



2023 Reading Panel

BACKGROUND REPORT

The former Deputy President of South Africa Dr Phumzile Mlambo-Ngcuka has convened the annual '2030 Reading Panel' to bring together respected South African leaders to ask: "What needs to change for us to ensure that all children learn to read by 2030?" The panel will meet once a year every year until 2030.

The panel consists of the following members (listed alphabetically): Commissioner André Gaum, Bobby Godsell, Colin Coleman, Prof Jonathan Jansen, Noncedo Madubedube, Nangamso Mtsatse, Jay Naidoo, Prof Njabulo Ndebele, Prof Vuyokazi Nomlomo, Prof Sizwe Mabizela, Archbishop Thabo Makgoba, Dr Phumzile Mlambo-Ngcuka, Hulisani Ravele, Umunyana Rugege, Prof Michael Sachs, Judy Sikuza, Elinor Sisulu, Prof Nic Spaull, Prof Catherine Snow. More information is available at readingpanel.co.za

This background report was prepared by Nic Spaull at the request of the Chair of the 2030 Reading Panel. The views and opinions expressed in the document are those of the author and do not necessarily reflect the official position of individual Panel members or the sponsors of the Reading Panel.

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7 February 2023.

Executive Summary

1. Introduction

Has the number of children that can read for meaning declined due to the pandemic?

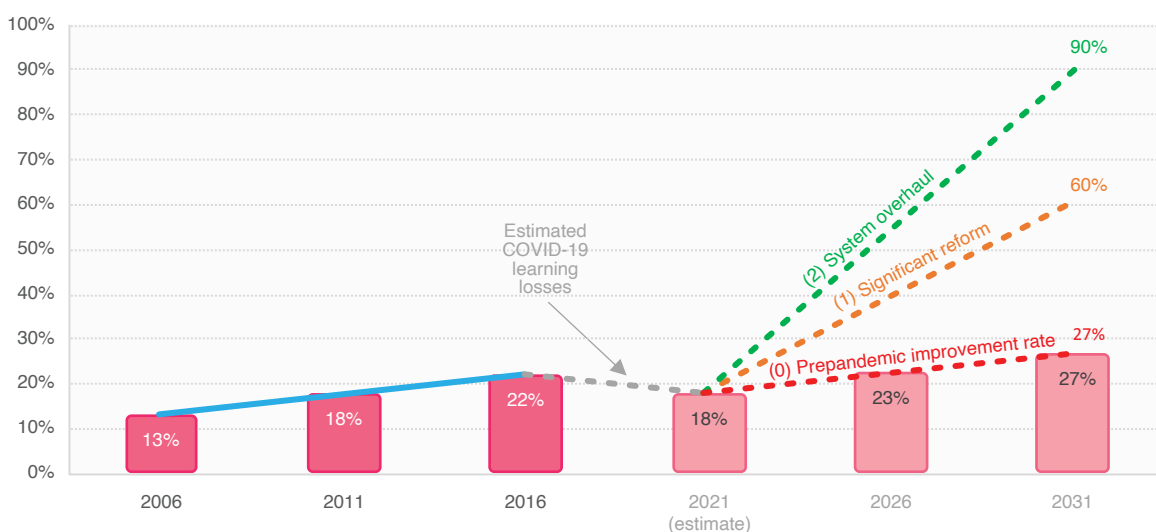
In 2016 PIRLS estimated that 78% of Grade 4 learners could not read for meaning in any language. The next round of PIRLS was conducted in 2021 but the results of that survey will only be released in May 2023 due to delays. However, it is possible to use new research on learning losses in the Western Cape to estimate the likely change due to the pandemic. That assessment tested all Grade 3 and Grade 6 children in the Western Cape in 2021 in both language and mathematics. In their 2022 report, Van der Berg et al. look at the percentages of Grade 3's and 6's that passed the language test at the lowest possible level (scored at least 30% on the test). At Grade 3 the percentage passing at this low level dropped from 68% (2019) to 59% (2021), and at Grade 6 dropped from 85% (2019) to 76% (2021) with the largest declines for the poorest learners. If the learning losses seen in the Western Cape are experienced by South Africa as a whole (a conservative assumption) then the percentage of Grade 4 children that cannot read for meaning will increase from 78% pre-pandemic to an estimated 82%.

2. Trajectories to 2030

Are we on track to ensure that by 2030 all children learn to read for meaning?

Given new estimates of learning losses from the pandemic, South Africa is even further behind the 2030 goal than it was before the pandemic. There is now the real possibility that the pandemic has wiped out a decade of progress in reading outcomes. If learning loss estimates are correct and the country manages to get back onto the pre-pandemic improvement trajectory, it will still take 86 years from 2023 until all Grade 4 children can read for meaning in SA (i.e. the year 2108). To reach the 2030 goal, fundamental reforms are required in the ways that teachers are recruited, trained, certified, supported and evaluated, as well as far-reaching reforms on education financing and the resourcing of schools. In the absence of these reforms, any goal of ensuring all children learn to read for meaning by age 10 by 2030 is aspirational rhetoric.

Figure 1: Percentage of Grade 4 learners in SA who can read for meaning (past PIRLS trends & possible trajectories)



3. New Research

What do we now know about early grade reading in SA that we didn't know before?

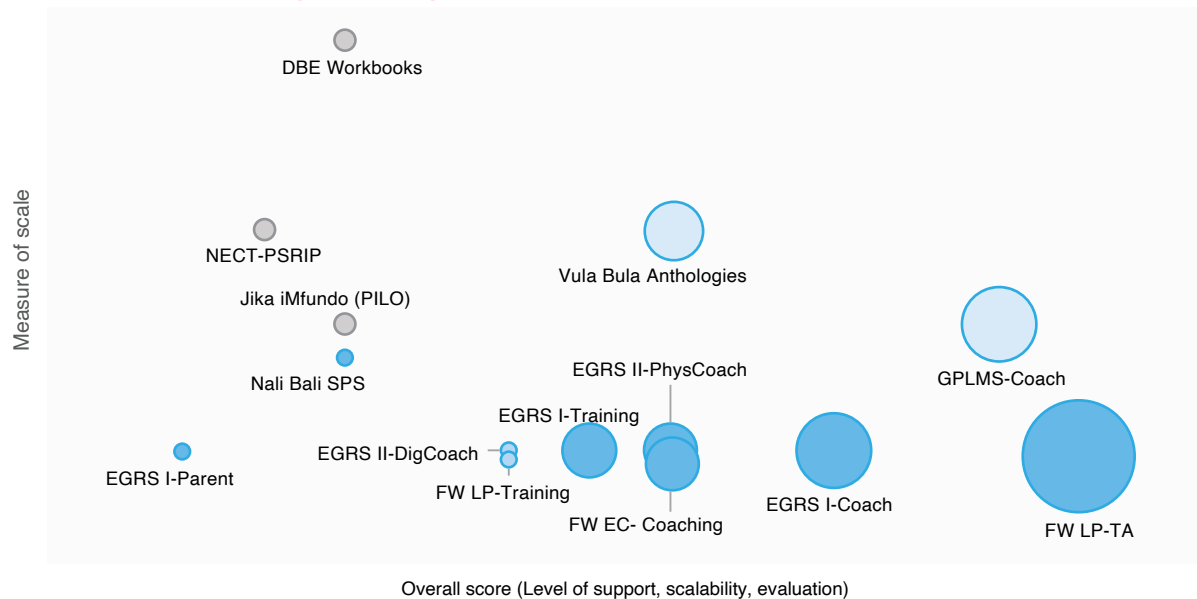
Two new books have been published by Oxford University Press on early grade reading in South Africa, as well as the interventions to improve reading outcomes. Over 50 South African authors contributed to the chapters in these volumes summarizing what is now known about reading outcomes, teacher practices, available resources and interventions that have led to improvements in reading outcomes, as well as those that have not. New datasets of over 40,000 South African learners from no-fee schools show the importance of getting the fundamentals of reading right in Grade 1 and Grade 2. Unfortunately these studies show that less than 50% of Grade 1 children learn the letters of the alphabet by the end of Grade 1. Longitudinal data following these children indicates that they are perpetually behind and in 'catch-up' mode, although they never actually catch up. One can summarize the research by saying that the psycholinguistic skills that go into early reading in African languages are now well-documented in South Africa, showing a hierarchy of skills that builds from oral proficiency to auditory discrimination (phonemic awareness) and letter-sound recognition. Once learners can segment individual letter-sounds in words and blend letters to form words, increasing accuracy and fluency then aid comprehension. This research shows in stark relief that decoding failures in Grade 1 predict fluency and comprehension failures all the way to Grade 7. Children who do not 'learn to read' in Grade 1 and 2 will not 'read to learn' in Grades 2 onwards. "The smoking gun at the crime scene of South Africa's literacy crisis is the fact that our learners do not acquire the most elementary building blocks of the literate world when they need to: in Grades 1 and 2. Policy attention must turn to what is happening in Grade 1 and 2 classrooms that prevents this most basic knowledge from being acquired" (Pretorius & Spaul, 2022: p.16).

4. Interventions in SA

What do we know about interventions to improve reading outcomes?

Over the period 2010-2022 there have been many government-led and NGO-led interventions to improve reading outcomes in the early grades. Some of these have been evaluated, and some were designed to measure whether there were causal improvements in reading outcomes. To summarize what is known about reading interventions in South Africa, 36 researchers contributed to writing 16 chapters on 14 different interventions over this period, including how they were designed and implemented, whether they were evaluated and what we have learnt from them. All 14 interventions were scored on four dimensions: (1) Program dosage, (2) Cost and implementation scale, (3) Government buy-in, and (4) Evaluation method and evidence. The figure below summarizes the results of that exercise showing that there are essentially two types of interventions: (1) Small-scale, well-resourced, well-evaluated interventions that have evidence of impact, and (2) Large-scale, train-the-trainer approaches that work within existing constraints but lack evidence of improving reading outcomes. Train-the-trainer approaches typically train subject advisers who are then expected to train teachers. The main problem with this approach is that it relies on Subject Advisers to be the 'implementing trainer' of teachers. Apart from the fact that Subject Advisers typically have inadequate knowledge of how to teach reading themselves – typically scoring 50% on tests measuring this (Chetty et al. 2022: p.75) – there are also simply too few of them to realistically train teachers they are responsible for. By using data on the number of Foundation Phase (FP) Subject Advisers and teachers per province it is possible to estimate the ratio of FP teachers to FP Subject Advisers. In four of the nine provinces (GP, MP, LP and KZN), the average FP subject adviser is responsible for more than 500 FP teachers. In KwaZulu-Natal the average Foundation Phase Subject Adviser is responsible for more than 1500 Foundation Phase teachers. These ratios make meaningful training and support impossible. By contrast, the heavy-dose interventions that have shown improvements in reading outcomes (EGRS and Funda Wande) have a ratio of one coach to approximately 33 teachers.

The relationship between scale, support and impact in South African early grade reading interventions (Source: Spaull & Taylor, 2022).



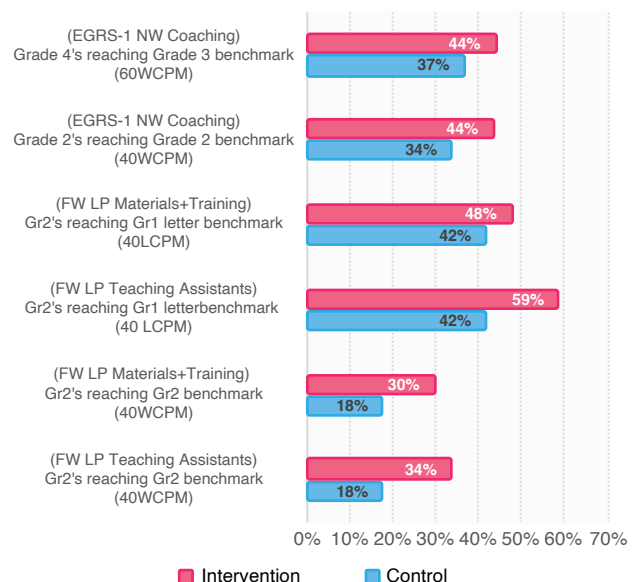
5. Promising programs

Is there evidence of small-scale programs significantly improving reading outcomes in SA?

There is evidence of small-scale programs improving reading outcomes in the North West, Eastern Cape and Limpopo. The two types of interventions that have the largest gains are employing a teacher coach who visits teachers in their classroom (such as the EGRS study in the North West), or employing Educator Assistants who are trained and resourced (such as the Funda Wande study in Limpopo). (Note that these Teacher Assistants are not the same as the DBE's Educator Assistants under the Presidential Youth Employment Initiative. In the Limpopo intervention the TAs underwent literacy and numeracy tests in their selection, were trained in-person every term and equipped with a full structured pedagogy program). The results of the Funda Wande Limpopo Teacher Assistant intervention (2021-2022) were released in January 2023

and show that schools that received both additional materials and a dedicated teacher assistant (one TA per teacher) improved reading outcomes by 129% (0,5 standard deviations) in both reading and mathematics (the intervention targeted both reading and mathematics). To date, there have been significant gains seen from both a coaching intervention (EGRS), and a Teacher Assistant intervention (Funda Wande). In both cases there was another arm of the program where schools were only given additional materials with some centralized training. Both studies (EGRS and FW) show that these centralized training programs also lead to improvements, although they were typically half as impactful as the coaching or the TA intervention.

The impact of rigorously evaluated interventions on home language reading outcomes in SA



6. Stated and revealed priorities

Is there a National Reading Plan or a budget for improving reading?

Although there has been mention in parliament of a 'National Reading Plan', it is unclear what is meant by this term since no such document exists on the DBE website and the DBE has not formally published any 'National Reading Plan' (this was confirmed by staff within the DBE). The most recent "National Reading Strategy" that is publicly available dates from 2008. There is also no national budget that has been allocated to reading interventions or reading resources. The two exceptions to this are (1) the *DBE Workbooks*, although these have been in existence since 2011 and are not 'new', and (2) The *PYEI Educator Assistant (EA) Program*. Considerable resources have been spent on this program (estimated at R25-billion), however it is largely considered a youth employment program rather than a program to improve learning outcomes. That being said, nearly 30,000 of the 250,000 EAs earmarked for 2023 have been allocated to be 'Reading Champions' with a focus on reading in the foundation phase. While this is a welcome development, it should be noted that the only requirement is that the applicant must have scored 30% in matric and be fluent in the Home Language of the school. There is no face-to-face training or selection process involving testing the candidates. The only budget in the 2022 Budget Vote that is specifically for reading was the R11-million for the Early Grade Reading Assessment (EGRA). The National Education Collaboration Trust's (NECT's) Primary School Reading Improvement Program (PSRIP) currently focuses on English rather than Home Language and has an estimated budget of R37-million per year despite working in more than 7000 schools.

7. Proactive provinces

Are any provinces implementing well thought-out, budgeted, province-wide interventions to improve reading?

Apart from the national roll-out of Educator Assistants (EAs), there are currently no funded national programs to improve reading outcomes. However, a review of new provincial programs suggests that there are some proactive provinces who are not only publishing provincial reading plans but also allocating budgets and implementing well thought-out programs targeting reading in Grades R-3. The only two provinces to have implemented province-wide and funded interventions are the Western Cape and Gauteng. The WCED has partnered with Funda Wande to implement a Reading for Meaning program in all Afrikaans and isiXhosa schools in the province. Following a 50-school pilot in 2022, this program is being rolled out to all schools in 2023 (Grade 1), 2024 (Grade 1+2), and 2025 (Grade 1+2+3). The 3-year budget is R111-million and is fully funded by the WCED. The Gauteng Department of Education (GDE) has partnered with WordWorks to implement a Grade R program in all schools offering Grade R in 2022-2024. The total budget is R107-million with 80% funded by a consortium of donors (GEDT, Zenex, USAID). It is interesting to note that both the WCED and GDE interventions cost approximately R8500 per teacher per year, and these were different programs implemented by different service providers. Creating norms around the costs of train-the-trainer materials-based interventions is useful for other provinces to budget accordingly. Notwithstanding these provinces' investments in Grade R-3 reading (especially the Western Cape), it is worth comparing these figures to the annual cost of the GDE's GPLMS program, which was approximately R300,000 per teacher per year. Put differently, these 'train-the-trainer-including-materials' approaches of both the WCED and the GDE cost only 3% of what GPLMS spent on its direct-classroom coaches from 2010-2014. With the possible exception of the Western Cape, there are no examples of provinces allocating reasonable budgets to foundation phase reading. Even the GDE's Grade R program, while commendable, is still majority funded (80%) by donors with the GDE contributing R20-million. The preceding sections on the research around interventions that improve reading outcomes is quite clear on which programs are most likely to improve reading outcomes.

8. Teacher retirements

Given that 50% of teachers are aged 50+ and will retire soon, how will this affect teaching and learning?

Since 2016 universities have increased teacher supply, but provinces have not increased hiring, leading to larger class sizes. In 2015/16 provinces hired more than two thirds of teachers that were produced. In 2020 this was only 54%. In 2014 the Department of Higher Education and Training (DHET) established increasing teacher training as a top priority for universities and while universities have responded, provinces have not increased hiring, in part due to budgetary constraints. The immediate impact of this is increasing Learner:Educator (LE) ratios and increasing class sizes. In order to keep up with the incoming wave of teacher retirements, as well as rising learner enrolments, universities will need to produce even more teachers, however provinces also need to hire the teachers that are produced. There is also some evidence that younger teachers have higher levels of content knowledge than older retiring teachers suggesting that retirements may lead to improvements in reading and mathematics outcomes in South Africa.

9. Recommendations for government

Is government on the right track and what needs to change to reach the 2030 goal?

The short answer is no. For the 2022 Background Report of the Reading Panel there were four recommendations for government relating to measuring reading, budgets, a minimum set of resources, and an audit of university teacher education programs. Unfortunately, there has been almost no progress on any of these recommendations. The only exceptions are the new programs implemented in the Western Cape (Grade 1–3) and Gauteng (Grade R). There is currently no National Reading Plan, no budget for reading and no reporting on reading. The problem is not about lacking an evidence base on how to improve reading outcomes, but rather the political economy issues of adequate political will to implement well-funded national programs that will improve reading outcomes.

Advisory Notes

In addition to this background report there are a number of short advisory notes in the Appendix. The authors of these notes are listed alphabetically by surname below:

1. Ardington, C. & Makaluza, N. (2023) Results of the Funda Wande Intervention in Limpopo (2021–2022)
2. Du Toit, A. (2023). Improving Reading for Meaning in the Western Cape.
3. Hoadley, U. (2023). Has reading instruction in early grade classrooms changed over the last decade?
4. McConnachie, C. & Lucwaba, S. (2023) Moving from Inputs to Outcomes: Realising the Right to Basic Education by developing South African law to include a right to read and write.
5. Metcalfe, M. (2023). Implementing our intentions to improve early grade reading.
6. Mohohlwane, N., Sebaeng, L., & Zwane, Z. (2023) South African Languages Reading Benchmarks Policy Brief.
7. Vereen, N., Tloubatla, P., Makhanya, M., & Mashamaite, D. (2023) Gauteng Grade R Language and Mathematics Improvement Project.
8. Wills, G & Van der Berg, S. (2023). COVID-19 disruptions and education in South Africa: Two years of evidence.

1. Introduction

Has the number of children that can read for meaning declined due to the pandemic?

Using Western Cape learning losses as a proxy, new research suggests that the percentage of Grade 4's who cannot read for meaning has risen from 78% (in 2016) to 82% (in 2021) as a result of the pandemic. The last nationally representative survey that tested South African children on their reading abilities was the 2016 round of the Progress in International Reading and Literacy Study, commonly known as PIRLS. Although another round of the PIRLS survey was conducted in South Africa in 2021, the results of that survey will only be released in May 2023 due to delays. The 2016 round of PIRLS showed that 78% of Grade 4 learners in South Africa could not read for meaning in any language (all 11 official languages were assessed), i.e. they could not reach the Low International Benchmark because they were unable to "locate and retrieve explicitly stated information or make straightforward inferences about events and reasons for actions." Although there have been no nationally representative surveys of reading achievement since the COVID-19 pandemic, there have been several studies measuring learning losses in smaller samples of no-fee schools in some provinces, and one province-wide assessment; the Grade 3 and Grade 6 Systemic Evaluations in the Western Cape. That assessment tested all Grade 3 and Grade 6 children in the Western Cape in 2021 in both language and mathematics. In their 2022 report, Van der Berg et al. look at the percentages of Grade 3's and 6's that passed the language test at the lowest possible level (scored at least 30% on the test). At Grade 3 the percentage passing at this low level dropped from 68% (2019) to 59% (2021), and at Grade 6 dropped from 85% (2019) to 76% (2021) with the largest declines for the poorest learners. The declines were also larger at the Grade 6 level than the Grade 3 level. If South Africa experienced learning losses equivalent to the Western Cape, then it is estimated that the percentage of Grade 4 learners who cannot read for meaning in PIRLS will increase from 78% in 2016 to either 82% (if Grade 3 losses are the proxy) or 85% (if Grade 6 losses are the proxy). There is reason to believe that the national learning losses may be even greater than those in the Western Cape since many studies have found that no-fee schools (Quintile 1-3) experienced greater learning losses than fee-charging schools, and the Western Cape has the lowest proportion of no-fee schools in the country.

If the learning losses seen in the Western Cape are experienced by South Africa as a whole, then the percentage of Grade 4 children that cannot read for meaning will increase from 78% pre-pandemic to an estimated...

82%

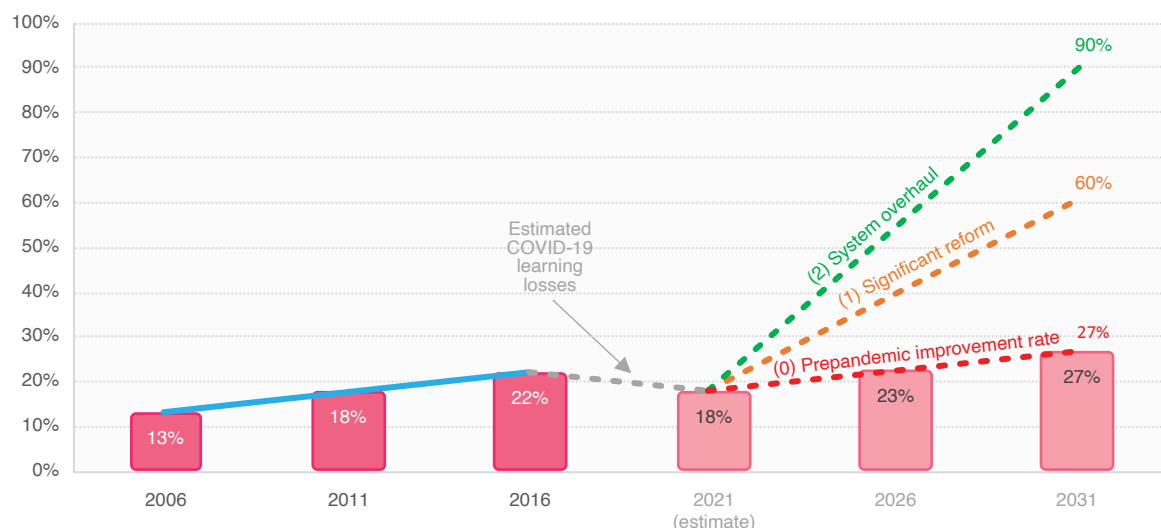
Children in 2023 are estimated to be a full year behind same-age children from 2019. In her background note for the Reading Panel, Dr Gabrielle Wills reports on the findings of the 'COVID-Generation' research project summarizing the impacts of the pandemic on education from large studies in Mpumalanga, the North West, the Eastern Cape and the Western Cape. She reports that learning losses for children in the early grades range from 50-120% of a year's worth of learning. Put differently, the average 10-year-old in 2022 has worse reading outcomes than the average 9-year-old from 2019. To provide one concrete example: *"Pre-pandemic, Grade 2's in the Eastern Cape sample would usually sound out an additional 23 letters correctly over a year. In 2020, alphabetic knowledge development during Grade 2 declined to just 7 additional letters correct per minute."*

2. Trajectories to 2030 & COVID-19

Are we on track to ensure that by 2030 all children learn to read for meaning?

Real possibility that the pandemic has wiped out a decade of progress in reading outcomes. The most authoritative estimate of learning losses at the primary school level will only be available in May 2023 when the PIRLS 2021 results are released. However, if one uses the Van der Berg et al. (2022) estimates of learning losses in the Western Cape between the Systemic Evaluations of 2019 and 2021 the decline in reading is made plain. In PIRLS 2016 only 22% of Grade 4 learners could read for meaning in any language, although there was a trajectory of improvement from at least 2006 (Figure 1). If South Africa maintained this trajectory of improvement from 2016 onwards, it was estimated that by 2031 about 36% of Grade 4's would be able to read for meaning (see 2022 Reading Panel Background Report). After taking account of the COVID-19 learning losses, it is now estimated that if South Africa manages to return to the pre-pandemic level of improvement from 2022 onwards, only 27% of Grade 4's will be able to read by 2031. Another way of stating this is that even if South Africa manages to get onto its pre-pandemic improvement trajectory, it will only get to 2016 levels of performance again in 2026.

Figure 1: Percentage of Grade 4 learners in SA who can read for meaning (past PIRLS trends & possible trajectories)



If SA is to achieve the 2030 goals, fundamental reforms are needed. If South Africa manages to introduce significant and sustained educational reforms that lead to a much higher rate of improvement than we have seen historically, this would place us onto the second trend line 'Significant reform'. A small number of countries and subregions around the world have managed to achieve rates of improvement like this over the space of 10–15 years. The final trajectory included in the graph is the 'System overhaul' line which reaches 90% by 2031. Nothing short of a sustained countrywide overhaul of the education system would be likely to yield this result. It would require a complete restructuring of the way that teachers are recruited, trained, certified, supported and evaluated, as well as far-reaching reforms on education financing and the resourcing of schools. The entire education system would need to be re-oriented towards reading in the early years. It should be noted that in the absence of considerable efforts to retrain the majority of Foundation Phase teachers, or to recruit new teachers who have been properly trained to teach reading, this trajectory is aspirational. Unless teachers know how to teach reading and are equipped with the resources to do so, as well as the support and accountability mechanisms to reach the goal, this trajectory will remain unattainable.

On SA's current trajectory, SA will only reach 95% of children reading for meaning in 86 year's time i.e. the year 2108.

If learning loss estimates are correct and SA does manage to get back onto the pre-pandemic improvement trajectory, it will still take 86 years from 2023 up to 2108 until all Grade 4 children can read for meaning in SA.

3. New Research

What do we now know about early grade reading in South Africa that we didn't know before?

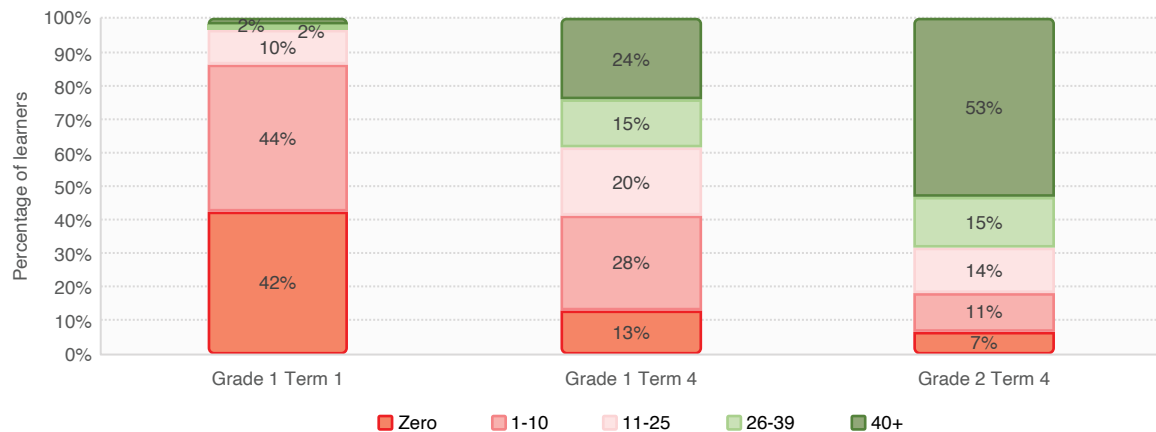
South Africa today is in the fortunate position of having a large and reliable empirical research base on reading outcomes that did not exist 12 years ago. In December 2022 Oxford University Press (OUP) published two edited volumes, one on Early Grade Reading in South Africa (Spaull & Pretorius, 2022) and one on Early Grade Reading and Mathematics Interventions in South Africa (Spaull & Taylor, 2022). Over 50 South African authors contributed to the chapters in these volumes summarizing what is now known about reading outcomes, teacher practices, available resources and interventions that have led to improvements in reading outcomes, as well as those that have not.

Perhaps the single biggest advance in reading research over the last decade has been the large-scale and systematic collection of data on early reading outcomes in African languages, testing not only the end point of reading (comprehension) but also the necessary components of learning to read – letter-sound knowledge, decoding, oral reading fluency, vocabulary knowledge, etc. These datasets cover more than 40,000 learners and reveal the empirical regularities that should guide our thinking on early grade reading in South Africa. For example, the Department of Basic Education's pioneering Early Grade Reading Study (EGRS) in the North West has followed children from over 200 schools for more than 7 years. This kind of long-term longitudinal data is incredibly useful when trying to understand to what extent later comprehension failures (in Grade 7, for example) are predicted by earlier decoding failures (in Grade 1 and 2). By following the same children over time and testing them on comparable tests we now have a much better understanding of where the wheels come off.

When do children learn the letters of the alphabet?

This new research suggests that the wheels are coming off at the very beginning of the learning-to-read journey – letter-sound knowledge in Grade 1. The process of learning to read begins when children start to match the sounds that they hear in spoken language with text in their environment and written on the page (words and letters). Figure 2 below shows the extent of letter-sound knowledge in 230 no-fee schools in the North West (Wills et al. 2022). Children are deemed to know most of the letters correctly if they can sound out 26 or more letters correctly in one minute, and know all the letters if they can sound out 40 or more letters correctly in one minute. According to the curriculum children should learn all the single letters of the alphabet (not digraphs and trigraphs) by Term 2 of Grade 1. The graph shows that at most only 40% of children learn most of the letters of the alphabet by the end of Grade 1 and even at the end of Grade 2, more than 30% still don't know all the letters of the alphabet.

Figure 2: Letter-sound knowledge in Grades 1 and 2, (North West Sample, Setswana). Number of letters correctly sounded out in one minute.

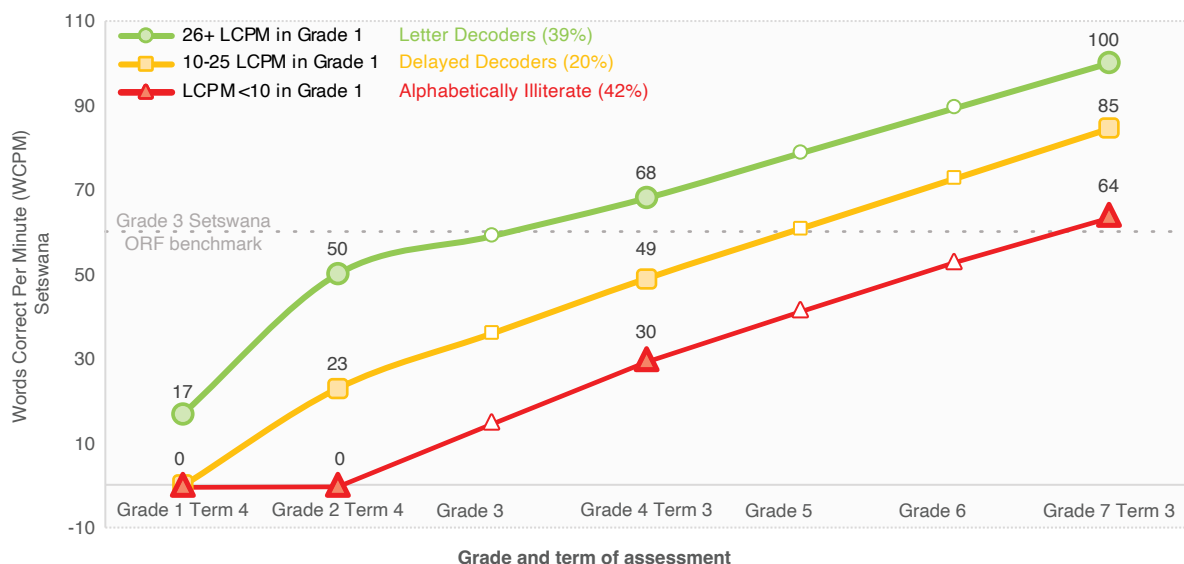


Source: Wills et al. (2022). Notes: EGRS I (waves 1-3), own calculations. Unbalanced panel including repeaters. N= 4452 for grade 1 term 1, 4138 for grade 1 term 4 and 3712 for grade 2 term 4.

What is the impact of not learning the letters of the alphabet in Grade 1?

Given that the EGRS dataset follows these same children over seven years, we can see what the impact is of not learning the letters of the alphabet in Grade 1. Figure 3 below shows the oral reading fluency trajectories of three groups of children: (1) the group that learnt the letters of the alphabet in Grade 1, called the '*Decoders*', (2) The group that learnt only about half of the letters of the alphabet in Grade 1, called the '*Delayed Decoders*', and (3) The group that learned only a handful of letter-sounds in Grade 1, called the '*Alphabetically illiterate*.' In this sample of no-fee schools, only 39% of Grade 1's were Letter Decoders, 20% were Delayed Decoders and 42% were Alphabetically Illiterate, meaning that at most, only 40% of Grade 1's knew enough letters of the alphabet at the end of Grade 1 to read and understand a simple sentence.

Figure 3: Reading trajectories for three groups of learners based in Grade 1 letter-sound knowledge (EGRS 1)



Source: Pretorius & Spaull (2022) using Wills et al. (2022) data from Early Grade Reading Study (EGRS)

The graph reports these learners' oral reading fluency in Grades 1, 2, 4 and 7 – that is the number of Setswana words a child can read correctly out loud in one minute. What is striking in the graph is firstly that all children learn to read more quickly as they proceed through the grades. However, the *Delayed Decoders* and the *Alphabetically Illiterate* are perpetually behind and in 'catch-up' mode, although they never actually catch up.

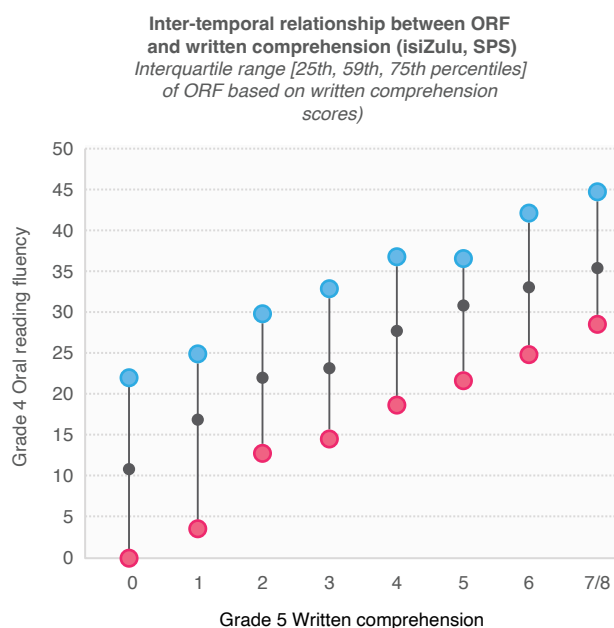
New research on reading benchmarks in African languages by Mohohlwane et al. (2022) shows that by Grade 3, children learning to read in Sesotho–Setswana languages should read at least 60 words correct per minute (minimum benchmark). The graph shows that the children who *do* learn the letters of the alphabet in Grade 1 (*Decoders*) go on to reach the minimum Grade 3 benchmark (60 WCPM) in Grade 3. By comparison, the *Delayed Decoders* only reach the Grade 3 benchmark in Grade 5 and the *Alphabetically Illiterate* reach it in Grade 7. That is to say that they are 2 to 4 years behind minimum grade–level reading.

The Delayed Decoders only reach the Grade 3 benchmark in Grade 5 and the Alphabetically Illiterate reach it in Grade 7, meaning they are 2-4 years behind the minimum grade-level reading benchmark.

What is the impact of not reaching grade–level fluency benchmarks?

To understand a written sentence or a paragraph, you need to not only understand what the words mean (vocabulary), but also read them accurately enough and fast enough (fluency) to process them in one’s short-term memory. If you make too many mistakes in decoding the symbols, or read too slowly, your short-term memory will not be able to process the sentence and make meaning from it. This is the main reason why oral reading fluency, measuring both accuracy and speed, is predictive of reading comprehension – at least in the early stages of the learning to read journey. Figure 4 below shows the relationship between Grade 4 oral reading fluency and Grade 5 written comprehension for the middle 50% of the distribution (the interquartile range). The average child scoring 1/8 on the Grade 5 comprehension test, read only 10 isiZulu words correctly per minute when they were in Grade 4, compared to the average child scoring 4/8 in Grade 5 who read 30 isiZulu words correctly in Grade 4. The same can be seen for children at the 25th percentile of the distribution and for those at the 75th percentile of the distribution. This work by Ardington et al. (2020) and new work by Wills et al. (2022) and Mohohlwane et al. (2022) shows the critical importance of reaching certain thresholds of oral reading fluency if children are to understand what they are reading.

Figure 4: The relationship between oral reading fluency (y-axis) and written comprehension (x-axis)



Children who do not ‘learn to read’ in Grade 1 and 2 will not ‘read to learn’ in Grades 2 onwards.

The fact that they cannot read for meaning in Grade 4 is the logical outcome of not learning to decode in Grades 1 and 2.

Seen together, we can summarize the situation by saying that the psycholinguistic skills that go into early reading in African languages are now well–documented in South Africa, showing a hierarchy of skills that builds from oral proficiency to auditory discrimination (phonemic awareness) and letter–sound recognition. Once learners can segment individual letter–sounds in words and blend letters

to form words, increasing accuracy and fluency then aid comprehension. This research shows in stark relief that decoding failures in Grade 1 predict fluency and comprehension failures all the way to Grade 7. Children who do not 'learn to read' in Grade 1 and 2 will not 'read to learn' in Grades 2 onwards. As summarized by Pretorius & Spaul (2022 p.16):

“Comprehension in the Intermediate Phase is predicted by fluency in the Foundation Phase, which itself is predicted by letter-sound mastery in Grade 1. The same children that failed the PIRLS assessment in Grade 4 failed basic fluency assessments in Grade 2 and did not know all the letters of the alphabet by the end of Grade 1.

The smoking gun at the crime scene of South Africa's literacy crisis is the fact that our learners do not acquire the most elementary building blocks of the literate world when they need to: in Grades 1 and 2. Policy attention must turn to what is happening in Grade 1 and 2 classrooms that prevents this most basic knowledge from being acquired.”

4. Interventions in SA

What do we know about interventions to improve reading outcomes?

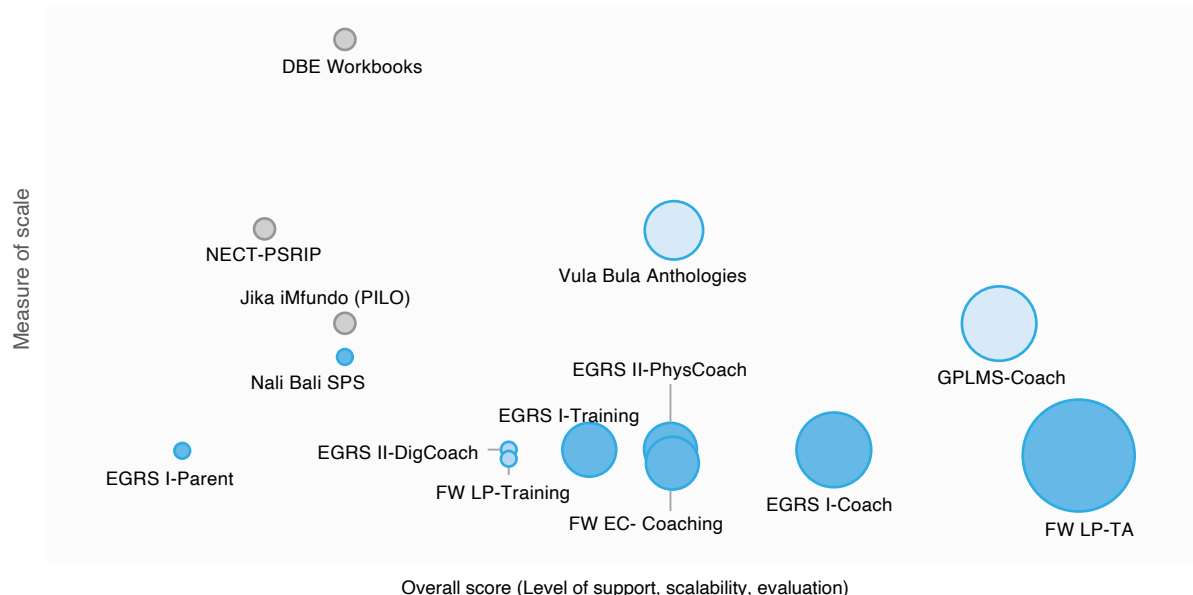
Over the period 2010–2022 there have been many government-led and NGO-led interventions to improve reading outcomes in the early grades. Some of these have been evaluated, and some were designed to measure whether there were causal improvements in reading outcomes. To summarize what is known about reading interventions in South Africa, 36 researchers contributed to writing 16 chapters on 14 different interventions over this period, including how they were designed and implemented, whether they were evaluated and what we have learnt from them. That book – *Early Grade Reading and Mathematics Interventions in South Africa* – was published in December 2022 by Oxford University Press (Spaul & Taylor, 2022b).

The aim of combining all 14 of these interventions into a single volume was to draw out the similarities and differences across the interventions and determine which interventions have gone to scale, which interventions have had an impact on reading outcomes, and which have done both. Table 1 below provides a scoring rubric to compare the interventions across four dimensions: (1) Program dosage, (2) Cost and implementation scale, (3) Government buy-in, and (4) Evaluation method and evidence. For each of these domains, and their sub-domains an intervention can receive a score of 0 (Non-existent) to 3 (High). The criteria for each score is provided in the rubric. Table 2 then provides the scores for each of the 14 interventions across the different criteria.

The total scores across the domains are then summarized visually in Figure 5 where the total score (x-axis) is plotted against a measure of how many schools the program was implemented in (y-axis). The bubbles are weighted by evidence of impact and the shading of the bubbles indicates the type of evaluation, i.e. if there was no credible control group (grey), a quasi-experimental evaluation (light blue) or a causal evaluation with a legitimate control group (dark blue). What is immediately clear is that the interventions with causal evaluations and evidence of impact have only been implemented in a small number of schools (<50 schools each) while the 'at-scale' interventions lack evaluations

that measure impact. There are a few interventions (Vula Bula Anthologies in the Eastern Cape and GPLMS Coaching in Gauteng) that have quasi-experimental evaluations showing impact, and also implemented at some scale (~1000+ schools).

Figure 5: The relationship between scale, support and impact in South African early grade reading interventions



Note: The overall score (x-axis) is the sum of six components reported in Table 1. The measure of scale is ordinal and categorical with ranges 1 = (20-100); 2= (100-500); 3= (500-2,500); 4= (2,500-5,000); 5= (5,000-10,000), 6= (24,000 all schools).
Source: Spaull & Taylor (2022)

Table 1: Rubric for assessing early grade reading interventions in South Africa (Source: Spaull & Taylor, 2022)

	Element	Rating			
		0 Non-existent	1 Low	2 Medium	3 High
Scale	Location & number of intervention schools	Micro intervention <20 intervention schools	Small-scale intervention (20-200 intervention schools)	Mid-scale intervention (200-1,000 intervention schools)	Large-scale intervention (>1,000 intervention schools)
Additional support	Intensity of centralised teacher training and/or in-classroom support	No centralised training	Any form of centralised training that is less than one full day at least once per term (i.e. four days per year)	Centralised training at least one full day at least once per term by verified expert or in-classroom support at least three times per year by verified expert	In-classroom support or coaching by verified expert at least once per month or more
	LTSM support Level of materials provision	No additional resources are provided to the school	Additional materials are at the school, teacher or classroom level not the learner level	Additional resources are at the learner level but are not 1-to-1 or are not comprehensive	Additional resources are at the learner level, are 1-to-1 & comprehensive (learners are given their own workbooks, readers, manipulatives etc.)
Scalability	Cost per learner: what are the costs of this intervention if it were scaled?	Extremely expensive (> 300% of existing per learner budget)	200-300% of existing per- learner budget	100-200% of existing per- learner budget	Within existing per-learner budgets (i.e. <100%)
	Level of government ownership / buy-in and funding	Done independently of government	Wholly donor funded but government acknowledgement	Partly government funded (>20% costs paid for by government)	Entirely government led and government funded

	Element	Rating			
		0 Non-existent	1 Low	2 Medium	3 High
Evaluation	Quantitative rigor of evaluation on improvement in learner outcomes	No publicly available evaluation or no measurement of learning outcomes. Data collected by organisation's own employees	Weak. Publicly available evaluation report on learning outcomes but no valid control group. Evaluator selected and contracted by the implementing organisation. Evaluator unknown within the field	Acceptable. Quasi-experimental evaluation. Evaluator selected and contracted by the implementing organisation. Evaluator has strong track record of rigorous evaluations	Ideal. Causal evaluation with valid control group. Evaluator independently selected and contracted by someone other than the implementing organisation. Evaluator has strong track record of rigorous evaluations
	Causal evidence of impact of intervention from independent evaluation after up to 2 years of intervention	No impact or no control group	Positive but small impact (<25% of a year of learning)	Moderate-impact (25-50% of a year of learning)	Large impact (>50% of year of learning)

Table 2: Scoring South African early grade reading interventions using the rubric (Source: Spaull & Taylor, 2022)

Intervention	# of intervention schools	Teacher support	LTSM support	Cost	Government buy-in	Evaluation (quantitative rigor)	Causal impact on learning outcomes (rating x 2)	Total score	Reference
EGRS I-Parent	50	0	0	2	1	3	0	6	Cilliers et al. (2020)
NECT-PSRIP	4,198	1	1	3	2	0	0	7	DNA Economics (2019)
Jika iMfundo (PILO)	1,200	1	2	3	2	0	0	8	Metcalf & Witten (2019)
Nal'ibali SPS	720	1	1	2	1	3	0	8	Ardington et al. (2020)
DBE Workbooks	24,000	0	2	3	3	0	0	8	McKay & Spaull (this volume)
EGRS II-DigCoach	50	1	2	3	1	3	0	10	Cilliers et al. (2022)
FW LP-Training	40	2	3	1	1	3	0	10	Ardington & Henry (2021)
EGRS I-Training	50	1	2	2	1	3	2	11	Cilliers et al. (2020)
FW EC_Coaching	30	2	2	1	1	3	3	12	Ardington & Meiring (2020)
EGRS II-PhysCoach	50	2	2	1	2	3	2	12	Cilliers et al. (2022)
Vula Bula Anthologies	4,298	2	2	3	3	2	2	12	Ardington & Spaull (this volume)
EGRS I-Coach	50	2	2	1	2	3	4	14	Cilliers et al. (2020)
GPLMS-Coach	1,000	2	2	1	3	2	5	16	Fleisch et al. (2016)
FW LP-TA	40	3	3	1	1	3	6	17	Ardington & Henry (2021)

Impact or scale? A typology of early grade reading interventions: Either (1) 'Light-touch/large-scale' or (2) 'heavy-dose/small-scale'.

When all the above results are seen together there are, broadly-speaking, two families of intervention-types. The first is that of light-touch large-scale interventions that were implemented across multiple provinces and at scale (4000+ schools) but lack causal evaluations of impact. The second are small-scale NGO-led interventions, some of which show causal evidence of impact on reading outcomes, but all of which operate in 50 schools or fewer. What this shows is a clear trade-off between dosage and scale across the programs. Programs implemented at scale either lack teacher-training altogether (DBE Workbooks) or employ a 'Train-the-Trainer' model (NECT-PSRIP and PILO) where trainers train subject advisors, who then train HODs or train teachers. Table 3 below summarizes the key features of these two types of interventions in South Africa.

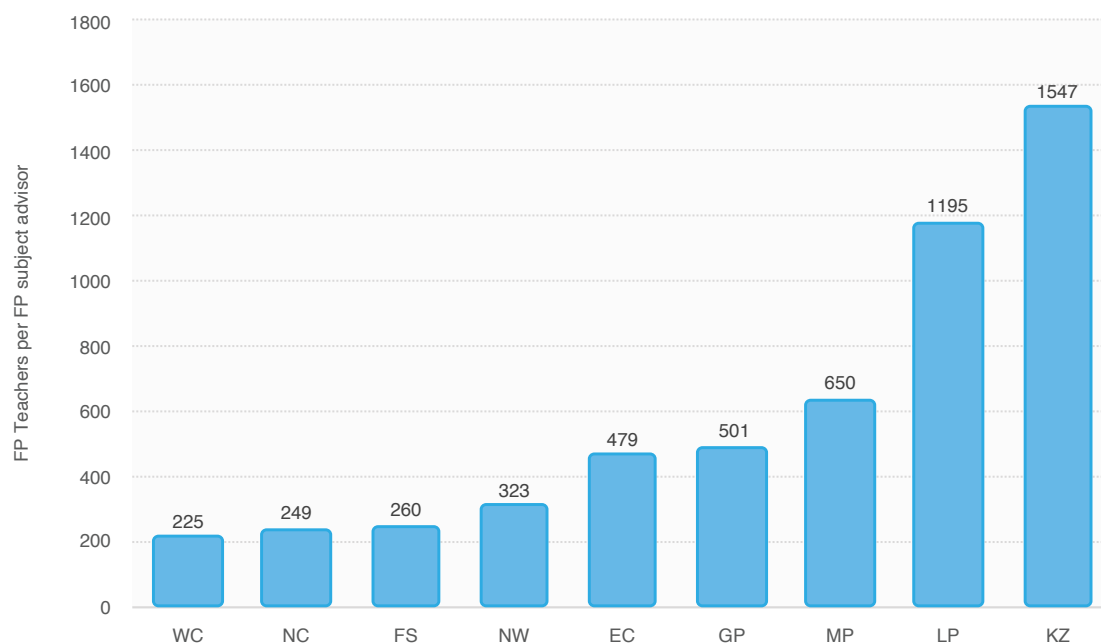
Table 3: Comparing two typical types of education intervention in South Africa 2010-2022

	Trickle-down, train-the-trainer • Light touch • Large scale	Bottom-up, in-classroom support • Heavy touch • Small scale
Scale	• Large scale with typically more than 1000 schools	• Small scale with typically 30-50 schools in an intervention arm
Exemplar programs	• NECT – PSRIP FP EFAL ~4200 schools; Jika iMfundo (PILO) Whole District Model ~1200 schools	• EGRS I-NW-coaching ~50 schools; FW-EC-Coaching ~30 schools; FW-LP-TAs ~40 schools
Programme leadership & management	• Conceptualised by internal (DBE) or external experts (Class Act), implemented by subject advisors / HODs / existing staff	• Conceptualised by external experts, implemented by external organisation (Class Act, FW, Molteno, R2R).
Implementation	• Train-the-trainer: e.g. each PILO coach is responsible for 110 schools (i.e. >1000 teachers). • Usually uses subject advisors and/or Lead Teachers /HODs with all training being centralised training (e.g. Experts train subject advisors centrally who then train Lead Teachers/ HODs centrally, who then train teachers centrally).	• In-classroom direct support. 1 coach responsible for 33 teachers (EGRS I – NW) or 1 TA per 1 teacher (FW-LP). • Coaches or TAs are externally hired, managed, paid, and monitored by the NGO.
Cost & LTSM	• Low or no-cost model; works largely within existing budgets & uses existing personnel. • Usually teacher-level (curriculum trackers or lesson plans) • If there are learner-level resources, then they are usually low-cost.	• High-cost model; brings in new external support in form of coaches or TAs and procures significant additional LTSM. • Both teacher-level and 1-on-1 learner- level. Teacher-level includes significant Big Books, friezes, classroom library. • 1-to-1 learner-level resources: one anthology per child, one full-color workbook per child, learner-level manipulatives etc.
Monitoring	• Trainings attended and LTSM delivered, e.g.: 5.7 million pieces of teaching and learning materials had been distributed; 84,128 teachers and 671 subject advisors had been trained. • Compliance (curriculum coverage).	• Objectively verifiable standardised assessments (e.g. literacy and numeracy tests for TAs in FW-LP), pre- and post-tests at training (EGRSI-NW), and teacher certification (e.g. Rhodes Adv Cert. for HODs in FW-EC).
Evaluation	• Usually non-existent or ex-post, non-causal, subjective, usually uses no-cost administrative data, no bona fide control schools, no random selection, non-standard instruments, teacher interviews.	• Pre-planned ex-ante, causal, external, independent, learner-level assessments with bona fide control schools and defensible estimates of causal impacts. High cost due to full- service evaluation.
Documentation	• Minimal public documentation. Little publicly available research or evaluation reports.	• Donor-funded evaluations usually publicly available.

Trickle-down training still the norm in South Africa, despite evidence it does not work: Although there is no causal evidence of any train-the-trainer intervention improving reading outcomes in South Africa, it is still the only method employed at scale. This is largely due to stated cost-constraints and the need to “work within the limits of what is doable at scale” (Chetty et al., 2022: p85). For example, the annual budget of the most recent large-scale intervention, the NECT’s Primary School Reading Improvement Program (PSRIP) has an annual budget of only R37-million per year for the 7,240 schools it is working in (Chetty et al., 2022), amounting to about R5000 per school per year. The last province-wide intervention that did *not* employ a train-the-trainer approach was the Gauteng Primary Mathematics and Language Strategy (GPLMS) implemented from 2010 to 2014 in Gauteng under MEC Barbara Creecy. As discussed in the 2022 Reading Panel Background Report, that intervention employed nearly 500 reading coaches that worked with teachers directly in the classroom of about 1000 of the province’s 2000 schools. The *annual* cost of the program was R298-million (in 2022 rands), or nearly R300,000 per school.

Ratio of Subject Advisers to Teachers typically 1:500 making ‘train-the-trainer’ impossible: The main problem with the train-the-trainer approach is that it relies on Subject Advisers to be the ‘implementing trainer’ of teachers. Apart from the fact that Subject Advisers typically have inadequate knowledge of how to teach reading themselves – typically scoring 50% on tests measuring this (Chetty et al. 2022: p.75) – there are also simply too few of them to realistically train teachers they are responsible for. By using data on the number of Foundation Phase (FP) Subject Advisers and teachers per province it is possible to estimate the ratio of FP teachers to FP Subject Advisers. Figure 6 below shows that in four of the nine provinces (GP, MP, LP and KZN), the average FP subject adviser is responsible for more than 500 FP teachers. In KwaZulu-Natal the average Foundation Phase Subject Adviser is responsible for more than 1500 Foundation Phase teachers. These ratios make meaningful training and support impossible. By contrast, the heavy-dose interventions that have shown improvements in reading outcomes (EGRS and Funda Wande) have a ratio of one coach to approximately 33 teachers.

Figure 6: Average number of Foundation Phase teachers per subject adviser (EFAL and Mathematics per province)



Source: Spaul & Taylor (2022) using data from CASME (2020), DBE (2019) and Van der Berg et al (2022)

5. Promising programs?

Is there evidence of small-scale programs significantly improving reading outcomes in SA?

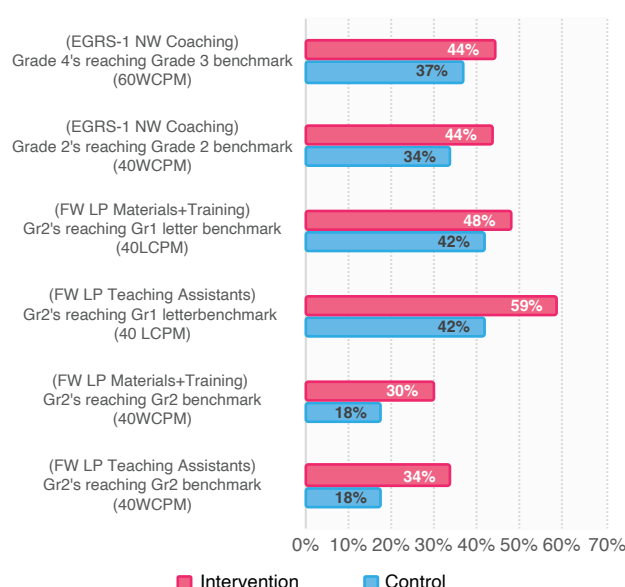
As discussed above, there are not many interventions in South Africa that have been rigorously evaluated to determine whether the intervention caused an improvement in reading outcomes or not. To do so requires a control group that is otherwise identical to the intervention group, except that they do not receive the intervention. This allows for comparison between the reading outcomes of the two groups to determine the causal impact of the intervention. There have been three such interventions in South Africa aimed at improving reading in the home language. The first was the Early Grade Reading Study (EGRS) in the North West, the second the Funda Wandé coaching intervention in the Eastern Cape (FW Coaching) and the third the Funda Wandé Teacher Assistant (TA) intervention in Limpopo.

Materials-and-Centralized-Training can improve reading outcomes by 30–60% of a year of learning Both EGRS–North-West and FW–Limpopo included an intervention group that received the additional materials and centralized training, but not additional coaches or TAs. The EGRS materials-only arm saw an improvement of 30% of a year of learning, and the FW–materials-only arm saw an improvement of 60% of a year of learning after 2 years of intervention.

Coaching interventions improve reading outcomes by 60% of a year of learning: The two coaching interventions (EGRS–NW and FW–EC) both led to improvements of approximately 60% of a year of learning compared to the control schools⁴⁵. To use

a concrete example from the EGRS coaching intervention in the North West, by the end of Grade 2, 44% of learners in the intervention group could read at Grade 2 level compared to 34% in the control group.

Figure 7: The impact of rigorously evaluated interventions on home language reading outcomes in SA



The Funda Wandé Teacher Assistant intervention improved reading outcomes by 130% of a year of learning: The results of the Funda Wandé Limpopo Teacher Assistant intervention (2021–2022) were released in January 2023 and show that schools that received both additional materials *and* a dedicated teacher assistant (one TA per teacher) improved reading outcomes by 129% (0,5 standard deviations) in both reading and mathematics (the intervention targeted both reading and mathematics). This is the largest improvement in reading outcomes seen to date in South Africa.

Structured workbook interventions can improve reading outcomes with 2–3 times more workbook pages covered by learners: The background note by Prof Cally Ardington & Dr Nwabisa Makaluza shows that learners in the Funda Wandé Limpopo intervention arms completed much more work in their Home Language workbooks than those in the control group. This intervention included a structured 'All-in-One' workbook where the entire curriculum is sequenced in a single

⁴⁵ The Funda Wandé coaching intervention led to an improvement of 50% of a year of learning improvement after only one year, but COVID-19 school closures eroded these gains in the second year making comparisons of two-year gains difficult.

workbook for learners and teacher guide. The Materials+TA arm completed 154 pages, the Materials-only arm completed 134 pages, and the Control group completed only 54 pages.

None of these interventions have been rolled out by provinces, primarily due to cost constraints and the lack of budget and political will to implement large-scale reading programs.

6. Stated and revealed priorities

Is there a National Reading Plan or budget for improving reading?

Currently there is no National Reading Plan, despite references to its alleged existence. On the 29th of March 2022 the Director General of the DBE, Mr Mveli, was asked in Parliament about whether or not the 'National Reading Plan' had been implemented. The Director General's reply was summarized by the Parliamentary Monitoring Group as follows:

“ *The Reading Plan was implemented by all provinces. The Director-General chairs meetings each year where reports are given on the implementation of reading programmes. Additionally, a monthly meeting convenes at department level where progress made on State of the Nation Address (SONA) commitments are reviewed – it is here that a number of line functions give feedback confirming the implementation of the National Reading Plan” (PMG, 29 March 2022).*

It is unclear what is meant by 'The National Reading Plan' since no such document exists on the DBE website, and the DBE has not formally published any 'National Reading Plan' (this was confirmed by staff within the DBE). The most recent "National Reading Strategy" that is publicly available dates from 2008. Indicator 2.2.5 in the DBE's 2022/23 Annual Performance Plan states that "An Annual Sector Report is produced on the implementation of the National Reading Plan." The 'Annual Sector Report' does also not exist in the public domain. The only reference to it is in the DG's PowerPoint which states that "Semester 1 Reading Report Template has been developed. Reading Reports were received from 9 PEDs" and "Draft Annual Sector Report has been development on the National Reading Plan" (slide 42).

Apart from the DBE Workbooks, reading norms and EGRA have been implemented in less than 1% of schools (18 schools). In its APP summary of activities related to reading the DBE reports that "During the 2022/23 financial year, the Department will continue to provide oversight to PEDs with regard to monitoring of public schools on the availability of readers. This forms part of a comprehensive strategy aimed at ensuring that children can read for meaning by the age of ten (10)... It remains imperative in the upcoming financial year to undertake to improving learners' reading proficiency levels in the Foundation Phase in all underperforming rural and township schools by using the Early Grade Reading Assessment toolkit to assess learners' reading levels by 2022/23. This includes learners' phonic knowledge, word recognition, fluency and comprehension skills in the early grades" (p61).

- **Indicator 2.2.1** Number of schools monitored on the implementation of the reading norms (Branch C)
 - 2021/22 performance: 18 schools

- **Indicator 2.2.3** Number of underperforming schools monitored on the implementation of the Early Grade Reading Assessment (EGRA) (Branch C)
 - 2021/22 performance: 18 schools
- **Indicator 2.2.5** An Annual Sector Report is produced on the implementation of the National Reading Plan (Branch C)
 - 2021/22 performance: "Approved Annual Sector Report on the implementation of the National Reading Plan"
- **Indicator 2.2.6** An Annual Sector Report is produced on the number of public schools monitored on the availability of readers (Branch D).
 - 2021/22 performance: "Approved Annual Sector Report on the number of public schools monitored on the availability of readers"
- **Indicator 2.3.6** Number of schools monitored for home languages in which Literacy Grades 1–3 lesson plans have been developed for terms 1–4. (Branch C)
 - 2021/22 performance: 100% (17 236 / 17 236 schools)

NECT's reading program (PSRIP) remains the only large-scale government-backed program yet it is woefully underfunded: The only large-scale reading program in implementation at the moment is the NECT's Primary School Reading Improvement Program (PSRIP) which is a structured learning program targeting English First Additional Language. There is no immediate reporting on its 2021 or 2022 budget for PSRIP, but this was R37-million in the 2020 NECT Annual Report. PSRIP is implemented in more than 7000 schools. The only reference to budget for reading in the 2021 NECT Annual Report is the "R6-million to pilot Home Language Reading Programme"

Currently there is no budget for reading. If one reviews the 2022 Education Budget Vote (Vote 16), there are five programmes: (1) Administration, (2) Curriculum, (3) Teachers/HR, (4) Planning & Assessment, and (5) Enrichment Services (RSA Treasury, 2022: p.255). The only reference to budget that is specifically allocated for reading is the R11-million allocated to the Early Grade Reading Assessment which targets 18 schools and where reporting shows that the DBE managed to reach 9 schools (RSA Treasury, 2022: p.133). Note there are approximately 15,000 primary schools in South Africa. To provide one example of a governmental priority that has a budget allocated to it, one can look at the Mathematics, Science and Technology Grant which was allocated R423-million for 2022/23.

Presidency's Educator Assistant program (PYEI) is the only new large-scale funded program; hiring 840,000 youth temporarily at a cost of R25-billion: Towards the end of 2020 the Presidential Youth Employment Initiative (PYEI) Basic Education Employment Initiative (BEEI) was introduced and is now in its fourth phase. This program provides training and placement for about 840,000 youth on 5–8 month contracts as Educator Assistants or General Assistants in public schools with a cost of approximately R25,5-billion (DBE, 2022: p19). Although this was initially seen primarily as a youth employment initiative and was and is still funded by Presidency, one of the explicit aims of the program is to promote reading. The DBE's guideline states that "Each school should appoint at least two Reading Champions (RCs) for meaningful impact" and explain that they should work with learners during and after school with an aim to 'improve reading outcomes, develop a positive reading culture among learners, instil a love of reading across the nation, inculcate a culture of reading in schools and improve learner engagement in reading' (DBE, 2022b p.12). To qualify as a Reading Champion an applicant must have scored 30% or more in English at matric and be fully fluent in the Home Language used in the school. In more recent phases of the program there have also been some online training resources provided to new Educator Assistants. There have been no evaluations of the impact on learning of having the EA's, although interviews with teachers show that they speak positively about the EA's and report that they are helpful in the classroom. That being said, of the 255,100 EA's to be appointed in 2023, only 29,088 (11%) are dedicated Reading Champions (DBE, 2022a, p.30) while the rest are Handymen/women, eCadres, Curriculum Assistants, Care and Support Assistants or involved in Sports/Arts.

In summary, while reading outcomes have declined significantly as a result of the pandemic, as of February 2023 there is no National Reading Plan, there is no budget and there is no reporting. Notwithstanding the lack of a plan, the lack of a budget, and the lack of reporting, the Minister continues to state that one of the top six priorities of her administration is “Improving foundational skills of Numeracy and Literacy, especially reading, which should be underpinned by a Reading Revolution.” In the absence of a plan or a budget this remains rhetoric.

7. Proactive provinces

Are any provinces implementing well thought-out, budgeted, province-wide interventions to improve reading outcomes?

Only the Western Cape and Gauteng have initiated province-wide programs to improve reading.

Apart from the national roll-out of Educator Assistants (EAs), there are currently no funded national programs to improve reading outcomes. However, a review of new provincial programs suggests that there are some proactive provinces who are not only publishing provincial reading plans but also allocating budgets and implementing well thought-out programs targeting reading in Grades R–3. Although some provinces have made headway in prioritizing reading, the two examples included here (of the WCED and GDE) are the only province-wide interventions that are both planned and funded. For example, in 2022 the Eastern Cape Department of Education (ECDOE) launched its ‘Reading Strategy & Campaign 2022 – 2030’ (ECDOE, 2022), which includes a number of important initiatives, but it is yet to allocate any budget for these programs or roll-out any province-wide programs. The roll-out of its Vula Bula Graded Reader Anthology to all Grade 1–3 learners in 2019 and 2020 has not been repeated in 2021, 2022 or 2023.

In both the Western Cape and Gauteng, the provincial department of education chose to partner with a service provider with a strong record of interventions in literacy and reading. In Gauteng the GDE partnered with WordWorks to develop its Grade R language and literacy program, while in the Western Cape the WCED partnered with Funda Wandé to develop its Grade 1–3 Language and Life Skills program. In both instances, the NGO had extensive experience in materials development, teacher training, versioning into different languages and working with government.

WCED Implementation of ‘Reading for Meaning’ Workbook Program 2023–2025. In 2020 the Western Cape Education Department (WCED) launched their ‘Reading Strategy 2020 – 2025’ (WCED, 2020). In 2021 the province ran its annual province-wide Systemic Evaluations at the Grade 3, 6 and 9 level revealing that there had been severe learning losses as a result of school closures and rotational timetables (Van der berg et al. 2022). In 2021 the province also chose to make Foundation Phase Learning (Language and Mathematics) one of the WCED’s top three priorities. The background note by Almareet Du Toit (Chief Education Specialist from the WCED) provides a full overview of the program. To summarize, the province has decided to roll-out a structured workbook intervention where the entire Home Language and Life Skills curriculum is structured into a single ‘Learner Activity Book’ together with a corresponding Teacher Guide. Each learner receives one additional workbook per term and each teacher receives one Teacher Guide per term (Grade 1–3). Additional resources needed to teach reading (decodable texts, Big Books, etc.) are also provided to all classrooms. The program includes face-to-face training, online training and the provision of

one Educator Assistant to every teacher in the roll-out. The Educator Assistants are also required to do a 40-hour course on Reading for Meaning as part of their training. The program employs a train-the-trainer approach and is currently being implemented in a staggered roll-out in all 852 Afrikaans HL and isiXhosa HL schools in the province in Grade 1 (2023), Grade 1+2 (2024) and Grade 1+2+3 (2025), reaching a total of 237,000 Grade 1–3 learners per year in 2025 (Table 4). The total 3-year budget for the intervention is R111-million or approximately R9000 per teacher per year.

GDE implementation of the Grade R Language and Maths Improvement Project. In 2020 the GDE launched its revised Strategic Plan (2020–2025) (GDE, 2020) with nine key outcomes including Early Childhood Development (Outcome #1). Already from 2016 the GDE and the Gauteng Education Development Trust (GEDT) were in discussions about how to raise the content knowledge and pedagogical skills of Grade R teachers and practitioners. To do so GDE has partnered with a group of funders (GEDT, Zenex Foundation and USAID) to implement the GDE Grade R program from 2021–2024, with WordWorks as implementing service provider for the literacy program (there is also a Grade R mathematics program implemented by the UCT Schools Development Unit). The Project Management Office (PMO) is run by JET Education Services. The program takes a train-the-trainer approach with face-to-face training, online training, and teacher-level materials provision. For full details of the program see Table 5 below and the background note by Vereen et al (2023). The project will reach 4,500 Grade R teachers and 130,000 Grade R learners per year from 2021–2024. The total budget for the intervention is R107-million or approximately R8,000 per teacher per year, with 80% of the total funded by the donor group and 20% funded by the GDE.

Both WCED and GDE interventions cost ~R8500 per teacher per year, compared to R300,000 per teacher per year for GPLMS. It is interesting to note that both the WCED and GDE interventions cost approximately R8500 per teacher per year, and these were different programs implemented by different service providers. Creating norms around the costs of train-the-trainer materials-based interventions is useful for other provinces to budget accordingly. Notwithstanding these provinces investments in Grade R–3 reading (especially the Western Cape), it is worth comparing these figures to the annual cost of the GDE’s GPLMS program, which was approximately R300,000 per teacher per year. Put differently, these ‘train-the-trainer-including-materials’ approaches of both the WCED and the GDE cost only 3% of what GPLMS spent on its direct-classroom coaches from 2010–2014. Although most South African evidence points to either teacher coaching (as in EGRS and Funda Wandé) or trained and supported teacher assistants (Funda Wandé Limpopo), both EGRS 1 and Funda Wandé Limpopo included an intervention arm with centralized training and materials provision. In both instances there were some improvements in those schools, although usually half as large as those in the coaching/TA intervention arms.

Currently there is a lack of political will and budget to implement well-funded programs: With the possible exception of the Western Cape, there are no examples of provinces allocating large budgets to foundation phase reading. Even the GDE’s Grade R program, while commendable, is still majority funded (80%) by donors with the GDE contributing R20-million. The preceding sections on the research around interventions that improve reading outcomes is quite clear on which programs are most likely to improve reading outcomes. Therefore the problem is not about lacking an evidence base on how to improve reading outcomes, but rather the political economy issues of why adequate funding for reading interventions has not been forthcoming.

Table 4: Overview of the WCED's Reading for Meaning program

		2023	2024	2025
Number of schools targeted				
Statistics	Grade	Grade 1	Grade 1+2	Grade 1,2,3
	# Learners	77,084	157,397	236,681
	# Teachers	2,085	4,085	6,094
	# Schools	852	852	852
	# Subject Advisers	67	67	67
	# Educator Assistants	2,085	4,085	6,094
	Budget (100% WCED)	R19,9m	R37m	R54m
	Budget / teacher / year	R9 544	R9 057	R8 861
Training				
Subject advisers	FP Coordinators	8		
	Subject Advisers (SA)	67		
	SA initial training	3 days face-to-face in Term 1; two Saturday trainings; online dry-run for block training		
	SA ongoing training	SA development sessions, Curriculum Strengthening Forums, ongoing online training sessions		
Lead teachers		1 day face-to-face training per term		
Grade 1-3 teachers		Face-to-face orientation day; 3-day in-person training in April ; Termly online training		
Materials				
Teacher-level resources		4 Teacher Guides per year (1 per term); Grade 1 Big Books; eClassrooms via an interactive poster with additional resources for Afrikaans HL. Also available on the WCED ePortal. One Educator Assistant per teacher.		
Learner-level resources		4 Learner Activity Books per learner (1 per term); Graded reader anthology for isiXhosa learners; Decodable graded readers for all Afrikaans HL classes (Grade 1 – 3)		

Table 5: Overview of the GDE's Grade R Language & Mathematics Improvement Project

		2022	2023	2024
Number of schools targeted				
Statistics	Grade	R	R	R
	# Learners	130,000		
	# Teachers	4,500		
	# Schools with Gr R	2,042		
	# Subject Advisers	190		
	Budget (80% donor; 20% GDE)	R35,6m	R35,6m	R35,6m
	Budget / teacher / year	R7 904	R7 904	R7 904
Training				
Subject advisers	Master trainers	10		
	Subject Advisers	180		
	SA initial training	5-day face-to-face block training		
	SA ongoing training	Once per term face-to-face training session on Saturdays (8 hours)		
FP HOD (1380 HODs)		Once per term 2-hour online information session in the afternoon		
Grade R teachers		11 monthly face-to-face training sessions on Saturdays (8 hours) including 1 day during holidays		

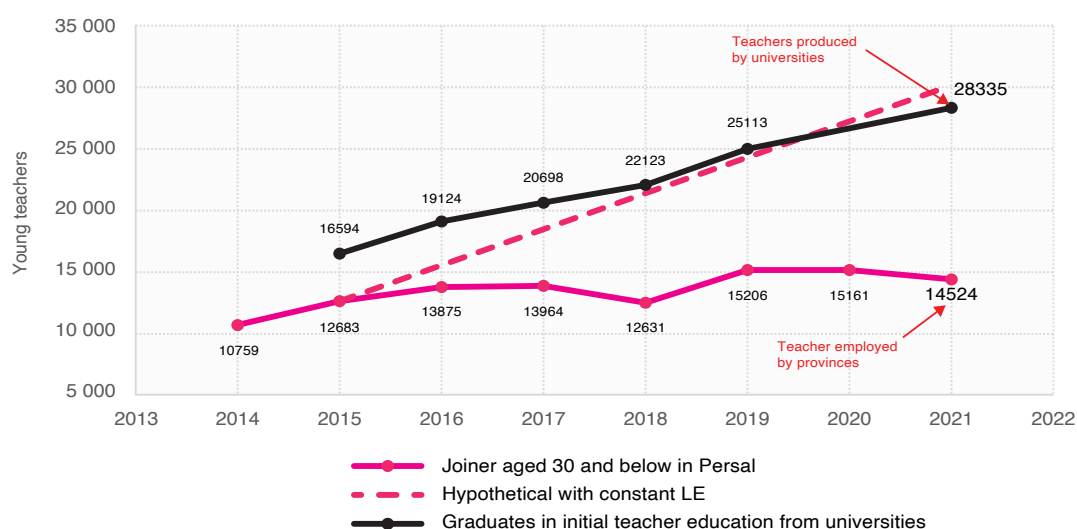
Materials	
Teacher-level resources	Every teacher receives training materials (workbooks for teachers) and classroom resources (Concept guides, activity guides, workbooks for teachers, facilitators' guides, slide presentation packs with videos, puppets, sequence cards, big books, game cards and Maths kit) in the languages used for their cluster of schools
FP HODs	Quarterly electronic versions of the online presentations covering content for each term.
Learner-level resources	N.A.
Additional notes	Development of the special needs materials is planned for 2023. Training of the ECD sites and catch-up sessions for new teachers is planned for 2024.

8. Teacher retirements

Given that 50% of teachers are aged 50+ & will retire soon, how will this affect teaching & learning?

Since 2016 universities have increased teacher supply, but provinces have not increased hiring, leading to larger class sizes. Figure 8 below shows the numbers of new teacher graduates produced by universities in SA (black line) and the number of young teachers employed by provinces (solid pink line). In 2015/16 provinces hired more than two thirds of teachers that were produced. In 2020 this was only 54%. In 2014 the Department of Higher Education and Training (DHET) established increasing teacher training as a top priority for universities and while universities have responded, provinces have not increased hiring, in part due to budgetary constraints. The immediate impact of this is increasing Learner:Educator (LE) ratios and increasing class sizes. The dotted pink line shows the number of teachers that would need to have been hired to maintain LE ratios.

Figure 8: Graduates from initial teacher education compared to young 'joiners' joining the public teacher-salary database (PERSAL)



Sources: Figure 19 from Gustafsson (2022) For graduates, source is the DHET annual reports of 2019/20 and 2020/21. To illustrate, the DHET value for 2020/21 would be plotted as the 2021 value in the graph.

Universities will need to produce even more teachers to keep up with the incoming retirement wave and increasing enrolments, although provinces need to hire teachers that are produced.

When the National Development Plan was written it was anticipated that the child population in SA would decline over time. In reality it has increased. Between 2010 and 2021 enrolments increased by over one million learners. Projections of the school-age population suggest a further increase of one million learners between 2021 and 2030 (Gustafsson, 2022), this is over and above the need to replace retiring teachers. Universities will need to produce 34,000 teachers per year in 2030 compared to 28,000 per year in 2020, although provinces need to hire the teachers that universities are producing.

Despite younger teachers having lower salaries than older teachers, the retirement wave is unlikely to lead to large cost-savings on salaries due to a change in 2019 where teachers earn 1,5% more per year instead of the previous 1% more per year.

In early 2022 it was expected that replacing older (more expensive) teachers with younger (less expensive) teachers would lead to an overall cost-saving. This is no longer the case. Modeling at the end of 2022 shows that the average 2,9% decline in the cost of senior teachers is completely offset by the overall increase for teachers as a whole of 1,8% (Gustafsson, 2022). This is largely due to a 2019 wage negotiation agreement where the notch increase for all teachers was changed from 1% to 1,5%, i.e. their salary increases by 1,5% per year (instead of 1% previously), over and above any cost of living adjustments. Although technically this notch increase is dependent on performance and being rated 'acceptable' on the Quality Management System, 99.9% of teachers are rated 'acceptable' and receive the increase.

There is evidence that younger teachers have higher levels of content knowledge than older retiring teachers.

The SACMEQ 2013 study in South Africa tested a nationally representative sample of Grade 6 teachers in both reading and mathematics, assessing their content knowledge. Those tests showed that younger teachers (aged 18–35 years) scored significantly higher than older teachers (either those aged 36–50 years or 51–65 years). To provide a sense of the size of the difference between younger and older teachers in mathematics (70–90 points), it is helpful to compare provinces. The SACMEQ IV South Africa report shows that the average mathematics teacher's score in the Western Cape was 843 points, and in the Eastern Cape was 781 points (i.e. 62 points), which is smaller than the gap between younger and older teachers (70–90 points). Therefore the gap between younger and older teachers is larger than the average gap between teachers in the Western Cape and the Eastern Cape (Spaull & Courtney, 2022).

Younger teachers replacing older teachers could lead to improvements in learning outcomes.

Although there are many dimensions to effective teaching that include training, materials, accountability and support, at a base level a teacher cannot teach that which they do not know. Older teachers that were educated and trained under apartheid have lower levels of content knowledge than their younger colleagues who were trained at universities post-apartheid. This trend is especially evident in mathematics. While this is for no fault of their own, there is some South African research evidence showing that learners learn more when their teachers have higher levels of content knowledge (Armstrong, 2015), suggesting that the retirement of older teachers may lead to improvements in learning outcomes in the coming years, other things being equal.

9. Recommendations for government

Is government on the right track and what needs to change to reach the 2030 goal?

For the 2022 Background Report of the Reading Panel there were four recommendations for government relating to measuring reading, budgets, a minimum set of resources, and an audit of university teacher education programs. Unfortunately, there has been almost no progress on any of these recommendations (see Table 6). The only exceptions are the new programs implemented in the Western Cape (Grade 1–3) and Gauteng (Grade R).

Table 6: Status of progress on recommendations from the 2022 Reading Panel Report

Recommendation from 2022:	Status:	Comment:
Measuring what matters: implementing a universal standardized assessment of reading at the primary school level	No progress	The only national assessment is the Systemic Evaluation that was meant to be the replacement to the Annual National Assessment which was abolished in 2014. Numerous delays mean that this was only implemented in 2021, the results of which are meant to be released in 2023. This is only in a sample of schools and only every 3–4 years. It does not fulfill the function of ensuring all primary schools focus on improving reading.
Moving from slogans to budgets: allocating meaningful budgets to reading resources and reading interventions not only talking about them	No progress (except for WC)	Reviewing the 2022 Medium Term Budget Policy Statement (MTBPS) and the February 2022 budget shows that there are no new national budgets for reading programs or reading resources. The only exception to this is the Western Cape Education Department (WCED) which has allocated R111-million (2023–2025) for a Foundation Phase ‘Reading for Meaning’ program. To a lesser extent Gauteng Department of Education (GDE) has allocated R20-million to a Grade R program (2022–2024), with an additional R80-million donor funding.
Providing a standard minimum set of reading resources to all Foundation Phase classrooms (Grade R–3) as a matter of urgency.	No progress (except for WC and GP)	There is still no national program to provide all schools with a minimum set of reading resources, other than the DBE Workbook program which have been in place since 2011. Additional resources are needed to teach reading (graded readers, Big Books, Teacher Guides, alphabet friezes etc.). The only exception to this are the Western Cape (grade 1–3) and Gauteng (Grade R), who have rolled out programs in 2022 and 2023 reaching all Grade R (GDE) and all Grade 1 (WCED) teachers.
University audit of pre-service teacher education programs.	No progress	There is currently no planned audit of pre-service teacher education programs. Forthcoming research shows that the average scores on the PrimTEd (English) assessment for B.Ed students are approximately 63% for first year students and 61% for fourth year students, suggesting no gain over the four year degree (Roberts & Mort, 2023, forthcoming). This confirms previous research calling into question the quality of preservice teacher training.

Despite mounting evidence of large and enduring learning losses there remains no plan to catch up from COVID-19: Research published in 2022 shows quite clearly that there have been widespread learning losses from COVID-19, school closures and rotational timetables. Despite this there is currently no plan and no budget attached to catching up from COVID-19. The only possible exception is the Educator Assistant youth employment program. However, this is primarily a youth employment program and there is minimal training provided to these matriculants.

Research on the extent of the reading crisis and possible interventions and resources to address it have never been clearer or more up to date, yet there remains no plan and no budget:

The research summarized in the two volumes published by Oxford University Press on early grade reading and interventions to improve it, makes it clear why children do not learn to read in the first three years of school, when the wheels come off, and what can be done about it.

Improve Educator Assistant program selection, training and support: Given the large budget for the Presidency's PYEI Educator Assistant (EA) program, it is a wasted opportunity to not implement better recruitment and selection processes (for example testing numeracy and literacy skills), training on a standardised program, and supporting youth once they are in classrooms. To realise its full potential, the Educator Assistant program needs to be understood and implemented as more than simply a youth employment program, and rather as a means of improving learning outcomes in schools.

The recommendations for 2023 are therefore the same as they were in 2022, with the additional recommendation of actually publishing the 'National Reading Plan' and stating what budgets are available to implement it.

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