COVID GENERATION

Covid-19 disruptions and education in South Africa

TWO YEARS OF EVIDENCE

By Gabrielle Wills and Servaas van der Berg

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Table of Contents

Abstract

IN THIS REPORT, WE REVIEW WHAT WE KNOW ABOUT LEARNING LOSSES AND OTHER SCHOOLING IMPACTS IN SOUTH AFRICA AFTER TWO YEARS OF THE COVID-19 PANDEMIC (2020 AND 2021).

In this report, we review what we know about learning losses and other schooling impacts in South Africa after two years of the COVID-19 pandemic (2020 and 2021). Four overall trends emerge from existing evidence. First, there have been extensive learning losses in the General Education and Training Phase (Grade R–9). In the 2021 Western Cape Systemic Tests, Grade 3, 6 and 9 learners were 40% to 70% of a school year behind in language and much more behind, 95% to 106% of a school year, in mathematics (Van der Berg et al. 2022). There were larger average declines in primary grades compared to Grade 9. Furthermore, sample-based reading studies in no-fee schools reveal extensive losses in reading skills among Grade 2 to 4 learners of 46% to 118% of a year of learning over two pandemic years, exacerbating an existing early grade reading crisis in South Africa. Second, evidence points to the widening of already high levels of learning inequality across wealthier and poorer parts of the system. A third and unexpected trend that occurred is that overall, dropping out in South Africa declined during the pandemic at the secondary level. There have also been large commensurate increases in total school enrolment. A fourth trend relates to unprecedented rises in candidates writing the National Senior Certificate (NSC) and achieving a Bachelors-level pass in 2021. This was related to pre-pandemic rises in secondary enrolment, and very large increases in promotion rates from Grade 11 to 12 at the end of 2020 (Gustafsson, 2022c) in a context of adjusted assessment practices to accommodate COVID-19 disruptions to the school calendar. Despite the importance of the NSC as a certification system, buoyant NSC results should not constitute evidence that there have been no learning losses in the system, especially where Grade 12s lost far fewer school days than other grades. Finally, twin pandemic shocks of learning losses and enrolment increases have occurred, in a context where education budgets are being squeezed. Enrolment increases in higher grades need to be addressed through realigning progression rules to effective assessment practices. Furthermore, budget cuts should not preclude prioritising remediating losses, a task that requires much more than merely adjusting Annual Teaching Plans.

Executive Summary

Although school attendance and economic activity has returned to a more usual state of functioning after the removal of COVID-19 related lockdown restrictions, pandemic disruptions to schooling are far from over. In this report, we review what we know about learning losses and other schooling impacts in South Africa after two years of the pandemic.

There have been extensive learning losses in the General Education and Training Phase. The Western Cape Systemic Tests are written in Grades 3, 6, and 9 in language and mathematics at the end of the year. Van der Berg et al. (2022) compared the performance of grade cohorts from the same schools on the same questions in 2021 and 2019. Conservatively, compared to cohorts assessed in 2019, Grade 3, 6 and 9 cohorts assessed in 2021 were 40–70% of a school year behind in language and much more behind, 95–106% of a school year, in mathematics. Expressed in standard deviations, learning losses in South Africa have been larger than average learning losses identified in international reviews of COVID-19 impacts (Patrinos, Vegas & Carter-Rau, 2022).

Average learner performance declines appear to be larger in primary grades (compared to Grade 9) and larger in mathematics than language on the Western Cape Systemic Tests (Van der Berg et al. 2022). However, language losses in earlier grades are likely underestimated where lower order reading and language skills are not tested in those written assessments. There is also preliminary evidence of **widening of already high levels of learning inequality** across wealthier and poorer parts of the system.

Losses in early grade reading skills, between 46% and 118% of a year of learning, observed in no-fee school samples over two pandemic years has exacerbated an existing early grade reading crisis in South Africa. In the first year of the pandemic, in a sample of Eastern Cape and Mpumalanga no-fee charging schools, a 57–81% reduction in children's reading development was observed in Nguni Home Languages and a 62% reduction in reading development in English First Additional language (EFAL) compared to a normal Grade 2 or 4 year (Ardington, Wills & Kotze, 2021). By the third term of 2021, Grade 4 learners in a North West school sample had lost 46–118% of a normal year of learning in foundational reading skills. Applying a 0.27 standard deviation learning loss in Grade 6 Language in the Western Cape Systemic Tests to the existing national Progress in International Reading Literacy Study (PIRLS) 2016 result implies that 'the 80% that could not read for meaning in the PIRLS tests in 2016 would rise to an astonishing 88%' (Van der Berg et al. 2022, p45). Pandemic-related deterioration in early grade reading is of significant consequence for children's development and attaining a national goal that all children read for meaning by age 10 (Department of Basic Education (DBE), 2022a, p6).

Learning losses could be attributed to lost contact teaching time, with far less instruction and evidence of less work done during school lockdowns or with school rotational timetables in place. Nationally on average across all learners in 2020, 54% of contact time was lost due to changes to the school calendar (DBE, 2022c, p5). In the second half of 2021, 22% of contact time in Grade 3 was lost due to rotations and regular absenteeism (Gustafsson, 2022b). In the Western Cape, an average of 155 school days was lost in 2020 and 2021 (Van der Berg et al. 2022). Year-on-year comparisons of work done in Grade 3 Home Language and English First Additional Language in Department of Basic Education workbooks in 2021 compared to 2018 in a North-West province sample, show significant reductions in exercises completed, writing of full sentences and paragraphs.

Contrary to expectations, overall dropping out in South Africa *declined* during the pandemic, especially at the secondary level. There have also been large commensurate increases in total school enrolment. Overall, between 2018 and 2021 the basic education system experienced a significant increase in enrolment, rising by half a million, mainly due to *reduced* dropout (DBE, 2022c, p2). The growth in enrolments started before the pandemic and did not abate (DBE, 2022b, p23). After accounting for population increases, in all provinces, enrolment between 2020 and 2021 increased among learners aged 15 and above (DBE, 2022d). Of the roughly 1 million learners that enter Grade 1, those leaving before Grade 12 declined from around 460 000 before the pandemic to perhaps as low as 200 000 in 2021 (DBE, 2022c, p2). This is in significant contrast to initial fears (Shepherd & Mohohlwane 2021, 2022a) of dramatic pandemic-related increases in the number of learners leaving school before Grade 12. Where dropout did occur between 2020 and 2021, it was in the initial school grades. About 2.3% fewer children than expected (roughly about 27 000 children) had not enrolled as first-time learners in 2021, while up to 19 000 learners at the compulsory school-going age dropped out. General enrolment and dropout trends in 2020 seen in administrative data are supported by patterns in household survey data (Statistics South Africa 2022, p8).

A major pandemic trend has been large and sustained system-wide reductions in repetition rates at all grade levels in 2020 and 2021, but particularly in Grade 10 and 11. For instance, in 2016 almost a third of Grade 10s in the Eastern Cape (EC) and Gauteng (GP) were not progressed to Grade 11. Grade 10 repetition rates declined to 18% (EC) and 17% (GP) in 2020 and stabilised slightly to 23% (EC) and 24% (GP) in 2021. Repetition rates in 2020 and 2021 also declined in primary grades, including the Foundation Phase and Grade 1 specifically. Historically high repetition rates in Grade 1 declined to pre-pandemic Grade 2 repetition levels by the end of 2021, evidenced in two provinces (the Eastern Cape and Gauteng). This will likely have implications for the acquisition of foundational reading and numeracy skills taught in Grade 1 if pre-pandemic patterns of 'holding back' children in Grade 1 were related to issues of school readiness.

As an unexpected outcome, "the pandemic may have pushed the system onto a new level at which far more youths obtain the NSC [National Senior Certificate] for many years into the future" (DBE, 2022c, p4) with many more qualifying for entry into tertiary studies. Related to pre-pandemic rises in secondary enrolment, and very large increases in promotion rates from Grade 11 to 12 at the end of 2020 (Gustafsson, 2022c), there was an unprecedented number of candidates writing the NSC and achieving a Bachelors-level pass in 2021. Despite many more candidates writing, the NSC results overall did not reflect any notable negative COVID-19 impacts.

This should not constitute evidence that there have been no learning losses in the system, especially where Grade 12s lost far fewer school days than other grades. Despite the importance of the NSC as a certification system, it is not designed to measure the overall quality of the education system.

Except for the Western Cape, South Africa has yet to demonstrate a cohesive and robust action plan to remediate losses. In the General Education and Training (GET) Phase, more time needs to be allocated to language and mathematics, in turn requiring freeing-up time from non-core subjects (Van der Berg et al. 2022). Educator assistants, made possible through the Presidential Youth Employment Initiative, could be better used for recovery support, helping individual learners with catching up content in core subjects. To identify gaps in learning, diagnostic assessments of learners' knowledge will also be required, where one-on-one testing in large class settings could also be supported by Educator Assistants with appropriate training. In India, assistants or volunteers working in after-school catch-up programmes significantly helped to mitigate learning losses (Singh et al. 2022).

In-person remediation is unequivocally the preferred approach to addressing learning losses. Not only is remote instruction found to be less effective in remediating learning gaps (Muñoz-Najar et al. 2021), few South African learners were reached through remote learning. In 2020, nationally just 11% of South African youth aged 5–24 and attending an educational institution engaged in remote learning. Access to remote learning opportunities was also highly unequal (Statistics South Africa, 2022, p12). Nevertheless, in the event of a future lockdown, relatively high smartphone proliferation among South African youth (Statistics South Africa, 2022, p17) suggests phone-based or SMS learning opportunities could be better leveraged.

In conclusion, twin pandemic shocks of learning losses and enrolment increases have occurred in the basic education system, in a context where education budgets are being squeezed. Enrolment increases in higher grades need to be addressed through realigning progression rules to effective assessment practices. Furthermore, budget cuts should not preclude prioritising remediating losses, a task that requires much more than merely adjusting Annual Teaching Plans. The long-term human development losses for South Africa of doing nothing to remediate losses will be more severe than the short-to-medium term costs of effective intervention.

Large system-wide reductions in repetition rates at all grade levels in 2020 and 2021.

Twin pandemic shocks of learning losses and enrolment increases have occurred in a context where education budgets are being squeezed.

1 Introduction

54%

Contact time lost in 2022 due to changes to the school calendar.

6%

Youth aged 5–24 participated in remote learning in 2020.

22%

Of contact time lost in Grade 3 in term 3 of 2021.

Globally, COVID-19 pandemic induced lockdowns and school closures have had dramatic impacts on schooling. In 19 out of every 20 countries around the world, schools closed completely for a median of 17 weeks (UNESCO 2021). In South Africa, the national closure of all schools due to the COVID-19 pandemic was implemented from 18 March 2020. A phased approach to the return to school commenced at the end of June 2020, with directives staggering which grades returned first. On average across all learners in 2020, 54% of contact time was lost due to changes to the school calendar (DBE, 2022c, p4). Opportunities for remote learning were very limited, with nationally just 6% of youth aged 5–24 participating in remote learning in 2020 (Statistics South Africa, 2022, p10). An extended period of rotational attendance schedules, applied for over 18 months after schools reopened in mid-2020, also contributed significantly to lost contact teaching time. In the second half of 2021, 22% of contact time was lost in Grade 3 due to rotations and regular absenteeism, although this average hides inequalities in contact teaching time received across the system. For approximately one-third of schools implementing rotations, attendance among Grade 3s was still as low as 45% in term 3 of 2021 (DBE, 2022c, p5). Normal daily school attendance only recommenced in February 2022 (South Africa, 2022).

Although school attendance and economic activity have returned to a more usual state of functioning after the removal of COVID-19 related lockdown restrictions, pandemic disruptions on schooling are far from over. In this report, we review what we know about learning losses and other schooling impacts in South Africa after two years of the pandemic. We bring together earlier evidence on reading losses in no-fee schools in two provinces (Ardington, Wills & Kotze, 2021) with new evidence on reading losses in another province sample, building on preliminary estimates by Kotze et al. (2022). We also consider learning loss impacts on mathematics and language for a much larger sample, across three grades (3, 6 and 9) using province-wide testing data from the Western Cape (Van der Berg et al. 2022).

The report highlights how learning in schools remains far from normal. Two years of schooling disruption has had, and will continue to have, ramifications for children's development. We explain why it is important to identify learning impacts using metrics other than year-on-year comparisons of final school year (i.e. National Senior Certificate (NSC)) examination outcomes, which to date, have masked major learning losses in lower grades.

Dropout and school enrolment patterns during the pandemic are also reviewed in this paper, and new evidence on changes in grade repetition rates during pandemic affected years is presented. In addition to learning losses, new patterns have emerged in the schooling sector as the education system grappled with the pandemic disruptions. Reduced repetition rates, particularly in higher grades, have led to increased learner enrolment flows through the system, and stimulated Grade 12 completion. These changes in schooling patterns will in turn have significant implications for tertiary institutions and flows into the labour market.

To position the South African situation against the global body of literature on COVID-19 impacts on education, international evidence on learning losses and dropout is considered in the next section. Sections 3–8 then provide evidence of COVID-19 disruptions or impacts on different schooling aspects in South Africa. In section 9, we consider international examples of best practices for recovering learning losses, highlighting the urgent need for South Africa to implement a state-wide remediation campaign, particularly in the lower grades. Section 10 concludes.

THERE IS AN URGENT NEED FOR SOUTH AFRICA TO IMPLEMENT A STATE-WIDE REMEDIATION CAMPAIGN, PARTICULARLY IN THE LOWER GRADES.

2 Literature: International evidence on COVID-19 disruptions to schooling and learning

Two significant reviews have been conducted in 2022 that consider the global educational impacts of COVID-19. Patrinos, Vegas & Carter-Rau (2022) reviewed 35 robust studies to specifically document learning losses, although just 4 of the studies are low-to-middle income countries (LMICs). Of the 35 studies, 32 find evidence of learning loss. The average learning loss across these studies was 0.17 standard deviations (SD), representing roughly half a school year of learning. Compared with higher income countries, larger losses when expressed in standard deviations are apparent in LMICs, including Mexico (0.55 SD), Brazil (0.32 SD) and China (0.22 SD) (Patrinos, Vegas & Carter-Rau, 2022, p9).

Moscowiz & Evans (2022) identify 40 empirical studies directly estimating student learning losses or dropout rates for students in pre-primary, primary, or secondary school in countries at any income level. This review does not compare studies using standard deviations but identifies some consistent patterns about the impacts of the pandemic. First, even in high-income countries, where distance learning was implementable, learning fell short relative to where it normally would be. At the primary school level, learning losses were experienced in the Netherlands (Engzell et al. 2021), Belgium (Maldondo & De Witte, 2022), Germany (Schult et al. 2022) and Italy (Contini et al. 2021). In the United Kingdom, across six studies, learning losses ranged from 0.05 to 0.17 standard deviations (Moscowiz & Evans, 2022, p6).

Typically learning losses have been calculated by comparing learning in 2020 or 2021 against learning in an adjacent pandemic year. What this fails to show, though, is how much educational progress has been lost over time. New findings from the United States (US) report significant learning losses when viewed against a long-term trend (NAEP, 2022a, 2022b). Between January and March 2022, a reading and mathematics assessment was administered to nationally representative samples of fourth and eighth-grade students across 50 US states. Each grade sample comprised over 100 000 students. The 2022 results could be compared to 2019 assessment results, and as far back as 1992. There were national declines in fourth-grade and eighth-grade reading and mathematics scores compared to 2019, with fourth-grade mathematics declines in 43 of 53 states or jurisdictions, and fourth-grade reading declines in 30 of 52 states or jurisdictions. At the fourth-grade, the average reading score and average mathematics score was lower than all previous assessment years, going back to 2005 or 2003 respectively.

A common pattern across countries, is that the pandemic augmented learning inequality. Even if there were no average learning losses, losses were much higher among students with lower socioeconomic status – a finding that applied not just in low-to-middle income countries (LMICs) but in high-income countries (Moscowiz & Evans, 2022). Of 20 studies examining learning loss by socio-economic status, Patrinos, Vegas & Carter-Rau (2022) state that 15 found greater learning loss among students or schools with lower socio-economic status. Another strong finding is that the longer the schools remained closed, the greater were the learning losses. Considering 19 countries with learning loss data, where average school closures were 15 weeks (Patrinos, Vegas & Carter-Rau 2022), for every week that schools were closed on average learning declined by 0.01 standard deviations.

In addition to tracking learning losses, studies have considered the impacts of COVID-19 for dropout. Moscowiz & Evans (2022) review 11 studies that estimate how dropout has changed during COVID-19. The key observation is that impacts on dropout rates vary dramatically across countries, from less than 1% to more than 35%. Dropout rates generally more adversely affected older students. In both the reviews by Moscowiz & Evans (2022) and Patrinos, Vegas & Carter-Rau (2022), South African estimates on learning losses and preliminary estimates on drop-out were included. In the discussion that follows we consider the South African studies in their review, discuss the validity of the results (particularly around dropout rates) and add additional evidence where available. Specifically, the discussion in section 6 emphasises that more recent evidence (DBE, 2022c) confirms declines in dropout between 2020 and 2021 among youth aged 15–19 in South Africa.

Even in high-income countries, where distance learning was possible, learning losses occurred.

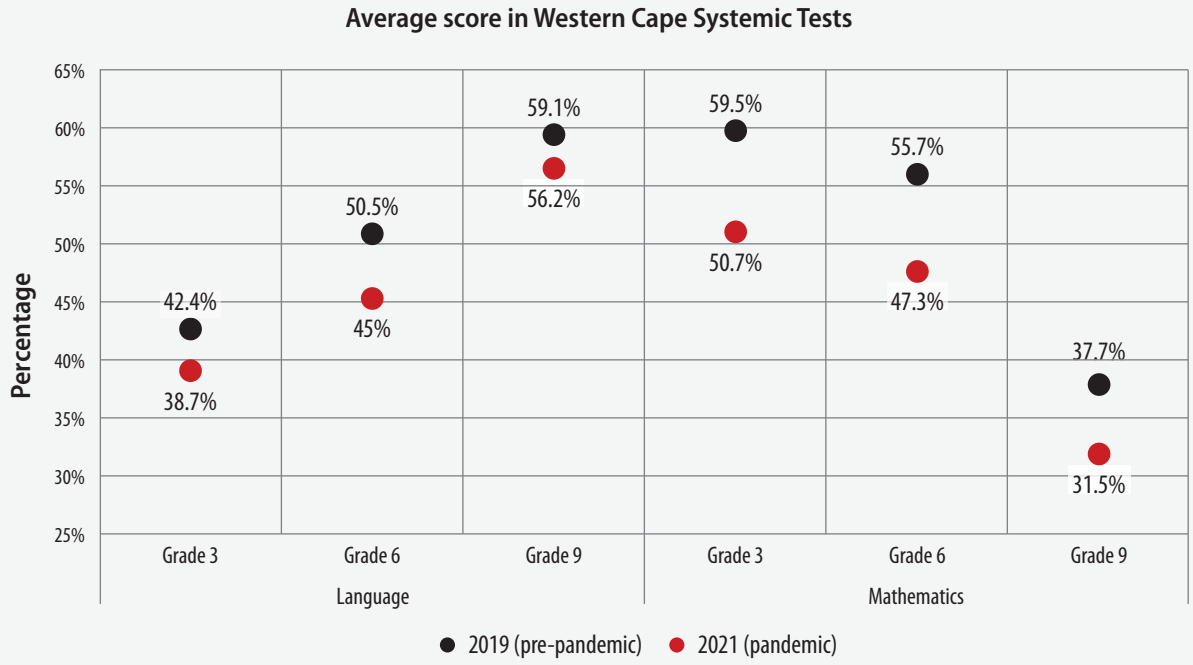
A common pattern across countries is that the pandemic augmented learning inequality.

3 Falling behind in literacy and mathematics: Evidence from the Western Cape

Most learners in South African schools had far lower exposure to school in 2020 and 2021 than in normal years due to school lockdowns and rotational timetables applied in many schools. For example, in the Western Cape, an average of 155 school days was lost in 2020 and 2021 (Van der Berg et al. 2022). But how large were impacts on learning as a result COVID-19 disruptions? In investigating performance in the Western Cape Systemic Tests written in Grades 3, 6, and 9 in both language and mathematics at the end of the year, Van der Berg et al. (2022) compare the performance of grade cohorts from the same schools on the same questions in 2021 and 2019. Their estimates provide a province-wide example of learning losses.

Figure 1 reproduces Van der Berg et al.'s (2022) estimates of year-on-year comparisons of average language and then mathematics performance of Grade 3, 6 and 9 learners. Conservatively, compared to cohorts assessed in 2019, Grade 3, 6 and 9 cohorts assessed in 2021 were 40–70% of a school year behind in language and much more behind, 95–106% of a school year, in mathematics (Van der Berg et al. 2022, p5).

Figure 1 Performance declines in the Western Cape Systemic Tests (2019–2021)



Source: *Van der Berg et al. (2022), Table ES2 and Figure ES1.*

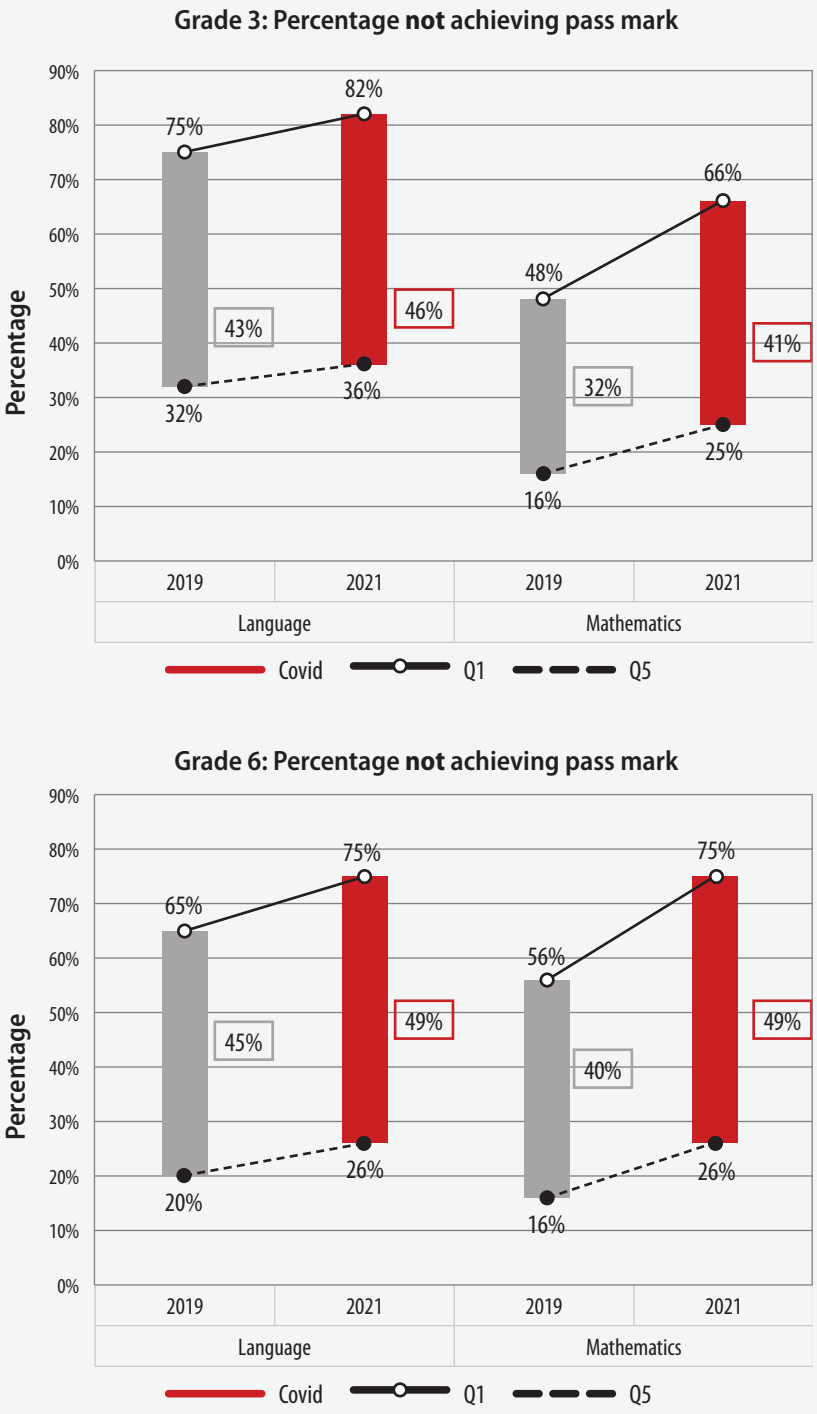
Declines in average learner performance on the tests appear to be larger in primary grades (compared to Grade 9) and in mathematics, confirming earlier expectations of large losses in mathematics (Soundien, Reddy & Harvey, 2022). As a conservative estimate, the grade 3 loss in mathematics amounts to almost a full school year of learning, assuming 190 days of school. There is also evidence of widening inequality in learning across wealthier and poorer parts of the system. This is illustrated in Figure 2A and B, showing the percentage of Grade 3 and 6 learners not achieving a pass mark (50%) benchmark. Worse performance is seen for both quintile 1 and 5 learner groups in 2021 compared to 2019. In quintile 5 schools, 16% of Grade 3s were not achieving a pass in 2019 and this increased to 25% in 2021 (Van der Berg et al. 2022). But larger losses are seen in quintile 1 schools, despite coming off a much lower performance base: 48% of Grade 3s in these schools were not achieving a pass in mathematics in 2019, but this increased to 66% in 2021.

The pandemic related declines in learning in the Western Cape should be viewed in relation to the already low levels of performance that predated COVID-19. What is more sobering is that the Western Cape has historically been the best performing province in South Africa along with Gauteng (Wills, Shepherd & Kotze, 2018, Gondwe & Wills, 2022). We expect even lower levels of average performance in other provinces on the same tests.

By assuming that normal learning in a year is a relatively high in primary schools at 0.40 standard deviations (SD), but lower at 0.30 SD in secondary schools, losses in the Western Cape Systemic Tests expressed in standard deviations are as follows: 0.39 SD in Grade 6 Mathematics, 0.32 SD in Grade 9 Mathematics, and 0.27 SD in Grade 6 Language. Applying a 0.27 SD learning loss in Grade 6 Language to the existing national Progress in International Reading Literacy Study (PIRLS) assessed at the Grade 4 level in South Africa, implies that 'the 80% that could not read for meaning in the PIRLS tests in 2016 would rise to an astonishing 88%' (Van der Berg et al. 2022, p45). Assuming the same learning loss in Grade 6 Mathematics performance in the Western Cape occurred in all of South Africa, then if applied at the Grade 5 level, the proportion not reaching the low international benchmark of 400 points in the Trends in International Mathematics and Science Study at the Grade 5 level (TIMSS-N) would rise from 64% to 76% (Van der Berg et al. 2022, p45).

THE 80% THAT COULD NOT READ FOR MEANING IN THE PIRLS TESTS IN 2016 COULD RISE TO AN ASTONISHING 88%.

Figure 2 Western Cape Systemic Tests. Percentage of learners in quintile 1 and 5 schools not achieving pass mark (50%)

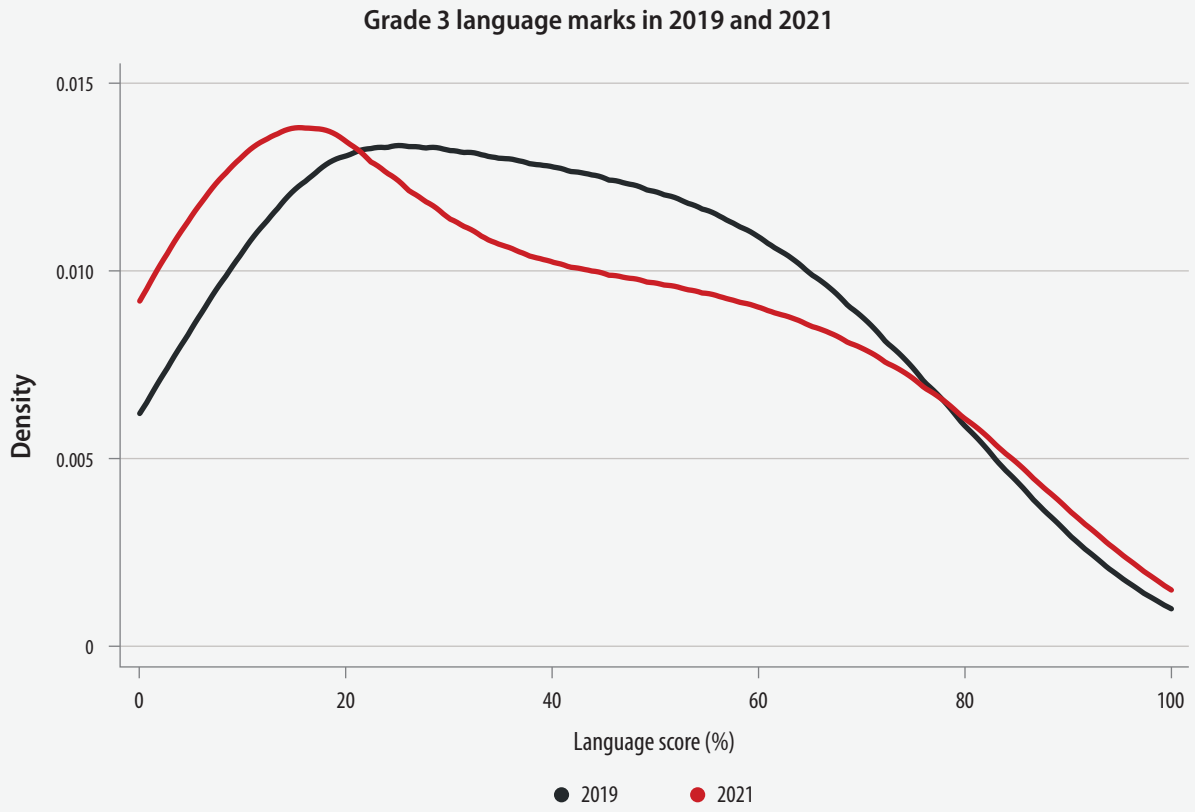


Source: *Van der Berg et al (2022), estimates from Table ES3, ES4, ES6 and ES7. Gaps between quintile 1 and 5 schools are shown by outlined data labels.*

WORSE GRADE 3 AND 6 PERFORMANCE IS SEEN FOR LEARNERS IN BOTH QUINTILE 1 AND 5 SCHOOLS IN 2021 COMPARED TO 2019, BUT LARGER LOSSES ARE SEEN IN QUINTILE 1 SCHOOLS.

The Western Cape Systemic Tests are very important for documenting at a province level how literacy and mathematics performance has been impacted by COVID-19 related schooling disruptions. In measuring literacy using a written assessment, the Systemics only capture the end point of the learning-to-read journey. Losses will be underestimated where lower order reading and language skills are not measured and where tests are set above average learner ability levels. For instance, written comprehension tasks assess higher order reading skills and cannot be used to detect deficits in skills such as oral reading fluency, alphabetic knowledge or oral language that are necessary building blocks on the journey to be able to read for meaning (Zuilkowski et al. 2019). Despite the inclusion of multiple-choice questions in the Grade 3 literacy Western Cape Systemic Test, which means that it is statistically possible to get some questions correct through random guessing, significant floor effects are seen in Figure 3. This is evidence of how impacts on lower order reading skills are not being effectively captured through the tests. For this reason, we turn to assessments of early grade reading from non-representative samples in three provinces.

Figure 3 Distribution (kdensity) of Grade 3 language marks in the Western Cape Systemic Tests, 2019 and 2021



Source data: *Output produced in preparing the report by Van der Berg et al (2021). Credit to Bianca Böhmer. The 2019 and 2021 comparison relies on a comparable set of questions across years.*

4 Learning losses: The case of early grade reading

After a period of notable progress in reading development in South Africa (Department of Basic Education, 2020), COVID-19 has dealt a significant setback to early grade reading. This is a major concern where initial levels were very low to start off with (Wills, Ardington & Sebaeng, 2022). This is observed using early grade reading assessment data from the Funda Wande project and the 1st and 2nd Early Grade Reading Study (EGRS I and EGRS II). More information on these study samples is provided in Box 1.

In 2020 in Eastern Cape and Mpumalanga no-fee charging schools, Foundation Phase learners lost 56–60% of the number of school days in a normal school year due to school closures and rotational school timetables (see Table 1). Losses in contact teaching time led to a 57–81% reduction in children's reading development in Nguni Home Languages and a 62% reduction in reading development in English First Additional language (EFAL) compared to a normal Grade 2 or 4 year (Ardington, Wills & Kotze, 2021). In North West province, in a sample of 202 schools, in the second year of the pandemic 37% of school days were lost in earlier grades (largely due to continued rotational schedules) after losing more than half of a normal school year in 2020. By the third term of 2021, Grade 4 learners in these schools had lost 54–118% of a normal year's learning in foundational Home Language reading skills.

Table 1 Schooling days lost versus calculated learning losses over a year, evidence from no-fee schools in three provinces

		YEAR OF LEARNING LOST		
	School days lost	**Alphabetic knowledge**	**Home Language (HL) reading**	**English first additional (EFAL) reading**
1st year of pandemic (2020)				
Grade 2 (Eastern Cape)	60% (2020 vs. 2019)	70%	57%	–
Grade 4 (Mpumalanga)	56% (2020 vs. 2019)	–	81%	62%
2nd year of pandemic (2021)				
Grade 4 (North West)	37% (2021 vs. 2019) 56% (2020 vs. 2019)	–	54%–118%	46%

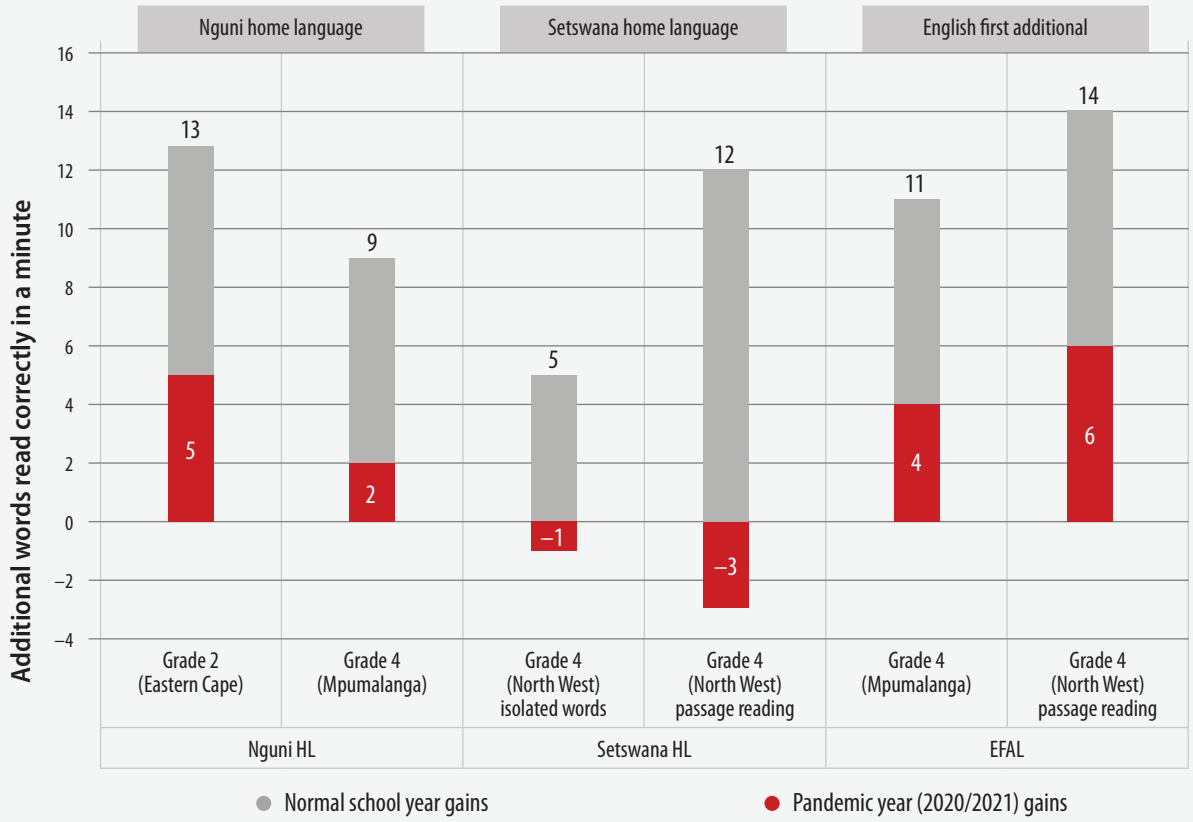
Source: *Ardington, Wills and Kotze (2021), Bisgard et al (2021). Note: School days lost account for COVID-19 related school lockdowns, not attending school due to rotational schedules, and other discretionary school closures.*

Another way of expressing the losses in Table 1 is shown in Figure 4, illustrating learners' average development in oral reading fluency or isolated word reading during a normal school year and then during the first and second year of the pandemic.

- In a normal year, a sample of Grade 2 Eastern Cape learners on average read an additional 13 words correctly in a minute in isiXhosa at the end of the year compared to the start of the school year. By the end of 2020, Grade 2s were reading just 5 additional words correctly in a minute compared to the start of the year. Not shown in the figure is the substantial decline in the acquisition of basic alphabetic knowledge. Pre-pandemic, Grade 2s in the Eastern Cape school sample would usually sound an additional 23 letters correctly over a year. In 2020, development in alphabetic knowledge declined to just 7 additional letters in Grade 2.
- Among a Grade 4 Mpumalanga sample, reading development in Home Language almost stagnated during the 2020 pandemic year. Grade 4s in EGRS II schools would normally read an additional 9 words correctly in a minute from an isiZulu or Siswati language text. This declined to just 2 additional words.
- After two years of disruptions to schooling, losses in reading appeared to be even more severe as observed in 202 North West schools. Normally during Grade 4, learners' fluency improves by about 12 additional words on average in Setswana. After two years of the pandemic, Grade 4 learners in term 3 of 2021 were reading about the same number of words in a minute as Grade 3 learners (in the same schools) in term 3 of 2019 (see Figure 5).
- Reading trajectories in English have also deteriorated. Normally over a Grade 4 year, learners in the Mpumalanga and North West province samples read 11–14 additional words correctly in a minute. In pandemic affected years, this declined to 4–6 additional words per minute.

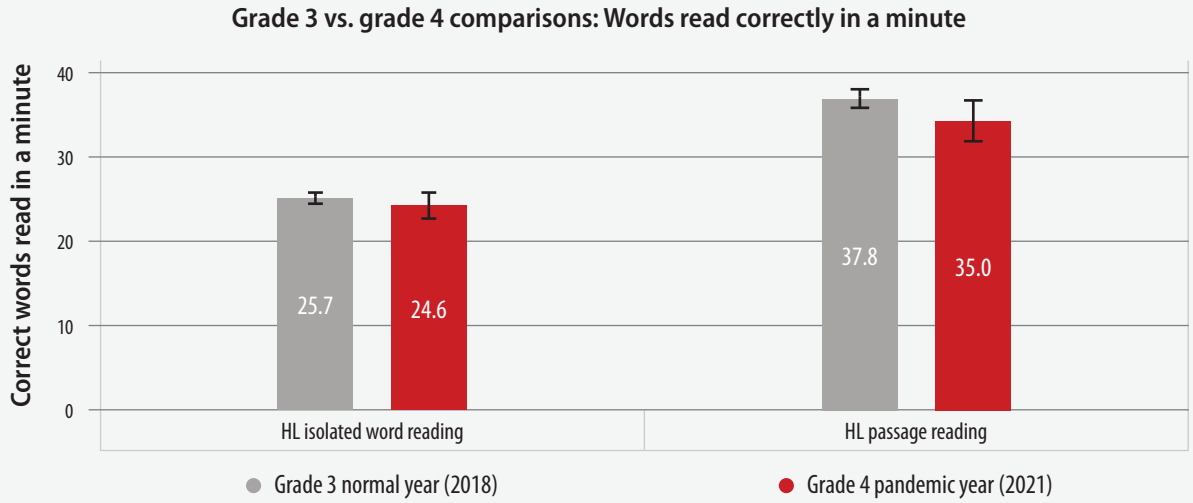
The deterioration in early grade reading seen in these studies is of significant consequence for children's development and achieving a key Medium Term Strategic Framework goal for education, namely, that 10-year-old learners can read for meaning (DBE, 2022a, p6). As Wills, Ardington & Sebaeng (2022) demonstrate empirically using large data samples on reading in African home languages, if children do not reach basic milestones in decoding skills and fluency in Grades 1–3, their ability to read with meaning by the time they finish primary school is significantly compromised.

Figure 4 Reading development over a year (additional words read correctly in a minute). Normal school year vs. COVID-19 pandemic years. Evidence from no-fee school samples in three provinces.



Notes: *Grade 2 (Eastern Cape) and Grade 4 (Mpumalanga) estimates from Ardington, Wills & Kotze (2021) using Funda Wande (Grade 2), EGRS II and SPS data (Grade 4). Estimates for Grade 4 (North West) are from own calculations using Grade 3 and 4 EGRS I and RSP (2018 and 2021) data. All estimates are derived from regressions using school fixed effects and/or difference-in-difference estimation.*

Figure 5 Reading levels of Grade 3 (2018) and Grade 4 (2021) learners in the same schools, North West province sample



Source: *EGRS I (2018) and RSP (2021), own calculations. Notes: Estimates are plotted from a school fixed effects regression. HL = Home Language. N schools = 202. N learners = 5 066 and 5 050. These figures are slightly adjusted from those shown in Kotze et al (2022) due to improved data cleaning.*

BOX 1 Early grade reading samples used to assess losses in reading

The following samples are available to assess Covid-19 related learning losses in reading:

Eastern Cape sample: Ardington et al. (2021) compared the reading gains of 435 students who were in Grade 2 in 2020 against 566 students who were in Grade 2 in 2019 in the same 57 schools. The schools included treatment and control schools assessed for the Funda Wande impact evaluation. The home language of almost all these learners was isiXhosa.

Mpumalanga sample: Ardington et al. (2021) evaluated the performance of 1 899 students who were in Grade 4 in 2020 (Covid group) in 180 schools included in the second Early Grade Reading Study (EGRS II) in Mpumalanga. As a pre-Covid comparison group, the Mpumalanga sample were matched on background characteristics to 2 910 students who completed Grade 4 between 2018 and 2019 in 354 Story Powered Study schools in KwaZulu-Natal. For both the Covid and counterfactual samples, isiZulu was the majority home language spoken.

Performance gains over time were compared across each sample using a difference-in-difference estimation, with school fixed effects to absorb time-invariant between-school variation.

North-West sample: Grade 3 and 4 reading assessments were conducted in the North West province for the first Early Grade Reading Study (EGRS I) and the subsequent Reading Support Programme (RSP) in 2018 and 2021. In both years, random samples of Grade 3 learners were drawn from EGRS I and RSP schools (a subset of EGRS I schools). Grade 3 reading outcomes were compared across 2018 and 2021 in the same 202 schools. Then reading outcomes were compared in the same 202 schools for 2015 and 2018 Grade 1 cohorts that were assessed three years later when the majority were in Grade 4. The combined 2018 and 2021 Grade 3 sample was just over 5 000 learners and the combined Grade 4 samples ranged from 5 300–5 400.

In all the above studies, assessment tasks have often remained very similar (or in some cases identical) across years and grades. This supports both year-on-year comparisons of reading levels and the identification of how learning gains have changed during the pandemic when considered in relation to typical learning gains pre-pandemic. In other words, it was possible to calculate both how far learners had fallen behind, as well as how much learning was lost in 2020 and 2021.

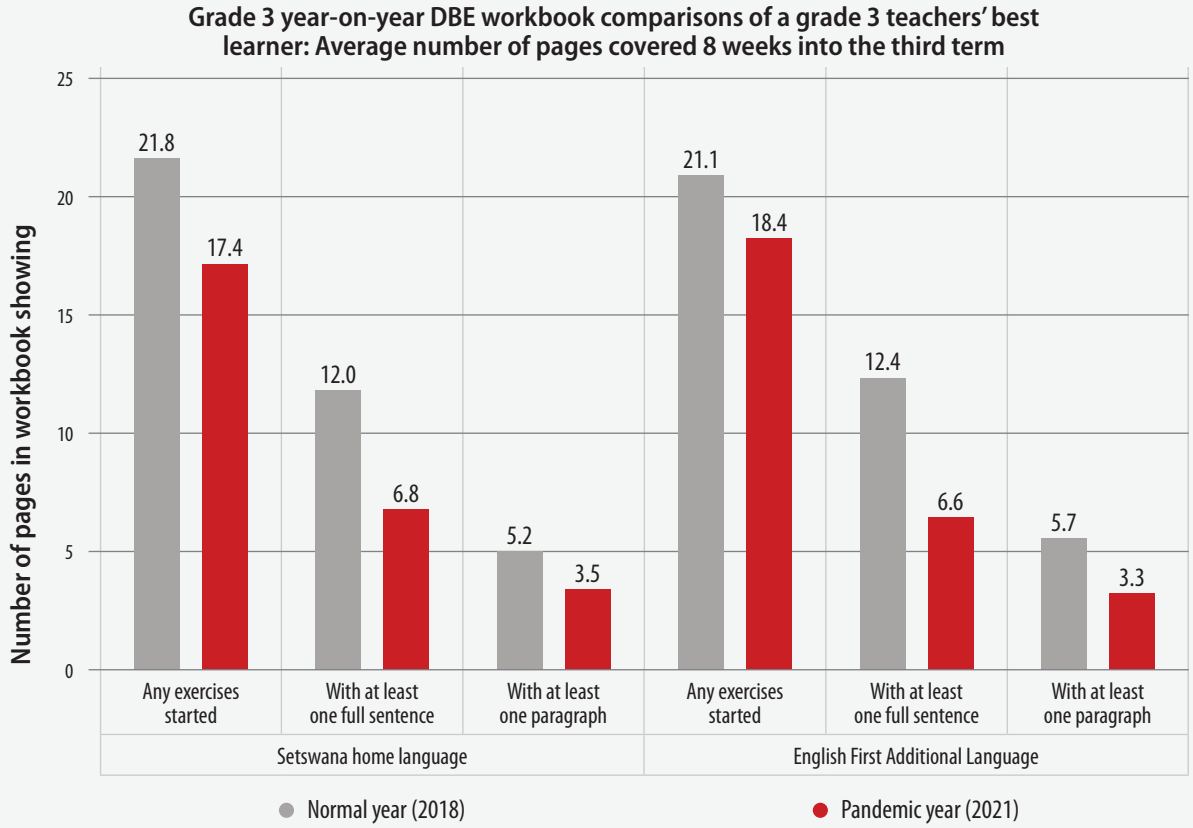
5 Reductions in writing and work done

One of the main reasons that learners have fallen behind is simply that they have received far less instruction (see Table A2) and done less work during school lockdowns or with school rotational timetables in place. Evidence of reductions in opportunities to learn during pandemic affected years is revealed by examining work done in Department of Basic Education (DBE) Rainbow Workbooks.

DBE workbooks of a Grade 3 teacher's best learner were evaluated in 2018 and 2021 at similar points in term 3 as part of the first Early Grade Reading Study (EGRS I). Year-on-year comparisons of work done, calibrated up to eight weeks into the third term, is shown in Figure 6. The number of pages reflecting any work done declined from 22 to 17 pages in Setswana Home Language workbooks, and from 21 to 18 pages in English First Additional Language (EFAL) workbooks. In 2018, there was writing of at least one full sentence in Home Language workbooks on just 12 pages, declining to just 7 pages in 2021. In EFAL workbooks, there was half as much evidence of writing of full sentences in 2021 (12–7 pages) compared to 2018. Pages showing paragraph writing in EFAL workbooks declined from 6 pages in 2018 to 3 pages in 2021. Reductions in DBE Workbook coverage occurred despite teachers indicating that the main way non-contact teaching took place during school closures and rotational scheduling was through children taking home DBE workbooks (Bisgard et al. 2022).

Less evidence of writing at lower grade levels could explain the particularly large impacts on writing observed in the Western Cape Systemic Tests (Van der Berg et al. 2022, p12). Language results in the Western Cape Systemics Tests were analysed in relation to three curriculum areas: 'Lexical comprehension' (vocabulary); 'Writing'; and 'Reading comprehension'. The largest declines from 2019–2021 at the Grade 3 level were for 'Lexical comprehension' and 'Writing' (a decline of 4 percentage points for each component).

Figure 6 Reductions in pages covered in Home Language and English First Additional Language DBE Rainbow Workbooks in a North West province sample of schools. Term 3 2018 vs Term 3 2021



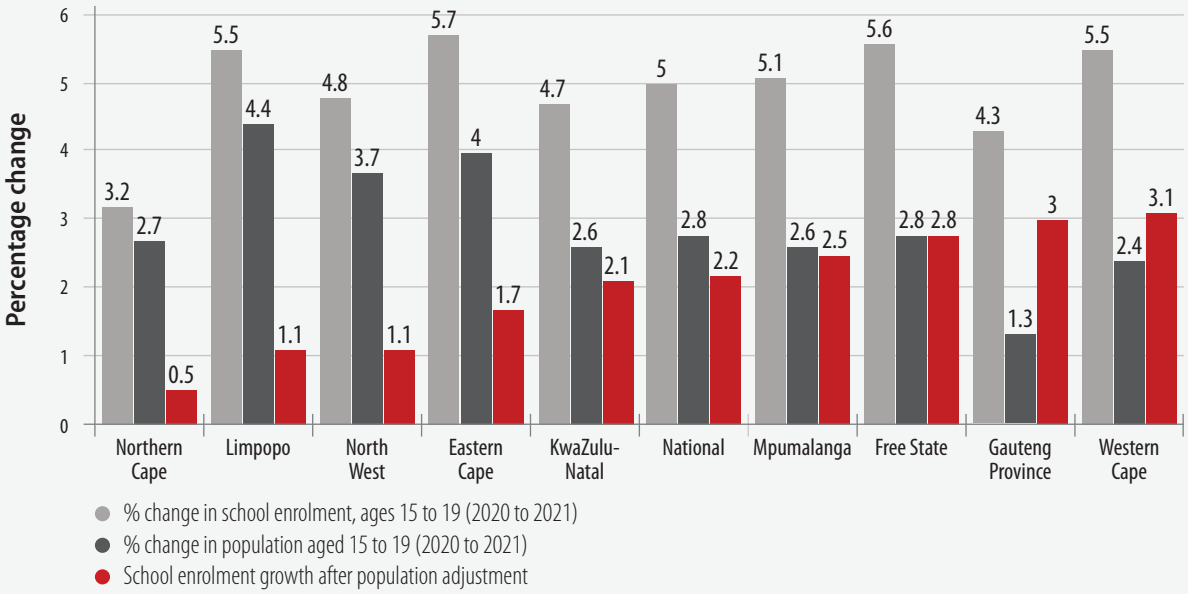
Source: *Own calculations using EGRS I wave 4 and 5. Only the best Grade 3 learners' workbooks were compared across each year to ensure similarity in sampling of workbooks across waves. N schools = 129–137. Estimates are from regressions controlling for school fixed effects and adjusted for any slight differences in time passed since the term started and when workbooks were evaluated.*

6 School enrolment and dropout

Contrary to what almost everyone expected, and contrary to initial evidence produced during the pandemic (Shepherd & Mohohlwane, 2021, 2022a) across the basic education system, overall dropping out in South Africa *declined* during the pandemic, in particular at the secondary level. It did not increase (Gustafsson, 2022a; DBE, 2022d). There were, however, differences experienced at the primary and secondary level.

After taking expected population increases into account, analysis by the Department of Basic Education (DBE, 2022d) shows that enrolment among learners aged 15 and above, of non-compulsory school age, actually increased between 2020 and 2021 in all provinces (Figure 7). An analysis of enrolment data also indicates a 20% increase in Grade 12 enrolment, with age specific increases in Grade 12 enrolment for ages 17–25 exceeding what Statistics South Africa estimates to be population growth at these ages (DBE, 2022c, p14). This rise in enrolment at the Grade 12 level does not reflect an administrative data problem. As discussed later, there were significant increases in the number of candidates enrolled and sitting the Grade 12 National Senior Certificate in 2021.

Figure 7 School enrolment growth among ages 15–19 from 2020–2021, nine provinces in South Africa



Source: *Department of Basic Education (2022d) using Table 12 where enrolment data was derived from SA-SAMS, quarter 1 of 2020 and 2021, and cleaned for duplicates. Population changes for those aged 15–19 are from Statistics South Africa's mid-year population estimates.*

Overall, the basic education system experienced a significant increase in enrolment between 2019 and 2021, with enrolments rising by half a million, mainly due to *reduced* dropout (DBE, 2022c, p2). This takes total enrolment to about 13.4 million in 2021. The growth in enrolments started before the pandemic and did not abate (DBE, 2022b, p23).

Yet international reviews (Moscowiz & Evans, 2022) have reported that school dropout in South Africa increased dramatically, drawing largely on preliminary studies using the National Income Dynamics Study – Coronavirus Rapid Mobile Survey (NIDS-CRAM) (Spaull et al. 2021). This confusion around dropout has arisen due to the challenges of interpreting telephonic survey responses on learner attendance at school or non-return of learners during periods of highly disrupted school schedules.

NIDS-CRAM – a telephonic survey representative of adults in South Africa – was administered at five data collection points between May 2020 and May 2021.[1] Adult respondents were asked to report on whether children in the household were attending school or whether any children had not returned to school in the year. Based on this data, it was initially suggested that there were an additional 500 000 learners out of school (Shepherd & Mohohlwane, 2021), and then 700 000 non-returned learners in the South African education system between 2020 and 2021 (Shepherd & Mohohlwane, 2022a). The authors subsequently reframed the rise in non-returned learners as being "extended absenteeism" (Shepherd & Mohohlwane, 2022b) where Gustafsson (2021) suggests that as many as 910 000 learners, largely younger learners, were extended absentees.

One of the key indicators pointing to this 'rise' in non-returned learners as in fact being absenteeism, was that the rise was observed only among younger learners (of compulsory school age) not among older learners who are typically more likely to drop out (Van der Berg et al. 2021). Relative to a pre-pandemic situation, updated analysis reflected that the prevalence of learners returning to school in Grades 10–12 was actually *better* than in pre-pandemic years (Shepherd & Mohohlwane, 2022a, p770). This agrees with Statistics South Africa data showing increases in school participation in 2020 among children aged 15–18 but decreases in school participation among children aged 5–13 compared to pre-pandemic years 2016–2019 (Statistics South Africa, 2022, p8).

Analysis of administrative data on enrolments by the Department of Basic Education indicates that where dropout did occur between 2020 and 2021, it was in the initial school grades, not in higher grades. About 2.3% fewer children than expected (roughly about 27 000 children) had not enrolled as first-time learners in 2021, while up to 19 000 learners at the compulsory school-going age dropped out. The small decline in enrolment of younger learners is attributed to reluctance on the part of households to enrol learners in either Grade R or Grade 1 in a pandemic-disrupted school environment or due to fears of contracting the virus (DBE, 2022d, p1).

1 The sample was drawn from the 2017 National Income Dynamics Study, so NIDS-CRAM is representative of adults in South Africa in 2017.

7 Declines in repetition rates across the basic education system

With very large reductions in contact teaching time and changes to assessment requirements during 2020 and 2021, typical learner progression patterns have been significantly disrupted. A major trend observed has been large and sustained system-wide reductions in repetition rates at all grade levels, but particularly in Grades 10 and 11. In a disrupted school context, progression was decoupled from assessment. In 2020 and 2021 there were reductions in assessments; examinations (except the National Senior Certificate) were cancelled; moderation processes were eased and the contribution of school-based assessment (SBA) to the final marks of learners in all grades was raised significantly. The SBA component of the promotion requirements for Grades 10 and 11 specifically was increased from 25–60% (Hoadley, 2020, p15), despite concerns about the reliability of SBAs (Van der Berg & Shepherd, 2015).

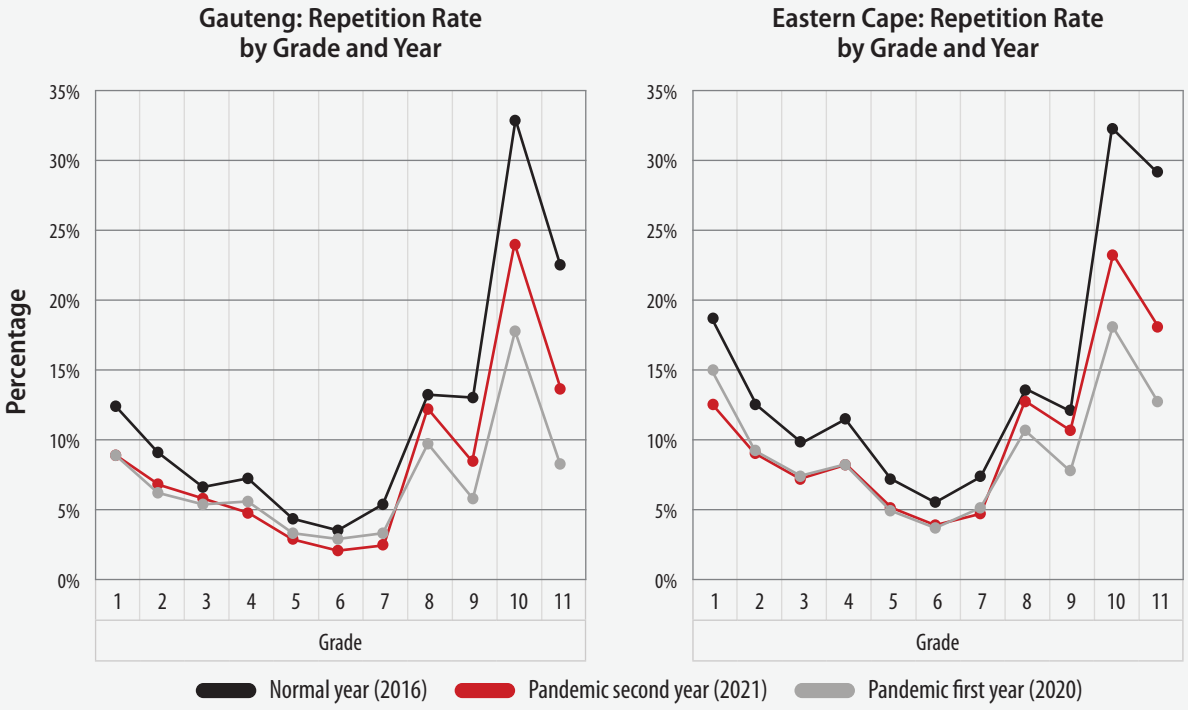
We provide evidence of end of year non-progression rates (i.e., repetition rates) for a balanced sample of schools in two provinces – Gauteng and the Eastern Cape (Figure 8). Across primary school grades (1–7), a four-percentage point decline in repetition rates in 2020 is observed compared to pre-pandemic (2016) levels in the Eastern Cape. This decline in repetition remains relatively entrenched at the end of 2021. A similar pattern is observed in Gauteng. Historically high repetition rates in Grade 1 (18% in the Eastern Cape and 12% in Gauteng in 2016) had declined to pre-pandemic Grade 2 repetition levels (12% in the Eastern Cape and 9% in Gauteng in 2016) by the end 2021. This will likely have implications for the acquisition of foundational reading and numeracy skills taught in Grade 1 if pre-pandemic patterns of 'holding back' children in Grade 1 were related to issues of school readiness.

At the Further Education and Training (FET) (Grades 10–11) level, repetition rate reductions are particularly notable. For instance, in 2016 almost a third of Grade 10s in the Eastern Cape and Gauteng were not progressed to Grade 11. Grade 10 repetition rates declined to 18% (Eastern Cape) and 17% (Gauteng) in 2020 and stabilised slightly to 23% (Eastern Cape) and 24% (Gauteng) in 2021.

With much larger numbers of learners pushed through the system, this in turn has implications for raising class sizes in higher grades while reducing class sizes in lower grades. We also anticipate rising class sizes in higher grades due to reduced dropout rates. Historically, repeaters have been more likely to drop out in later grades, so dropout rates are expected to decline, thus increasing enrolment levels in the highest grades.

Nationally, reduced repetition rates from 2020–2021 at the Grade 10 and 11 level, are confirmed by declines in the average age of Grade 10 and 11 enrolled learners in 2021 (DBE, 2022d, p12). Gustafsson (2022c, p1) also finds that the Grade 11 to Grade 12 promotion rate rose "from 67% in 2019 (for Grade 11 learners moving to Grade 12 in 2020) to 79% in 2020 (Grade 11 learners moving to Grade 12 in 2021)". Higher Grade 12 enrolment of 20% from 2020 to 2021 and the sharp rise in average age of Grade 12 learners from 2020 to 2021, initially pointed to higher repetition in grade 12 in 2021 (DBE, 2022d). However, subsequent analysis indicates that the absolute number of Grade 12 repeaters declined from around 152 000 in 2018 to around 110 000 in 2021 (Gustafsson, 2022c, p6).

Figure 8 Reduction in repetition rates (i.e. not being progressed) during the pandemic. Gauteng and the Eastern Cape province



Source: *Data Driven Districts. Calculation by Van Wyk and Van der Berg (2022) using a balanced school sample in each province. Calculations using data for up to 1.5 million Grade 1–12 learners in each province. Repetition rates in each year identify the percentage of enrolled learners who were not progressed to a higher grade the following year.*

8 The NSC examination in 2020 and 2021

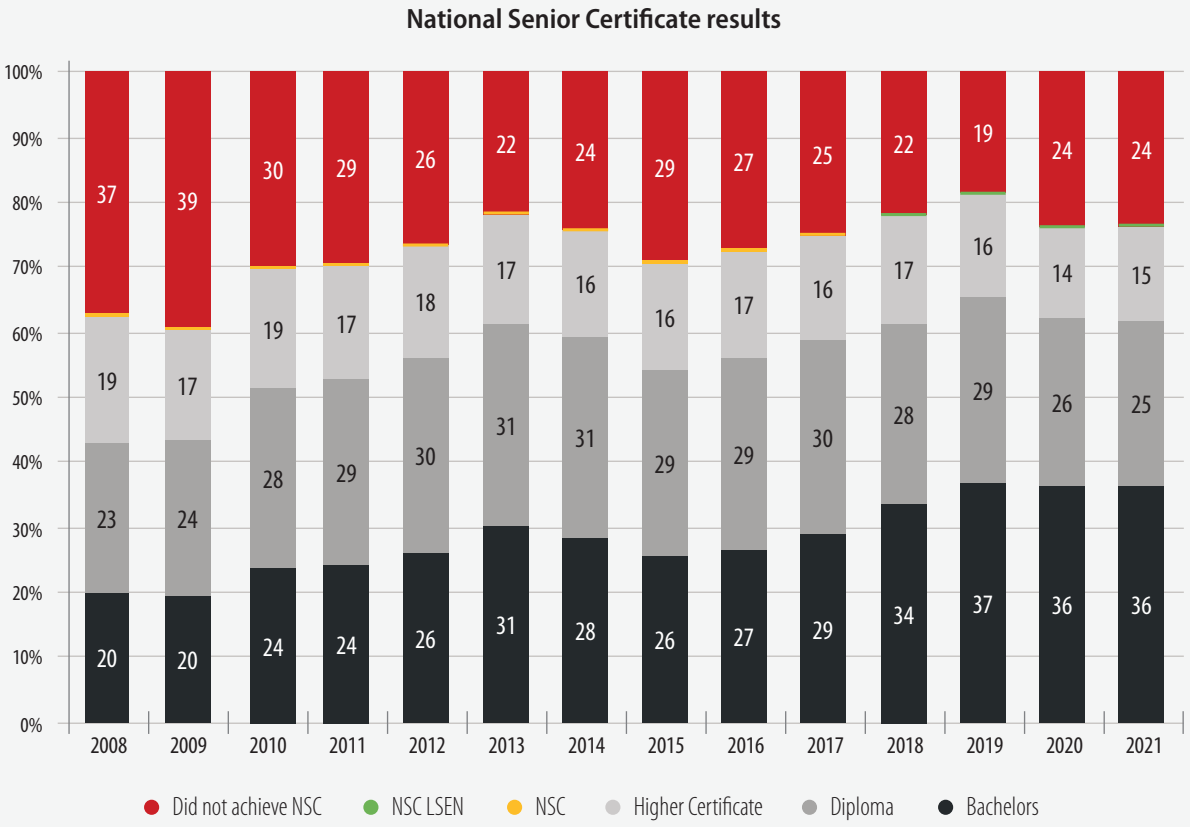
The National Senior Certificate (NSC) (or commonly referred to as the 'matriculation' examination) is South Africa's flagship programme of certification at the end of the last year of schooling. The NSC result determines entry into tertiary education and signals competence in the labour market. Hoadley (2020, p16) regards it as 'a stellar achievement' that the DBE was able to retain the NSC examination in 2020 despite the pandemic-related disruption of the school system, considering that this is 'the only high-stakes examination with consequences for learners future academic and work opportunities'. Despite the importance of the NSC as a certification system, it is not designed to measure the overall quality of the education system. Large percentages of any Grade 1 cohort do not go on to sit the examination 12 years later, despite improvements in 'survival' to matric (DBE, 2020). Those that do sit the NSC examination are therefore a select group of students who did not drop out and managed to progress through the higher grades. For this reason alone, the NSC results are not a good metric to track how the basic education system has been affected by COVID-19 disruptions.

The NSC results overall did not reflect any notable negative COVID-19 impacts. Considering the results of those that wrote the NSC from 2008–2021 (Figure 9), there weren't major variations in Bachelors-level pass rates (which provide an important signal of acceptance into university) in 2020 and 2021 relative to pre-pandemic years 2018 and 2019. About 81% of those who obtained the NSC as full-time students in 2019 qualified with a Bachelors or Diploma pass to study at a university. In 2020 and 2021, these figures were 82% and 81% (DBE, 2022e, p14). However, the full distribution of results, among those that wrote, appears to be better in 2021 and 2020 than in pre-pandemic years from 2015–2017. But a closer analysis of subject combinations and performance in individual subjects is required. The number of learners achieving 60% in mathematics in 2021 was the highest in the last five years, although this cannot be said for physical science (DBE, 2022e, p15).

COVID-19 learning losses are expected to be less severe in the senior grades in South Africa, and especially in Grade 12 compared to earlier grades, for various reasons. Grade 12s were favoured in the staggered return of learners to school, so that fewer days were lost. For example, shown in Appendix Table A1, relative to 2019, Grade 12s lost 22% of official school days in 2020, while Grade 4s and 9s lost 42% of school days (before rotations) (Kotze, 2021). Furthermore, historically, vacation and after-school programmes have been used by schools to prepare Grade 12 learners for the matriculation examination. With these learning extension practices in place pre-pandemic, it would have been relatively easy to scale this up in intensity in pandemic affected years.

Nevertheless, the buoyant NSC results in 2020 and 2021 are also counterintuitive for two reasons. First, it seems unlikely that vacation programmes could have entirely made up for losses experienced not only during the Grade 12 year, but for Grade 11, which is an important preparation year in acquiring content to tackle the NSC matriculation examination. Furthermore, there were many more candidates sitting the 2021 examination.

Figure 9 National Senior Certificate (NSC) results 2008–2021



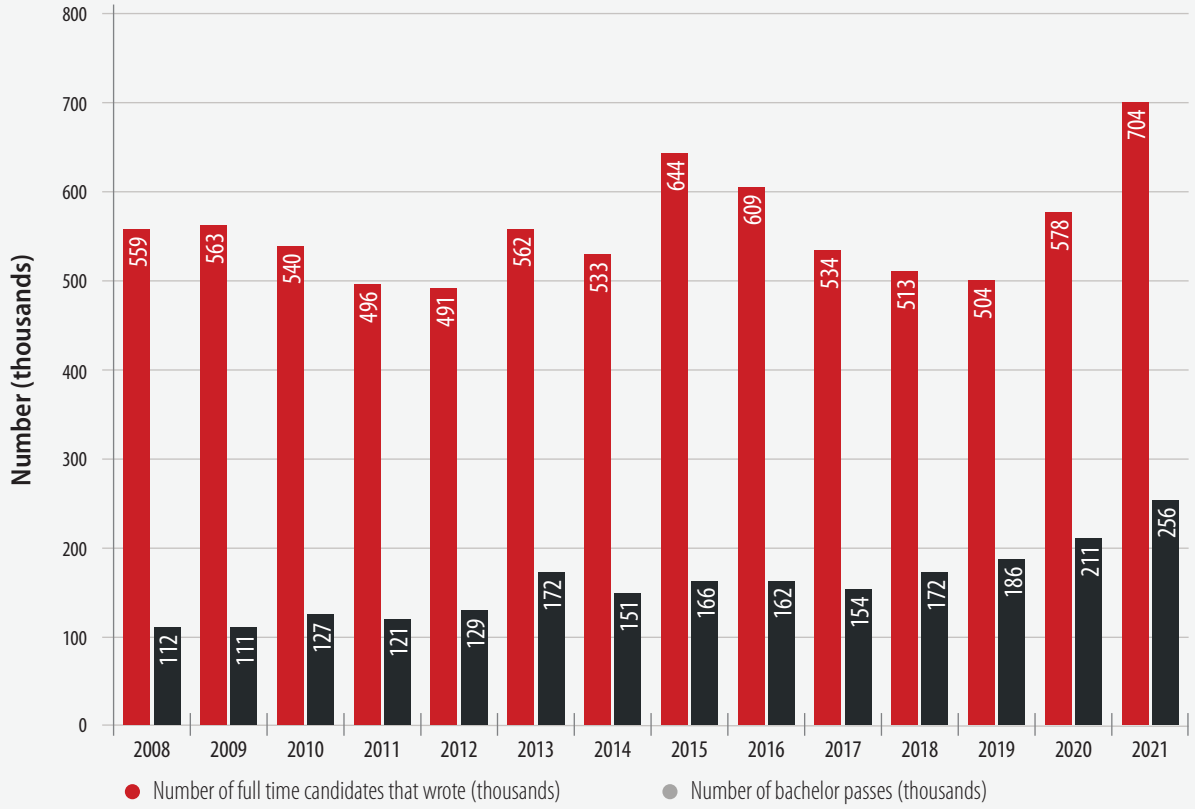
Source: *NSC data on full-time candidates from Department of Basic Education. NSC and NSC LSEN candidate are so few as a proportion of all candidates, that numbers can't be seen visually.*

A very important pandemic-related trend is that 2021 saw an unprecedented number of candidates write the NSC, at 704 000 candidates, with a concurrent and unprecedented number achieving a Bachelors-level pass at 256 000 (see Figure 10). Compared to 2019, this amounts to a 40% increase in the number of candidates writing and a 38% rise in Bachelor-level passes. The increase in candidates writing was largely attributed to pandemic-related changes to progression rules which allowed more Grade 11 learners in 2020 to be promoted to Grade 12 in 2021 and thus much higher 'survival'[2] to matric. Pre-pandemic, of roughly 1 million learners entering Grade 1 in a school year, 450 000 would leave school before reaching Grade 12 (DBE, 2022c, p1). This implies only 45% of every age cohort among the youth population obtained the NSC in Grade 12 or very soon thereafter.[3] The increase in Grade 12 learners in 2021 implies that learners leaving before matric declined from around 460 000 before the pandemic to perhaps as low as 200 000 (DBE, 2022c, p2).

2 Nationally completion of Grade 11 improved from 61% in 2007 to 73% in 2018 as reflected in analysis of Statistics South Africa data. The corresponding figures for Grade 10 are 73% and 84%. This trend has occurred without a noticeable increase in the average age of learners (DBE 2020, p16).

3 Although household survey data from Statistics South Africa indicates that 57% of youths eventually obtain a Grade 12 level qualification over time (DBE, 2022e, p15).

Figure 10 Number of full-time candidates that wrote the National Senior Certificate or obtained a Bachelor-level pass, 2008–2021



Source: *NSC data on full-time candidates from Department of Basic Education.*

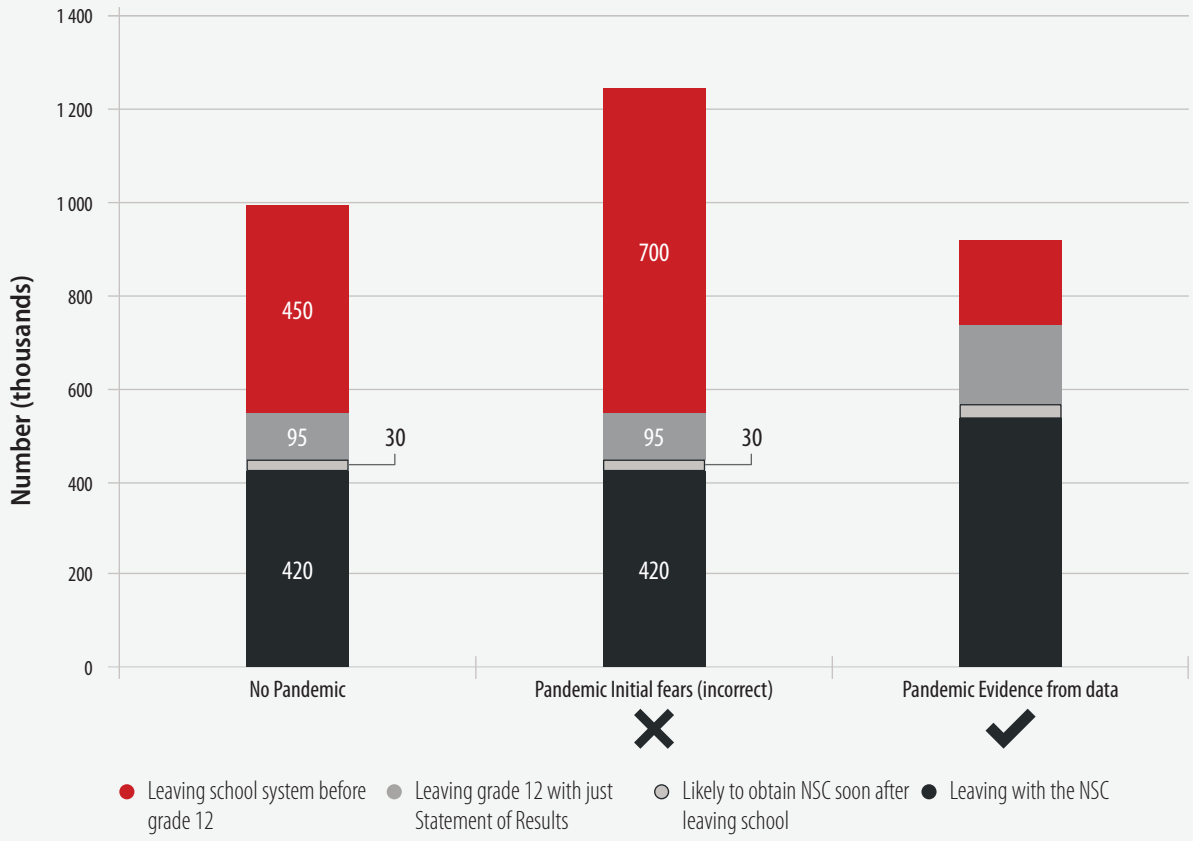
As an unexpected outcome, "the pandemic may have pushed the system onto a new level at which far more youths obtain the NSC for many years into the future" (DBE, 2022c, p4), with many more qualifying for entry into tertiary studies. Drawing on estimates from the Department of Basic Education (2022c), Figure 11 demonstrates how, relative to a pre-pandemic scenario, the number of school leavers without a Grade 12 had declined notably in 2021 while those leaving school with an NSC rose considerably. This is in significant contrast to initial fears erroneously suggesting dramatic increases from 2020–2021 in the number of learners leaving school before Grade 12 due to the pandemic-related disruption.

As a consequence, it is anticipated that demand for places at tertiary institutions in 2022 and 2023 will also be unprecedented. Little time has been given for universities to prepare for this unexpected and sudden increase in qualifying students.

Given that the NSC is designed to be a certification system, an upward adjustment of the 2020 and 2021 examination marks was likely to avoid disqualifying Grade 12s in 2020 and 2021 from further educational opportunities. But importantly, the NSC results should not constitute evidence that learning losses in the last two years of school have not been large. As has been experienced in a tertiary context in South Africa (Whitelaw, Branson & Leibbrandt, 2022), 'improved' or consistent

results may simply not reflect true learning gains or sustained learning. In 2023 (and going forward) universities will have had to accommodate disruptions to learning experienced by students in school, adding bridging course content to make up for topics and skills not fully covered in Grade 11 and/or 12 in pandemic disrupted years. This is imperative where evidence already suggests widening achievement gaps between students funded by the National Student Financial Aid Scheme (NSFAS) and students not funded by NSFAS in 2021 (Whitelaw, Branson & Leibbrandt, 2022).

Figure 11 Pre-pandemic vs. pandemic changes in number of learners annually leaving the school system (a general impression from DBE (2022c))



Source: *Adapted from DBE (2022c). The 500 000 increase in non-returned learners suggested in Shepherd and Mohohlwane (2021) was split across two years, 2020 and 2021 to derive the 'pandemic initial fears' figures. NSC = National School Certificate.*

9 Recovery from COVID-19 schooling disruptions

While very strong evidence internationally points to learning losses, and locally this is clearly the case, it will take time before there is greater clarity on the extent to which impacts will persist and how much recovery will be observed. The extent to which losses are mitigated, will be strongly determined by whether well-designed remediation policies are implemented. South Africa has yet to demonstrate a strong commitment and action plan to remediate losses.

The dominant COVID-19 'recovery' plan in eight of nine South African provinces has been to adjust or revise Annual Teaching Plans (ATPS). In the revised teaching plans, a multiyear curriculum recovery approach is considered, allowing for an interim deviation from the original curriculum. Strategic 'remote' support programmes were also set-up for Grade 12s through the WOZA Matrics 2021 Catch-Up Programme. The Tswelopele Campaign, a collaboration with the National Education Collaboration Trust (NECT), was developed to support learners from Grades R to 9, with supplementary support content to catch-up on learning losses through television, mobile chat platforms and YouTube channels (DBE, 2022, p7). Accessing this content, however, depends on individualised learner decisions (and the availability of home resources) to engage with these programmes. Despite these efforts, a state-wide remediation programme response to COVID-19 that fundamentally shifts what happens in schools to address learning gaps has not been prioritised. This is a strategic blind spot in South Africa's response to the COVID-19 pandemic, that may have lasting ramifications for human capital development (Kaffenberger, 2022). By exception, the Western Cape province adjusted their Foundation Phase instructional time to give more emphasis to core subjects (specifically Mathematics and Language) from mid-2022 (Makwala King, 2022). This was a direct response to evidence of learning losses in the province and recommendations provided in the report 'Learning Losses from COVID-19 in the Western Cape' (Van der Berg et al. 2021). The recommendations for recovery in the report remain relevant at the end of 2022 and are summarised in Table 2.

Despite a limited COVID-19 recovery response, this does not preclude introducing new measures to actively address learning deficits going forward. Some countries have already shown that with the right support, significant recovery is possible. In rural Tamil Nadu in India, it has been possible to compensate for losses at scale with the largest COVID-19 education response programme on the globe. Singh et al. (2022) find that after 18 months of school closures in December 2021, children aged 5–7 years had suffered severe learning losses compared to identically aged students in the same villages in 2019. Learning losses of 0.7 standard deviations in mathematics and 0.34 in language were identified, which is equivalent to 1–2 years of schooling in this context. Yet two thirds of the loss in learning was made up in the first 6 months after schools reopened. Singh et al. (2022, p1) find that while losses were 'regressive, the recovery was progressive'. The recovery was attributed to three factors: catch-up from returning to school, the compensatory actions of teachers and schools, and importantly, a state-wide after-school remedial instruction program called Illam Thedi Kalvi ("Education at Doorstep") designed to address learning losses. The authors estimate that while about half of the learning losses experienced would have been remedied after 6 months even without the programme, the programme increased the recovery to two-thirds of the loss.

Table 2 Learning loss recovery recommendations from Van der Berg et al (2022)

Additional time for Language and Mathematics
Additional instructional time for catch up in Mathematics and Language (gateway subjects) should be accommodated across all grades.

Free up time from other subjects
Freeing up time for this may require reducing time allocations for other subjects or integrating non-core subjects into other subjects (as was done in 2020 with the integration of Life Skills in the Foundation Phase into Home Language).

Reduce the instructional load of other subjects
The instructional load of all subjects apart from Mathematics and Language needs to be reduced.

Diagnostics assessments
To identify gaps in learning, individual teachers should regularly conduct diagnostic assessments of learners' knowledge. The DBE/provinces/districts could assist teachers by providing quality benchmark assessments and assistance to teachers in interpreting results of these tests. For example, Foundation Phase reading benchmarks are available for Nguni languages, Sotho-Setswana languages and EFAL.

Educator assistants to support learners
Educator assistants, made possible through the Presidential Youth Employment Initiative (PYEI), should focus on assisting individual learners with catching up content in Mathematics and Language. Working through the previous year's DBE Rainbow Workbook with individual learners should be the key activity of educator assistants. This will provide one-on-one instructional and affective support to learners, especially those who are struggling.

Lessons from India's recovery programme are relevant for the South African context. It was a scaled-up government-led initiative, designed and implemented in a short-period with design aspects that are not incommensurate with current trends in South African education, particularly the hiring of nearly 320 000 educator assistants through the Presidential Youth Employment Initiative (PYEI). The Indian programme took the form of after-school remedial camps, led by about 200 000 volunteers who were locally-hired between January 2022 and June 2022 (see Box 2). The programme directly led to more instructional time for foundational skills, and had high fidelity, with around 90% of surveyed households reporting having heard of the programme and about 57% of households reporting sending their children to these sessions. Over 3–4 months, attending the remedial classes increased student test scores by 0.17 and 0.09 standard deviations in mathematics and Tamil language (Singh et al. 2022).

These notable impacts on learning occurred despite existing literature which tends to view large-scale government-led initiatives as far less effective than small programmes implemented by non-governmental organisations (Bold et al. 2018). Second, although large learning losses were experienced by the most disadvantaged students, the remedial impact of the programme was progressive in nature. The after-school sessions in India were more likely to be attended by less advantaged students than students from wealthier households. There were larger gains from remedial programme attendance for girls and for students whose mothers had not completed secondary schooling (Singh et al. 2022, p3). This contrasts with remote instruction or private tutoring which tend to display a positive socio-economic gradient, where these instructional modes are more accessible to wealthier households.

BOX 2 Salient details about the Illam Thedi Kalvi ("Education at Doorstep") remedial COVID-19 programme in India from Singh et al. (2022)

Programme coverage: Between January 2022 and June 2022, 200 000 volunteers were locally-hired and about 3.3 million children were covered. Launched on 1 December 2021, the programme has been extended to March 2023.

Criteria to be a volunteer: To teach primary school children, volunteers require at least a completed high school (Grade 12). To teach middle school children, volunteers require a Bachelors degree. From a short-list, volunteers are selected by the school management committees.

Nature of delivery: After-school instruction was delivered in small groups (15–20 students), held on school premises, or at preschool centres. 90 minutes of instruction after school, 5 days a week.

Cost: Volunteers are paid a stipend of about 12 USD (roughly 214 ZAR) per month compared to an average primary teacher salary in India of 352 USD (roughly R6121) per month.

Assessment and monitoring: Attending students are registered on an app. Quarterly assessments are administered via an app by volunteers to track remediation efforts.

There are two reasons why a large-scale remediation programme could be considered in South African schools and ramped up quicky. First, a large army of teacher or educator assistants has been deployed to schools. Significant learning gains in the Foundation Phase were identified in Limpopo province through the deployment of teacher assistants during the pandemic in one intervention (Ardington & Henry, 2021). Qualitative insights from the pilot rural educator assistant programme (REAP) has already suggested that educator assistants provide administrative support to teachers; assisting with classroom management and are providing additional tutoring through facilitating various clubs (DBE, 2022f). If the educator assistant programme could be reorganised into an effective remediation programme, targeting in particular, the 2020–2021 affected Foundation Phase cohorts, this presents an opportunity for remediation. Second, catch-up programmes are common in South Africa in relation to the final school year National Senior Certificate (NSC) examination (DBE 2022e, p27–28). If vacation programmes are widely promoted to prepare learners for the NSC examination, why can't this be done at earlier grades through the support of educator assistants?

In-person remediation is unequivocally the preferred approach to addressing learning losses. As Singh et al. (2022, p4) argue, interventions that prioritise in-person instruction, either through extending the school day or providing after-school lessons, may be more promising for remedying learning loss at scale. Not only is remote instruction found to be less effective in remediating learning gaps (Muñoz-Najar et al. 2021), it is largely inaccessible for most learners and teachers in LMICs, including in South Africa. In 2020, just 6% of South African youth aged 5–24 nationally engaged in remote learning; or 11% of those attending an educational institution. Access to remote learning opportunities was also unequal, where at least 36% of Indian/Asian and White youth (aged 5–24 in educational institutions) accessed a remote learning option compared to just 9% among Black African youth (Statistics South Africa, 2022, p12).

Yet in the event of a future lockdown, where contact teaching is restricted, remote learning options could be better used in South Africa. Evidence from LMICS shows that some learning can be promoted through a combination of phone-based tutoring and text messaging, as seen in Table 3. With almost 60% of youth aged 5–24 in South Africa with a smartphone in 2020 (Statistics South Africa 2022, p17), arguably more opportunity existed for digital learning opportunities during lockdowns than was fully leveraged.

Table 3 Results of non-contact teaching lockdown interventions to encourage learning in LMICS

INTERVENTION	LOCATION AND AUTHOR	DETAILS	RESULTS
Text messages	Brazil, Goias state (Lichand et al. 2022)	Messages to secondary school students or parents to encourage students to engage in remote learning and stay enrolled in schools	Reduced learning loss on average but also increased inequality No change in dropout rates
Phone-based tutoring	Botswana (Angrist et al. 2021b)	Text messages sent with simple mathematics problems, with a follow-up phone call by live instructors	Learning increased by 0.12 standard deviations
Text messages and brief calls	Sierra Leone (Crawfurd et al. 2021)	Text messages to remind students to listen to the government radio broadcasts and phone calls from teachers to go over the content	No impact on learning
Text messages and brief calls	Kenya (Schueler & Rodriquez-Segura, 2021)	Text messages with practice mathematics problems provided to students in primary school; also brief calls from teachers to see if students had completed the exercises given	No impact on learning
Phone-based tutoring	Bangladesh (Hassan et al. 2021)	Phone-based tutoring on language and mathematics to primary school students	Positive impacts on learning outcomes

Source: *Draws on review findings in Moscowiz & Evans (2022).*

10 Conclusion

Together, the evidence discussed in this report confirms that learning losses in South Africa have been large, especially in lower grades. Learning loss realities should be significantly reshaping instruction and policy, particularly for learners in the Foundation Phase in 2020 and 2021. Research shows that if learning losses are not addressed timeously, they will compound, especially for the most disadvantaged learners (Kaffenberger, 2021).

Beyond learning losses, COVID-19 has also disrupted South African education patterns in significant ways, placing new demands on both the basic education system and tertiary system. There have been significant shifts in enrolment patterns in the context of much improved survival rates into higher grades and reduced dropout in the FET Phase, spurred by lenient pandemic-related progression decisions applied in 2020 and 2021. It is imperative that the basic education system realign progression to achievement standards. As Whitelaw, Branson & Leibbrandt (2022, p3) reflect, "spuriously improved or even constant academic performance during the pandemic could unintentionally impact academic performance in the long term if students proceed to higher levels without sufficient baseline knowledge and competencies." Furthermore, having to accommodate unplanned rises in enrolment due to increased retention is a concern for an already resource constrained system.

Learning losses and enrolment increases have occurred as twin shocks in the basic education system, in a context where education budgets are being squeezed. In a resource-constrained environment, it is imperative that accountability and monitoring systems are well implemented to realise improved efficiencies in the system. Progress is possible in the presence of limited resources, evidenced by the fact that some provinces have been able to achieve better results than others among equally poor children (Wills, Shepherd & Kotze, 2018).

Furthermore, budget cuts should not preclude prioritising the remediation of learning losses, a task that requires much more than merely adjusting Annual Teaching Plans. The long-term human development losses for South Africa of doing nothing to remediate losses will be more severe than the short-to-medium term costs of effective intervention.

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12 Appendix

Table A 1 Days of school lost due to official school closures in 2020

	2020		
	Maximum possible school days per DBE regulations	% of 2019 days (199) lost due to school closures only	Weeks of loss due to school closures only
Gr 7 & 12	155	22%	8.8
Gr R, 6 & 11	136	32%	12.6
Gr 3 & 10	131	34%	13.6
Gr 1 & 2	126	37%	14.6
Gr 4 & 9	116	42%	16.6
Gr 5 & 8	102	49%	19.4

Source: *Adapted from Kotze (2021)*

Table A 2 Lost contact teaching time at school in 2020 and 2021

	2020		2021	
	School days per DBE regulations/ % loss on normal year	Average taking rotational schedules and discretionary school closures into account	School days per DBE regulations/ % loss on normal year	Average days taking rotational schedules and discretionary school closures into account
North West (EGRS I no-fee school sample)	–	–	–	–
Grade 3: Total school days available	133	88	192	126
Grade 3: % of 2019 school days lost	33%	56%	4%	37%
Grade 7: Total school days available	157	101	192	127
Grade 7: % of 2019 school days lost	21%	49%	4%	36%
Lost contact teaching time in Grade 3 in 7 provinces (SA-SAMS, Term 3, 2021 applying NECT rotation information)	–	–	–	22%
Western Cape Province (TREPS) assuming 155 days lost in Grade 3 across 2020 and 2021*	39%			

Sources: *Bisgard et al. 2022, Van der Berg et al. 2022, Gustafsson, 2022b. *Assumes 190 days in a normal school year.*

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