Strengthening South Africa's Teacher Workforce of Tomorrow:

Insights & Recommendations from the Teacher Demographic Dividend Project (2022–2024)

A synthesis report

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Table of Contents

List of figures

List of tables

List of abbreviations and acronyms

BEd	Bachelor of Education
CAO	Central Applications Office
CHE	Council on Higher Education
DBE	Department of Basic Education
DHET	Department of Higher Education and Training
ECD	early childhood development
FP	Foundation Phase
HEI	higher education institution
IP	Intermediate Phase
HSRC	Human Sciences Research Council
ITE	initial teacher education
MRTEQ	Minimum Requirements for Teacher Education Policy Qualifications
NGO	non-governmental organisation
NSFAS	National Student Financial Aid Scheme
PED	provincial education department
PGCE	Postgraduate Certificate in Education
RESEP	Research on Socio-Economic Policy
SGB	school governing body
SMT	school management team
TALIS	Teaching and Learning International Survey
TDD	Teacher Demographic Dividend
TP	teaching practice
TVET	technical and vocational education and training

Executive summary

Introduction and context

The Teacher Demographic Dividend (TDD) research project (2022–2024) set out to examine the challenges and opportunities presented by the ageing workforce in South Africa's education system. At the time of project development, nearly half of government-employed teachers were aged 50 years or older, which meant the country is facing an impending wave of teacher retirements in the next few years. Initially, researchers hypothesised that these retirements would lead to significant cost savings. However, as the project evolved, a more nuanced understanding of teacher shortages, supply and financing emerged.

The study explored teacher training, recruitment, retention, and financing, informing policy recommendations to ensure the education system remains sustainable and effective. This synthesis report consolidates the findings from extensive research, policy engagement, and stakeholder discussions.

Key findings

1. Teacher shortages and workforce planning

Early projections anticipated a critical shortfall of teachers by 2030, requiring universities to double their output of education graduates to collectively produce 50 000 new teachers per year. However, new modeling suggests that **33 000** new teachers per year will be needed to maintain current learner-educator ratios – a target that can be achieved without major difficulties. That said, teacher supply remains uneven, with an oversupply of secondary school teachers and a shortage of primary school educators, particularly those specialising in African languages and numeracy.

2. Class sizes and resource constraints

The South African education system is characterised by large class sizes, particularly in underprivileged schools. National guidelines recommend no more than 35 learners per Grade 3 classroom; yet, in 2017, the average Grade 3 class size was 41 learners. Nearly 70% of learners were in overcrowded classrooms, exacerbating disparities between wealthier and poorer schools. Efficient teacher allocation and better recruitment strategies could help address these issues.

3. Recruitment and retention challenges

- **Is teaching an aspirational career?** Fewer than half of interviewed teachers entered the profession as their first choice. Many were drawn by job security rather than a passion for teaching. Despite this, teacher training programmes remain in high demand, with institutions receiving more applications than they can accept. However, entry standards vary widely, contributing to academic under-preparedness among some graduates.

- **Placement issues**: The recruitment process for teachers has drifted away from policy guidelines. Instead of open competition, many appointments are made from priority lists, limiting schools' ability to hire the best candidates.
- **Job satisfaction and workplace stress**: Many teachers feel unsupported in managing discipline, curriculum changes, and heavy workloads. However, teachers in underprivileged schools reported job satisfaction from helping disadvantaged learners, whereas those in wealthier schools felt pressured by high expectations from parents and principals.
- **Attrition**: About 50% of teachers surveyed indicated an intention to leave the profession within the next decade, citing administrative overload and poor working conditions as their primary concerns.

4. Education financing and efficiency

Despite real increases in per-learner expenditure until 2019/20, budget pressures and rising salaries have strained resources. Some provinces have announced reductions in teaching posts, learner transport, and early childhood education funding. Although South Africa spends more on education than many peer nations, learner performance lags, highlighting inefficiencies in fund allocation.

5. Systemic mismatches in teacher supply and demand

- **Geographic and subject-specific gaps**: Rural and no-fee schools struggle to attract qualified teachers, particularly in African languages and technical subjects.
- **Promotion and leadership imbalances**: Women remain underrepresented in school leadership roles, with cultural and systemic barriers limiting their access to principal and deputy principal positions.
- **Recruitment and induction weaknesses**: There is no centralised database tracking unemployed teachers' qualifications and subject specialisations, making it difficult to match teachers to schools' needs.

Recommendations

Based on these findings, the report outlines several key policy actions:

1. Better manage teacher supply and training

- Strengthen coordination between the Department of Higher Education and Training (DHET), universities, and the Department of Basic Education (DBE) to align teacher graduate output with actual workforce needs.
- Improve entry selection for teacher training programmes to ensure candidates have both academic and personal suitability for teaching.
- Revise teacher education curricula to focus on literacy, numeracy and subject-specific pedagogy.
- Enhance teaching practice (TP) mentorship by partnering student teachers with experienced educators at carefully selected partner schools.

- Conduct national assessments of new graduates to evaluate the effectiveness of training programmes.
- The DHET should incentivise programmes to research and improve the quality of initial teacher education (ITE).
- Provide support to teacher educators to develop their knowledge and skills in key areas.

2. Improving teacher appointments and retention

- Consider reintroducing incentives for teachers willing to work in rural and hard-to-staff schools (e.g. housing and school fee subsidies).
- Reduce teachers' administrative burdens by expanding the teaching assistant programme so that assistants take care of non-instructional tasks.
- Provide structured mental health support for both teachers and learners.
- Equip teachers with remedial teaching strategies to address learning backlogs.
- Include classroom management training in teacher education programmes to help teachers maintain discipline and engagement.
- Empower principals to optimise teacher allocation within schools.

3. Systemic shifts needed to align teacher supply with teacher demand

- Reallocate spending to prioritise early-grade literacy and numeracy.
- Improve monitoring of class size disparities and teacher allocation at the provincial and school levels.
- Improve the completeness of data on teacher numbers, qualifications and subject specialisations.
- Implement deliberate and careful succession planning for promotion posts.
- Expand and refocus the human resource management section in each provincial education department's (PED) annual report.
- Improve communication and coordination between human resources and treasury personnel at a provincial level.
- Support female educators in applying for leadership positions and track gender parity.
- Return to the policy-mandated processes for teacher recruitment.

Conclusion: Realigning teacher supply and demand

The TDD project initially sought to determine whether demographic shifts would create significant financial savings in the education system. However, revised models indicate that, even though there will be minimal cost reductions, there is an opportunity to improve workforce planning, efficiency and educational outcomes.

Looking ahead, South Africa must integrate demographic forecasting into education planning to ensure that teacher supply aligns with demand. Addressing inefficiencies in recruitment, retention and financial allocation will be crucial for sustaining a high-quality education system. The research highlights that effective policymaking rooted in data-driven strategies can help turn demographic challenges into opportunities for educational renewal.

Introduction and project context

This report draws on the findings from several research reports written as part of the Teacher Demographic Dividend project (2022–2024). It provides a synthesis of the findings and interprets what the research collectively implies for both the basic and higher education systems. With the research project now completed, there is more clarity on the implications for teacher shortages, teacher supply and training, and the status of teaching as a career.

What is the Teacher Demographic Dividend research project?

The Teacher Demographic Dividend (TDD) project set out to understand the challenges and possible windows of opportunity created by a critical demographic fact: **Half of all government-employed teachers in South Africa are aged 50 years or older, which meant (at the time of the project's development) the country would face a wave of teacher retirements within the next few years**. The project name cited a potential dividend because it was initially assumed that large-scale retirements would bring significant cost savings to the fiscus, which could then be applied elsewhere. This argument was explicitly explored throughout the project and we reflect on this in the concluding section of this report.

In addition to the matter of potential cost savings, the TDD project examined the **data**, **challenges** and **opportunities** associated with South Africa's anticipated **wave of retiring teachers**, as well as the **entry of new teachers into the education system**. While replacing older teachers will be a tremendous challenge, it also offers the opportunity to renew the teaching workforce. The TDD researchers therefore investigated the inputs and mechanisms by which new teachers come into schools, which revealed issues relating to **teacher training, recruitment, placement, and retention**. During the project, the **financing of both teachers and the overall education system** – in particular the trade-offs and synergies between expenditure on different phases of education – also emerged as a critical issue.

Scope of the project

The project team comprised 28 researchers affiliated with various universities, research organisations, independent consultancies and the national Department of Basic Education (DBE). The TDD project was formally endorsed by the DBE and the Gauteng Department of Education and the project team worked closely with stakeholders in all provincial departments of education.

18
workshops

10
in-depth research reports

32
notes/policy briefs

Over the project period, the researchers, policymakers and civil society collaborators who were involved participated in 18 workshops (both national and provincial) and three large policy conferences and produced 10 in-depth research reports and 32 shorter policy briefs or research notes[1]. Additionally, four films capturing the key insights gained from the project were also produced. A full list of the

1. Including the nine provincial slide decks produced in 2023.

research reports, working papers, policy briefs, and research notes produced as part of this project is included in Appendix A. We also provide short descriptions of most of the stakeholder engagement activities undertaken as part of the project in Appendix B.

Table 1: Project deliverables over the project period (2022–2024)

	2022	2023	2024	Total
Workshops	3	12	3	**18**
Policy conferences	0	2	1	**3**
Research reports	4	4	2	**10**
Policy briefs/Research notes	11	10	11	**32**
Films (one main and three supporting shorter social media films)	0	0	4	**4**

Source: Authors' own.

Methodologies and data

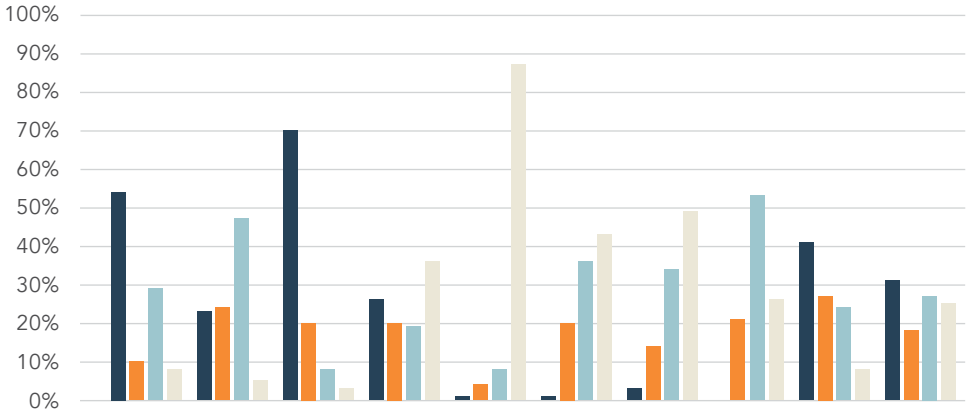
The TDD study relied on various publicly available, anonymised household and school surveys, as well as education-specific administrative data such as PERSAL (government payroll) data on all teachers employed. In addition, the following three data collection exercises were undertaken:

1. **Exploratory interviews with a small sample of teachers:** Kruger, Hompashe and Swelindawo[2] investigated teacher motivation and working conditions by conducting interviews with 27 primary school teachers and nine school principals in three provinces (the Eastern Cape, Gauteng and Limpopo). The small size of the sample means that the findings from this data must be seen as tentative. Nevertheless, the study generated interesting insights into the motivations, experience and recruitment of primary school teachers, which we explored further in a large mixed methods study.

2. **A mixed methods study combining a quantitative teacher survey and interviews with teachers from schools across all nine provinces in different geographic areas and with different school-fee levels:** A nationwide survey of 1 513 teachers was conducted by Hofmeyr, Pampallis, Qvist and Swelindawo,[3] with the goal of gaining a broad understanding of teacher motivation and job satisfaction across all nine provinces. The survey included teachers from both no-fee schools and a wide range of fee-paying schools, and from primary, combined and high schools (Figures 1 and 2). This allowed for comparisons of teacher motivation and job satisfaction across different types of schools. Telephonic interviews were subsequently conducted with 80 of the teachers.

2. John Kruger, Dumisani Hompashe and Lunga Swelindawo, *"An overall pattern of dissatisfaction"? Interviews with primary school teachers on motivation, experience and recruitment* (Research on Socio-Economic Policy (RESEP), 2024). https://tdd.sun.ac.za/downloads/I.-Kruger-Hompashe-&-Swelindawo-2024-An-overall-pattern-of-dissatisfaction.pdf
3. Heleen Hofmeyr, Irene Pampallis, Jess Qvist and Lunga Swelindawo, *Teacher preferences and job satisfaction in South Africa* (Research on Socio-Economic Policy (RESEP), 2024). https://tdd.sun.ac.za/downloads/Hofmeyr-et-al_TDD-Survey_Teacher-preferences-and-job-satisfaction.pdf

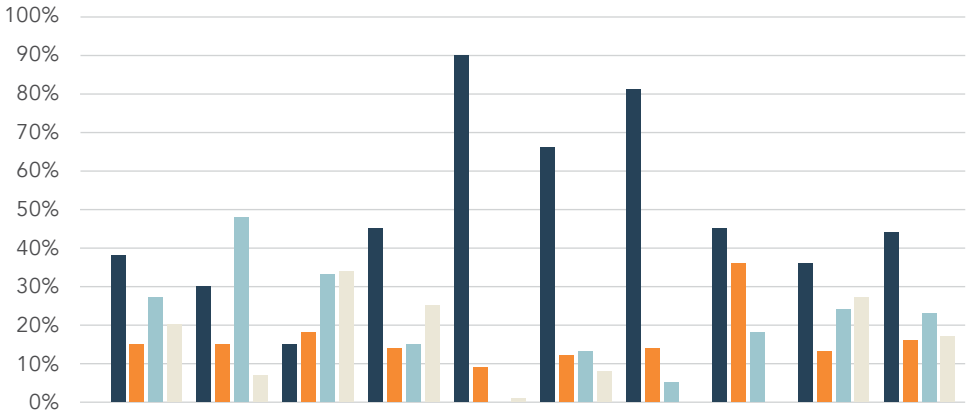
Figure 1: Distribution of teacher survey respondents across area types within provinces



	Eastern Cape	Free State	Gauteng	KwaZulu-Natal	Limpopo	Mpumalanga	North West	Northern Cape	Western Cape	Total
Metro	54%	23%	70%	26%	1%	1%	3%	0%	41%	31%
Non-metro city/large town	10%	24%	20%	20%	4%	20%	14%	21%	27%	18%
Small town	29%	47%	8%	19%	8%	36%	34%	53%	24%	27%
Village or rural area	8%	5%	3%	36%	87%	43%	49%	26%	8%	25%

Source: Hofmeyr et al., *Teacher preferences*, 11.

Figure 2: Distribution of teacher survey respondents across school-fee levels within provinces



	Eastern Cape	Free State	Gauteng	KwaZulu-Natal	Limpopo	Mpumalanga	North West	Northern Cape	Western Cape	Total
No-fee	38%	30%	15%	45%	90%	66%	81%	45%	36%	44%
Low-fee (<R3 000 p.a.)	15%	15%	18%	14%	9%	12%	14%	36%	13%	16%
Mid-fee (R3 000-R20 000 p.a.)	27%	48%	33%	15%	0%	13%	5%	18%	24%	23%
High-fee (>R20 000 p.a.)	20%	7%	34%	25%	1%	8%	0%	0%	27%	17%

Source: Hofmeyr et al., *Teacher preferences*, 12.

3. **In-depth interviews with almost 30 key actors involved in initial teacher education (ITE):** The purpose of these interviews was to inform our understanding of the ITE field. Interviews were conducted with teachers and teacher educators situated in public universities, private higher education institutions (HEIs) and non-government organisations (NGOs), as well as members of government departments and regulatory agencies[4].

Ethical clearance and permissions

Permission for the overall research project and its various sub-streams was obtained from the Humanities Research Ethics Committee of Stellenbosch University. We also obtained approval from the DBE to conduct interviews with relevant officials and to access certain administrative datasets. Additionally, separate permission was also obtained from the DBE and all provincial education departments to distribute the survey to teachers.

Purpose of this report

The purpose of this synthesis report is to present some of the main findings, policy implications and recommendations of the TDD study. More detailed analysis and findings can be viewed in the various reports produced as part of the study, which can be accessed from the project website: https://tdd.sun.ac.za/research/.

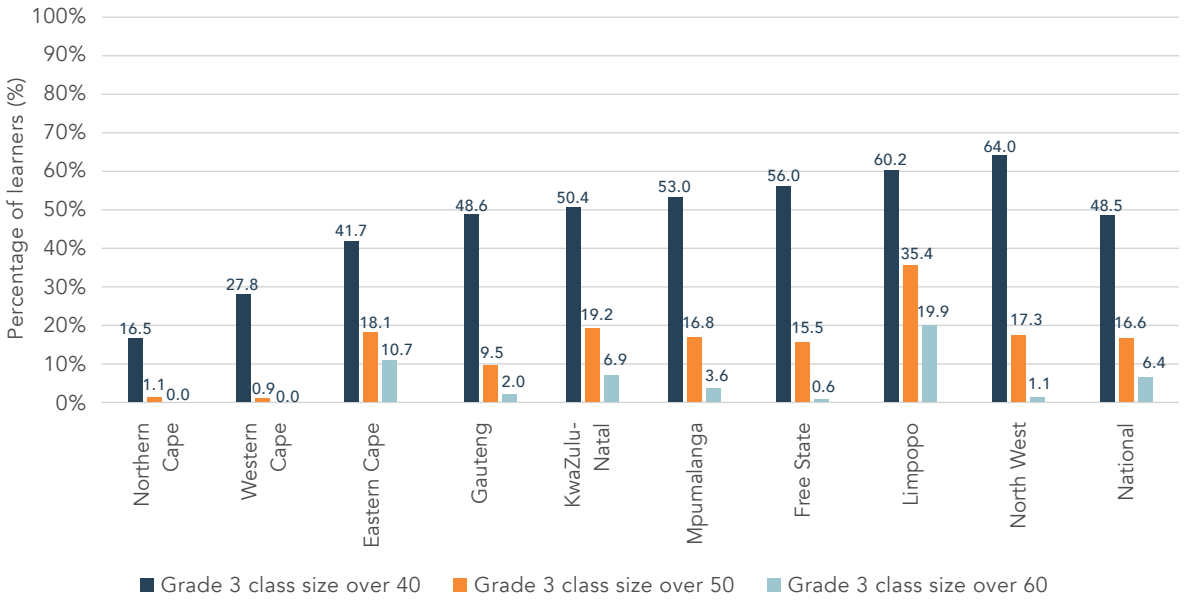
4. Nick Taylor, *Note 18: Initial Teacher Education: Implications for reform from the Teacher Demographic Dividend project* (Research on Socio-Economic Policy (RESEP), forthcoming); Nick Taylor, School Foundations: The Role of Initial Teacher Education (HSRC Press, forthcoming).

The problem of large class sizes

Average class sizes in South African primary schools are large, exceeding schools' learner-educator ratios by a substantial degree[5]. While learner-educator ratios are determined by the number of teachers allocated to a school based on funding decisions, internal teacher allocation decisions made at the school also affect class sizes.

Class sizes tend to be higher than the suggested guidelines on ideal class sizes. National guidelines stipulate that Grade 3 class sizes should not exceed 35 learners. In 2017, the average Grade 3 class size was 41 learners, compared to an average learner-educator ratio of 33 in the same schools. Nationally, about seven out of ten Grade 3 learners were in classes exceeding 35 learners, and about half of Grade 3 learners were in classes of more than 40 learners (Figure 3). Concerningly, almost two out of ten Grade 3 learners were in classes with more than 50 learners.

Figure 3: Percentage of learners in schools with Grade 3 class sizes of more than 40, 50 and 60 learners respectively, across provinces and nationally



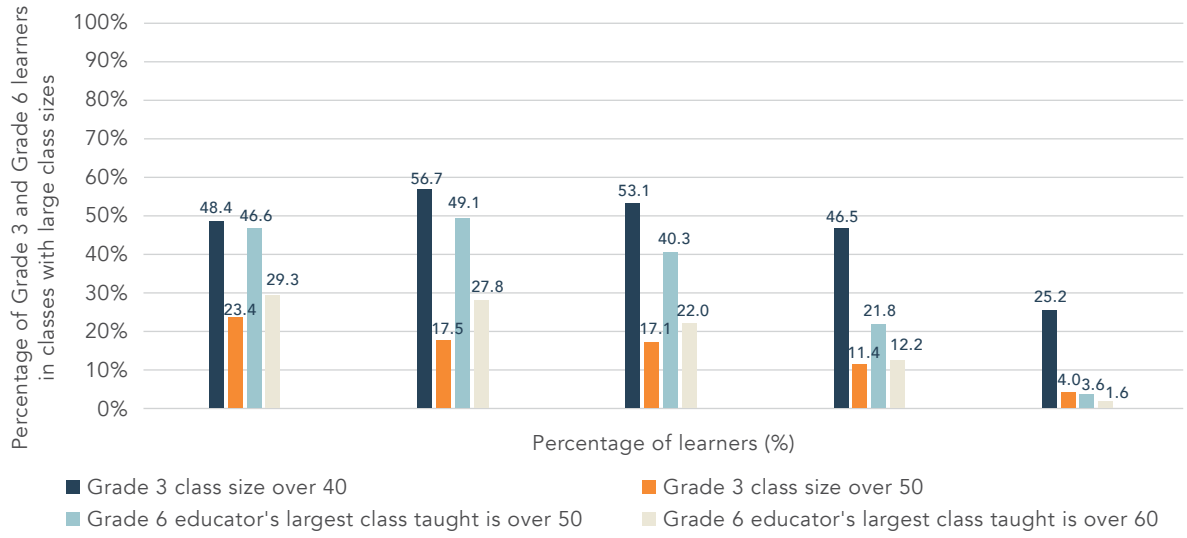
Data source: SMS 2017/18. Learner weights applied. Educator responses averaged at school level. Technically estimates should be interpreted in relation to Grade 6 leamers.

Source: Wills, *South African teacher shortages*, 24.

There are also high levels of inequality in class sizes across South African primary schools. In 2017, 4% of Grade 3 learners in a typical Quintile 5 school were in classes of over 50 learners. By contrast, almost a quarter (23%) of Grade 3 learners in Quintile 1 schools were in classes exceeding 50 learners (Figure 4). Similar trends are apparent at the Grade 6 level.

5. Gabrielle Wills, *South African teacher shortages as revealed through class sizes and learner-educator ratios: An exploratory analysis* (Research on Socio-Economic Policy (RESEP), 2023). https://tdd.sun.ac.za/downloads/E.-Wills-2023-Teacher-Shortages-class-sizes-LE-ratios.pdf.

Figure 4: Percentage of Grade 3 and Grade 6 learners in large classes by school quintile



Data source: SMS 2017/18. Learner-weighted. Educator responses averaged at school level. Estimates should be interpreted in relation to Grade 6 learners.

Source: Wills, *South African teacher shortages*, 23.

Are we training enough and the right type of teachers?

Earlier estimates[6] using data on the number of teachers being trained published up to 2018, showed a serious projected teacher shortage by 2030. When the proposal for this research project was developed (using the best available data at the time), we asserted that if South Africa wanted to maintain the current total number of teachers employed (407 000) and keep the system-wide learner-educator ratio stable, the number of teachers produced by HEIs per year would have to double by 2030.

However, the new modelling undertaken as part of the TDD project found that the shortfall will be much smaller than initially anticipated[7]. The detailed analysis completed by Gustafsson provides projected teacher demand numbers for three different scenarios, each with a different learner-educator ratio target, and each informed by different assumptions about South Africa's economic growth rate. The three scenarios are presented in Table 2.

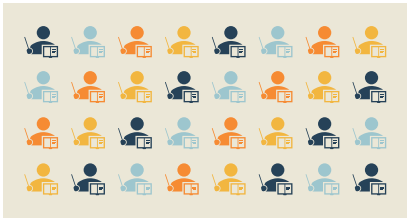
6. Servaas Van der Berg, Martin Gustafsson and Cobus Burger, *School Teacher Supply and Demand in South Africa in 2019 and Beyond* (Department of Higher Education and Training, 2020). https://resep.sun.ac.za/wp-content/uploads/2022/03/DHET-Supply-and-Demand-Report-Phase-1-1.pdf.
7. Martin Gustafsson, *Projections of Educators by Age and Average Cost to 2070: Final Report* (Research on Socio-Economic Policy (RESEP), 2023). https://tdd.sun.ac.za/downloads/F.-Gustafsson-2023-Projections-of-Educators-by-Age-Cost_Final.pdf.

Table 2: Future South African teacher demand, the workforce and the economy

	Now	2030		
		Focus on LE (of 2011)	Keep LE at Focus on LE (of 2011) present levels	Constant educators
LE ratio (was **27.4** in 2011)	**29.8**	27.4	29.8	31.6
Total educators	**403 000**	467 000	428 000	403 000
Newly graduated teachers	**31 000**	**40 000**	**33 000**	28 000
Above-CPI annual cost of living increase	**1.8%** (2015-2019) **-2.5%** (2019-2023)	0.0	0.0	0.0
Annual real % increase in unit cost 2022-2030	**0.4%** (2011-2022)	0.0	0.0	0.1
Annual real % increase in total cost 2022-2030	**0.8%** (2011-2022)	1.8	0.8	0.1

Source: Martin Gustafsson, "Teacher demographics in South Africa: National and provincial insights." PowerPoint presentation, at the Quantitative Educational Research (QER) Conference, Stellenbosch, September 5, 2023. https://tdd.sun.ac.za/downloads/presentations/Gustafsson-Teacher-demographics-QER-2023.pdf. Note that "LE" stands for "learner-educator (ratio)".

We now know that if South Africa wants to maintain the learner-educator ratio at current levels by 2030, we would need to employ **33 000 new teachers a year**. This is a much more achievable target of newly trained teachers than the 50 000 new teachers per year indicated by earlier estimates[8]. That said, to lower the learner-educator ratio to what it was in 2011, we would need **40 000 new teachers** per year.



33 000
new teachers per year to maintain learner-educator ratio

There are two key reasons for the substantial shift in the findings from our initial expectations:

1. The new modelling uses more accurate teacher attrition estimates. Overall **educator attrition, including retirement, is now expected to reach 8% in 2030**, as opposed to 12% as per earlier estimates.

2. More recent figures on teacher graduates at universities point to **steep increases in teacher graduates over the last decade, even exceeding official targets**. This was one of the most surprising project findings. The larger-than-expected number of graduates has created a "reserve pool" of qualified teachers who have not yet been employed, which will cushion the impact of the upcoming retirement wave. (See the section "Teacher shortages in certain regions and types of schools" for a discussion of why a large share of graduates are not being hired.)

The supply of young, qualified teachers has improved considerably. However, even though the total number of available teachers will not be substantially less than the system needs, there

8. Van der Berg et al., *School Teacher Supply and Demand*, 60.

is still likely to be a shortage in particular phases**. Graduates specialising in primary school grades constitute only 60% of the projected demand, whereas the supply of secondary school teachers is twice what is required**[9]. Consequently, many primary school teachers lack the highly specialised knowledge needed to teach African languages, literacy and numeracy to primary school children, especially in the Foundation Phase (FP).

9. Martin Gustafsson, *Specialisation-specific teacher supply and employment in the 2019 to 2022 period* (Department of Basic Education, 2025). https://www.education.gov.za/Portals/0/Documents/Reports/2025/Specialisation-specific%20supply%202025%2001%2015.pdf?ver=2025-02-12-201150-747.

Is the basic education system an employer of choice and is it easy for schools to appoint the best candidates?

This section is based on a synthesis of four research outputs: the working paper by Kruger et al.[10], the report by Hofmeyr et al.[11], Taylor's research note[12] and the chapter by Pampallis[13]. These come from the three sub-projects whereby we collected original data from teachers and key actors in the teacher education sector, as described in the introductory section.

Selecting into teacher training: an aspirational career?

The small study by Kruger et al.[14] confirmed previous findings that teaching is not a popular first choice as a career, with fewer than half of interviewees indicating that teaching was their first-choice career. A substantial number (about 50%) were drawn to teaching by perceived job security and access to government bursaries. Only a marginal number reported a passion for teaching.

Undergraduate teaching programmes at South African universities are nonetheless in high demand. In fact, HEIs receive far more applications than they can accept[15]. Different universities apply varying criteria for admission to the Bachelor of Education (BEd) degree. Given that larger training institutions (as determined by student intake numbers) generally have lower admission standards, it is not surprising that **many candidates entering BEd programmes are academically underprepared both on entry to and graduation from ITE**, have slow throughput rates, and tend to leave the teaching profession after just a few years (or do not enter teaching at all). Together with the significant oversupply of qualified applicants, this suggests that there is room for a more rigorous approach to selection into ITE[16].

Better selection practices could help identify candidates who are **well-suited for teaching, in terms of both temperament and academic skills,** and who are willing to take on the challenge of teaching in hard-to-staff schools. This would increase the efficiency of the teacher training system and raise the quality of teachers entering our schools.

While a more rigorous approach to ITE selection would demand more resources, the costs could be mitigated by (i) screening applicants so that only the most qualified participate in more

10. Kruger et al., "*Pattern of dissatisfaction*".
11. Hofmeyr et al., *Teacher preferences.*
12. Taylor, *Note 18.*
13. Irene Pampallis, "Selection into the Bachelor of Education," in *School Foundations: The Role of Initial Teacher Education*, ed. Nick Taylor (HSRC Press, forthcoming).
14. Kruger et al., "*Pattern of dissatisfaction*".
15. Pampallis, "Selection into the Bachelor".
16. Pampallis, "Selection into the Bachelor"; Taylor, *Note 18.*

resource-intensive selection procedures, (ii) automating the assessment process as much as possible, and (iii) centralising the application process for prospective teachers and screening procedures. Centralising the application and screening process would have the dual benefit of reducing the administrative burden on individual universities and making it easier for matriculants to apply to multiple institutions. Existing models of centralised application systems, such as the Central Applications Office or CAO (which handles applications to all undergraduate programmes at four universities and fifteen private HEIs in KwaZulu-Natal), provide lessons for the successful upscaling of this idea. Key to the CAO model is that, although the process of collecting and pre-screening applications is centralised, the final admission decision remains in the hands of each individual university or college. The Department of Higher Education and Training (DHET) is already piloting a central applications service with selected schools, universities and technical and vocational education and training (TVET) colleges, with the aim of the service eventually operating nationwide[17].

Entering the teaching system: recruitment and teacher preparedness

A quality school system requires effective recruitment, appointment and placement of teachers. We have discovered that appointments are increasingly moving away from the process prescribed in policy[18]. The prescribed policy requires provincially advertised, nationally available vacancy bulletins, followed by open competition and an important role for school governing bodies (SGBs). In recent years, few vacancy circulars for entry-level teachers have been released. Instead, the most common practice seems to be making appointments from various priority lists (e.g. bursary holders, teachers in excess, contract teachers, and unemployed teachers), with limited open competition and more limited SGB choice. Effective recruitment processes that attract and rapidly appoint strong candidates should receive more attention.

Although surveyed teachers generally thought that their studies prepared them well for the teaching profession, interesting differences emerged regarding their sense of preparedness when considering different types of schools. **Teachers in mid-fee and high-fee schools reported feeling less prepared for the profession than teachers in no-fee and low-fee schools[19].** This could point to higher expectations in better-resourced schools, which novice teachers may find particularly challenging.

The most common reason for feeling underprepared was **insufficient preparation for teaching learners who are unable to keep up with the curriculum[20].** Low reading ability – even in higher grades – was often mentioned in the interviews. This shows how South Africa's low literacy levels affect teachers' ability to cover the curriculum in the classroom. Compulsory grade progression (for learners who have already repeated a grade once in a phase), large class sizes, as well as not knowing how to implement differentiated assessments and teaching were mentioned as barriers to addressing learning shortfalls.

17. Pampallis, "Selection into the Bachelor".
18. Kruger et al., "*Pattern of dissatisfaction*".
19. Hofmeyr et al., *Teacher preferences*, 36–37.
20. Hofmeyr et al., *Teacher preferences*, 39–41.

Engagements with provincial education officials revealed the perception among many officials that **teachers who had received bursaries to study education were less motivated**. This could perhaps be due to the underlying perception that these teachers had studied teaching only to receive bursaries. **The survey results, however, provide no evidence to support this view**, with the same proportions of bursary recipients versus non-recipients reporting that teaching was their first-choice career and that they intended to remain in teaching[21].

Staying in the system: teacher motivation, job satisfaction and stress

Teachers still face the same frustrations identified in earlier studies. A 2005 study by the Human Sciences Research Council (HSRC) and the Medical Research Council found that 55% of teachers intended to leave the profession due to job dissatisfaction, workplace stress and heavy workloads[22]. The Organisation for Economic Co-operation and Development's (OECD) 2018 Teaching and Learning International Survey (TALIS) ranked South Africa among six countries where teacher job dissatisfaction is particularly high[23]. In our smaller sample of teacher interviews[24], teachers most frequently cited a lack of learner motivation, discipline and knowledge as challenges, followed by curriculum changes and poor school infrastructure. Strong child protection policies, particularly the ban on corporal punishment, also made some teachers feel powerless.

The large teacher survey by Hofmeyr et al.[25] revealed unexpected sources of job satisfaction. Despite resource constraints, teachers in poorly resourced schools reported job satisfaction from having a positive impact on disadvantaged learners. Surprisingly, teachers in mid- and high-fee schools reported experiencing more stress relating to achieving good results, largely due to pressure from principals and parents. Administrative work was the leading cause of stress, with 70% of surveyed teachers citing it as their biggest challenge.

Regression analysis showed that low job satisfaction and high stress significantly predict the likelihood of a teacher wanting to leave the profession. However, teachers' intent to leave did not differ much between teachers in no-fee schools and those in mid- or high-fee schools.

Beyond low achievement levels and learning backlogs, teachers cited learner poverty and socio-emotional issues as major stressors affecting their ability to teach effectively. Many teachers in no-fee and low-fee schools felt overwhelmed by the home conditions of their students, which took a toll on teachers' mental health. They often felt they had to act as social workers and counsellors, providing support beyond their teaching duties. Additionally, ill-discipline – especially among older learners – was a recurring concern, frequently disrupting classroom time.

21. Hofmeyr et al., *Teacher preferences*, 41–45.
22. Olive Shisana, Karl Peltzer, Nompumelelo Zungu-Dirwayi and Julia Louw (Eds.), *The Health of our Educators: A focus on HIV/AIDS in South African public schools, 2004/5 Survey* (HSRC Press, 2005), https://hsrc.ac.za/uploads/pageContent/1046482/The-Health-of-Our-Educators-Entire-eBook_171218_2307132.pdf.
23. OECD, TALIS 2018 *Results (Volume II): Teachers and School Leaders as Valued Professionals* (OECD Publishing, 2020), 84. https://doi.org/10.1787/19cf08df-en.
24. Kruger et al., "*Pattern of dissatisfaction*".
25. Hofmeyr et al., *Teacher preferences.*

The issue of socio-emotional challenges transcends mere unruliness – it often **reflects broader societal problems** that permeate the school environment. For example, a teacher at a no-fee school in the Eastern Cape reflected on how gangsterism influences the behaviour of learners:

> *"You can see it clearly by the way they carry themselves, how they dress, how they speak to you. They swear at you. I've been called every word under the sun."*

Leaving the system: attrition

Results from the online survey revealed that **half of in-service teachers want to leave the profession in the next 10 years**. Given job market constraints (among other factors), it is unlikely that so many teachers will actually leave the profession. Still, this finding highlights the high levels of dissatisfaction among South African teachers. Survey respondents listed being overworked as the main reason for wanting to leave the profession, pointing to the high workload (including **a high administrative burden**) experienced by teachers.

One teacher in a mid-fee school in Gauteng provided a compelling example of how regular requests from the provincial departments and district offices add to their administrative load:

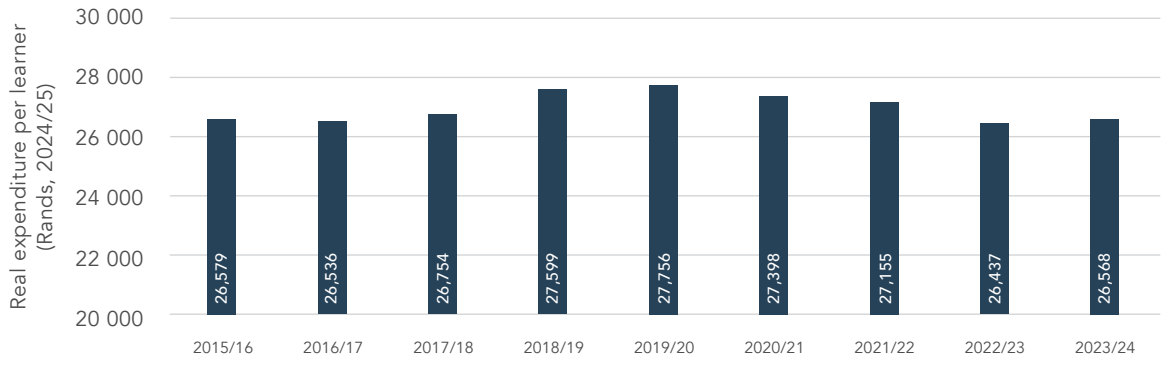
> *"We were covering a topic with the matrics until the middle of August, only to get an email from the department in the holidays saying we had to be finished with it by the end of July, which means we have to squeeze two weeks of content in somewhere, which is very unrealistic for matrics, because they have a lot going on and still need to excel.*
>
> *Or they would ask you where you are on your syllabus, then you get an email from another person asking [inaudible], then you fill in seven forms for the same thing. Or the department tells you to do an assessment on a certain date, but the exam people want you to do it on a different day. They don't communicate amongst themselves. I send out letter after letter to the parents about changing dates, and all those things add up."*

Improving the efficiency of financing available for teacher appointments and the education system

Despite real increases in per learner expenditure until 2019/20, inputs in basic education have been under significant pressure. This has been the result of substantial increases in real remuneration up to 2019 and of ongoing enrolment growth. These trends have been associated with increasing learner-educator ratios and class sizes, as well as inadequate building of new schools and deteriorating infrastructure.

The decrease in real spending per learner from 2020/2021 (Figure 5) therefore comes at an inopportune time. Several provinces have recently announced steps to cut back expenditure. These steps, which differ between provinces, include decreasing the number of teaching posts in 2025, reducing learner transport, and slowing down the expansion of early childhood development (ECD) programmes.

Figure 5: Real per learner expenditure (basic education, excluding Grade R but including the Presidential Youth Employment Initiative)



Source: John Kruger, "Strategic Options for South African Education Budgets in Austere Times." Unpublished draft note (Research on Socio-Economic Policy (RESEP), forthcoming).

The national Minister of Education has called this "a national crisis"[26]. Many have supported the minister's view, as reduced inputs have a negative impact on learning and education outcomes. Others, however, have pointed to the fact that South Africa's basic education spending is above the average for comparator countries, and that spending is still relatively high from a historical perspective.

26. Siviwe Gwarube, "Media briefing on budget cuts," transcript of speech delivered in Pretoria, September 25, 2024, https://www.gov.za/news/speeches/minister-siviwe-gwarube-media-briefing-budget-cuts-25-sep-2024.

Compared to other countries, South Africa is not getting enough value for its education spending. International data show that several developing countries – even those spending the same or less per learner – perform better on standardised international assessments.

To improve outcomes, it is crucial to examine both how funds are allocated within the basic education sector and how they are used. Recent analysis has highlighted **several areas that need better monitoring and evaluation**:

- **Disproportionately higher allocation of resources to the secondary school phase:** Secondary schools receive a disproportionately high share of resources compared to primary schools. Figures from the National Treasury show that spending on primary schools dropped after 2021/22, whereas secondary education took up a larger share of the budget[27]. To improve early-grade reading performance, policymakers must monitor and protect funding for primary schools.
- **High repetition rates, which are costly:** Studies show that Grade 1 repetition rates in South Africa are high compared to other middle-income and Sub-Saharan African countries[28]. Early-grade repetition raises costs for provinces and increases class sizes. An earlier study estimated the cost of having repeaters in the public education system at a minimum of R20 billion (in 2018 prices), which amounts to 8% of that year's basic education budget[29]. Although repetition has a remedial impact in some cases, it is also driven by a lack of school readiness – a problem that is currently not addressed efficiently.
- **Provincial and school differences in class sizes relative to learner-educator ratios:** Comparisons have shown that provinces and schools with similar learner-educator ratios may have different class sizes, also manifested in the proportion of learners in oversized classes[30]. Some provinces and schools struggle to contain class sizes at higher learner-educator ratios[31]. Considering the constrained fiscal context, improved teacher utilisation, e.g. through better timetabling, could lead to improved efficiencies.

In the coming years, **improving efficiency and effectiveness in education spending will be essential**; however, it will be equally important to **closely monitor equity** in the education system. Budget cuts could disproportionately **affect lower-quintile schools**, which lack the financial support of fees and community contributions. These schools also face **high staff turnover**, making them more vulnerable to delays in filling vacant posts.

Stronger forward planning will also play a crucial role. Policymakers need to better incorporate **key demographic shifts** into their strategies. While declining population growth is resulting in a stabilisation of the overall population of school-going age, secondary-school enrolment is growing

27. Spencer Janari, "Basic Education Spending and Budget Trends: A 10 Year Overview," presentation at the TDD Fiscal Workshop series, virtual, May 9, 2024), slide 11. https://tdd.sun.ac.za/downloads/presentations/fiscal-workshop/Basic-education-budget-trends_Spencer-Janari.pdf.
28. Gabrielle Wills and Jess Qvist, *Repetition and dropout in South Africa before, during and after COVID-19* (Research on Socio-Economic Policy (RESEP), 2023). https://resep.sun.ac.za/wp-content/uploads/2024/01/2023-12-21-Wills_Qvist_covid_dropout_repetition_report_v4_upload.pdf.
29. Servaas van der Berg, Gabrielle Wills, Rebecca Selkirk, Charles Adams and Chris van Wyk, *The cost of repetition in South Africa* (Stellenbosch Economic Working Papers, WP13/2019, 2019). https://www.ekon.sun.ac.za/wpapers/2019/wp132019/wp132019.pdf.
30. Department of Education, *Post provisioning: Conceptual framework, analysis of the data and way forward* (Republic of South Africa, 2006) https://www.education.gov.za/Portals/0/Documents/Reports/Research%20Repository/Teacher%20demand%20and%20supply/Post%20provisioning.pdf?ver=2019-09-06-161613-730&timestamp=1570440828998; Wills, South African teacher shortages.
31. Wills, *South African teacher shortages*, 39.

more rapidly. At the same time, more teachers are retiring and younger teachers are entering the workforce, easing some pressure on salary budgets (since less experienced teachers receive lower pay), though not enough to generate major savings.

Financial planning must also become **more agile and responsive** to population shifts between urban and rural provinces. Some provinces should proactively invest in **expanding capacity** to accommodate growing student numbers. More broadly, in an era of **rapid geopolitical, climate and technological change,** a **more responsive and adaptable** education planning system will be essential.

Options to better manage the number and quality of teachers

There is universal agreement that inadequate learning achievement in languages, literacy and numeracy in the early grades constitutes a major inhibition to learner progress in all other subjects at all levels of the education system and, eventually, the workplace[32]. There are several solutions to this problem and progress is being made. These solutions include promulgating appropriate policies; deploying, supplying and managing primary schools and teachers in a learning-focused manner; and, above all, significantly raising the knowledge and pedagogical skills of newly qualified primary school teachers. This section draws primarily on the work of Taylor[33].

Sharper application of existing resources and instruments for teacher education

Some progress has been made in recent years with respect to teacher development, regarding both the continuous professional development of existing teachers in schools[34] and ITE in the higher education system[35]. However, much remains to be done to better prepare the country's primary school teachers, as reflected in the following quotes from the DHET and the Council on Higher Education (CHE).

In 2018, the DHET issued a proposed new draft of the Minimum Requirements for Teacher Education Policy Qualifications (MRTEQ)[36], motivating the proposed changes as follows:

> *"Language competence and mathematics competence are serious developmental challenges that South Africa must overcome. This must be a primary focus of the BEd in Foundation Phase teaching, and sufficient credits and time must be allocated to ensure that all new Foundation Phase teacher graduates are well able to teach languages and mathematics."*[37]

In support of this view, the CHE motivated the announcement of a national review of ITE programmes in 2022 as follows:

> *"… concerns still persist that many of the initial teacher education graduates, particularly Foundation Phase and Intermediate Phase teacher graduates,* ***do not emerge with the requisite knowledge and skills*** *to teach* ***literacy/languages and numeracy/mathematics in these critical early years of schooling*** [emphasis added]."[38]

32. Servaas van der Berg and Martin Gustafsson, "Educational Outcomes in Post-apartheid South Africa: Signs of Progress Despite Great Inequality," in *South African Schooling: The Enigma of Inequality,* eds. Nic Spaull and Jonathan Jansen (Springer, 2019), 25–45.
33. Taylor, Note 18.
34. Nic Spaull and Stephen Taylor (Eds.), Early Grade Reading and Mathematics Interventions in South Africa (Oxford University Press, 2022).
35. Nick Taylor and Monica Mawoyo, "Professionalising initial teacher education: The case of language and literacy," in Early Grade Reading in South Africa, eds. Elizabeth Pretorius and Nic Spaull (Oxford University Press, 2022), 164–178.
36. Department of Higher Education and Training, "The Minimum Requirements for Teacher Education Qualifications (as Revised 2018)," unpublished draft for comment, issued October 29, 2018.
37. Department of Higher Education and Training, Minimum Requirements, 26.
38. Council on Higher Education, "Proposal for a national review of initial teacher education programmes", unpublished draft for consultation, 2022.

Raising the quality of ITE will entail coordinating the initiatives of seven key sets of stakeholders: the DHET, the DBE, the CHE, the South African Council for Educators, the National Student Financial Aid Scheme (NSFAS), the Education, Training and Development Sector Education and Training Authority, and the HEIs who deliver ITE to prospective primary school teachers.

Most resources and instruments required to achieve this goal already exist. What is required is **sharper and smarter application of these systems** and **tighter cooperation between the parties.** The details surrounding this are outlined in the recommendations at the end of this report, which address the different components of teacher education and preparation for teaching in schools. In addition, an objective measure of the quality of new graduates must be established to regulate teacher production.

The training targets: delivering a consistent flow of quality primary school teachers

In 2021, the country's HEIs produced nearly twice as many teachers as were finding employment in public schools. After accounting for privately employed teachers, **the country produced approximately 10 000 teachers who were not employed in either the public or private school sector**[39].

At the same time, the profile of newly qualified teachers is not an optimal fit for the needs of schools. Twice as many graduates specialising in high school teaching than are needed are being produced, while there is a shortage of graduates specialising in the FP and African languages – the areas most in need of qualitative reform[40].

Cutting supply to more closely match demand would generate millions in annual savings, money which is desperately needed to employ additional teachers in a time of rapidly rising learner-educator ratios. However, reducing supply is risky, given the time lag between when a student registers and their eventual graduation. Nevertheless, in the interests of achieving both **efficiency savings and quality gains, reducing numbers must remain an option during times of low demand**, conditional on providing a comfortable cushion to cater for the possibility of a rapid rise in demand in future. In this regard, accurate and timeous information is critical to maintaining a fine balance between the over- and under-production of teachers.

Curriculum reform: developing expertise to teach languages and mathematics

Curriculum content

Teachers must be proficient in the language of instruction and have strong pedagogical knowledge in reading and mathematics. However, many education faculties fail to provide adequate training in these areas. A restructured BEd curriculum should involve intensive coursework in mathematics and English linguistics and literature over the four years of the degree programme. It cannot be

39. Gustafsson, *Projections of Educators (Final Report)*, 40.
40. Gustafsson, *Specialisation-specific teacher supply and employment.*

assumed that students enter university with strong academic language proficiency: A ministerial task team found that the matric exams for English as a first additional language (taken by most students in the country) tend to focus on lower-order cognitive skills, hindering students' ability to develop critical thinking skills[41]. The results of the National Benchmark Tests also confirm that applicants to education programmes have poor academic literacy[42]. These skills must therefore be explicitly developed in undergraduate teaching programmes.

In addition, FP teachers and those specialising in African languages should undertake rigorous study in the relevant language. There is also a case for ensuring all other student teachers demonstrate basic communicative proficiency in an African language before graduation. The latter is already a requirement in MRTEQ but it is likely not sufficiently implemented.

All primary school BEd programmes should also focus on the skills and knowledge needed to teach reading and mathematics. Learning to teach reading involves mastering structured routines. It starts with developing vocabulary and verbal comprehension in Grade R and progresses to fluent reading comprehension by Grade 3, meeting at least the basic Progress in International Reading Literacy Study benchmark. Similarly, primary school teachers need a solid foundation in mathematics to effectively teach the base-10 system and arithmetic operations to ensure learners transition away from inefficient unit counting by Grade 2[43].

Research

Little research exists on improving BEd students' knowledge before graduation. Academics teaching in ITE programmes are incentivised to publish in accredited journals rather than to engage in collaborative, curriculum-driven research. To address this, government and donors should fund large-scale, practice-oriented studies.

Recent policy initiatives and financial support from the DHET have encouraged collaboration on setting literacy and mathematics standards, experimenting with improved curricula, and developing assessment tools[44]. The Education Deans' Forum could serve as a key platform for coordinating these efforts, aligning research with teacher education reforms[45].

41. Department of Basic Education, *Ministerial task team report on the national senior certificate (NSC)* (Department of Basic Education, 2014). https://static.pmg.org.za/141119nsc.pdf.
42. Robert Prince, Emlyn Balarin, Sanet Steyn and Ashley Niekerk, *The National Benchmark Tests National Report: 2019 Intake Cycle* (Centre for Educational Testing for Access and Placement, 2019). https://nbt.uct.ac.za/sites/default/files/NBT%20National%20Report%202019.pdf.
43. Taylor, Note 18.
44. Primary Teacher Education Project, *Knowledge and Practice Standards for primary teacher education graduates: Language and literacy* (Department of Higher Education and Training, 2020) https://www.jet.org.za/clearinghouse/projects/primted/standards/literacy-teacher-standards/literacy-teacher-standards-2020-1.pdf/; Primary Teacher Education Project, *Mathematical Knowledge and Practice (MKP) Standards for Prospective FP and IP Teachers* (Department of Higher Education and Training, 2022) https://www.jet.org.za/clearinghouse/projects/primted/standards/mathematics-teacher-standards/primted-k-p-standards-for-mathematics-19nov19.pdf/; Nicky Roberts and Qetelo Moloi, The Quality of Primary Mathematics Teacher Preparation in SA: Findings from PrimTEd (Research on Socio-Economic Policy (RESEP), 2022) https://tdd.sun.ac.za/downloads/D.-Roberts-Moloi-2022-Overview-of-Primted-TDD-10-Nov-2022.-v3.pdf.
45. Council on Higher Education, *Proposal for a national review*.

Staff

Effective enactment of intended curricula depends heavily on the expertise of university teaching staff. Anecdotal evidence indicates that many BEd lecturers responsible for teaching languages, literacy and mathematics – by their own admission – do not have the required knowledge and skills for the job.

Measuring outcomes

It is one thing to reform intended curricula but quite another to achieve the targeted outcomes. Measuring the extent to which outcomes are achieved poses an additional challenge. Faculty staff must track the progress of students over the course of the BEd programme. **In this context, valid and reliable test scores are important,** firstly, to determine curriculum suitability and pedagogical effectiveness, and secondly, todetermine overall student competence.

Improving teaching practice

Teaching practice (TP) is a key element of teacher education. Despite the policy specifications, the TP components practiced in university faculties are highly variable. They range from carefully constructed, well-staffed programmes linked to well-functioning schools, to cases where TP is given only perfunctory attention. TP must be integrated into the theory programme components. Furthermore, students must be provided with guidance on how to execute successful classroom routines, as well as how to reflect on their school experiences following each period of in-school work.

Given the prevalence of poor teaching practices in many of the country's schools, it is inappropriate to leave the job of mentoring students to teachers in poorly performing schools. On the contrary, **students must be mentored by highly experienced teachers and former teachers who have achieved success in the classroom**. Mentoring needs to be carried out in real and simulated classrooms throughout the four years of the BEd programme.

Quality assurance of the initial education of teachers

Regular external assessments are essential to track progress in teacher education and identify underperforming institutions. The ongoing CHE audit of BEd programmes[46] helps ensure there is an appropriate regulatory system in place to monitor the quality of teacher supply. The institutional reviews will follow the establishment of qualification standards, which will define the purpose of the qualifications and required graduate attributes. Institutions will need to submit a self-evaluation report, which will be reviewed by a peer team, followed by a verification site visit.

Identifying institutional shortcomings is, however, only useful if followed by action. An effective regulatory approach **should limit student intake at underperforming institutions while improvements are being made**. The CHE's quality review will help determine whether institutions

46. Council on Higher Education, *Proposal for a national review*.

should expand or reduce their graduate output. A caveat is that these types of audits can often be compliance-orientated, in which case they do not sufficiently assess the skills and knowledge of teachers-to-be. If this turns out to be the case for the CHE audit, it might be a poor basis for properly gauging the quality of graduates.

Teacher education training policy

A key issue in primary school teacher training is the insufficient time allocated to languages and mathematics in BEd curricula. The DHET recommends increasing the number of credits for these subjects; however, reallocating instructional time may provoke resistance from those whose hours are reduced to accommodate this change. A policy mandating minimum hours for languages and mathematics in BEd programmes in both FP and Intermediate Phase (IP) teaching would help resolve this.

Funding also plays a crucial role in ensuring teacher supply, primarily through the Funza Lushaka bursary programme. Funza Lushaka grants bursaries for teacher training on subjects or in phases deemed national priority areas. However, challenges arise when students switch specialisations (for instance, if a student who was initially funded to study mathematics teaching switches to social sciences). NSFAS funding, which does not consider students' area of specialisation, provides a further challenge. This results in an over- or under-supply of qualified teachers in certain specialisations, which in turn leads to unemployment or misallocation of new teacher graduates.

To ensure better alignment with national needs, a more effective approach would be to channel all state funding for teacher education through Funza Lushaka. This would require a comprehensive funding review and transferring resources from NSFAS and the fiscus to Funza Lushaka.

Teacher shortages in certain regions and types of schools

Since 2016, universities have been increasing teacher supply, but provinces have not increased hiring, leading to higher learner-educator ratios. Universities have met the ITE graduate targets set by the DHET, which suggests that they have managed to respond to the pressures of training additional teachers. Even though teacher production has increased significantly, provinces have not increased the number of teachers they are hiring, with this gap growing over time. In 2014, 85% of newly graduated teachers were hired as public employees; by 2021, this number had dropped to only 58%[47].

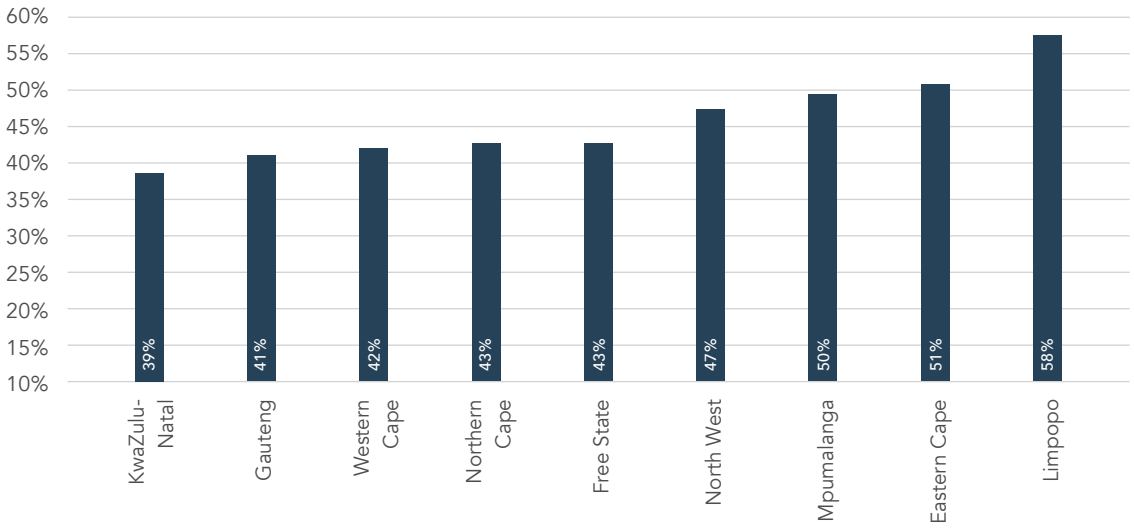
Provinces struggle to hire more teachers due to budget constraints and rising salaries. The 2018 Public Service Co-ordinating Bargaining Council Resolution increased teachers' annual salary notch adjustments from 1.0% to 1.5%, which means salaries are growing faster than the education budget allows. In the context of fiscal austerity and public sector wage freezes, provinces often freeze middle-management positions or leave vacancies unfilled to cut costs.

No-fee and rural schools will be impacted the most if teacher appointments do not increase in line with growing enrolments. If provinces do not increase the number of teachers hired, class sizes will continue to grow, pushing the learner-educator ratio even higher. In 2021, the learner-educator ratio was 29.8; this is projected to rise to 31.6 by 2030[48]. An elevated ratio will especially burden teachers in poor and rural schools. The results of the teacher survey reveal that rural areas are by far the least preferred area type for teachers. In addition, the results show that teachers working at no-fee and low-fee schools are more likely to want to leave the profession than those working in more affluent schools[49].

Teacher shortages will be exacerbated by some provinces having more educators aged 50 years and older (Figure 6). Nearly two-thirds (58%) of educators in Limpopo were aged 50 years or older in 2021, followed by the Eastern Cape (51%), Mpumalanga (50%) and North West (47%). The three provinces with the lowest share of older educators are KwaZulu-Natal (39%), Gauteng (41%) and the Western Cape (42%). This means that **the more rural provinces (Limpopo, the Eastern Cape, Mpumalanga, and North West) will experience the most educator retirements over the next 10 to 15 years**. The three provinces with the largest urban populations (KwaZulu-Natal, Gauteng and the Western Cape) have the lowest percentages of teachers aged 50 or older. Nevertheless, considering that KwaZulu-Natal and Gauteng are also the most populous provinces, teacher retirements in these provinces will still account for a large share of overall retirements.

47. Gustafsson, Projections of Educators (Final Report), 40–41.
48. Gustafsson, Projections of Educators (Final Report), 63.
49. Hofmeyr et al., Teacher preferences.

Figure 6: Percentage of educators who were 50 years or older in 2021, by province



Source: RESEP and the Department of Basic Education, "Provincial TDD Workshops (Spotlight Series): Stakeholder Engagement Report", unpublished report, 2024, 1.

**Anonymised PERSAL data from 2021. Only educators were included – ECD practitioners, examination reviewers, adult basic education and training (ABET) teachers, and TVET lecturers were removed.*

Box 1: The voice of the provinces – Concerns raised by provincial education departments

RESEP, in collaboration with the DBE's Education Human Resource Planning, Provisioning and Monitoring directorate, hosted individual information-sharing workshops with all nine provincial education departments (PEDs) from July to October 2023. These workshops aimed to connect research, policy and planning, while helping education stakeholders prepare for the challenges and opportunities of rapid demographic change.

During the interactive three-hour sessions, the RESEP research team, DBE and provincial officials discussed key topics, including educator age distribution, projected retirements and resignations, enrollment and population growth, teacher movement between provinces and schools, and trends in educator costs. We also addressed province-specific issues and gender equity in management.

Targeted stakeholders at these discussions included heads of departments, deputy director-generals, directors, provincial treasury officials, district directors, planners at the provincial level, and representatives from the subcommittees of the Heads of Education Departments Committee (i.e. the Human Resource Matters, ITE and Planning, Monitoring and Evaluation subcommittees). **Between 16 and 53 senior officials attended each of the workshops.**

Provinces highlighted some of the main factors contributing to mismatches within the system, which include the following:

- In terms of subject and phase specialisation as well as preparedness (in terms of pedagogy), **there is a mismatch between the teacher graduates being produced by universities and what the sector demands.** PEDs expressed challenges in finding teachers who can teach in African languages at the FP and who can teach technical subjects. One of the limitations of the Post Provisioning Norm model is that it **primarily bases the allocated number of posts on learner enrolment numbers** (although it does, to some extent, consider subjects offered). This approach reportedly leads to situations where the allocated number of teachers does not adequately cover all the subjects offered by a school, potentially affecting the quality of education. Once the number of posts for a school has been determined, the hiring process involves a range of stakeholders at the school, district and provincial level. The SGB and school management team (SMT) are responsible for ensuring that the allocated posts are filled by qualified educators who can teach the required subjects, but they often experience challenges in finding the right candidate for the school.
- The main objective of the **Funza Lushaka bursary programme** is to provide the education sector with high-quality teachers, especially in rural and underprivileged schools. However, a **major concern is that some bursary recipients graduate with a combination of subjects that does not meet the sector's demands or the requirements of the bursary contract.** For instance, some students do not specialise in two or more of the priority areas, making it difficult to place them in schools. To ensure closer alignment between the sector's demands and what the bursary programme offers, the programme criteria as well as the recruitment and placement process must be revisited.

Provinces also raised issues relating to teacher recruitment, induction and mentorship programmes for senior staff, the database of unemployed teachers, gender imbalances in promotional posts, educator movements, and ageing office-based educators.

- **The inadequacies of the database of unemployed teachers and management systems:** Although most provinces have a database of unemployed teachers, they agree with the DBE that more needs to be done to ensure that the data is complete, accurate and up to date. Provinces also confirmed that there is no centralised database that contains information on which subjects teachers are trained to teach and what they are currently teaching.
- **A poor understanding of the migration and movement of educators:** Apart from economic factors, there needs to be a better understanding of other key drivers that prompt teachers to change posts.
- **Gender imbalances in management posts:** While female educators are better represented in middle-management posts, all provinces confirmed that gender

imbalances exist at all school management levels, especially for principal and deputy principal positions. Contributing factors to these imbalances include fewer applications from female educators for deputy and principal posts (especially at the secondary school level) and cultural or social dynamics within the community (most evident in rural provinces). Provinces indicated that the power to influence senior management appointments should reside with PEDs as opposed to SGBs, while SGBs should have the power to influence post level 1 appointments. They proposed that this be addressed via the Basic Education Laws Amendment Bill, as the bill was still being reviewed at the time of the engagements. The TDD project also produced a research note with recommendations for tackling gender inequality[50].

- **The informal nature of induction and mentorship programmes for principals and senior educators:** Most provinces reported having an induction programme for incoming principals and senior educators but indicated that it was not formally structured.
- **The potential gap left by ageing office-based educators:** Attention needs to be given to ageing educators in office-based positions (e.g. office-based managers, specialists and public servants), as they tend to be older and will also be retiring soon.
- **Encouraging the appointment and retention of young teachers in hard-to-staff and rural schools:** The views on this issue varied widely across provinces and post levels, and no single, strong consensus view emerged. That said, at the TDD Provincial Workshop II at Kievits Kroon Estate in September 2024, there was significant discussion about the need to pay a rural allowance to teachers placed in rural locations.

50. Gabrielle Wills and Bianca Böhmer, *Note 12: Male Managers, Female Teachers: The South African case of gender imbalances in school leadership and management* (Research on Socio-Economic Policy (RESEP), 2023. https://tdd.sun.ac.za/downloads/notes/Note%2012%20-%20Male%20Managers,%20Female%20Teachers%20(TDD%2010%20July%202023).pdf.

Next steps and recommendations

This section provides recommendations informed by the overall body of research produced as part of the TDD research project, reflected in this report. Recommendations are structured according to the sections in this report.

Better managing the number and quality of teachers trained

Improve teacher training management: To ensure the right number and types of teachers are produced, South Africa must better manage its teacher training pipeline. The DHET already regulates teacher supply by setting fundable targets for student teacher graduates at each university every five years. However, **more effective oversight and coordination** are needed to align graduate output with education system demands.

The five-yearly quotas for ITE intake and graduation at each university should be based on **historical trends, system needs regarding numbers and types of teachers, and the quality of the BEd (FP) and BEd (IP) programmes**. The enrolment plan for ITE must also be more nuanced: In addition to specifying overall numbers, it should specify the numbers of teachers needed for each phase and/or subject specialisation. The quotas must be informed by timeous and accurate data on the quantity and types of teachers required and adjusted to meet the projected demands of the PEDs. This will require close engagement and data sharing between DHET, the DBE and universities.

The DHET should commission research into the success of different selection policies and practices: This can be done by tracking education students' time to graduation, their competence at graduation, the length of their teaching career, and the locations of their teaching posts throughout their career. This information should be matched with the students' application data in order to develop profiles of successful applicants, which can inform future selection policies.

Faculties of education offering BEd (FP) and/or BEd (IP) degrees should undertake **a programme of curriculum reform** that will ensure that teachers acquire the required knowledge and skills to teach languages, literacy and mathematics. The Education Deans' Forum should lead professional collaboration among education faculties on matters pertaining to standards, curriculum, assessment, policy, and funding.

The DHET should pay attention to the reward system for teaching and research in universities: The system should give equal attention to effective teaching and research outputs, including for investigations aimed at improving the quality of student outcomes.

University education faculties should employ lecturers and teaching practice mentors who have the necessary knowledge and skills to educate students in language, literacy and mathematics: Where suitable candidates are not available to teach the foundation disciplines, accredited programmes should be established and made available to staff. Continued employment should be contingent on staff demonstrating the appropriate expertise. In addition, **donors should support the establishment and administration of training programmes for university staff in**

the foundation disciplines, as well as research, development and evaluation of ITE curriculum and assessment.

Improve the quality of teaching practice – both as it is taught and with regards to the practical experience gained by young teachers: Education faculties should strengthen the quality of the TP experience through subject-specific mentorship and supervision by educators who have demonstrated pedagogical expertise, amongst others. Schools where TP is undertaken should be more carefully selected and be contracted by the university as partners. This partnership should involve regular contact between the faculty and the teachers selected as mentors.

HEIs that receive a negative rating of their BEd programmes (FP and IP) in the CHE Sector Review should have their allocation of student enrolments curtailed by the DHET until they are able to demonstrate that they have addressed the identified weaknesses in their programmes.

MRTEQ should specify that a minimum of 150 credits (out of 480) should be allocated to languages and literacy and 100 credits to mathematics for both BEd (FP) and BEd (IP) programmes.

The DHET and DBE should review ITE student funding disbursed through both NSFAS and the Funza Lushaka bursary scheme, with a view to channeling all state funding for BEd and PGCE programmes through Funza Lushaka.

Improving teacher appointments and retention

Consider providing incentives for teachers to teach at rural schools: The teachers in our survey overwhelmingly rated rural areas as their least preferred type of area. This suggests that incentives may be necessary to ensure that rural schools can fill their teaching posts. Although teachers indicated that they prefer financial incentives, it is unlikely that these incentives will be reintroduced as a policy option given that they were recently discontinued for affordability reasons. Nonetheless, the survey reveals that **other incentives** might draw teachers to rural areas, including **subsidised accommodation, teaching assistants, and school fee subsidies for teachers' children**. There is some scope for government to consider some of these incentives as options for attracting teachers to rural schools.

Reduce teachers' administrative burden: There is a clear need to review the administrative responsibilities of teachers with the view to reducing these to only those that are crucial for effective school management. Expanding the national teaching assistant programme may also be an effective policy solution in this regard, as teaching assistants could take on some of the administrative tasks currently completed by teachers.

Provide mental health support to both teachers and learners: Evidence of teachers having to extend beyond their role as educators and acting as caregivers, social workers and counsellors suggests a great need for these professionals among learners, especially those from socio-economically disadvantaged homes. Providing this type of support to teachers is also crucial, given the demands placed on them by the profession.

Train teachers in practical remedial teaching strategies: Addressing learning backlogs that accumulate as learners move through school without mastering the curriculum emerged as a

challenge faced by many teachers. In addition to improving the teaching of reading in the FP, there is a clear need to equip teachers in later grades to support learners with major learning backlogs.

Include classroom management strategies in ITE programmes: It is clear from the interviews that dealing with behavioural problems in the classroom significantly detracts from teaching time. A possible response to this would be to include training in classroom management in all ITE programmes.

Empower principals to optimise teacher allocation within schools: South African schools can reduce class sizes even within current budget limits. Class size varies widely across provinces and school quintiles, even when the earner-educator ratio is the same. These differences still persist after accounting for school resources and enrollment[51]. This suggests **schools can distribute teachers more efficiently across classrooms and subjects.** To achieve this, principals need better support in managing teacher allocation (e.g. through better timetabling) and stronger accountability mechanisms to enhance their role as instructional leaders.

Improving the efficiency of financing teacher appointments and the basic education system

The current education system and institutions are characterised by many efficiency and equity issues. Given the extent of fiscal constraints and the low likelihood of rapid relief, it is necessary to address these issues.

- In basic education, there are options to increase both **allocative efficiency and operational efficiency**. In terms of allocative efficiency, **improvements in early grade reading and numeracy remain an important challenge to overcome** and require a more in-depth look at the distribution of spending between primary and secondary education.
- Regarding operational efficiency, **there is a need for improved monitoring and quantitative and qualitative analysis of school class sizes**, as well as the varying relationships between learner-educator ratios and class sizes (including the factors behind these relationships). It is also important during periods of austerity to improve the monitoring of funding equity in basic education.
- In addition to exploring alternatives around fiscal strategy and education financing, **it is also important to explore the threats and opportunities arising from broad structural shifts,** including, among other things, shifts in demography, technology and climate. For example, demographic change will lead to less quantitative pressure in primary education, but there will be enrolment growth in secondary education due to increasing retention of learners in schools.

51. Wills, *South African teacher shortages.*

Systemic shifts needed to align teacher supply with teacher demand

Improve the completeness and accuracy of the data regarding teacher numbers, qualifications and subject specialisation at the provincial level: This includes making use of the available data and sharing analysis of data with key stakeholders to support evidence-based planning in the sector.

Deliberate, careful succession planning is needed along with resources and processes to make and implement promotion decisions: Turnaround times for appointing educators to SMT posts must be tracked. These processes were significantly disrupted during COVID-19. With higher retirement rates, the number of promotions will increase, so it is important that the time taken to fill posts declines.

Expanding and refocusing the human resource management section in each PED's annual report: Possible improvements include the following:

- Develop more evidence-based, multi-year personnel spending proposals for the provincial treasury to consider in the annual budgeting process.
- Be more deliberate about taking into account supply and demand issues.
- Separate non-educators and educators.
- Be more explicit about the issues affecting unit costs and how these change over time.
- Make it a standard reporting practice to highlight some of the issues facing the province.

To break down silos within a province, organise closed workshops or discussions between human resource planning and provincial treasuries: These sessions should address budget-related issues in the education sector and provide clear interpretations of matters such as excess educators and double-parking educators. This will improve coordination and decision-making.

Develop programmes to encourage female educators to apply for school management and leadership positions and continue to track the overall number of applicants and eventual hires: Additionally, ensure that policies and promotion decisions are applied equally to both genders.

Continue to assess overall levels of educator demand and supply, in the context of an evolving budget at the provincial level: Improve the ability to identify supply and demand gaps at more granular levels, so that ITE intake can be better matched to the posts likely to be needed in five years' time.

Return to policy-mandated processes for teacher recruitment, specifically the open publication of vacancy lists.

Conclusion: Realising the education dividend

The TDD project was created to measure and plan for expected financial savings due to a younger educator workforce in the future. When the project started, estimates suggested that demographic shifts would steadily reduce the educator wage bill due to lower unit costs per educator, leading to savings of about R13 billion by 2030 – assuming the workforce size remained the same.

However, this initial estimate relied on outdated modeling that did not account for key factors, such as the shift from a two-notch to a three-notch annual progression (following the 2018 policy change), or how demographic changes would impact promotion patterns. The updated model now provides a more reliable estimate.

The original expectation of a large financial saving no longer holds. Even if the workforce size remains unchanged and cost-of-living adjustments match inflation, the 2030 wage bill will be 0.8% higher than in 2022, adding R1.6 billion to salary costs. This represents an almost flat growth rate of just 0.1% per year.

Although there are no significant monetary savings, there is still a financial benefit. With no workforce expansion, the wage bill will grow at a much slower rate than National Treasury budgeting guidelines suggest. These guidelines, which are deeply embedded in the planning and budgeting cycle, require PEDs to account for both cost-of-living adjustments and annual salary progressions. However, a 1.5% annual notch progression does not always directly translate to a 1.5% increase in total cost. Demographic changes, specifically changes in the average age of teachers, must also be taken into account. **As older educators retire, younger, lower-paid educators enter the workforce, balancing out the overall wage bill**. South African budgeting often fails to consider this crucial demographic effect.

In modelling teacher demand, we used different economic growth scenarios52. Two of these scenarios are considered here. Scenario 1 is driven by the need to revert to **the more favourable learner-educator ratio seen in 2011, namely 27.4:1**. This first scenario produces an **annual total expenditure increase of 1.8%.** Although this happens to match the medium-term growth forecasts of both the National Treasury and the IMF, this is a mere coincidence, as Scenario 1 is not driven by a 1.8% total expenditure growth figure. Scenario 2 is less ambitious and aims to keep the learner-educator ratio at the 2021 level and no lower. Scenario 2 thus requires **lower economic growth of 0.8%**, which is more in line with South Africa's current growth figures. The economic growth figures and the education sector's dependency on public sector funding show the very tight relationship between our ability to improve education in South Africa and the overall performance of the economy. We will not be able to increase the quality of education available in classrooms through lower learner-educator ratios if South Africa does not move to a higher growth path.

52. For more detail, consult Gustafsson, *Projections of Educators (Final Report)*.

In conclusion, **the work done as part of the TDD study should not be regarded as a once-off initiative**. It should help to guide analysts inside and outside government on how to proceed with ongoing work: gauging changes to the average cost of a teacher, for instance, as age distributions change; using the available data to project future demand, including understanding the often significant discrepancies between data on enrolment age and official population figures; and interpreting the evolving relationship between learner-educator ratios and class sizes.

In planning teacher supply, we must be cognisant of demand – and that has not historically been the case. The temporary over-supply of teachers we are experiencing was not planned rationally to assist in dealing with an approaching demand crunch; it just so happens that supply and demand have aligned relatively well over the longer term. Ultimately, our teacher education training institutions and education system must become better at planning for the alignment of teacher supply and demand.

References

Council on Higher Education. "Proposal for a national review of initial teacher education programmes." Draft for consultation, unpublished, 2022.

Department of Basic Education. *Ministerial task team report on the national senior certificate (NSC)*, Department of Basic Education, 2014. https://static.pmg.org.za/141119nsc.pdf.

Department of Education. *Post provisioning: Conceptual framework, analysis of the data and way forward,* Department of Education, 2006. https://www.education.gov.za/Portals/0/Documents/Reports/Research%20Repository/Teacher%20demand%20and%20supply/Post%20provisioning.pdf?ver=2019-09-06-161613-730&timestamp=1570440828998.

Department of Higher Education and Training. "The Minimum Requirements for Teacher Education Qualifications (as Revised 2018)." Draft for comment, unpublished, issued October 29, 2018.

Gustafsson, Martin. "Teacher demographics in South Africa: National and provincial insights." PowerPoint presentation, Quantitative Educational Research (QER) Conference, Stellenbosch, September 5, 2023. https://tdd.sun.ac.za/downloads/presentations/Gustafsson-Teacher-demographics-QER-2023.pdf.

Gustafsson, Martin. *Projections of Educators by Age and Average Cost to 2070*: *Final Report*, Research on Socio-Economic Policy (RESEP), 2023. https://tdd.sun.ac.za/downloads/F.-Gustafsson-2023-Projections-of-Educators-by-Age-Cost_Final.pdf.

Gustafsson, Martin. *Specialisation-specific teacher supply and employment in the 2019 to 2022 period*, Department of Basic Education, 2025. https://www.education.gov.za/Portals/0/Documents/Reports/2025/Specialisation-specific%20supply%202025%2001%2015.pdf?ver=2025-02-12-201150-747.

Gwarube, Siviwe."Media briefing on budget cuts." Transcript of speech delivered in Pretoria, September 25, 2024. https://www.gov.za/news/speeches/minister-siviwe-gwarube-media-briefing-budget-cuts-25-sep-2024.

Hofmeyr, Heleen; Pampallis, Irene; Qvist, Jess and Swelindawo, Lunga. *Teacher preferences and job satisfaction in South Africa*, Research on Socio-Economic Policy (RESEP), 2024. https://tdd.sun.ac.za/downloads/Hofmeyr-et-al_TDD-Survey_Teacher-preferences-and-job-satisfaction.pdf

Janari, Spencer. "Basic Education Spending and Budget Trends: A 10 Year Overview." Presentation, TDD Fiscal Workshop series, Stellenbosch, May 9, 2024. https://tdd.sun.ac.za/downloads/presentations/fiscal-workshop/Basic-education-budget-trends_Spencer-Janari.pdf.

Kruger, John. "Strategic Options for South African Education Budgets in Austere Times." Unpublished draft note, Research on Socio-Economic Policy (RESEP), forthcoming.

Kruger, John, Hompashe, Dumisani and Swelindawo, Lunga. *"An overall pattern of dissatisfaction"? Interviews with primary school teachers on motivation, experience and recruitment*, Research on Socio-Economic Policy (RESEP), 2024. https://tdd.sun.ac.za/downloads/I.-Kruger-Hompashe-&-Swelindawo-2024-An-overall-pattern-of-dissatisfaction.pdf.

OECD. *TALIS 2018 Results (Volume II): Teachers and School Leaders as Valued Professionals*, OECD Publishing, 2020. https://doi.org/10.1787/19cf08df-en.

Pampallis, Irene. "Selection into the Bachelor of Education." In *School Foundations: The Role of Initial Teacher Education*, edited by Nick Taylor. HSRC Press, forthcoming.

Primary Teacher Education Project. *Knowledge and Practice Standards for primary teacher education graduates: Language and literacy*, Department of Higher Education and Training, 2020. https://www.jet.org.za/clearinghouse/projects/primted/standards/literacy-teacher-standards/literacy-teacher-standards-2020-1.pdf/

Primary Teacher Education Project. *Mathematical Knowledge and Practice (MKP) Standards for Prospective FP and IP Teachers*, Department of Higher Education and Training, 2022. https://www.jet.org.za/clearinghouse/projects/primted/standards/mathematics-teacher-standards/primted-k-p-standards-for-mathematics-19nov19.pdf/

Prince, Robert; Balarin, Emlyn; Steyn, Sanet and Niekerk, Ashely. *The National Benchmark Tests National Report: 2019 Intake Cycle*, Centre for Educational Testing for Access and Placement, 2019. https://nbt.uct.ac.za/sites/default/files/NBT%20National%20Report%202019.pdf.

RESEP and the Department of Basic Education. "Provincial TDD Workshops (Spotlight Series): Stakeholder Engagement Report." Unpublished report, 2024.

Roberts, Nicky and Moloi, Qetelo. *The Quality of Primary Mathematics Teacher Preparation in SA: Findings from PrimTEd*, Research on Socio-Economic Policy (RESEP), 2022. https://tdd.sun.ac.za/downloads/D.-Roberts-Moloi-2022-Overview-of-Primted-TDD-10-Nov-2022.-v3.pdf.

Shisana, Olive; Peltzer, Karl; Zungu-Dirwayi, Nompumelelo and Louw, Julia (Eds.). *The Health of our Educators: A focus on HIV/AIDS in South African public schools, 2004/5 Survey*, HSRC Press, 2005. https://hsrc.ac.za/uploads/pageContent/1046482/The-Health-of-Our-Educators-Entire-eBook_171218_2307132.pdf.

Spaull, Nic and Taylor, Stephen (Eds.). *Early Grade Reading and Mathematics Interventions in South Africa*. Oxford University Press, 2022.

Taylor, Nick and Mawoyo, Monica. "Professionalising teaching: The case of language and literacy." In *Early Grade Reading in South Africa*, edited by Elizabeth Pretorius and Nic Spaull. Oxford University Press, 2022.

Taylor, Nick. *Note 18: Initial Teacher Education: Implications for reform from the Teacher Demographic Dividend project*. Research on Socio-Economic Policy (RESEP), forthcoming.

Taylor, Nick. *School Foundations: The Role of Initial Teacher Education*. HSRC Press, forthcoming.

Van der Berg, Servaas and Gustafsson, Martin. "Educational Outcomes in Post-apartheid South Africa: Signs of Progress Despite Great Inequality." In *South African Schooling: The Enigma of Inequality*, edited by Nic Spaull and Jonathan Jansen. Springer, 2019.

Van der Berg, Servaas, Gustafsson, Martin and Burger, Cobus. *School Teacher Supply and Demand in South Africa in 2019 and Beyond*, Department of Higher Education and Training, 2020. https://resep.sun.ac.za/wp-content/uploads/2022/03/DHET-Supply-and-Demand-Report-Phase-1-1.pdf.

Van der Berg, Servaas; Wills, Gabrielle; Selkirk, Rebecca; Adams, Charles and Van Wyk, Chris. *The cost of repetition in South Africa*, Stellenbosch Economic Working Papers: WP13/2019, 2019. https://www.ekon.sun.ac.za/wpapers/2019/wp132019/wp132019.pdf.

Wills, Gabrielle and Böhmer, Bianca. *Note 12: Male Managers, Female Teachers: The South African case of gender imbalances in school leadership and management*, Research on Socio-Economic Policy (RESEP), 2023. https://tdd.sun.ac.za/downloads/notes/Note%2012%20-%20Male%20Managers,%20Female%20Teachers%20(TDD%2010%20July%202023).pdf.

Wills, Gabrielle and Qvist, Jess. *Repetition and dropout in South Africa before, during and after COVID-19: COVID-Generation Research Report,* Research on Socio-Economic Policy (RESEP), 2023. https://resep.sun.ac.za/wp-content/uploads/2024/01/2023-12-21-Wills_Qvist_covid_dropout_repetition_report_v4_upload.pdf.

Wills, Gabrielle. *South African teacher shortages as revealed through class sizes and learner-educator ratios: An exploratory analysis*, Research on Socio-Economic Policy (RESEP), 2023. https://tdd.sun.ac.za/downloads/E.-Wills-2023-Teacher-Shortages-class-sizes-LE-ratios.pdf.

Appendix A: List of working papers, reports and notes produced as part of the TDD project

All publications listed here can be accessed by clicking on the hyperlinks or by visiting https://tdd.sun.ac.za/research/.

Working papers and reports

A. Gustafsson, Martin. *Projections of Educators by Age and Average Cost to 2070: A first report*, Research on Socio-Economic Policy (RESEP), 2022. *Note: This working paper was accompanied by an Excel model.*

B. Shepherd, Debra. *The Teacher Labour Market and Pay: How does it compare to other professions?*, Research on Socio-Economic Policy (RESEP), 2022a.

C. Shepherd, Debra. *Teachers' level of education and employment over the last two decades: What can be learnt from labour force survey data?*, Research on Socio-Economic Policy (RESEP), 2022b.

D. Roberts, Nicky and Moloi, Qetelo. *The Quality of Primary Mathematics Teacher Preparation in SA: Findings from PrimTEd*, Research on Socio-Economic Policy (RESEP), 2022.

E. Wills, Gabrielle. *South African teacher shortages as revealed through class sizes and learner-educator ratios: An exploratory analysis*, Research on Socio-Economic Policy (RESEP), 2023.

F. Gustafsson, Martin. *Projections of Educators by Age and Average Cost to 2070: Final Report,* Research on Socio-Economic Policy (RESEP), 2023. Note: This working paper was accompanied by an *Excel model*, a *video* explaining key points of the report, and the *video script*.

G. Böhmer, Bianca and Gustafsson, Martin. *Provincial Educator Demand Projections for South Africa: 2021-2030*, Research on Socio-Economic Policy (RESEP), 2023.

H. Takalani, Mukovhe Glen and Shepherd, Debra. *Who and How Matters: Using situated expectancy value theory to explore the mathematics performance of Grade 9 learners in South Africa*, Research on Socio-Economic Policy (RESEP), 2023.

I. Kruger, John, Hompashe, Dumisani and Swelindawo, Lunga. *"An overall pattern of dissatisfaction"? Interviews with primary school teachers on motivation, experience and recruitment*, Research on Socio-Economic Policy (RESEP), 2024.

J. Hofmeyr, Heleen; Pampallis, Irene; Qvist, Jess and Swelindawo, Lunga. *Teacher preferences and job satisfaction in South Africa*, Research on Socio-Economic Policy (RESEP), 2024.

Research notes

1. Van der Berg, Servaas and Gustafsson, Martin. *Note 1: How many teachers will retire by 2030?*, Research on Socio-Economic Policy (RESEP), 2022.
2. Spaull, Nic. *Note 2: Teacher production, class size & learner population growth*, Research on Socio-Economic Policy (RESEP), 2022.
3. Spaull, Nic and Ntaka, Poppie. *Note 3: To what extent are provinces freezing HOD and Deputy Principal posts to cope with budgetary pressures?*, Research on Socio-Economic Policy (RESEP), 2022a.
4. Ntaka, Poppie. *Note 4: Are provinces hiring the additional teachers universities produce?*, Research on Socio-Economic Policy (RESEP), 2022.
5. Spaull, Nic and Ntaka, Poppie. *Note 5: Which universities produce the most teachers who enter public schools?*, Research on Socio-Economic Policy (RESEP), 2022b.
6. Böhmer, Bianca and Pampallis, Irene. *Note 6: How many teachers are universities producing?*, Research on Socio-Economic Policy (RESEP), 2022.
7. Pampallis, Irene. *Note 7: What do teachers earn?*, Research on Socio-Economic Policy (RESEP), 2022a.
8. Shepherd, Debra and Spaull, Nic. *Note 8: Where do teachers fall relative to others in the labour market?*, Research on Socio-Economic Policy (RESEP), 2022.
9. Pampallis, Irene. *Note 9: What are the matric marks of those entering ITE programmes?*, Research on Socio-Economic Policy (RESEP), 2022b.
10. Spaull, Nic and Courtney, Peter. *Note 10: Teacher knowledge and teacher age: What are the levels of in-service teacher knowledge?*, Research on Socio-Economic Policy (RESEP), 2022.
11. Roberts, Nicky and Moloi, Qetelo. *Note 11: The Quality of Primary Mathematics Teacher Preparation in SA: Findings from PrimTEd*, Research on Socio-Economic Policy (RESEP), 2022.
12. Wills, Gabrielle and Böhmer, Bianca. *Note 12: Male Managers, Female Teachers: The South African case of gender imbalances in school leadership and management*, Research on Socio-Economic Policy (RESEP), 2023.
13. Deghaye, Nicola. *Note 13: The impact of teacher retirements on inclusive education: A dark cloud, or one with a silver lining?*, Research on Socio-Economic Policy (RESEP), 2024.
14. Kika-Mistry, Jesal. *Note 14: Spending and Budget Trends in the Early Childhood Care and Education Sector*, Research on Socio-Economic Policy (RESEP), 2024.
15. Kruger, John. *Note 15: Spending and Budget trends in the South African Post-School Education and Training Sector*, Research on Socio-Economic Policy (RESEP), 2024.
16. Böhmer, Bianca and Kruger, John. *Note 16: Spending and Budget Trends in the South African Basic Education Sector*, Research on Socio-Economic Policy (RESEP), 2024.

17. Moses, Eldridge. *Note 17: Principal Retention and Attrition Trends in South Africa: Insights from the PERSAL data*, Research on Socio-Economic Policy (RESEP), 2024.

18. Taylor, Nick. *Note 18: Initial Teacher Education: Implications for reform from the Teacher Demographic Dividend project,* Research on Socio-Economic Policy (RESEP), forthcoming.

19. Teacher Demographic Dividend. *Making sense of the Teacher Demographic Dividend Project: Synthesis Note 1: Can we address the problem of large class sizes through more (and better) teachers?*, Research on Socio-Economic Policy (RESEP), 2024.

Presentations

1. Teacher Demographic Dividend. "Eastern Cape Province: Educator Demand Projections, 2021-2030." PowerPoint presentation, TDD provincial workshops, presented to the Eastern Cape Department of Education, July 21, 2023.

2. Teacher Demographic Dividend. "KwaZulu-Natal Province: Educator Demand Projections, 2021-2030." PowerPoint presentation, TDD provincial workshops, presented to the KwaZulu-Natal Department of Education, July 23, 2023.

3. Teacher Demographic Dividend. "Mpumalanga Province: Educator Demand Projections, 2021-2030." PowerPoint presentation, TDD provincial workshops, presented to the Mpumalanga Department of Education, July 27, 2023.

4. Teacher Demographic Dividend. "Northern Cape Province: Educator Demand Projections, 2021-2030." PowerPoint presentation, TDD provincial workshops, presented to the Northern Cape Department of Education, July 31, 2023.

5. Teacher Demographic Dividend. "Western Cape Province: Educator Demand Projections, 2021-2030." PowerPoint presentation, TDD provincial workshops, presented to the Western Cape Education Department, August 3, 2023.

6. Teacher Demographic Dividend. "Free State Province: Educator Demand Projections, 2021-2030." PowerPoint presentation, TDD provincial workshops , presented to the Free State Department of Education, August 14, 2023.

7. Gustafsson, Martin (Stellenbosch University and the Department of Basic Education). "Teacher demographics in South Africa: National and provincial insights." PowerPoint presentation, Quantitative Educational Research (QER) Conference, Stellenbosch, September 5, 2023.

8. Teacher Demographic Dividend. "North West Province: Educator Demand Projections, 2021-2030." PowerPoint presentation, TDD provincial workshops, presented to the North West Department of Education, September 11, 2023.

9. Teacher Demographic Dividend. "Limpopo Province: Educator Demand Projections, 2021-2030." PowerPoint presentation, TDD provincial workshops, presented to the Limpopo Department of Education, October 15, 2023.

10. Teacher Demographic Dividend. "Gauteng Province: Educator Demand Projections, 2021-2030." PowerPoint presentation, TDD provincial workshops, presented to the Gauteng Department of Education, October 24, 2023.

11. Donaldson, Andrew R. (Southern Africa Labour and Development Research Unit). "Education, growth, development: A long run perspective." Presentation, TDD Fiscal Workshop series, April, 2024.

12. Lewin, Thandi (University of Johannesburg) and Parker, Diane (University of Pretoria). "The Higher Education Budget." Presentation, TDD Fiscal Workshop series (virtual), April 24, 2024.

13. Kruger, John. "(Thinking about) Prioritising Education Spending (Or, Escaping the Human Capital Trap)." Presentation, TDD Fiscal Workshop series (virtual), April 25, 2024.

14. Mohamed, Zaheera and McLaren, Daniel (Ilifa Labantwana). "Trends in early childhood development funding." Presentation, TDD Fiscal Workshop series (virtual), April 25, 2024.

15. Keller, Sonja (JPMorgan Chase Bank). "Budget 2024: Navigating the fiscal adjustment path." Presentation, TDD Fiscal Workshop series (virtual), April 2024.

16. Janari, Spencer (National Treasury). "Basic Education Spending and Budget Trends: A 10 Year Overview." Presentation, TDD Fiscal Workshop series (virtual), May 9, 2024.

17. Philip, Kate. "Moving the Dial on Learning Outcomes? The Presidential Employment Stimulus." Presentation, TDD Fiscal Workshop series (virtual), May 9, 2024.

18. Gustafsson, Martin (Stellenbosch University and the Department of Basic Education), "Basic education spending and costs: The learner-educator ratio and related resourcing issues." Presentation, TDD Fiscal Workshop series (virtual), May 2024.

Appendix B: Dissemination – engagements with government, the Department of Basic Education and district offices

In 2024, presentations and discussions on research findings from the TDD project and broad concepts were shared at the following non-provincial and provincial engagements[53]:

Presentation to the 2030 Reading Panel, Houghton Hotel, Johannesburg, 13 February 2024: Ms Bianca Böhmer made this presentation to delegates from business, government, academia, and the NGO sector. The TDD research was included in the 2024 Reading Panel Background Report, presentation and discussions.

UNESCO Teacher Conference: 14th Policy Dialogue Forum and governance meetings of the International Task Force on Teachers for Education 2030, Johannesburg, 26-28 February 2024: Prof Martin Gustafsson made a presentation at the UNESCO Teacher Conference, which drew from the TDD work.

Virtual Fiscal Workshops discussion: Education Budget Drivers, Implications and Options, virtual meetings and email, March 2024: Mr John Kruger discussed the upcoming Virtual Fiscal Workshops (see below) with various stakeholders from government, the private sector, civil society, and universities who were panellists in the workshops.

Research notes prepared for the National Treasury, March 2024: Research notes on the productivity differences between younger and older teachers as well as early retirement options were prepared on request of the Director-General of the National Treasury, Dr Duncan Pieterse. The research notes drew from TDD research findings and other RESEP work.

Virtual Fiscal Workshops, April-May 2024: On 10 April, 25 April and 9 May 2024, the TDD project hosted virtual workshops. The workshops were attended by government officials from the National Treasury, the Department of Planning, Monitoring and Evaluation, the National Planning Commission, the DBE, and the Gauteng and KwaZulu-Natal PEDs. The workshops were also attended by colleagues from the private sector (JPMorgan), voluntary/civil society (Ilifa Labantwana, UNICEF, DG Murray Trust, and World Bank) and universities/research units (Southern Africa Labour and Development Research Unit, Wits University, University of Cape Town, University of Pretoria, University of Johannesburg, and Stellenbosch University).

53. Not all of these meetings/engagements were funded through the TDD budget, even though research findings from the project were presented at these events.

TDD Provincial Workshop II, Kievits Kroon Estate, Pretoria, 18-19 September 2024:

In September, the project held a two-day policy workshop in Pretoria. The workshop was attended by officials from the PEDs, the National Treasury, the Department of Planning, Monitoring and Evaluation, the DHET, the National Planning Commission, and the DBE. The keynote address, which focused on teacher employment, was given by the Director-General of the DBE, Hubert Mathanzima Mweli, on the first day of the workshop.

TDD research project videos, December 2024: On 22 December 2024, a video sharing the main findings of the TDD research project was posted on the RESEP Group YouTube channel. At the time of writing, the video has been viewed just over 130 times. The video can be found here. Three shorter videos for dissemination via social media were also produced. All four videos can be found on RESEP's Youtube channel.