Eight Years of the Implementation of the School Funding Norms, 2000 to 2008. Institute for Democracy in South Africa, Pretoria for discussion of the early years of this policy.
[28] Available on the DBE website

[29] The databases do not have quintile information for all public ordinary schools. However, the number of schools with missing information is small, and the fact that the schools with missing information are spread across the provinces limits the possibility of bias in the inter-provincial patterns.
[30] The education component of the equitable share is calculated on the basis of (a) the number of learners in both public and independent schools and (b) the population aged 5-17 in the province. The calculation does not factor in the quintile distribution. The separate poverty component, at only 3% of the total equitable share, is meant to compensate for the extra burden in other sectors, including welfare services.

Figure 9: Percentage distribution of education component of equitable share and cost of NPNC subsidies, 2016 and 2021

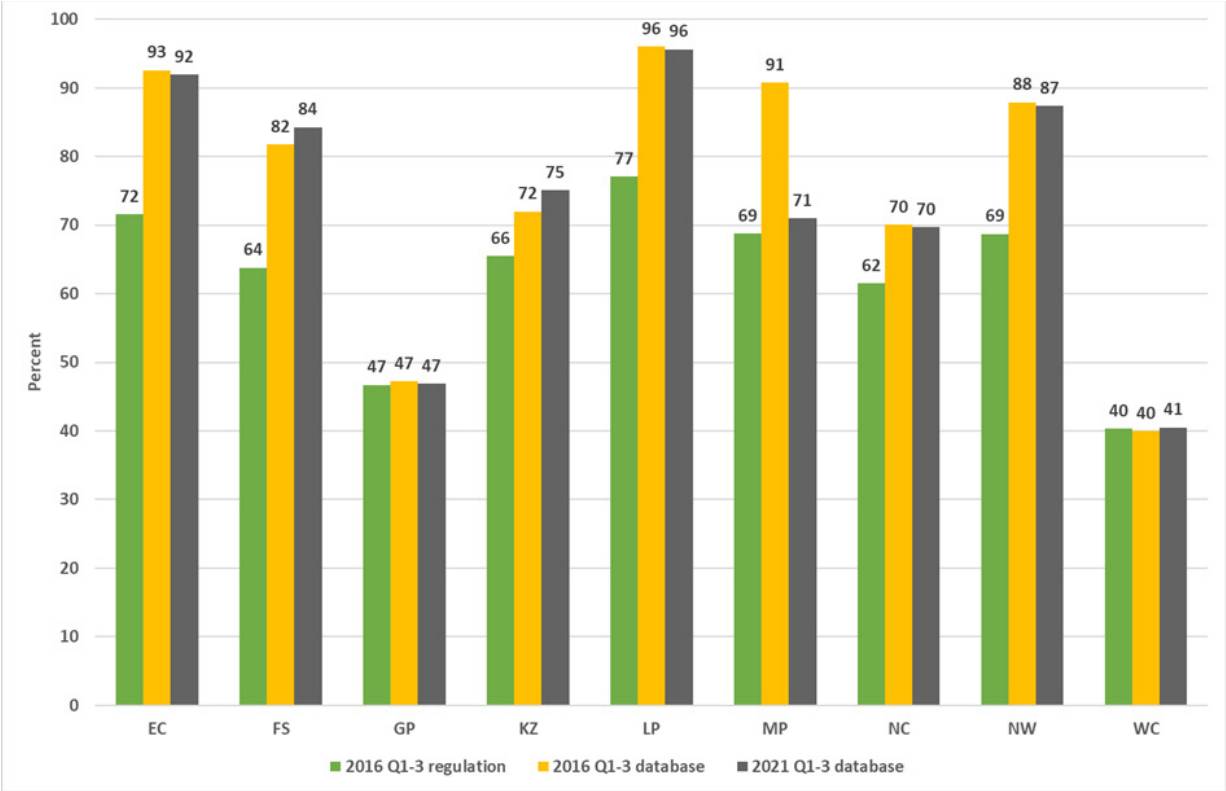


Source: Own calculations using data from National Ordinary Schools databases for 2016 and 2021 and National Treasury consolidated spreadsheet of provincial budgets 2016 and 2021.

Figure 10 compares the provincial share of public ordinary school learners in quintiles 1-3 recorded in the school databases with the percentages in the norms and standards regulation circular (See Figure 10). There is a close match only for Gauteng and Western Cape. For Eastern Cape, Free State, Limpopo and North-West, the share reflected in the schools databases is more than fifteen percentage points higher than in the circular. These provinces appear to carry a higher financial burden than officially recognised.[31]

[31] Mpumalanga's share changes radically between 2016 and 2021. The number of public ordinary schools in the province also decreases markedly from 1 730 to 1 665. The reason for this is not clear.

Figure 10: Percentage of public ordinary school learners in quintiles 1-3 compared to provincial distribution in terms of the National Norms and Standards for School Funding



Source: Own calculations using data from National Ordinary Schools databases for 2016 and 2021 and National Treasury consolidated spreadsheet of provincial budgets 2016 and 2021.

Gauteng and Western Cape – and perhaps some other provinces – have extended quintile 1 to 3 benefits to some schools in quintiles 4 and 5. These include the NSNP, learner transport and no-fee status, as well as higher-than-prescribed NPNC subsidies. Provinces explain that they do this because some of these schools previously, during apartheid, received similar government support. This practice reduces the amount of funds available for poorer schools. It also dilutes the already limited impact on overall equity of the differentiated NPNC subsidy.

The quintile 1 NPNC amount per learner is, in real terms, lower in 2021 (at R1 525) than in 2007 (R1 608). [32]

Other LTSM initiatives

South Africa's SDG progress report notes that DBE-provided workbooks for Grade R to 9 learners aim to improve learner's literacy and numeracy and assist with tracking of learners' progress. The workbooks are issued free of charge. They form part of a "back to basics" approach that has been evident under the leadership of Minister of Basic Education Angie Motshekga, and which included the 2011 introduction of the Curriculum and Assessment Policy Statements (CAPS) in 2011 and Annual National Assessments (ANA) in Grades 1, 6 and 9.

DBE workbooks were first reflected in national budgets in 2014. The FY2016 vote of the national DBE reports that the department will print and distribute about 180 million workbooks over the three-year MTEF period. A budget of R3,2 billion is allocated for this purpose.

The focus on workbooks has continued through to FY2021 and beyond. However, while the nominal amount allocated for LTSM in the DBE budget has increased in most years, when adjusted for inflation the trend is downward except for FY2021 (See Table 4).

[32] The nominal values are R738 and R1 466 respectively. See Crouch L & Mabogoane T. (1998). 'When the Residuals Matter More than the Coefficients: An Educational Perspective.' Journal of Studies in Economics and Econometrics, 22(2): 1-13 for earlier amounts.
[33] Statistics South Africa. 2019. Sustainable Development Goals Country Report. Pretoria Statistics South Africa. 2019. Sustainable Development Goals Country Report. Pretoria.

Table 4. DBE allocations for LTSM in nominal and real terms, FY2016-FY2021

	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021/
Nominal	981.5	1018.5	1056.3	1044.4	1024.8	1276.2
Real (adjusted for inflation)	1264.8	1236.0	1235.4	1168.2	1100.8	1328.0

Takeaways

- Adjustments based on the sector-specific Basic Education Price Index suggest that total spending on education increased by only 3 percent over the period 2009-2018 in terms of purchasing power. Real spending per learner fell by 2,3 percent, with more than 70 percent of the decrease in spending per learner resulting from salary increases.

- School salaries account for an estimated 3.5 percent of South Africa's gross domestic product (GDP). This is comparable to the country's spending on child grants as a percentage of GDP.

- In the late 2000s DBE tried to introduce a system in which quality teaching would be rewarded through an increase in the pay of the teacher concerned. After objections from the unions, the additional funding allocated for this purpose was used instead to fund three-yearly increments based on years of service.

- Nationally, the number of teachers has been declining since at least 2013 while enrolment increased with population growth. The learner-teacher ratio has grown faster for the lower-quintile schools than for those in quintiles 4 and 5. Class sizes have also increased.

- The absence of any public/private weighting in the formula for the education component of the provincial equitable results in a situation where the wealthier provinces receive more for each public school learner than provinces with few learners in independent schools. The absence of a quintile weighting further increases the relative funds available to wealthier provinces to subsidise learners in no-fee schools.

- The personnel budgets for schools serving poorer learners tend to be lower than those for higher-quintile schools because of both higher learner: teacher ratios and lower-qualified, and thus lower-paid, teachers.

- Upgrading of teacher competence cannot rely only on the production of new teachers through the Funza Lushaka Scheme. Serious efforts are needed in respect of in-service training for the much larger numbers of existing teachers.

- The Non-Personnel and Non-Capital (NPNC) subsidy alone, at less than 10 percent of the provincial education budget, will not achieve meaningful improvements in the quality of teaching at the majority of schools where performance is poor. The budget for quality teachers also needs to favour the poorer schools.

- The quintile 1 NPNC amount per learner was, in real terms, lower in 2021 (at R1 525) than in 2007 (R1 608).

- While the nominal amount allocated for LTSM in the DBE budget has increased in most years, when adjusted for inflation the trend is downward except for FY2021.

References

Besharati NA, Brahm F & Tsotsotso K. 2021. "Chapter 2: Interventions to improve learner achievement in South Africa: A systematic meta-analysis" in Maringe F (ed). Systematic Reviews of Research in Basic Education in South Africa. Stellenbosch: African Sun Media.

Bhorat H & Oosthuizen M. 2008. 'Determinants of Grade 12 Pass Rates in the Post-Apartheid South African Schooling System.' Journal of African Economies 18(4): 634-666.

Crouch L & Mabogoane T. 1998a. 'No Magic Bullets, Just Tracer Bullets: The Role of Learning Resources, Social Advantage and Education Management in Improving the Performance of South African Schools' (unpublished article).

Crouch L & Mabogoane T. 1998b. 'When the Residuals Matter More than the Coefficients: An Educational Perspective.' Journal of Studies in Economics and Econometrics, 22(2): 1-13

Department of Basic Education. 2013. General Education System Qualify Assessment: Country Report South Africa. Pretoria. Department of Performance Monitoring and Evaluation. 2021. Final Revised [mid-2021] Medium Term Strategic Framework 2019-2024. Pretoria.

DG Murray Trust. 2017. Expenditure 2016/17. Are allocations efficient for improving outcomes? What is the evidence that spending is pro-poor? Commissioned by DGMT for the Western Cape Department of Education.

Fiske EB & Ladd HF. 2005. Elusive equity: education reform in post-apartheid South Africa. Brookings Institute: Washington.

Gustaffson M. October 2017. Personnel spending pressures: Hiring and promotion cuts with enrolment growth (personal communication with author).

Maringe F (ed). Systematic Reviews of Research in Basic Education in South Africa. Stellenbosch: African Sun Media

Maringe F & Chiramba O. 2021. "Chapter 1: Systematic reviews in basic education in South Africa: The gold standard of evidence for educational decision-making" in Maringe F (ed). Systematic Reviews of Research in Basic Education in South Africa. Stellenbosch: African Sun Media.

Pellicer M & Piraino P. (2015). 'The effect of non-personnel resources on educational outcomes: Evidence from South Africa.' A Southern Africa Labour and Development Research Unit Working Paper Number 144. Cape Town: SALDRU, University of Cape Town.

Sachs M, Ewinyu AK & Shedi O. 2022. Spending choices in budget 2022. SCIS Working Paper Series Number 30. Southern Centre for Inequality Studies, Wits University.

Spaull N, Lilenstein A & Carel, D. 2020. The Race Between Teacher Wages and the Budget: The case of South Africa 2008-2018. Research on Socioeconomic Policy (RESEP). Stellenbosch University. Stellenbosch.

Statistics South Africa. 2019. Sustainable Development Goals Country Report. Pretoria.

UNICEF. 2021. Basic Education: Budget Brief 2021. Pretoria.

Van der Berg S. 2008. 'How Effective Are Poor Schools? Poverty and Educational Outcomes in South Africa', Studies in Educational Evaluation 34: 145–154.

Wildeman RA. 2008. Reviewing Eight Years of the Implementation of the School Funding Norms, 2000 to 2008. Institute for Democracy in South Africa, Pretoria.

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