WHAT SA-SAMS AND LURITS DATA TELLS US ABOUT EDUCATION

New Insights from administrative data

DECEMBER 2024

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RESEP
Research on Socio-Economic Policy

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EXECUTIVE SUMMARY

> What SA-SAMS and LURITS data tells us about education: New Insights from administrative data

Overview

This report examines key aspects of South Africa's education system, focusing on learner progression, repetition, absenteeism, subject choices and critical challenges in foundational education. Drawing on longitudinal administrative datasets such as SA-SAMS, LURITS and the Data Driven Districts (DDD) programme, the report highlights how policy decisions, systemic challenges and learning disruptions – exacerbated by the COVID-19 pandemic – have shaped educational outcomes.

Key Findings

1. **Impact of Promotion Policies and Learner Progression**
   - The pandemic led to temporary leniency in school promotion policies to address disruptions caused by closures. While these measures reduced grade repetition and enabled accelerated learner progression, they also resulted in unintended consequences. By 2022, matric pass rates were 21% higher than pre-pandemic projections, with data suggesting that three-quarters of this increase resulted from policy changes rather than academic improvement. Learners in poorer provinces and no-fee schools were particularly affected, advancing to higher grades without mastering foundational skills. This created significant challenges for critical transition years, such as Grade 4 and Grade 10, where learning gaps are particularly pronounced.

2 Early Grade Entry and Grade 4 Outcomes

- An important focus of this report is early entry into Grade 1, a practice that varies across provinces and schools. While South African policy allows learners to enter Grade 1 after turning 5½ years, discrepancies exist in how this rule is applied. Quintile 5 schools and wealthier provinces typically align with a stricter calendar-year rule, delaying entry until after children turn 6. Provinces like KwaZulu-Natal and Limpopo show higher proportions of younger entrants. The analysis reveals that early entry correlates with higher repetition rates in Grade 1, particularly for boys, as they may not be developmentally ready for formal schooling.
- The transition to Grade 4—when learners move from instruction in their Home Language to English—poses a major challenge. The report draws on the theory of **linguistic interdependence,** which emphasises that strong foundational mastery in the Home Language supports second-language acquisition. Analysis of learner data confirms that poor Home-Language proficiency in Grade 3 strongly predicts Grade 4 repetition and weak English First Additional Language (EFAL) performance. Boys are disproportionately affected, with both higher repetition rates and poorer EFAL outcomes compared to girls, highlighting the need for more support during this critical shift.

3 Subject Choices in the FET Phase

- The decision between Mathematics and Mathematical Literacy in Grades 10–12 significantly influences learners' career opportunities. Mathematics, while more challenging, is a prerequisite for STEM (Science, Technology, Engineering, and Mathematics) and commerce-related university programmes. Learners with weak mathematical foundations from earlier grades often struggle to achieve the required 60% performance threshold for university admission into these fields. The pandemic further complicated this landscape, with more learners opting for Mathematical Literacy to improve pass rates, particularly in disadvantaged schools.

4 What subjects teachers teach

- This report also explores new insights into teacher deployment in South African primary schools, drawing on SA-SAMS data from six provinces. The analysis focuses on two critical areas: the extent to which Foundation Phase teachers (Grades 1 – 3) follow the same learners across multiple years and patterns of subject specialisation in Grades 4 – 7. While the practice of teachers moving with their learners – referred to as "learner-following" – remains relatively uncommon, evidence suggests a small but statistically significant link between this strategy and reduced grade repetition, highlighting its potential benefits for learning continuity. In the intermediate phase (Grades 4 – 7), school size strongly influences teacher specialisation, with smaller schools offering limited opportunities for subject-specific teaching.

CHAPTER 1
BACKGROUND

> The COVID-19 pandemic disrupted education systems worldwide, with South Africa experiencing significant learning losses across all grades.

1.1 South Africa's Education System and Persistent Challenges

South Africa's education system has made significant strides in expanding access to schooling over the past few decades. Most children now attend school, and the country boasts near-universal enrolment at the primary school level. However, substantial challenges remain, particularly in addressing disparities in quality and outcomes between schools serving different socio-economic groups.

The inequalities are stark. Quintile 1–3 schools serve the poorest learners and often lack adequate resources, qualified teachers and infrastructure. In contrast, Quintile 5 schools - usually fee-paying - offer more favourable learning conditions. These systemic disparities are reflected in educational outcomes, with learners in poorer schools more likely to repeat grades, drop out or fail to achieve basic proficiency in key subjects such as Reading and Mathematics.

1.2 This Report

Despite these challenges, South Africa has made notable efforts to strengthen its data systems. The Data Driven Districts (DDD) programme, supported by the Michael & Susan Dell Foundation, has been a key innovation. By linking data from the South African School Administration Management System (SA-SAMS) with the Learner Unit Record Information and Tracking System (LURITS), the DDD programme provides valuable longitudinal datasets. These datasets have been instrumental in identifying trends, assessing the impact of policies, and informing evidence-based interventions.

Since 2018, the Research on Socio-Economic Policy (RESEP) group at Stellenbosch University has collaborated with the Dell Foundation to leverage the Data Driven Districts (DDD) data collected by the New Leaders Foundation (NLF). The value of that data was enhanced by using unique identifiers to track learners from year to year in the Basic Education system. This partnership has produced several insightful reports that analyse various facets of South Africa's education system.

THE QUINTILE SYSTEM IN SOUTH AFRICAN EDUCATION

The term "quintile" typically refers to one-fifth of a population. However, South Africa's quintile system does not divide schools into equally sized groups. Instead, it classifies schools into five groups based on the relative affluence of the communities they serve. Despite its misleading name, the quintile system conveys essential information about socio-economic disparities across schools.

Schools in the bottom three quintiles (1, 2, and 3) are categorised as non-fee-paying, reflecting their prohibition from charging school fees. This policy aims to remove financial barriers for students from less affluent backgrounds. Schools in quintiles 4 and 5, by contrast, are fee-paying schools , though they must provide full or partial exemptions for children from low-income families. This regulatory framework seeks to balance the need for school-generated revenue with equitable access to education.

The allocation of funding follows the School Funding Norms, prioritising schools in poorer communities. Resources such as teaching posts and learning materials are distributed equitably, with additional support according to the School Funding Norms directed to schools in quintiles 1 to 3. However, these allocations are modest, leading some schools to seek reclassification into lower quintiles to access more resources, citing the socioeconomic conditions of their communities.

Despite these measures, disparities in resource availability persist. Quintile 4 and especially Quintile 5 schools generally outperform lower-quintile schools, aided by additional funding from school fees and greater parental involvement, which often correlate with higher community education levels. Meanwhile, the differences in socio-economic status and performance among schools in quintiles 1, 2 and 3 are often less pronounced, leading to similar outcomes across these groups.

Many quintiles 1 to 3 schools need more support in meeting basic infrastructure standards, which can hinder the teaching and learning process. While the quintile system helps prioritise funding, the financial support it facilitates is insufficient to address these broader challenges comprehensively.

The quintile system remains a valuable tool for categorising schools based on socio-economic context and targeting limited resources. The system also highlights the broader role that socio-economic factors, such as parental education and community affluence, play in shaping educational outcomes. Continued efforts to address these disparities are essential for creating a more equitable education system.

The 2023 report based on some of this data covered three provinces: Eastern Cape, Gauteng and Limpopo. Similarly, this 2024 report utilises data from the South African School Administration Management System (SA-SAMS), a longitudinal version of the DDD data for six provinces, as well as the Learner Unit Record Information Tracking System (LURITS) data and National Senior Certificate (NSC) examination data. The three added provinces were Kwazulu-Natal, Mpumalange, and North West. It provides a comprehensive analysis of learner flows, assessment strategies and teacher dynamics, offering valuable insights for policymakers and educational stakeholders. On 5 December 2024, Resep presented this analysis to about 130 officials from the national and provincial departments.

Building upon this foundation, the current report aims to further explore the dynamics of South Africa's education system by utilising the rich datasets provided by the DDD program.

By analysing longitudinal data across multiple years and provinces, this report seeks to uncover trends and patterns that can inform effective educational policies and interventions. The ongoing collaboration between Resep and its partners continues to enhance our understanding of the education landscape, ultimately contributing to improving educational outcomes.

THE SA-SAMS AND THE DDD PANEL DATA

The Data Driven Districts (DDD) dashboards provide an innovative platform for visualising and analysing school-level data. These dashboards consolidate information from the South African School Administration and Management System (SA-SAMS) into user-friendly formats, enabling district officials, school leaders and policymakers to make data-informed decisions. By presenting insights on attendance, assessment and learner progression, the dashboards empower educators to identify at-risk learners, monitor performance trends and allocate resources more effectively. The partnership between NLF and Dell Foundation has been instrumental in ensuring that the DDD system addresses the diverse needs of South African education.

SA-SAMS data plays a central role in the Data Driven Districts (DDD) program, providing detailed administrative data on learners, schools and teacher. Schools record learner enrolment, attendance, assessment marks and progression decisions into SA-SAMS. By integrating SA-SAMS data into the DDD operational platform, a robust system for monitoring learners across the country has been established, making it a vital tool for tracking educational trends and informing policy decisions.

Unlike traditional data systems that focus on aggregate trends, using unique identifiers allows for a detailed, longitudinal view of learner trajectories, making it possible to monitor grade repetition, dropout rates and transitions between grades and phases. This data has been linked in a cooperative effort for Resep's analysis, involving cooperation from various partners. This longitudinal tracking is particularly valuable for understanding systemic issues such as repetition, learner flows through grades, the role of school-based assessments (SBAs) and the effectiveness of interventions and disparities across provinces or school quintiles. Using unique anonymised identifiers, analysts can link data from multiple years to explore how learners in a specific cohort, such as those entering Grade 8 in 2019, progress to matric. This provides insights into the cumulative effects of learning gaps, absenteeism and other factors on ultimate outcomes like matric performance.

By enabling such granular analysis, unique identifiers transform the DDD data into a tool for evidence-based policymaking. They allow policymakers to identify at-risk learners early, tailor interventions to specific groups and evaluate the long-term impact of policy changes, such as the leniency introduced during the COVID-19 pandemic. This plays a vital role in improving equity and efficiency in South Africa's education system.

1.3 The School Population

The enrolment data for 2023, sourced from LURITS, provides a breakdown of learners by grade and gender. The distribution in Table 1.1 shows a near-equal representation of boys and girls across the system but with notable variations in specific phases. In the early grades, the percentage of female learners is slightly lower, which may be attributed to higher repetition rates among boys. However, as learners progress through the system, the proportion of boys declines due to higher dropout rates among male learners in the later grades, particularly Grades 10 and 11.

One striking feature of the data is the relatively low enrolment in Grade R compared to higher grades, which typically have around one million learners. Grade R enrolment stands at fewer than 800 000 learners in public and independent schools, excluding those attending Early Childhood Development (ECD) centres. This highlights the ongoing need to universalise Grade R as a preparatory year before children enter formal schooling in Grade 1.

Enrolment rates decline steadily as learners progress towards Grade 12, the final year of schooling. In contrast to Grade 10, which often experiences overcrowding due to high repetition rates, enrolment in Grades 11 and 12 drops below one million, with Grade 12 enrolment falling even below Grade R levels. Despite this decline, there has been considerable progress compared to the past, when a much smaller proportion of learners passed Grade 10 and reached Grade 12. A particularly notable trend is the significant gender disparity in Grade 12, where almost 100 000 more girls than boys are enrolled, reflecting both higher dropout rates among boys and greater persistence among female learners.

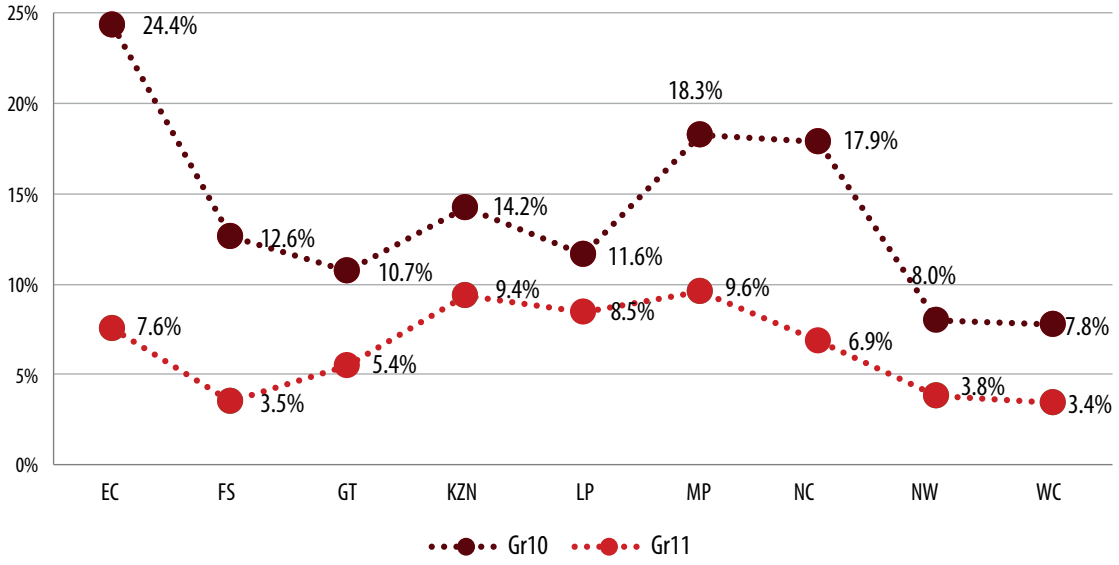
TABLE 1.1 School Enrolment by Grade and Gender, 2023

Grade	Girls	Boys	Enrolment	% female	Cumulative %
0 (R)	396 470	401 207	797 677	50%	5.8%
1	506 687	545 179	1 051 866	48%	13.6%
2	518 175	550 879	1 069 054	48%	21.5%
3	539 063	567 870	1 106 933	49%	29.6%
4	534 386	584 523	1 118 909	48%	37.9%
5	527 178	561 724	1 088 904	48%	45.6%
6	527 825	551 219	1 079 044	49%	53.8%
7	522 708	557 577	1 080 285	48%	61.8%
8	548 682	621 123	1 169 805	47%	70.4%
9	524 999	530 191	1 055 190	50%	78.2%
10	585 364	609 429	1 194 793	49%	86.9%
11	520 428	460 105	980 534	53%	94.2%
12	421 397	323 794	745 191	57%	99.6%
Unknown	20 362	27 880	48 304	42%	100.0%
Total	6 693 724	6 892 700	13 586 489	49%	

1.4 Switching Schools

Figure 1.1 illustrates the significant mobility of learners in Grades 10 and 11, with Grade 10 exhibiting the highest rate of school transfers across provinces. Gauteng and the Eastern Cape show notably high mobility rates, which may indicate structural issues within the education system or increased urban migration. The national average for school switching is 11.8%, a quite high figure. That means that roughly one-ninth of each cohort annually transfers between schools.

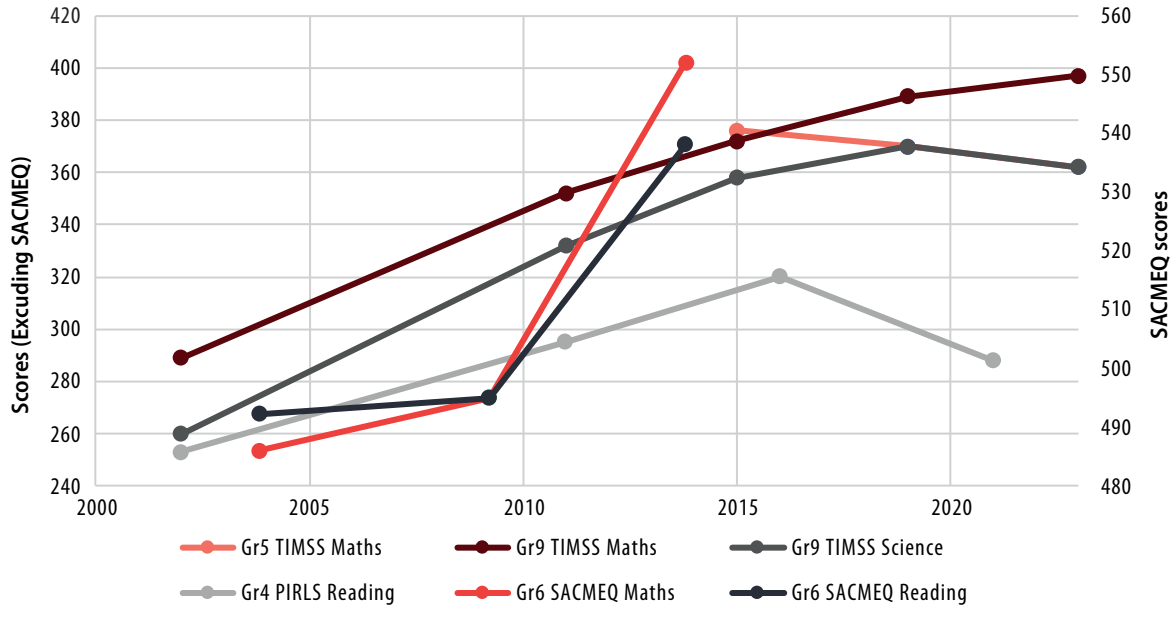
FIGURE 1.1 Percentage of Learners Switching Schools by Province (for Grades 10 and 11)



1.5 Performance in International Assessments

Figure 1.2 depicts trends in South African learners' performance in TIMSS, PIRLS, and SACMEQ assessments over time. While there has been some improvement in certain areas, results remain below the international benchmark. For instance, only 19% of Grade 4 children read the low international benchmark score in PIRLS, an international reading study. The line expressing average PIRLS scores over time shows a strong upward trend for much of the period up to 2017. The next PIRLS assessment was in 2021, showing much weaker performance. To understand the drop in scores during the pandemic, the 2021 mark is likely the joint result of a continuing improving trend until the pandemic, whereafter the average marks fell sharply. In TIMSS, too, there was only marginal improvement or decline in the various tests spanning the pandemic years 2020–21.

FIGURE 1.2 South Africa's Performance in International Assessments



1.6 Learning Losses and Recovery

The COVID-19 pandemic disrupted education systems worldwide, with South Africa experiencing significant learning losses across all grades. Prolonged school closures, limited access to remote learning and reduced instructional time compounded existing inequalities. Studies estimate that South African learners lost the equivalent of about three-quarters to one full academic year in foundational subjects such as Reading and Mathematics during this period. These learning losses were particularly severe in Quintile 1–3 schools serving the most disadvantaged learners. Inequalities between wealthier and poorer schools widened even further, with learners in poor schools having limited access to digital tools or reliable internet for remote learning. This underscores the critical need for targeted recovery strategies.

Data from the Western Cape's annual systemic tests provide a detailed account of these losses and partial recovery efforts in that province. For this purpose, the data in Figures 1.3 and 1.4 are expressed in standard deviations, as is often done for impact evaluation. A conservative estimate is that one percentage point of a standard deviation equals at least five school days of learning. For example:

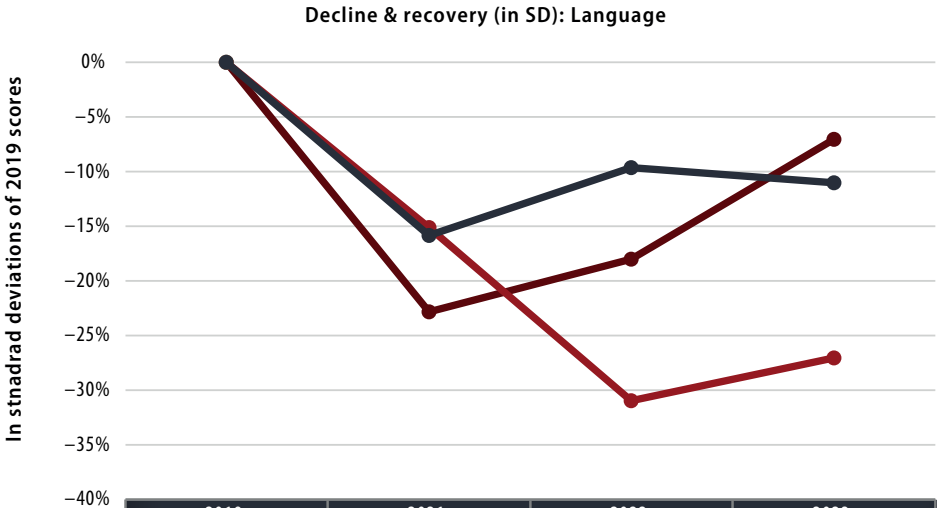
- Grade 6 learners in isiXhosa LOLT schools scored 0.41 standard deviations lower in Language in 2023 compared to 2019, representing a deficit equivalent to more than 205 school days, more than the 200 school days typically found in a school year.
- Mathematics results showed similar trends, with the most significant losses recorded by Grade 3 learners, who remain 85 school days behind their pre-pandemic peers.
- Recovery has been uneven, with Grade 9 learners showing almost complete recovery in Language by 2023, while Grade 6 Mathematics performance has stagnated.

The ongoing recovery from COVID-19-induced learning losses makes it challenging to disentangle the effects of recovery efforts from those of specific interventions. However, these findings emphasise the importance of continued focus on addressing learning deficits to ensure a return to pre-pandemic performance levels across all grades and subjects.

These findings are critical for understanding the broader context of education in South Africa. They also highlight the importance of using robust data on the progress with recovery, assessing the effectiveness of interventions and designing evidence-based policies to mitigate long-term impacts. The decline and gradual recovery of scores in Language and Mathematics, measured in standard deviations, illustrate the pandemic's disruptive implications for foundational learning.

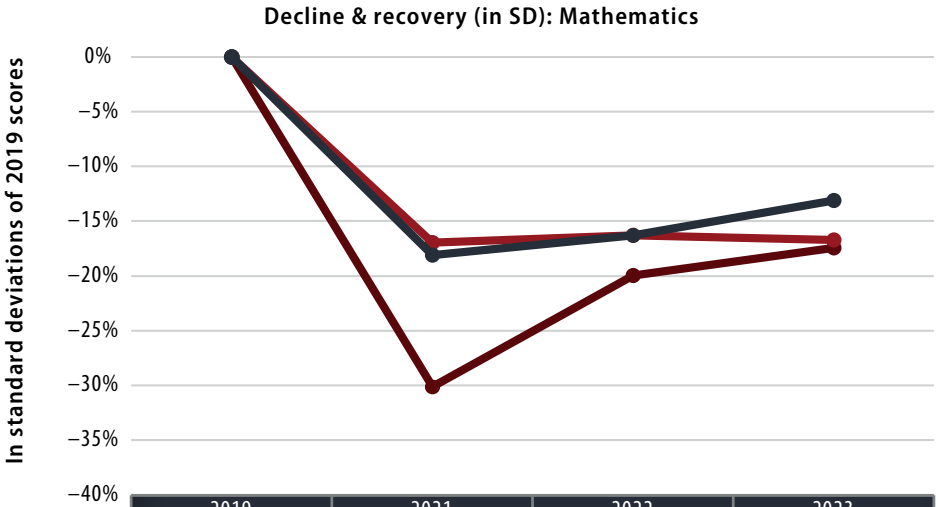
It is important to note that the systemic tests in the Western Cape have limitations for inter-temporal comparisons, as test questions vary each year, and there is no formal system for equating difficulty levels over time. However, historical results have shown minimal variation, providing a degree of reliability for trend analysis. In line with expectations, the 2021 results reveal substantial learning losses, followed by a partial recovery in subsequent years.

FIGURE 1.3 Decline and Recovery since 2019 in the Western Cape Systemic Language Tests, shown in Standard Deviations



	2019	2021	2022	2023
Gr3 Lang	0%	−23%	−18%	−7%
Gr6Lang	0%	−15%	−31%	−27%
Gr9 Lang	0%	−16%	−10%	−11%

FIGURE 1.4 Decline and Recovery since 2019 in the Western Cape Systemic Mathematics Tests, shown in Standard Deviations



	2019	2021	2022	2023
Gr3Maths	0%	−30%	−20%	−17%
Gr6Maths	0%	−17%	−16%	−17%
Gr9Maths	0%	−18%	−16%	−13%

LEARNERS UNACCOUNTED FOR (MAINLY DROP-OUTS)

There are numerous reasons why children might be unaccounted for across years in the school system. For example, some children may have died, moved to another country, transitioned out of the formal education system, entered homeschooling, or, most commonly, dropped out of school due to disengagement from the schooling system.

As a result, it is common to refer to such unaccounted-for children as dropouts, although this is not always accurate. Some children classified as unaccounted for may still be in the education system but need to be correctly tracked. This could be due to limitations in the administrative system, e.g. SA-SAMS. In some cases, children may transfer to another school and reappear in the system without a clear link to their previous enrolment, creating the appearance of dropouts in one part of the system and "drop-ins" in another.

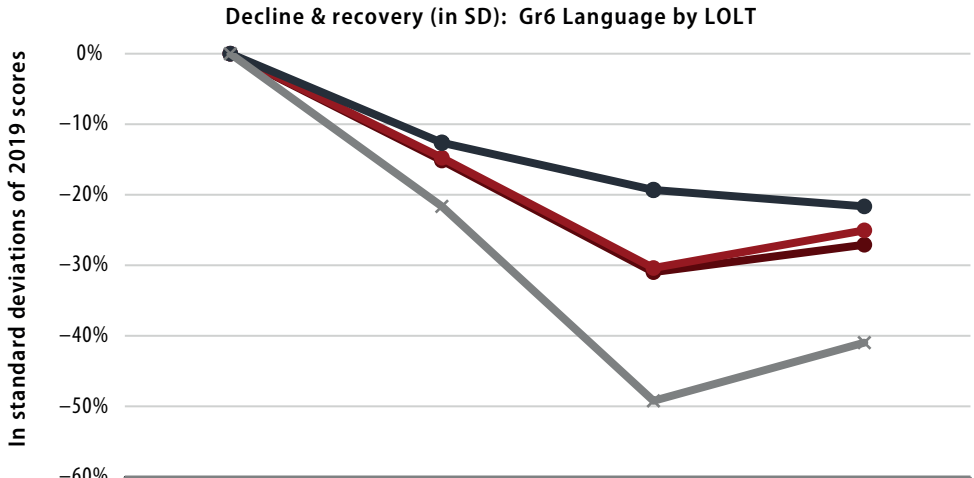
These tracking anomalies mean that the SA-SAMS data cannot be entirely accurate. However, the SA-SAMS data system has significantly improved over time, enhancing its ability to track students between schools. These improvements have increased the system's reliability, enabling it to provide a reasonably accurate perspective on the functioning of the school system, including student movements between schools, grade transitions and instances of unaccounted-for children.

Dropouts are most prevalent in higher grades, with a noticeable increase in Grade 10. Repetition in earlier grades often compounds the issue, as over-age learners are more likely to leave the system before completing matric. The transition between Grade 7 and Grade 8 is particularly problematic due to the shift from primary to secondary school. Most learners change schools during this phase, leading to gaps in administrative tracking. Inconsistent application of unique learner identifiers exacerbates this issue, as some transitions are erroneously recorded as dropouts. While cross-sectional data gives an approximate sense of the problem, longitudinal data from SA-SAMS and the DDD programme offers deeper insights. For instance, in Gauteng, nearly 25 000 learners from an original cohort of 75 000 Grade 9 learners dropped out before reaching Grade 12.

High dropout rates not only reflect missed educational opportunities but also perpetuate cycles of poverty and inequality. These learners are less likely to gain employment, increasing the socio-economic burden on families and society.

Figure 1.5 shows the decline in Grade 6 language scores in 2021 and 2022 by LOLT. It reveals that the impact was most severe for learners in isiXhosa LOLT schools. By 2023, these learners were 0.41 standard deviations - equivalent to 205 school days, or more than an entire academic year - behind their 2019 counterparts. This is a finding of great significance, as most learners in South Africa transition from an African Home Language to English as the medium of instruction in Grade 4. This transition, already challenging under normal circumstances, was considerably more difficult by pandemic-related disruptions, severely reducing learners' exposure to English in the classroom.

FIGURE 1.5 Decline and Recovery since 2019 in the Western Cape Systemic Language Tests by language group, shown in Standard Deviations



	2019	2021	2022	2023
All	0%	−15%	−31%	−27%
Afikaans	0%	−15%	−30%	−25%
English	0%	−13%	−19%	−22%
Xhosa	0%	−22%	−49%	−41%

These compounding factors highlight the need for targeted interventions to support learners during this critical shift in their education.

1.7 The Role of Data in Education Analysis

The availability of high-quality, longitudinal datasets has been transformative for understanding and addressing challenges in South Africa's education system. The DDD programme, supported by Dell Foundation and implemented by NLF, allows for detailed tracking of learner progression, repetition, and dropout rates across years. By linking SA-SAMS data with LURITS and other national datasets, the programme provides a unique opportunity to examine systemic trends and their implications for policy and practice.

This report builds on previous studies conducted by Resep using DDD data. It provides new insights into learner progression and repetition, focusing on how foundational skills developed in the early grades influence outcomes in later grades. The analyses presented

here aim to inform interventions that can help mitigate learning losses, improve progression rates, and ultimately enhance educational equity and quality.

BALANCED PANELS IN LONGITUDINAL ANALYSIS

Balanced panels are vital for making valid comparisons over time, as they ensure that the same units – schools, learners, or cohorts – are consistently tracked across multiple years. This approach mitigates the challenges posed by incomplete or inconsistent data submissions. For instance, when some schools fail to submit data in a given year, comparing that year's dataset with previous or subsequent years risks introducing errors or biases. By restricting the analysis to units with complete data across the relevant years, balanced panels help ensure that observed changes reflect genuine trends in the system rather than artefacts of inconsistent data coverage. For this to hold, however, the missing observations should be relatively few and should be missing at random, which previous analysis has indicated is likely to be true for the SA-SAMS data.

In education, balanced panels are particularly valuable for longitudinal analysis, allowing researchers to track learner flows, grade progression and the impact of interventions over time. For example, balanced panels constructed from SA-SAMS data in selected provinces have been used to analyse repetition rates and dropout trends. However, these datasets are often constrained by variability in data submissions, as not all schools report data consistently every term or year. This inconsistency can limit the generalisability of findings; for example, repetition rates calculated for a province might underestimate actual rates due to missing data from some schools. Despite these limitations, balanced panels remain indispensable for uncovering meaningful insights into systemic education dynamics.

Efforts to standardise and expand data submissions across all schools are critical to maximising the utility of balanced panel datasets. Strengthening data collection processes would reduce gaps in coverage and enhance the representativeness of findings, enabling balanced panels to provide a more comprehensive view of the education system and its challenges.

…the impact was most severe for learners in isiXhosa LOLT schools...

CHAPTER 2
ACCELERATED LEARNER FLOWS THROUGH GRADES

> Prolonged closures, remote learning challenges and reduced instructional time led to significant learning losses and forced education systems to adopt unprecedented measures. Key among these were leniency policies in assessment and progression designed to mitigate the disruptions.

2.1 Introduction

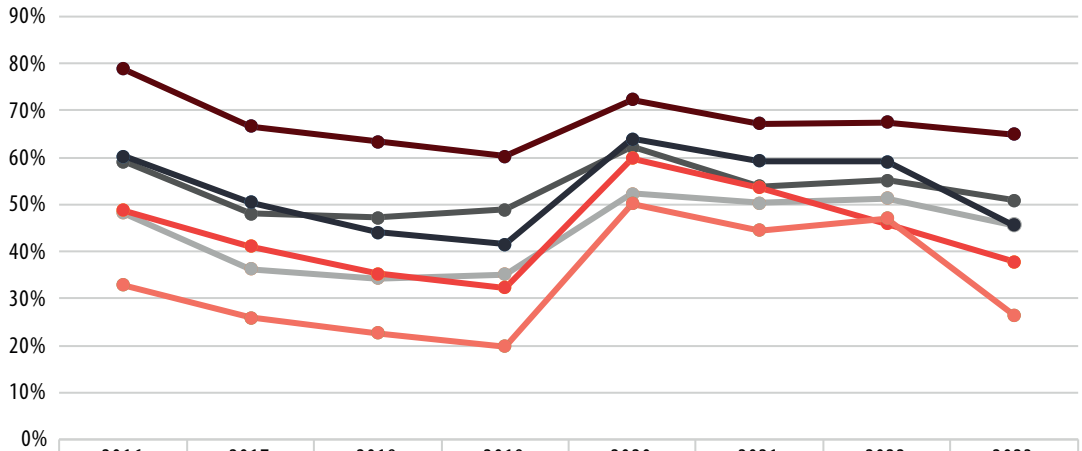
The COVID-19 pandemic disrupted schooling worldwide, and South Africa was no exception. Prolonged closures, remote learning challenges and reduced instructional time led to significant learning losses and forced education systems to adopt unprecedented measures. Key among these were leniency policies in assessment and progression designed to mitigate the disruptions. (Hoadley 2020, 2023). Hoadley (2023: 2) refers to "*four central curriculum strategies undertaken by the DBE to try and recover time given the decline in curriculum coverage*". These were a reduction in curriculum content, suspension or rationalising of subjects, changes to assessment and remote learning.

These measures significantly affected educational progression, particularly through their effect on school-based assessments (SBAs). These adjustments led to marked increases in pass rates across all provinces and subjects in 2020 compared to 2019.

The policies adopted by South Africa mirrored global trends. Similar leniency measures were seen in India, Brazil and other low- and middle-income countries, where automatic promotion policies were broadly implemented to prevent dropouts. However, in developed countries like Germany and the United States, strict grading standards were maintained alongside extensive remedial programmes to mitigate learning losses.

While leniency helped minimise disruptions, it also created challenges. For example, the relaxation of Grade 9 Mathematics requirements allowed learners to progress without mastering foundational skills, potentially impacting their performance in senior grades. Figure 2.1 illustrates the steep increase in Grade 9 pass rates in Mathematics during the pandemic, followed by a partial return to pre-pandemic patterns in 2022.

FIGURE 2.1 Pass Rates in Mathematics in Grade 9 by Province (2019–2022)



	2016	2017	2018	2019	2020	2021	2022	2023
EC	79%	67%	63%	60%	72%	67%	68%	65%
GT	48%	36%	34%	35%	52%	50%	51%	46%
KZN	59%	48%	47%	49%	62%	54%	55%	51%
LP	49%	41%	35%	32%	60%	54%	46%	38%
MP	60%	50%	44%	42%	64%	59%	59%	46%
NW	33%	26%	23%	20%	50%	45%	47%	26%

Similar trends were observed globally, with UNESCO estimating that pandemic-related disruptions resulted in learning losses equivalent to 2–3 school years in many low- and middle-income countries.

Increased SBA weight and leniency could lead to grade inflation, undermining the credibility of education outcomes and even the National Senior Certificate (NSC) or matric. Grade inflation has been observed in countries like the UK, where teacher-assessed grades replaced national exams during the pandemic, leading to record-high results. Learners promoted with lower thresholds, especially in subjects like Mathematics, may face challenges in tertiary education or STEM-related career paths. Similar concerns have arisen in countries like India, where higher education institutions reported higher dropout rates among students admitted under relaxed pandemic policies. Countries like Chile have implemented "bridge programs," combining remedial teaching with phased reintroduction of stricter assessment criteria.

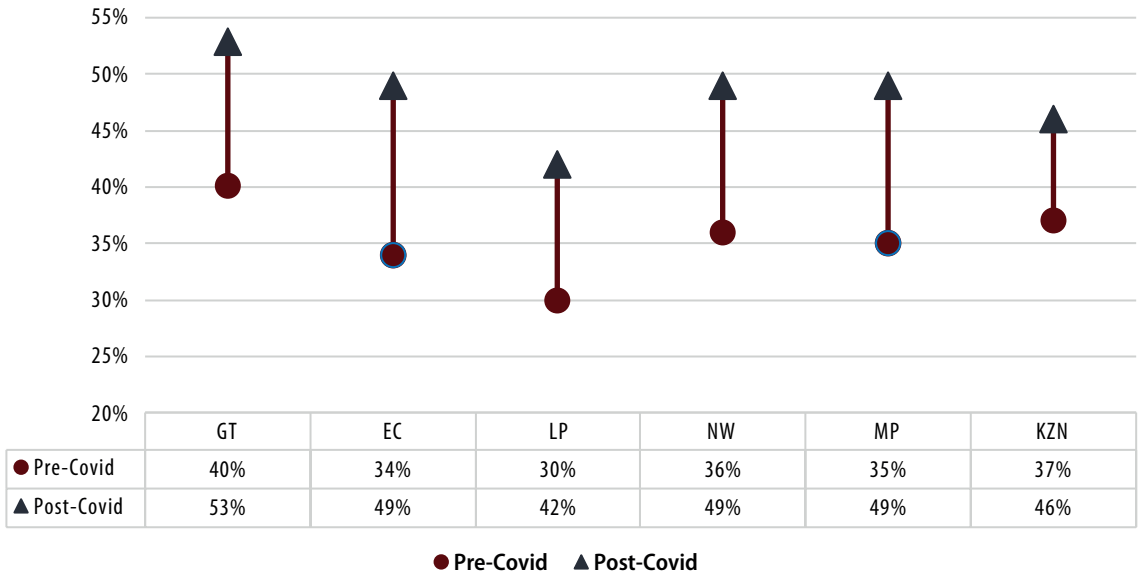
This chapter examines the dynamics of learner flows, repetition and progression within this context. It draws on longitudinal data to analyse the immediate and longer-term effects of leniency policies, focusing on repetition patterns, accelerated flows and systemic challenges such as dropout risks. These findings demonstrate how systemic disruptions shaped learner outcomes and provide insights for future policy and recovery efforts.

2.2 Pandemic-Era Leniency and Grade Flows

Lenient SBA outcomes temporarily relieved learners, particularly in poorer provinces and districts, most notably in Grade 10. However, this raised concerns about long-term academic standards and preparedness. While leniency helped maintain enrolment levels, it also led to accelerated flows, with learners promoted without mastering critical foundational skills.

The relaxation of promotion criteria during the pandemic temporarily increased the proportion of learners reaching matric without repetition. Figure 2.2 compares the 2017 and 2021 Grade 10 cohorts, showing significant improvements in flow-through rates. For example, Limpopo saw an increase from 31% to 52% in learners reaching matric without repetition. While these figures highlight the immediate benefits of leniency, they also raise questions about the academic readiness of learners promoted under these policies.

FIGURE 2.2 Progression of 2017 (Pre-Covid) and 2021 (Post-Covid) Grade 10 Cohort to Matric without Repetition

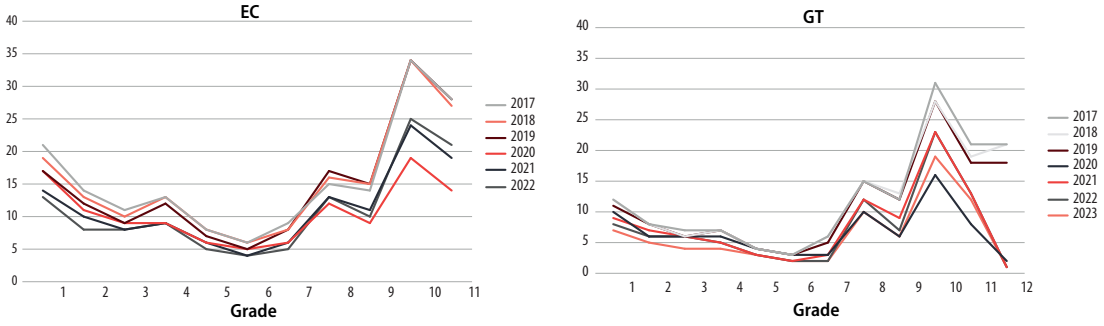


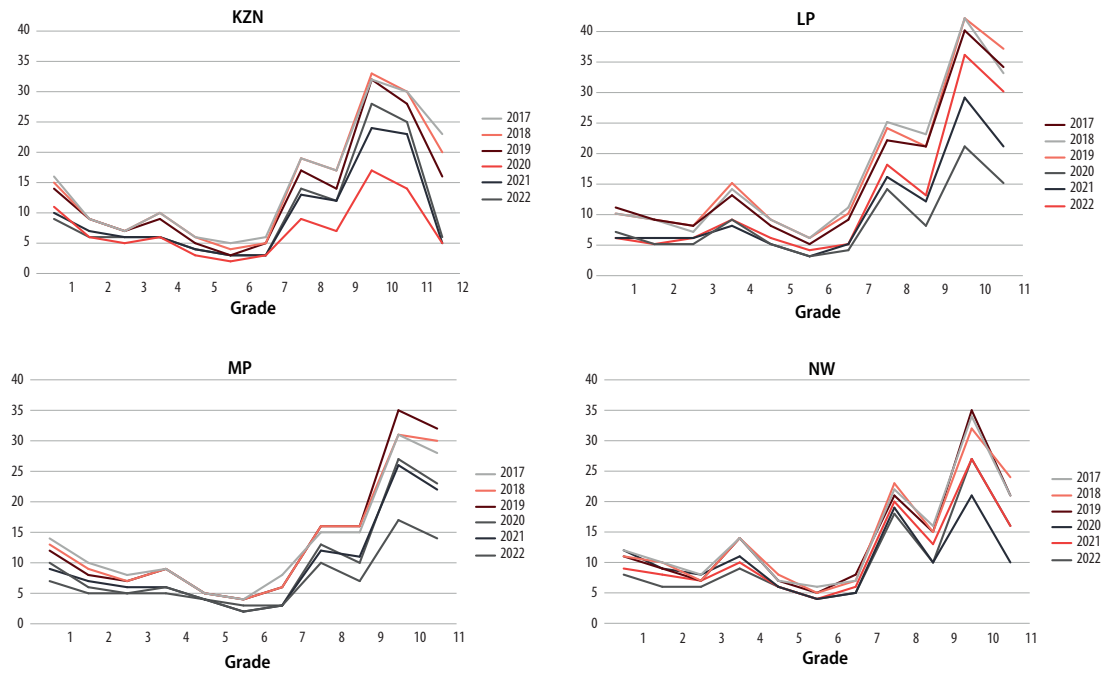
	GT	EC	LP	NW	MP	KZN
● Pre-Covid	40%	34%	30%	36%	35%	37%
▲ Post-Covid	53%	49%	42%	49%	49%	46%

2.2 Repetition and Broader Learner Flows

The pandemic's impact on repetition rates reveals significant shifts in learner progression. Figure 2.3 shows a sharp decline in repetition rates in 2020, coinciding with relaxed promotion criteria. For example, Limpopo's Grade 10 repetition rate fell from 42% in 2019 to 21% in 2020. However, by 2022, these rates began to rise again, approaching pre-pandemic levels in some provinces.

FIGURE 2.3 Repetition Rates by Grade, Year and Province





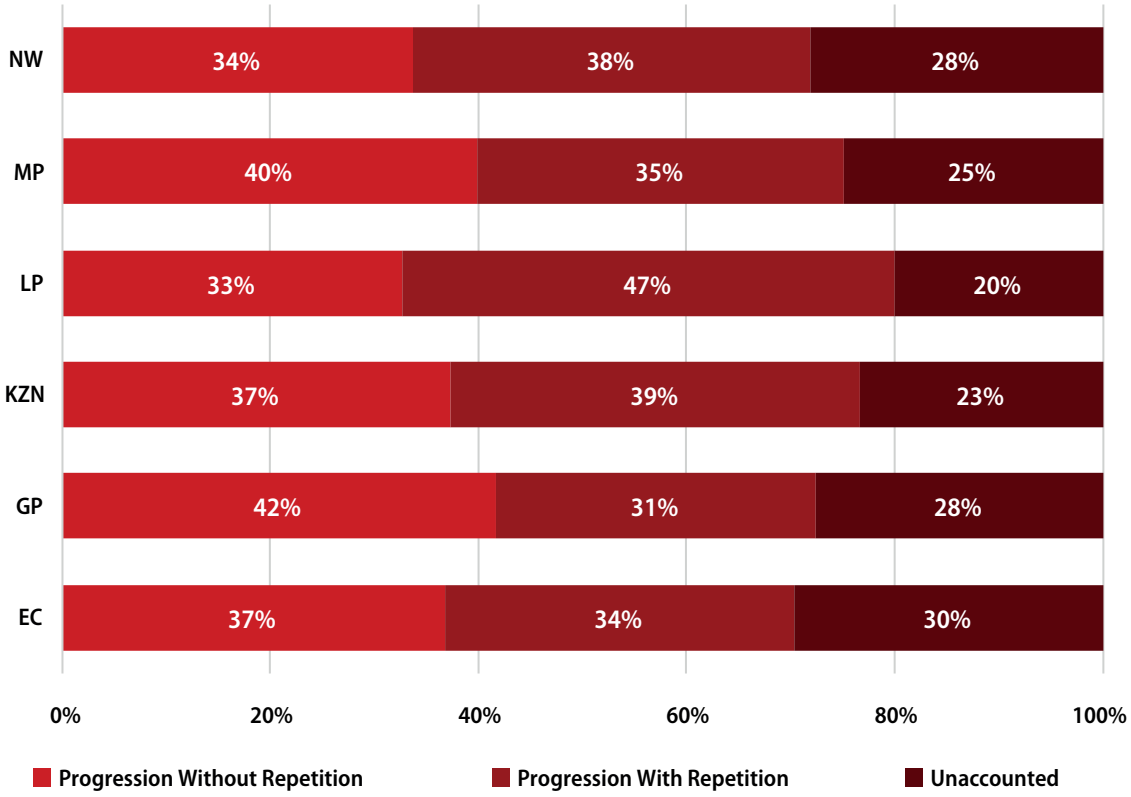
"The actual passes in 2022 are around 21% higher than what one might have expected on the basis of pre-pandemic data … the evidence suggests about a quarter of the higher-than-expected 2022 NSCs was the result of population effects, while three-quarters were due to changes in the promotion rules." (DBE 2024: 40)

The leniency policies not only reduced repetition but also affected the flow-through rates of cohorts. Longitudinal tracking of learner cohorts provides critical insights into educational progression. Table 2.1 tracks learners from Grade 8 in 2019 to Grade 12 in 2023, while Figure2.4 shows this by the percentages of the original cohort in Grade 8 and also distinguish those still in school after repeating from those who are unaccounted for, most of whom are likely to have dropped out of school.. Gauteng led with 42% of learners reaching matric without repetition, while Limpopo trailed at 33%. These figures reflect the benefits of leniency and the persistent challenges of learner retention.

TABLE 2.1 Progression of the 2019 Grade 8 Cohort to Matric across Provinces

	EC	GP	KZN	LP	MP	NW
Progression to matric without repetition	56 048	72 595	67 042	47 654	36 143	24 902
Progression with repetition	51 218	53 619	70 646	68 773	31 835	28 150
Unaccounted	45 093	47 981	41 790	29 112	22 524	20 719
Total	**152 359**	**174 195**	**179 478**	**145 539**	**90 502**	**73 771**

FIGURE 2.4 Tracking the 2019 Grade 8 Cohort to 2023

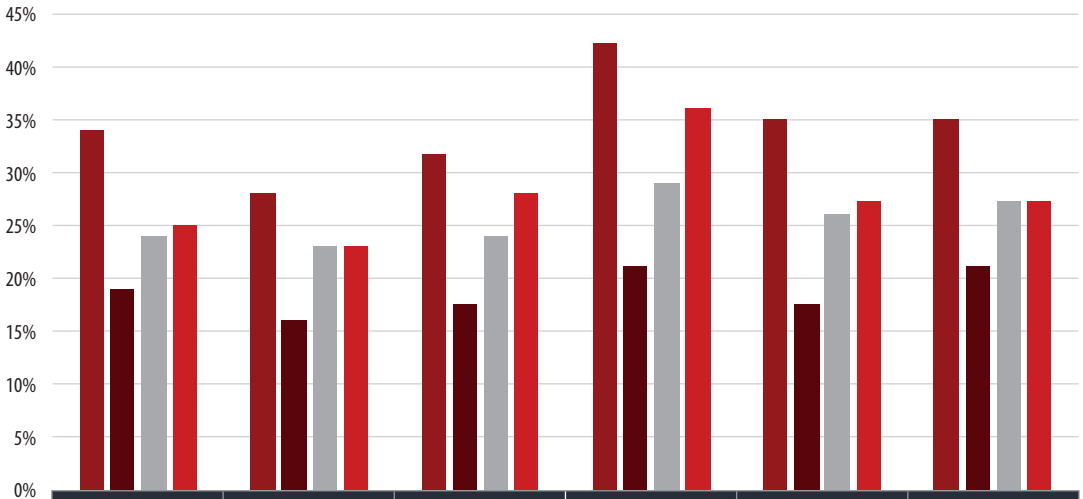


The pandemic-era policies temporarily improved flow-through rates, allowing more learners to progress to higher grades. However, these patterns were not uniform. For example, Figure 2.5 shows the patterns of repetition in Grade 10, historically the grade with the highest repetition rates. We see that, after the shape decline in repetition in all provinces in 2020, they again rose somewhat in 2021. However, the experience in 2022 seems to exhibit two distinct patterns:

- In Eastern Cape, Gauteng, Mpumalanga and North West, repetition rates stabilised at relatively low levels in 2022 compared to their levels in 2019.
- In Limpopo and KwaZulu-Natal, repetition rates in 2020 fell sharply, started rising in 2021 and continued growing in 2022, though they remained somewhat below 2019 levels.

It is unclear what caused these distinct patterns between the two groupings. Repetition rates from 2023, when they become available, may bring greater clarity about whether we will see repetition rising back to 2019 levels or whether 2022 is the beginning of new stable rates.

FIGURE 2.5 Repetition rates by Province and Year for Grade10 in 6 Provinces



	EASTERN CAPE	GAUTENG	KWA-ZULU NATAL	LIMPOPO	MPUMALANGA	NORTH WEST
2019	34%	28%	32%	42%	35%	35%
2020	19%	16%	17%	21%	17%	21%
2021	24%	23%	24%	29%	26%	27%
2022	25%	23%	28%	36%	27%	27%

2.3 Subject Choice: Electing Mathematics or Mathematics Literacy?

When learners enter the Further Education and Training (FET) phase (Grades 10 to 12), they face critical decisions about subject choices that significantly shape their academic and career opportunities. Among these decisions, choosing between Mathematics and Mathematical Literacy is particularly consequential. Learners aiming for careers in STEM (Science, Technology, Engineering, and Mathematics) fields or even in Commerce and Economic Sciences often require a minimum score of 60% (a C symbol) in Mathematics to gain university admission (Van der Berg & Gustafsson, 2017). This threshold is also a key performance measure in the government's Medium-Term Strategic Framework (MTSF) for 2019–2024.

The decision is challenging for many learners and their parents. Mathematics is perceived as more demanding but offers broader career opportunities. Conversely, Mathematical Literacy, while less challenging, limits options for tertiary education and professional fields. Learners in no-fee schools or poorer provinces often opt for Mathematics, even when their basic Mathematical skills, as reflected in Grade 9 performance, are weak. This trend highlights the tension between ambition and preparedness, as learners without a strong mathematical foundation struggle to pass and meet the 60% threshold required for STEM-related courses.

This dilemma is succinctly captured by the Director-General of the Department of Basic Education, Mr HM Mweli, who stated:

> *"There seems to be a complex trade-off between providing large numbers of Grades 10 to 12 learners with access to Mathematics, as opposed to Mathematical Literacy, and producing enough Grade 12 matriculants with levels of Mathematics achievement required by our universities" (DBE, 2024: 2).*

The pandemic exacerbated these challenges by disrupting normal schooling and altering promotion policies. This led to a temporary increase in learners reaching higher grades without mastering foundational skills.

Figure 2.6 illustrates the trends in subject choice for Mathematics and Mathematical Literacy at the Grade 10 level. In contrast, Figure 2.7 does so in terms of full-time matric candidates and Figure 2.8 compares the enrolment trends across provinces. These data reveal a noticeable growth in Mathematical Literacy enrolment during the pandemic, reflecting a shift away from overly ambitious Mathematics choices.

Although learners typically decide on their subjects at the start of Grade 10, some who struggle with Mathematics later switch to Mathematical Literacy during the FET phase. This adjustment highlights the need for early interventions to strengthen foundational Mathematics skills, ensuring learners are better prepared to meet the demands of higher grades and post-secondary opportunities. It also makes a strong case for better-advising learners who need a solid foundation in Mathematics up to Grade 9 on the consequences of overly ambitious subject choices.

There are signs that what Taylor and Swelindawo (2024) refer to as "overly ambitious" choices for Mathematics in Grade 10 and above, despite performing very weakly in Grade 9 in Mathematics, has declined but is still high. The decline in the choice for Mathematics is evident from Figure 2.6. However, it is not clear to what extent the pandemic reduced such over-ambition or if the changing composition of the Grade 10 classes due to the accelerated flows to higher grades meant that a smaller proportion was so ambitious.

Interestingly, there has been a strong trend among learners in poorer provinces and no-fee schools to opt for Mathematics, even when their performance in the subject up to Grade 9 has been weak. This is notable because all learners follow the same Mathematics curriculum through Grade 9, regardless of their eventual subject choice in the FET phase. For learners without a strong foundation in Mathematics by the end of Grade 9, taking Mathematics in Grades 10 to 12 often leads to difficulties in passing, let alone achieving the 60% threshold typically required for admission

FIGURE 2.6 Percentage of Grade 10 Learners electing to take Mathematics by Province, 2018 and 2023

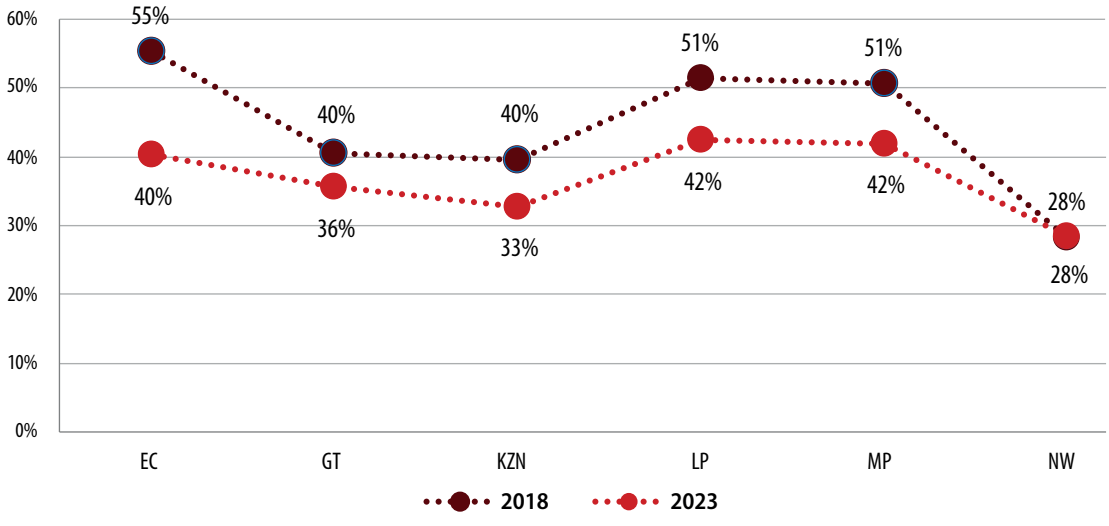
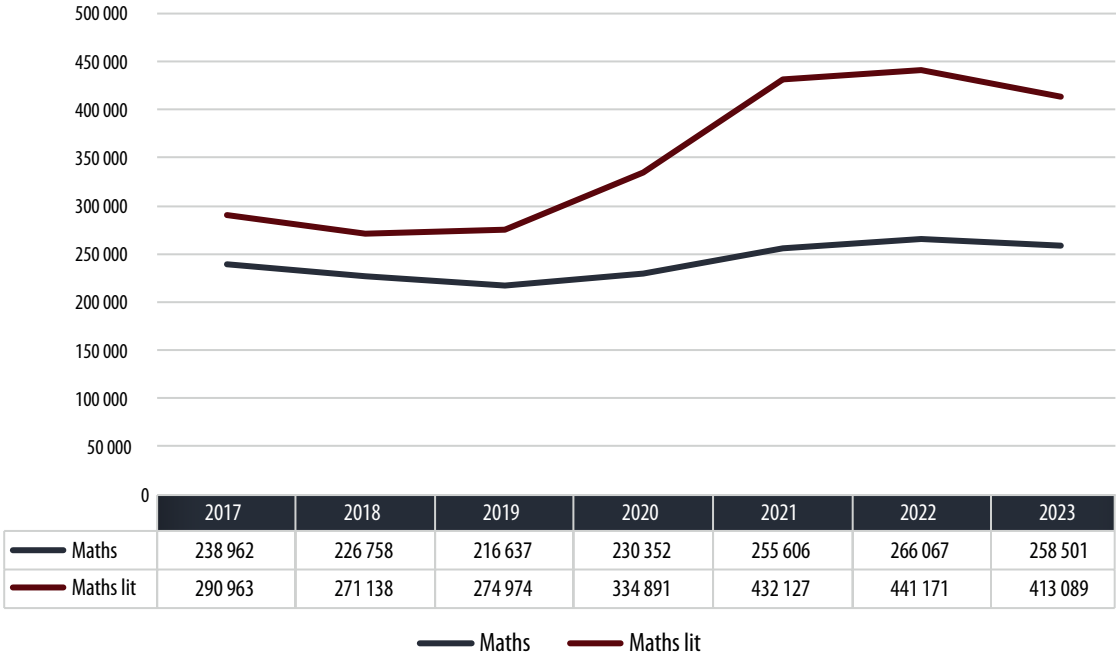


Figure 2.7 shows the very strong increase in learners in the wake of the pandemic, with most of the growth being in Mathematical Literacy. In 2021, the number of Mathematical Literacy candidates grew by 29% or more than 97 000 compared to 2020.

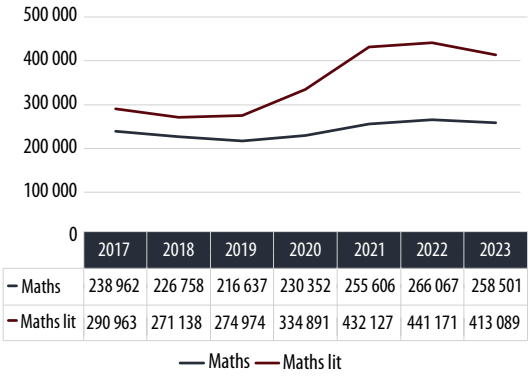
FIGURE 2.7 Full-time Matric Candidates doing Mathematics and Mathematical Literacy, 2017–2023



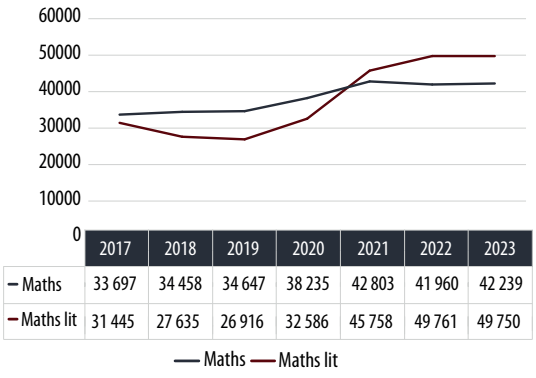
	2017	2018	2019	2020	2021	2022	2023
Maths	238 962	226 758	216 637	230 352	255 606	266 067	258 501
Maths lit	290 963	271 138	274 974	334 891	432 127	441 171	413 089

Figure 2.8 shows comparable trends by province. These data are from the national NSC data; thus, it is possible to show trends for all nine provinces. It is notable that the Mathematical Literacy figures were initially considerably lower than those for Mathematics in the Eastern Cape, while in Kwazulu-Natal, Limpopo and Mpumalanga, the candidates for these two subjects were almost equal at the beginning of this period. In contrast, the two more affluent provinces, Gauteng and Western Cape, and all other provinces, which have many more learners in fee-paying schools, had a considerably smaller proportion of Mathematics candidates from the beginning of this period.

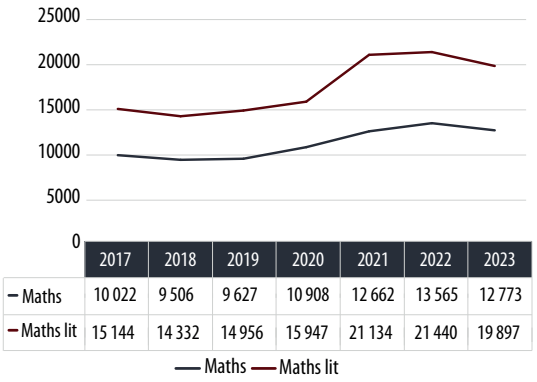
FIGURE 2.8 Full-time Matric Candidates doing Mathematics and Mathematical Literacy by Province, 2017–2023



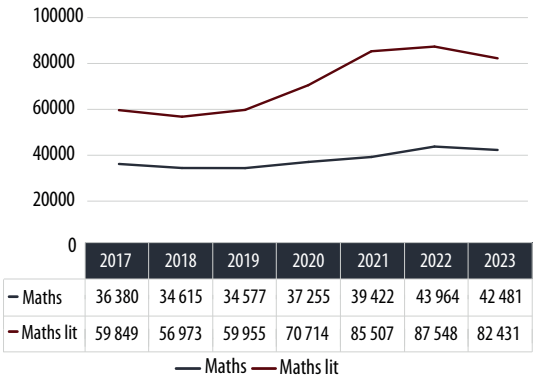
	2017	2018	2019	2020	2021	2022	2023
Maths	238 962	226 758	216 637	230 352	255 606	266 067	258 501
Maths lit	290 963	271 138	274 974	334 891	432 127	441 171	413 089



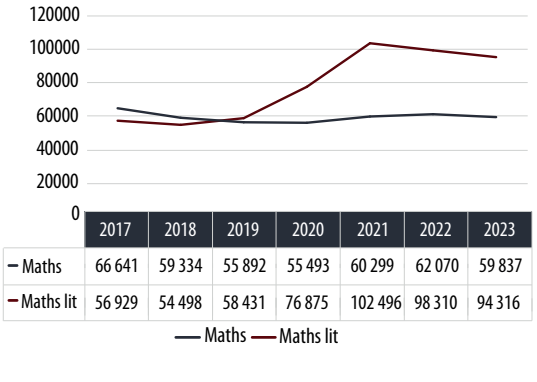
	2017	2018	2019	2020	2021	2022	2023
Maths	33 697	34 458	34 647	38 235	42 803	41 960	42 239
Maths lit	31 445	27 635	26 916	32 586	45 758	49 761	49 750



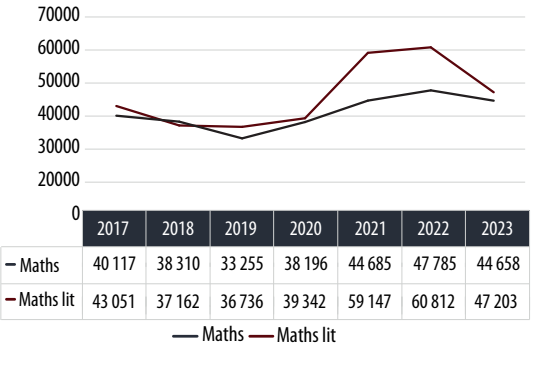
	2017	2018	2019	2020	2021	2022	2023
Maths	10 022	9 506	9 627	10 908	12 662	13 565	12 773
Maths lit	15 144	14 332	14 956	15 947	21 134	21 440	19 897



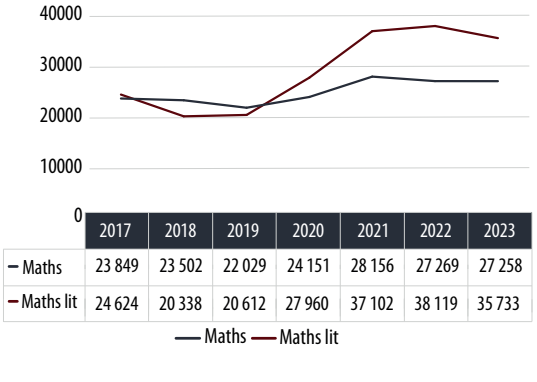
	2017	2018	2019	2020	2021	2022	2023
Maths	36 380	34 615	34 577	37 255	39 422	43 964	42 481
Maths lit	59 849	56 973	59 955	70 714	85 507	87 548	82 431



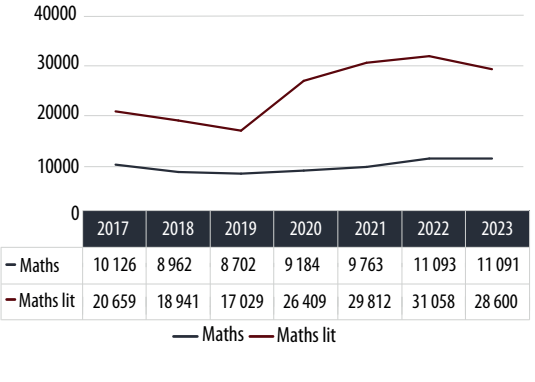
	2017	2018	2019	2020	2021	2022	2023
Maths	66 641	59 334	55 892	55 493	60 299	62 070	59 837
Maths lit	56 929	54 498	58 431	76 875	102 496	98 310	94 316



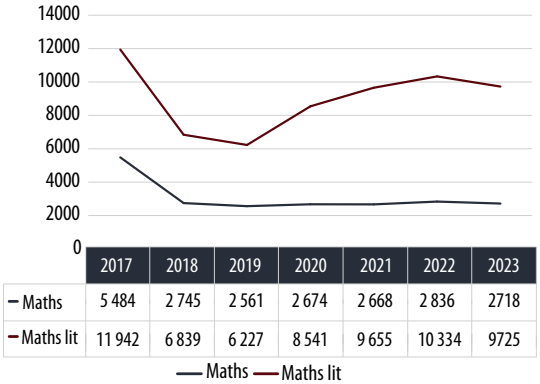
	2017	2018	2019	2020	2021	2022	2023
Maths	40 117	38 310	33 255	38 196	44 685	47 785	44 658
Maths lit	43 051	37 162	36 736	39 342	59 147	60 812	47 203



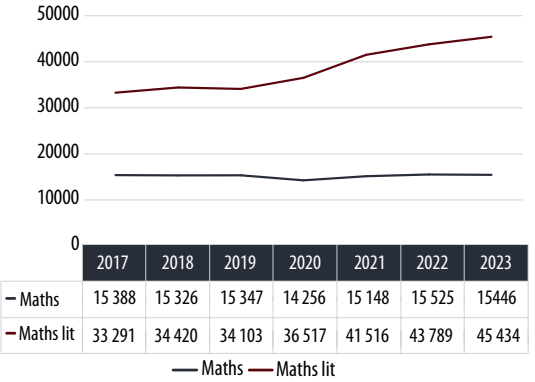
	2017	2018	2019	2020	2021	2022	2023
Maths	23 849	23 502	22 029	24 151	28 156	27 269	27 258
Maths lit	24 624	20 338	20 612	27 960	37 102	38 119	35 733



	2017	2018	2019	2020	2021	2022	2023
Maths	10 126	8 962	8 702	9 184	9 763	11 093	11 091
Maths lit	20 659	18 941	17 029	26 409	29 812	31 058	28 600



	2017	2018	2019	2020	2021	2022	2023
Maths	5 484	2 745	2 561	2 674	2 668	2 836	2718
Maths lit	11 942	6 839	6 227	8 541	9 655	10 334	9725



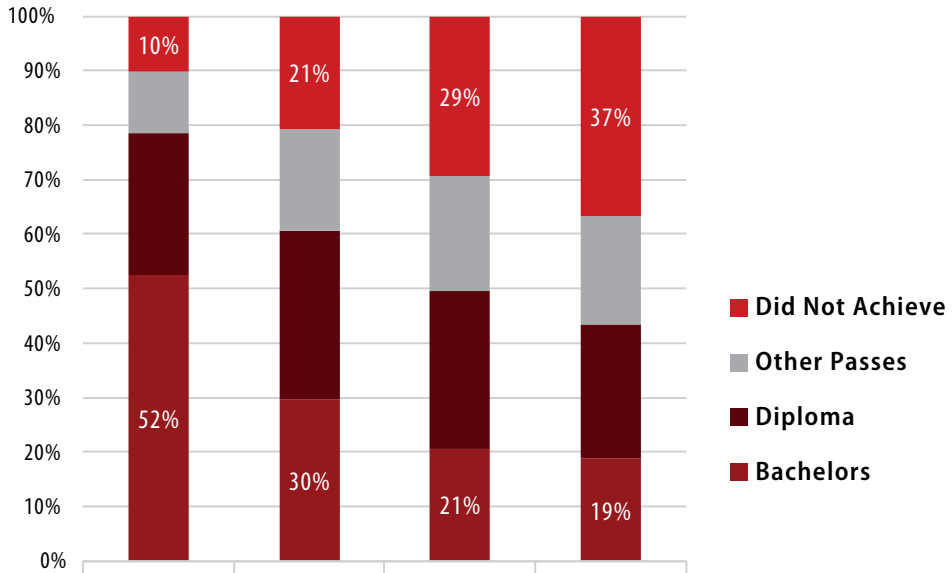
	2017	2018	2019	2020	2021	2022	2023
Maths	15 388	15 326	15 347	14 256	15 148	15 525	15446
Maths lit	33 291	34 420	34 103	36 517	41 516	43 789	45 434

2.4 Repetition Trends and Progression

Tracking the progression of the 2019 Grade 8 cohort highlights critical attrition points. Table 2.3 shows that dropout rates peak in Grades 10 and 11, with KwaZulu-Natal exhibiting a steeper decline between Grades 11 and 12 than Gauteng.

The analysis also reveals the cumulative impact of repetition on learners' outcomes. Overage learners, in particular, face significant challenges. Figure 2.9 demonstrates that learners older than their grade level tend to perform worse in the matriculation exams. Those on-grade or only one-year overage show significantly higher pass rates and Bachelor-level achievement, whereas learners two or more years overage exhibit a marked decline in performance, often ending up in failure to pass matric.

FIGURE 2.9 Matric Performance by Years Overage, 2023



	Not Overage	1yr overage	2yrs overage	3yrs overage
Did Not Achieve	10%	21%	29%	37%
Other Passes	11%	19%	21%	20%
Diploma	26%	31%	29%	24%
Bachelors	52%	30%	21%	19%

2.5 School-based Assessments (SBAs) and Matric Performance

School-Based Assessments (SBAs) are integral to South Africa's Continuous Assessment (CASS) system, contributing 25% to 40% of the final mark in many subjects, depending on the grade and subject. SBAs aim to reduce the pressure of high-stakes exams by spreading assessment tasks across the school year. These tasks include tests, projects, assignments, practical work, and oral presentations, and they are designed to provide a comprehensive measure of learner performance. SBAs also allow teachers to monitor learners' progress throughout the academic year and address gaps in understanding before summative exams.

Introduced to complement traditional examinations, SBAs were intended to make assessments more inclusive and reflective of day-to-day classroom learning. However, their implementation has faced several challenges. Disparities in resources and teacher capacity across schools have affected the consistency and quality of SBAs. In poor schools, inadequate training and support for teachers have led to uneven application of SBA guidelines. These disparities became more pronounced during the COVID-19 pandemic, as reliance on SBAs increased due to disruptions in formal examinations.

The impact of SBAs on matric performance has been a focus of Resep's analysis of the DDD data in recent years. While SBAs were designed to provide a reliable measure of learners' abilities, studies have shown discrepancies between SBA marks and examination results. For example, learners in poorer schools often show inflated SBA scores compared to their exam marks, raising questions about the consistency and accuracy of these assessments, but also perhaps affecting these learners in that lenient assessments create a low level of cognitive demand that affects their opportunity to learn.

Provincial disparities in SBA and matric alignment are particularly notable. In some schools, learners' SBA scores align closely with their exam results, reflecting a well-moderated assessment system. However, in others, learners' SBA marks are significantly higher than their exam scores, suggesting inconsistencies in the quality of continuous assessments. This inflationary effect is most evident among learners performing near critical thresholds, such as those on the pass-fail borderline or aiming for a Bachelor's pass in matric.

Resep's use of DDD data has revealed systemic patterns, such as weaker alignment of SBAs with exams in Quintile 1–3 schools compared to Quintile 5 schools. These findings again highlight the need for stronger moderation mechanisms to ensure that SBAs accurately reflect learners' knowledge and skills. Without this alignment, SBA inflation may undermine learners' preparedness for tertiary education or employment, as their marks may not reflect their true competencies.

To improve the credibility and utility of SBAs, policy interventions should focus on teacher training in assessment practices, better standardisation across provinces, and stronger moderation processes. By addressing these challenges, SBAs can become a more reliable and equitable component of South Africa's assessment framework.

Performance on SBAs largely determines flows through the school system. Table 2.4 and Figure 2.10 shows how progress through secondary school (from Grade 8 to Grade 12 (matric) is far from universal. This table tracks learners from their Grade 8 year through to matric. Of the original cohort, only 42% in Gauteng and 37% in KwaZulu-Natal progressed to matric without repetition. A significant proportion of learners remain unaccounted for, pointing to challenges in retention and tracking.

Figure 2.10 compares the relationship between school-based assessment marks and final examination marks for two provinces. The data from Gauteng and Limpopo reveals discrepancies that suggest potential inflation of SBA marks, particularly in weaker schools.

FIGURE 2.10 Correlation Between School-Based Assessments and Examination Marks in Mathematics in Gauteng and Limpopo

	Correlations			Gaps		
Matric Cohort	Grade 10	Grade 11	Grade 12	Grade 10	Grade 11	Grade 12
Gauteng						
Panel A: Mathematical Literacy						
2020	0.62	0.72	**0.87**	5.67	8.87	**4.67**
2021	0.65	**0.65**	0.83	6.93	**4.2**	2.99
2022	**0.59**	0.66	0.82	**6.3**	6.57	2
Panel B: Mathematics						
2020	0.72	0.88	**0.93**	5.32	1.99	**6.11**
2021	0.69	**0.76**	0.93	7.73	**–3.31**	6.49
2022	**0.66**	0.77	0.93	**–6.1**	–6.24	5
Limpopo						
Panel A: Mathematical Literacy						
2020	0.54	0.65	**0.83**	7.42	9.51	**12.89**
2021	0.55	**0.54**	0.85	5.29	**2.11**	4.28
2022	**0.41**	0.51	0.82	**4.31**	5.79	9.00
Panel B: Mathematics						
2020	0.66	0.80	**0.91**	2.34	3.63	**9.93**
2021	0.68	**0.70**	0.93	6.27	**–3.16**	7.40
2022	**0.55**	0.71	0.94	**–5.83**	–7.33	4.18

Note: Gaps = NSC mark minus report mark. Correlations and gaps between learners' 2020 report marks and their respective matric NSC marks are in bold.

Source: Calculated using Grades 10 and 11 Term 4 report marks and Grade 12 Term 3 report marks

CHAPTER 3
NEW PERSPECTIVES ON PRIMARY SCHOOLS

> Children who start school at a younger age within the typical entry range tend to have higher repetition rates.

3.1 Age of Entry to Grade 1

When examining the age of first entry into Grade 1 across schools and provinces in South Africa, it becomes clear that two different rules are applied.

According to the first rule, children may enter Grade 1 any time after turning 5 years and 6 months, provided they meet this age requirement by the end of the year preceding their entry. This means that children as young as 5 years and 6 months or as old as 6 years and 6 months are eligible to start Grade 1. In contrast, the second rule—the calendar year rule—requires children to turn 6 years before entering Grade 1. Under this rule, children can start Grade 1 anytime after turning six but before turning 7.

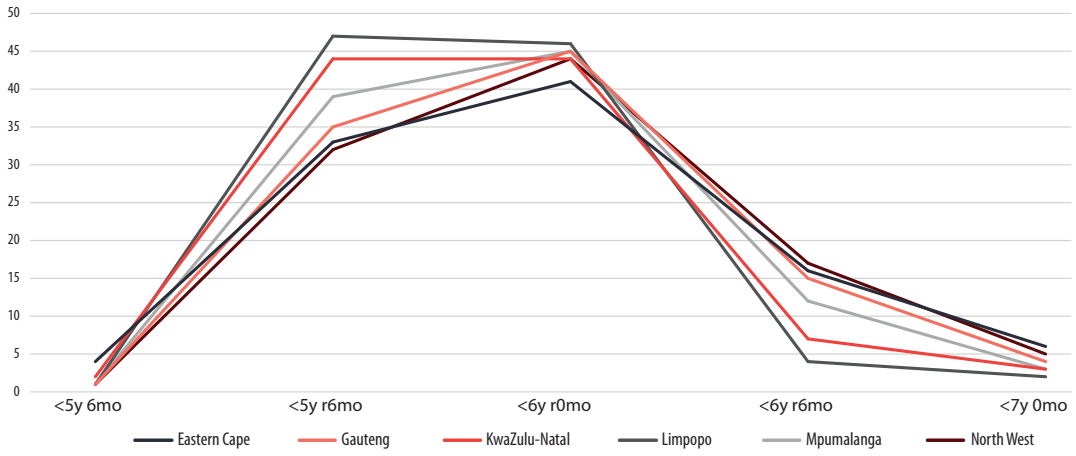
Data from the provinces highlights these differences. For example, KwaZulu-Natal and Limpopo appear to follow the first rule more often, with a large proportion of children (44% in KwaZulu-Natal and 47% in Limpopo) entering Grade 1 at the younger age of 5½ years or older. These provinces also show fewer children entering at the older age of 6½ years or above, with only 7% and 4% falling into this category, respectively.

In contrast, the remaining provinces exhibit lower proportions of children entering at 5 years and 6 months and higher proportions entering at 6 years and 6 months or older. This suggests a difference in how the entry rules are interpreted across provinces.

Ultimately, these differences are most pronounced at the school level. There is a noticeable tendency for quintile 5 schools to apply the calendar year rule, which aligns with the practice in wealthier provinces and schools. This variation in interpretation and application of the rules contributes to significant disparities in the age of first entry into Grade 1.

Figure 3.2 highlights the age distribution of learners entering Grade 1 across provinces. The data shows that most learners enter at the recommended age of 6 years, but there is a notable proportion of over-age entrants, particularly in rural provinces. These late entries are often associated with higher repetition and dropout rates later in the school career.

FIGURE 3.1 & TABLE 3.1 Age of First Entry into Grade 1, 2018–2023



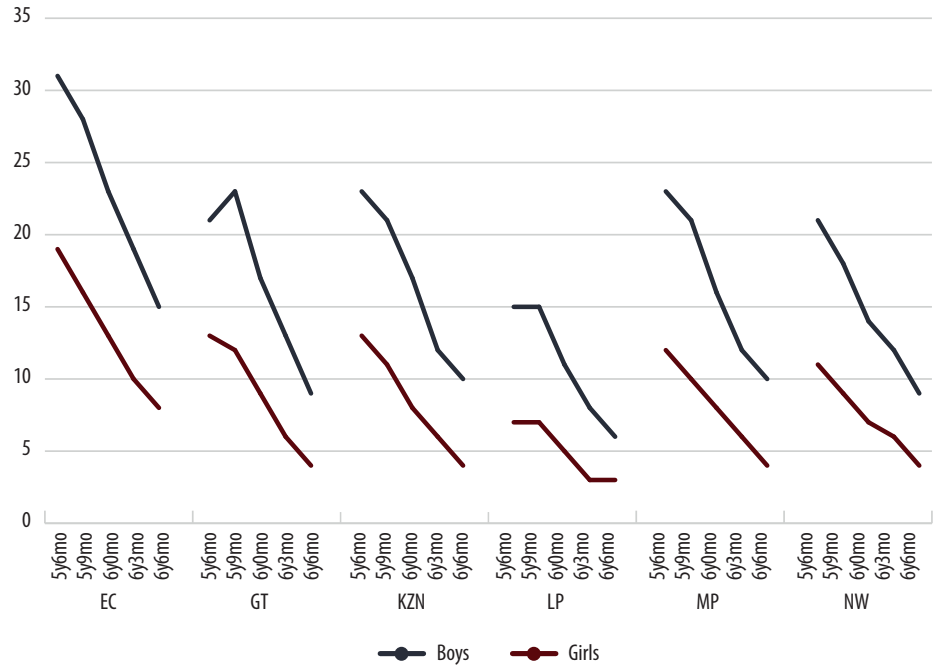
	Eastern Cape	Gauteng	KwaZulu-Natal	Limpopo	Mpumalanga	North West
<5yr 6mo	4%	1%	2%	1%	1%	1%
5yr 6mo	33%	35%	44%	47%	39%	32%
6yr 0mo	41%	45%	44%	46%	45%	44%
6yr 6mo	16%	15%	7%	4%	12%	17%
<7yr 0mo	6%	4%	3%	2%	3%	5%
	100%	**100%**	**100%**	**100%**	**100%**	**100%**

The repetition rates for Grade 1 learners are significantly higher among underage entrants. Figure 3.2 illustrates Grade 1 repetition rates by province, gender and age of school entry. As shown, children who start school at a younger age within the typical entry range tend to have higher repetition rates. For instance, in the Eastern Cape, the repetition rate for boys entering school at a younger age is as high as 31%, compared to 19% for girls in the same age group. However, for both boys and girls, it is evident that older children within the normal school-entry age range perform better, with significantly lower repetition rates. This trend is also reflected in their academic performance, such as school marks.

The pattern holds consistently across all six provinces included in the analysis, with boys generally faring worse than girls. On average, boys appear to lag behind girls by approximately half a year to three-quarters of a year in terms of performance.

These findings raise important questions about the optimal age for school entry. Encouraging earlier school entry might result in higher repetition rates for children not yet developmentally ready for Grade 1. On the other hand, delaying entry could introduce its own set of challenges. Striking the right balance is critical to ensuring students are ready to succeed when they begin formal schooling.

FIGURE 3.2 Grade 1 Repetition Rates by Province, Gender and Age of School Entry, 2018–2022



3.2 Linguistic Interdependence and Grade 4 Outcomes

South Africa's education policy mandates the use of the Home Language as the medium of instruction during the Foundation Phase (Grades 1–3), transitioning to English or Afrikaans as the Language of Learning and Teaching (LOLT) in Grade 4. This transition poses significant challenges for learners. Cummins' (1979) theory of linguistic interdependence emphasises the importance of foundational mastery in one's Home Language to effectively acquire a second language. Evidence from recent studies, such as de Galbert (2023) in Uganda, Kim and Piper (2019) in Kenya and Mohohlwane et al. (2023) in South Africa, confirms the applicability of this theory in African educational contexts.

This part of the research uses large-scale, representative school-based assessment data to evaluate how Foundation Phase Home Language mastery influences Grade 4 outcomes. Specifically, it examines how Grade 3 Home Language proficiency predicts Grade 4 repetition rates and how Grade 3 Home Language mastery affects English First Additional Language (EFAL) performance in Grade 4.

The study focuses on learners whose Home Language is an African language and who transition to English as LOLT in Grade 4. Unique learner identifiers were used to construct a balanced panel dataset for three cohorts of learners who entered Grade 1 in 2017, 2018 or 2019 and were observed in Grade 4 by 2023. This approach allowed for tracking individual learner progression, repetition and performance across grades, providing rich insights into their educational trajectories.

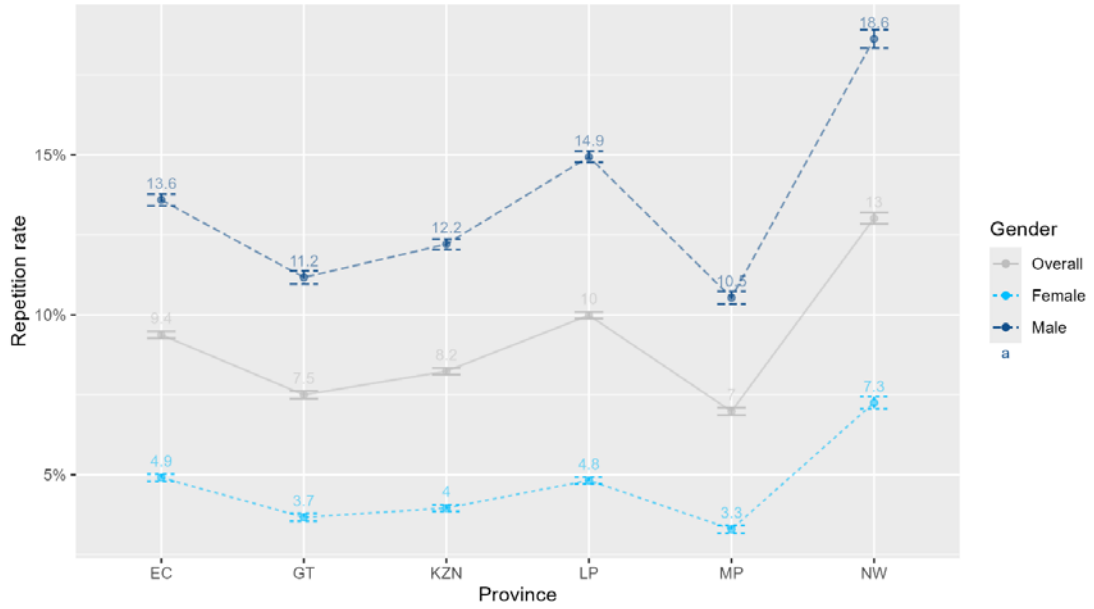
These insights set the stage for examining Grade 4 outcomes, including repetition and EFAL performance and the characteristics of repeaters.

The figure below highlights average Grade 4 repetition rates across provinces, showing a consistent pattern of much higher repetition among boys than among girls over all provinces. Notably, repetition rates in Grade 4 are particularly high in provinces such as the North West, where the gap between boys and girls often exceeds ten percentage points. These high repetition rates are accompanied by poor academic performance in the province, further emphasising the challenges boys face in Grade 4.

The persistent gender disparity in repetition rates across all provinces and years underscores the need for targeted interventions to support boys' academic progress and reduce these substantial gaps over time.

Figure 3.3 below shows Grade 4 repetition rates for each province by gender. The gender gap in favour of females is large at about 9 percentage points on average.

FIGURE 3.3 Average Grade 4 Repetition Rates by Province and Gender, 2020-2023

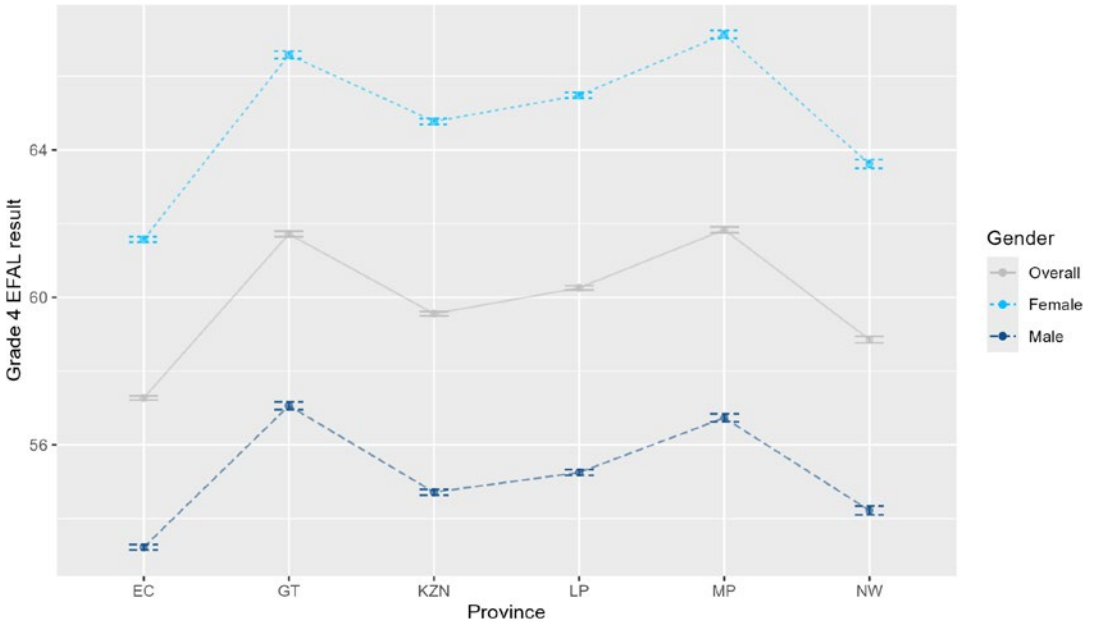


Source: DDD longitudinal dataset (all learners in public ordinary schools with an African Home Language subject, who started Grade 1 between 2017 and 2019 and who reached Grade 4 by 2023). Error bars show 95% confidence interval.

Figure 3.4 below illustrates the performance in English First Additional Language (EFAL) for Grade 4 students, disaggregated by gender and province, for the three years immediately preceding the pandemic. There are substantial gender differences in EFAL performance, with girls consistently outperforming boys across all provinces.

The data also shows a concerning alignment between boys' poorer performance in EFAL and their higher repetition rates in Grade 4, as highlighted in the previous figure. These findings emphasise the need to address boys' challenges in language acquisition and overall academic performance to reduce these persistent disparities.

FIGURE 3.4 Average Grade 4 EFAL Marks by Province and Gender, 2017-2019



Source: DDD data.

Table 3.2 summarises some characteristics of the learners who repeated and those who passed Grade 4 on the first attempt, as well as the percentage point difference between the two groups. Higher Grade 3 Home Language results are strongly associated with passing Grade 4 on the first attempt, with passers achieving an average of 70.5%, and repeaters averaging 49.6% (a difference of almost 21 percentage points). Grade 1 Mathematics results are similarly associated with repetition, with passers achieving 16.8 percentage points more for Grade 1 Mathematics than repeaters. Grade 4 repeaters are 22 percentage points more likely to have also repeated Grade 1, indicating that many who repeated Grade 1 later also repeat Grade 4 once they reach the next school phase, (learners are supposed not to repeat more than once in a phase). Receiving a condoned pass in Grade 3 (progressing to Grade 4 despite not meeting the CAPS pass requirements for Grade 3) is even more strongly associated with repetition. 35.4% of learners who repeated Grade 4 received a condoned pass in Grade 3, compared to 4.2% of learners who passed Grade 4. The relationship is similar for learners who failed Grade 3 Home Language; in fact, 92% of learners who received a condoned pass failed their Home Language subject, indicating that achieving less than 50% in Grade 3 Home Language is a significant predictor of repetition in Grade 4.

TABLE 3.2 Characteristics of Learners who Passed and those who Failed Grade 4 on the First Attempt, 2020-23

	Those who passed	Those who failed	Difference
Gr1 Mathematics	70.6%	53.8%	16.8%
Gr3 Home Language	70.5%	49.6%	20.6%
Repeated Gr1	11.2%	33.3%	– 22.1%
Condoned pass in Gr3	4.2%	35.4%	– 31.2%
Overage in Gr4	32.6%	66.7%	– 34.1%

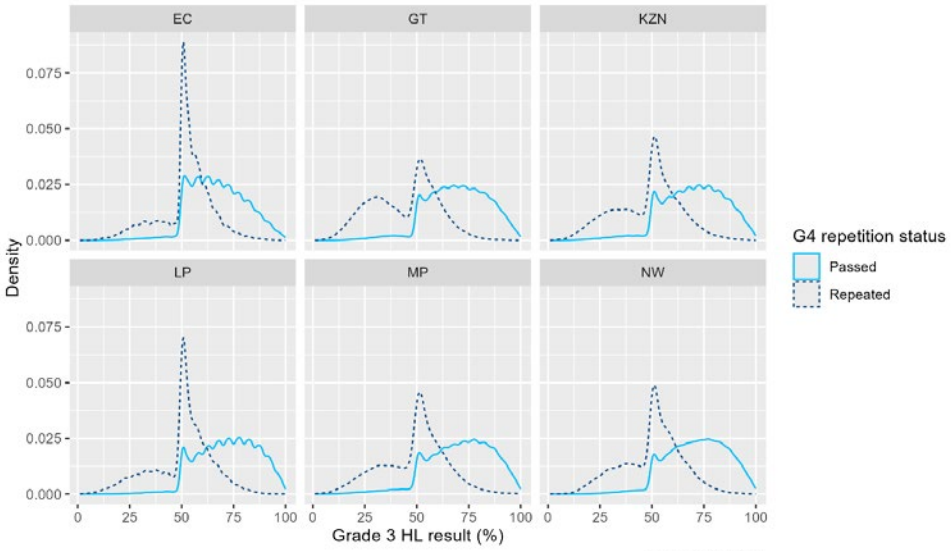
Grade 3 Home Language mastery was a significant predictor of Grade 4 repetition. Learners scoring below 50% in Grade 3 Home Language were much more likely to repeat Grade 4, with repetition rates decreasing sharply for learners who had performed better in Home Language in Grade 3. For instance, 98% of learners who achieved 75% or higher in Grade 3 Home Language passed Grade 4 on their first attempt.

Figure 3.5 below illustrates the Grade 3 Home Language performance of students who repeated or progressed through Grade 4 in the following year. For those who then progressed from Grade 3 to Grade 4 but failed Grade 4, all graphs have a spike at 50% , suggesting that results just below 50% were artificially increased to 50% (the minimum pass mark). The much larger spike at 50% in the repetition group indicates that a greater proportion of repeaters were pushed through to Grade 4 (they would not be shown as having been condoned, as their marks were adjusted rather than being formally condoned.) The practice of increasing nearby marks to 50% appears to be most prevalent in the Eastern Cape and Limpopo, and least prevalent in Gauteng. This suggests that some students' marks were adjusted to meet the minimum pass threshold, allowing them to progress to Grade 4. This form of mark adjustment may reflect decisions made at the teacher or school level. Many of these students might have scored below 50% without these adjustments and would otherwise have required condoning to advance.

While almost all learners who successfully passed Grade 4 achieved scores above 50% in Home Language in Grade 3, many students who repeated Grade 4 (shown by the dotted line) had scores below 50%, indicating that they were condoned—promoted despite not meeting the required standard. In Gauteng, Mpumalanga, KwaZulu-Natal and the North West, fewer students exhibited adjusted marks at exactly 50%. Still, a higher proportion appears to have been condoned directly to progress to Grade 4, as indicated by the higher proportions of them shown by the dotted lines with Grade 3 Home Language marks below 50%.

These findings raise significant concerns about the preparedness of these learners of learners who have been condoned in Grade 3 or who benefited from mark adjustments to achieve a pass level, many of whom ultimately struggle and repeat Grade 4. The distinction between mark adjustments to meet the pass threshold and outright condonation without adjustment highlights different approaches to promotion decisions, reflecting systemic challenges in ensuring students acquire the basic skills necessary for successful progression.

FIGURE 3.5 Grade 3 Home Language Results by Grade 4 Repetition Status in 2020-23

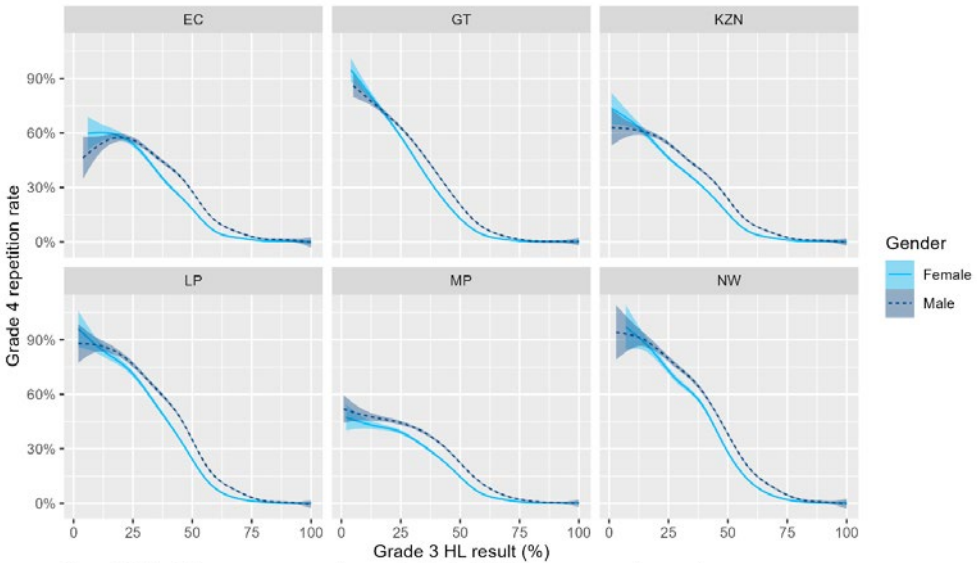


Source: DDD data.

Figure 3.6 below shows the relationship between Grade 4 repetition and Grade 3 Home Language results by plotting loess curves with a 95% confidence interval on a random sample of up to 100 000 learners per province-gender grouping. Two clear patterns emerge: for most of the range in all provinces, dropout rates are lower for better performance in Grade 3 Home Language; and again for most of the range of Grade 3 Home Language performance, boys are mre likely to repeat than girls This gender trend is consistent across all six provinces and is particularly pronounced for students performing at intermediate levels (neither very high nor very low).

Repetition rates varied significantly across provinces. North West exhibited the highest rates, averaging 13.7%, while Mpumalanga recorded the lowest at 6.7%. Provincial disparities may reflect differences in the implementation of promotion policies, particularly during the pandemic. Additionally, as indicated in the previous graph, earners who progressed to Grade 4 with condoned passes (despite not meeting CAPS requirements) were significantly more likely to repeat.

FIGURE 3.6 Grade 4 Repetition in 2020-23 and Grade 3 Home Language Marks by Gender

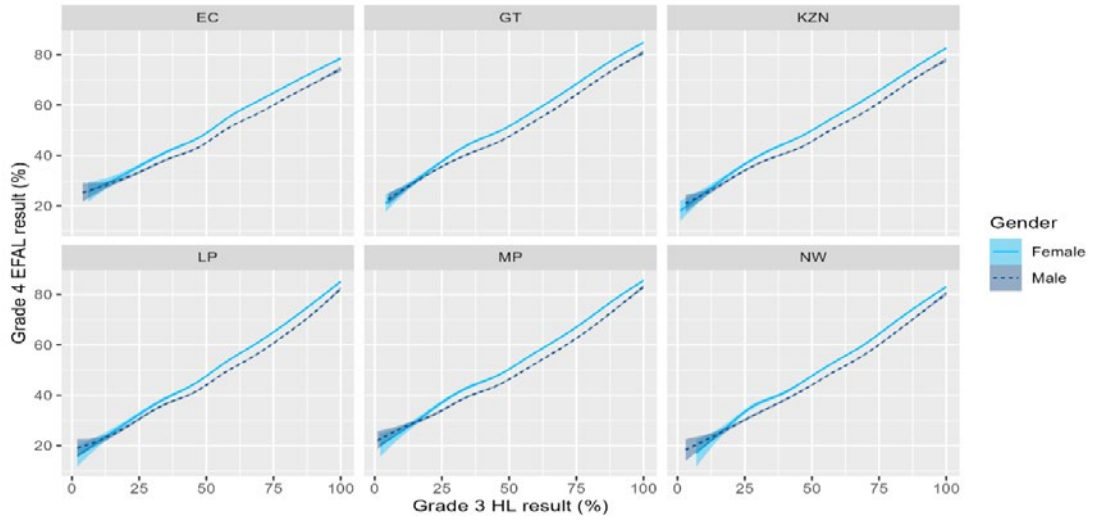


Source: DDD data. Loess curves on a random sample of up to 100 000 learners per the province-gender group.

The same patterns hold if we consider EFAL marks in Grade 4 rather than repetition rates: Learners who performed better in Grade 3 Home Language consistently achieved higher EFAL scores in Grade 4 (Figure 3.7). Girls outperform boys by 3-5 percentage points across all provinces. This pro-girl advantage persisted even after controlling for Grade 3 Home Language results and other factors such as absenteeism and age.

The relationship between Grade 3 Home Language results and Grade 4 repetition rates is most significant (steepest) in the 25-75% range. It is flatter at the bottom end of the Grade 3 Home Language result distribution and significantly flatter at the top end, with almost all learners scoring 75% or higher passing Grade 4. On average, each percentage point increase in Grade 3 Home Language results was associated with a 0.4–0.5 percentage point increase in EFAL results. Gender differences were again notable, with girls outperforming boys by 3-5 percentage points across all provinces. This pro-girl advantage persisted even after controlling in regressions for Grade 3 Home Language results and other factors such as absenteeism and age. The large gender gap in most provinces and at most performance levels indicates that gender significantly predicts repetition for many learners, even controlling for Grade 3 Home language results. This relationship suggests a growing gender performance gap for most learners.

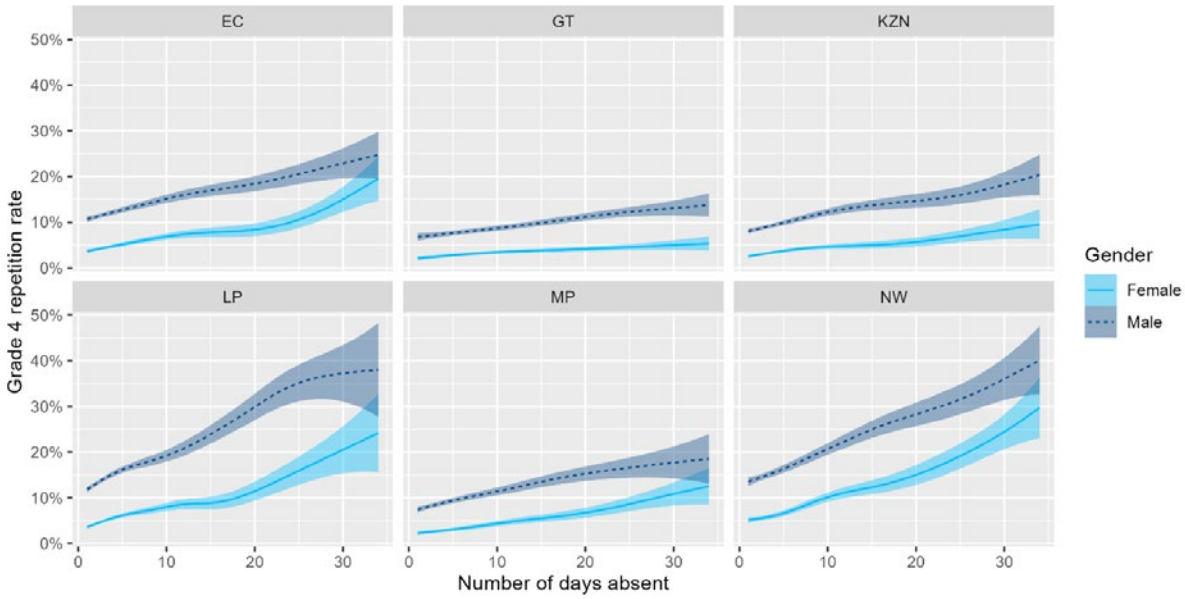
FIGURE 3.7 Grade 4 EFAL Marks in 2020-23 by Grade 3 Home Language Marks by Gender



Source: DDD data. Loess curves on a random sample of up to 100 000. Shading represents a 95% confidence interval.

Absenteeism in Grade 3 was negatively correlated with repetition in Grade 4, with learners who missed more school days being more likely to repeat, as shown in Figure 3.8, and to have performed worse in EFAL in Grade 4 (Figure 3.9). This effect was particularly pronounced in Limpopo, Mpumalanga and the Eastern Cape. However, in Gauteng, absenteeism seems to have a much weaker relationship with Grade 4 repetition. This may have something to do with how absenteeism is recorded in Gauteng, as discussed in Chapter 4. At least within five of the six provinces shown, recorded learner absenteeism appears to have some relationship with performance in Grade 4. This may be because absence from school may undermine learners' performance, but it could also be because disengaged learners may be absent more often.

FIGURE 3.8 Grade 3 Absenteeism and Grade 4 Repetition in 2020-23

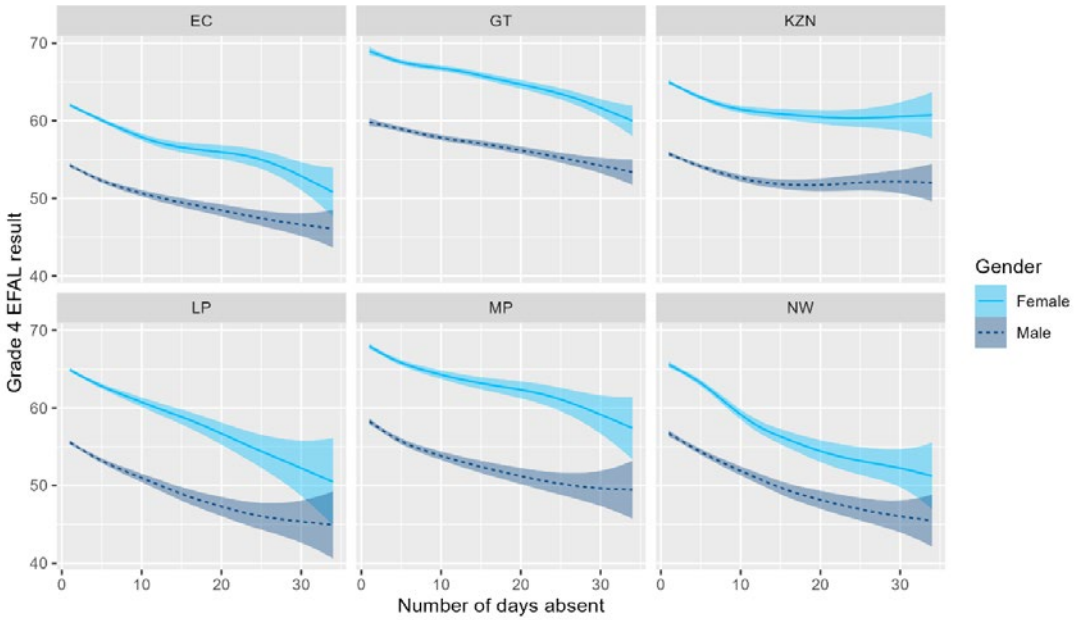


A clear downward slope across all provinces and for both genders indicates that greater absenteeism in earlier grades is associated with lower EFAL performance. However, it is also evident that boys, on average, perform worse than girls, even at similar levels of absenteeism. This persistent gender disparity highlights the compounded challenges boys face in language acquisition.

Confidence bands around the estimates widen at very high levels of absenteeism, reflecting fewer observations in these extreme cases. Despite this, the downward trend remains consistent, emphasising the negative impact of frequent absences.

Interestingly, the pattern differs slightly between provinces. In KwaZulu-Natal, for instance, the decline in EFAL performance appears to plateau after approximately 15 days of absenteeism, suggesting that additional absences beyond this threshold do not further exacerbate performance outcomes. This nuanced finding underscores that the relationship between absenteeism and academic performance may vary by region and context.

FIGURE 3.9 Grade 3 Absenteeism and Grade 4 EFAL Performance in 2020-23



Source: DDD data. Only learners from the 2017 cohort who were in Grade 3 in 2019. Outliers not displayed.

Learners whose Home Language subject aligned with their actual Home Language were less likely to repeat Grade 4 in the Eastern Cape, Limpopo and Mpumalanga. However, the alignment had no significant effect in Gauteng, KwaZulu-Natal and North West. These findings suggest that Home Language implementation policies may have varying impacts depending on regional and contextual factors.

The data analysis in this section demonstrates that learners with stronger Home Language proficiency achieve better outcomes in EFAL and are less likely to repeat Grade 4. The findings further support the theory of linguistic interdependence, demonstrating that foundational skills in a learner's first language positively influence second-language acquisition.

These results highlight the need for sustained investment in Foundation Phase education, particularly in strengthening Home Language instruction, to ensure smooth transitions to English as LOLT and to support equitable learning opportunities. The large gender gaps that persist across outcomes, with female learners consistently outperforming males in both repetition rates and EFAL performance, support the case for targeted interventions to support boys' academic progress.

CHAPTER 4
TEACHER AND LEARNER ABSENTEEISM

> One consistent pattern in the data is the higher rate of teacher absences on Fridays.

4.1 Teacher and Learner Absence as Post-Pandemic Disengagement?

Emerging evidence from the United States indicates increased disengagement from education in the post-pandemic period, as shown by rising absenteeism among teachers and learners. (New York Times, 2023, 2024). This chapter examines whether similar trends are evident in South Africa, focusing on teacher and learner absenteeism patterns.

For **teachers**, the data suggests that rising absenteeism may indeed point to disengagement. Teacher absenteeism rates have been increasing across the four provinces for which data was analysed, with this trend beginning even before the COVID-19 pandemic, The pandemic may have exacerbated existing issues, but it is unlikely to have been the sole driver of rising teacher absenteeism.

For **learners**, the picture is less clear. Data limitations and inconsistencies in how absenteeism is recorded across provinces complicate the analysis. In some cases, recorded learner absenteeism appears exaggerated due to variations in the way schools report absences, particularly in Gauteng. Despite these inconsistencies, there is no conclusive evidence to suggest that learners are disengaging from school at higher rates post-pandemic. On the contrary, declining repetition rates and an increase in the proportion of learners reaching and passing matric may have improved engagement for many learners

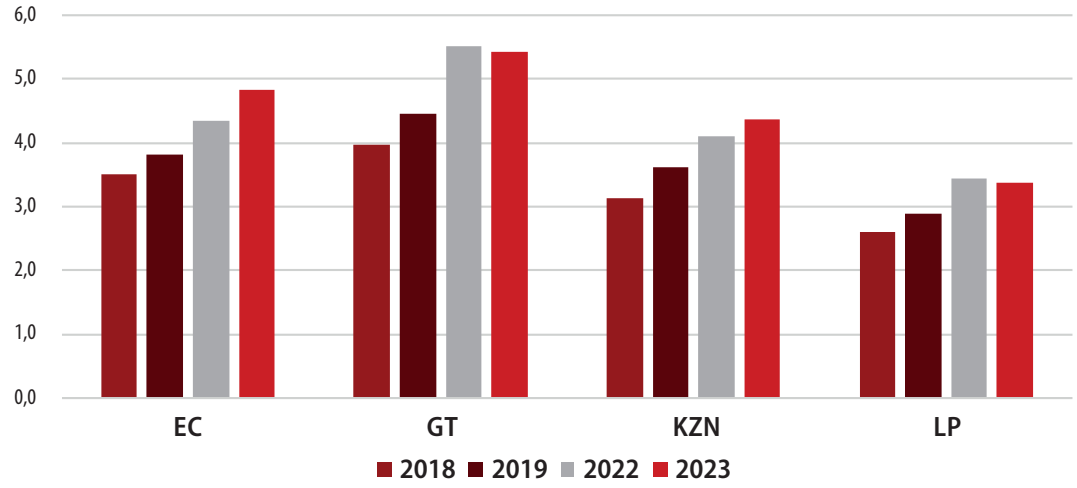
Moreover, for **learners**, attending school offers significant incentives beyond academics. One key motivator is the **school feeding programme,** which provides daily meals to many children who might otherwise go without. Additionally, school attendance remains one of the few structured activities available for many learners, as alternative forms of entertainment or engagement are often limited outside of school.

4.2 Teacher Absence from School

Teacher absenteeism is an important indicator of potential disengagement. Figure 4.1 illustrates rising absenteeism rates across the four provinces analysed, a trend that predates the pandemic.

Table 4.3 provides further disaggregation by province, showing average teacher absences in terms of school days missed out of the 200-day school year.

FIGURE 4.1 Average Percentage of Teaching Days Absent by Province, 2018, 2019, 2022 & 2023



Note: This was calculated for a balanced panel of teachers, as data was only available for teachers currently employed

TABLE 4.3 Average Number of Days Teachers were Recorded Absent from School in Four Provinces, 2023

	EC	GT	KZN	LP
Q1	8.06	12.11	8.35	7.03
Q2	8.25	10.81	8.98	6.34
Q3	12.06	11.24	9.14	6.89
Q4	10.92	11.40	9.30	6.54
Q5	7.64	9.62	7.66	7.02
Male	10.00	9.15	7.41	5.80
Female	9.63	11.34	9.26	7.25
Age<30	11.17	12.99	10.28	12.59
Age 31–40	9.76	12.06	9.77	9.59
Age 41–50	8.22	9.54	8.07	6.55
Age>50	10.25	10.65	8.72	6.27
Primary	9.58	11.20	9.11	6.80
Secondary	10.93	10.21	8.36	6.69
Combined	8.58	11.00	8.80	7.51
Rural	8.78	11.52	8.76	6.75
Urban	10.57	10.78	9.00	6.73
Total	**10.82**	**9.72**	**8.8**	**6.73**

Note: A year usually has 200 school days.

Interestingly, South Africa's recorded teacher absenteeism rates appear lower than those observed in many other sub-Saharan African countries. Table 4.4 compares school and class absence rates for teachers across 10 sub-Saharan African countries, collected by the World Bank as part of their unannounced Service Delivery Indicator (SDI) survey. These range from a low of 12% in Ethiopia to 45% in Mozambique, with an average of 22% (countries arranged according to absence rate from school). However, it is important to note that South Africa's data may underreport actual absenteeism, as it relies on administrative records rather than unannounced visits like those used in the World Bank's SDI surveys. It would also be instructive to obtain data on teachers being out of class, though in school. As the data in the table indicates, this is close to half the time teachers are out of their classrooms in this sample of countries.

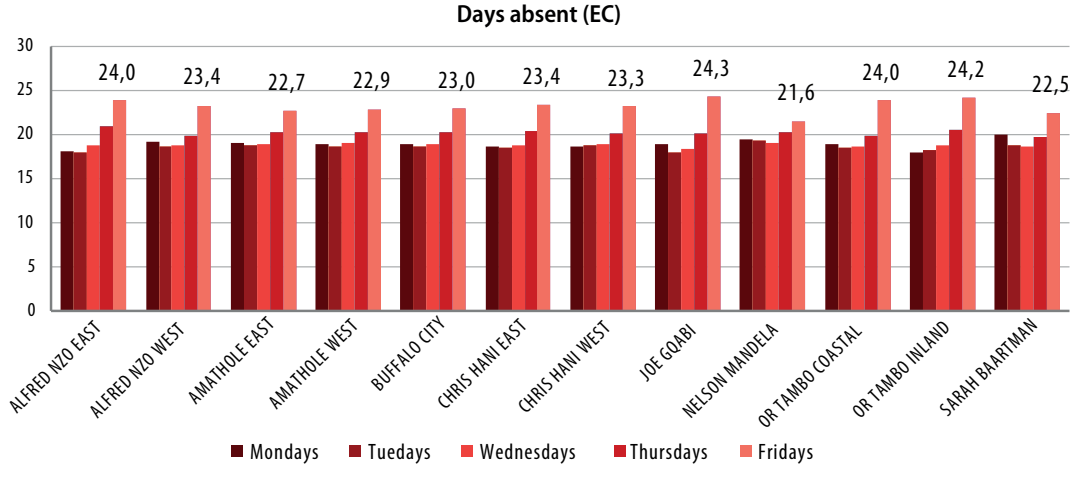
TABLE 4.4 School and Class Absence Rates for Teachers at Public Primary Schools in the SDI countries, 2011–2016

Country	Year of survey	Absent from the school	In school but absent from the classroom	Absent from the school or the classroom
Ethiopia	2014	12%	28%	40%
Tanzania	2014	14%	32%	46%
Kenya	2012	15%	31%	47%
Niger	2015	17%	10%	28%
Nigeria	2013	17%	6%	23%
Senegal	2010	18%	11%	29%
Togo	2013	23%	17%	39%
Uganda	2013	27%	30%	57%
Madagascar	2016	36%	6%	42%
Mozambique	2014	45%	11%	56%
Average		22%	18%	41%

Source: Bennel 2022: Table 1

One consistent pattern in the data is the higher rate of teacher absences on Fridays, as Reddy et al. (2010) also observed. For the four provinces whose data was analysed, the percentage of teacher absence falling on a Friday ranged from Gauteng's 21.7% to Kwazulu-Natal's 22.6%, Eastern Cap's 23.1% and Limpopo's 23.5%, in all cases exceeding the 20% of school days that fall on a Friday. The example from the Eastern Cape shown in Figure 4.2 confirms that this trend is universal across education districts.

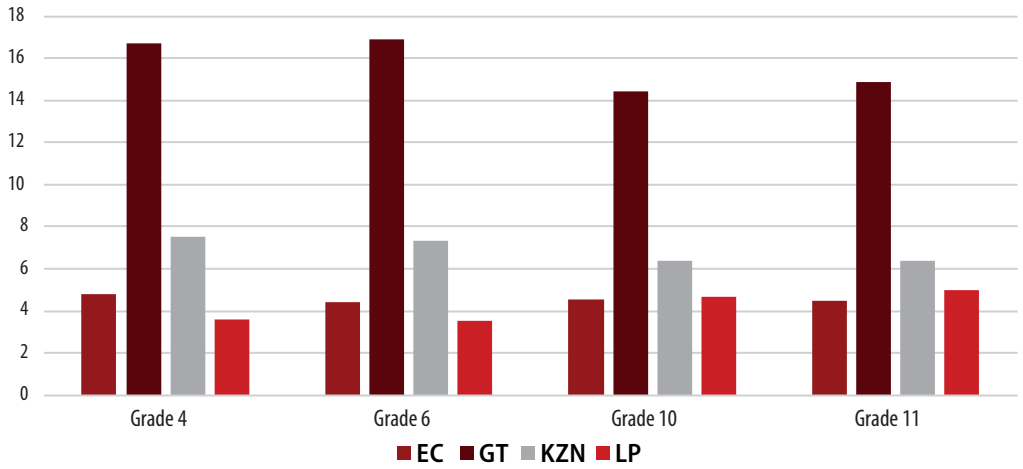
FIGURE 4.2 Distribution of Teacher Absence by Days of the Week and District, Eastern Cape 2023



4.3 Learner Absence from School

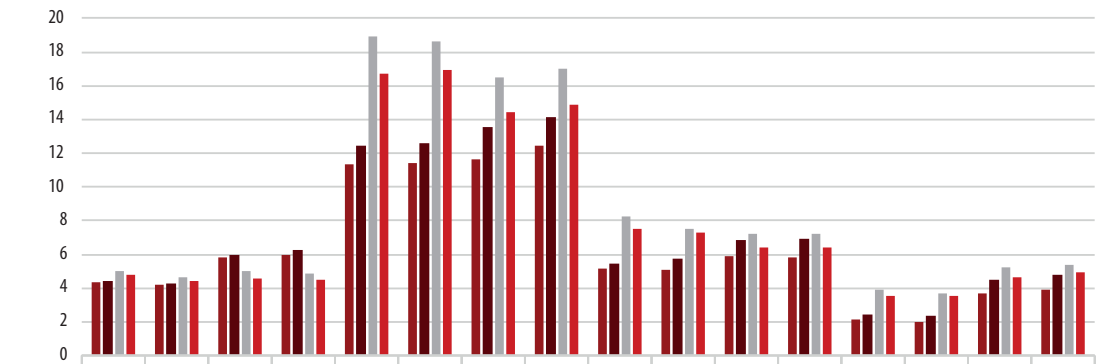
The pattern whereby absence at school is associated with education performance, as seen in Chapter 3, gives one some confidence that the absence rate amongst learners is well captured. In that chapter, it was noted that the pattern of repetition and its relationship to absence from school was weaker in Gauteng. While teacher absences from school might be under-recorded, one would expect learner absences to be better captured, as they should be reported to parents in their report cards. Yet recorded learner absenteeism rates vary significantly across provinces. Figure 4.3 shows the average number of school days learners were absent in 2023 by province, highlighting the particularly high absenteeism rates recorded in Gauteng. The high rates of learner absenteeism recorded in Gauteng appear because they record absence even for days when attending school may be optional, after term tests or examinations. An analysis of the recorded absence across the calendar year in Gauteng shows that it is, in fact, an outlier in terms of the way it records its absence.

FIGURE 4.3 Average Number of School Days Learners were Absent from School in 2023 by Province



Despite these recording inconsistencies, Figure 4.4 provides a broader view of learner absenteeism trends across four grades in the two years before and after the pandemic. The most notable feature of this graph is the much higher absentee rates recorded in Gauteng compared to the other provinces, as discussed above. The lack of a clear upward trend in absenteeism suggests that fears of growing post-pandemic disengagement among learners may be unfounded, perhaps for the reasons mentioned in Section 4.1 above.

FIGURE 4.4 Average Days Learners were Absent by Grade, Province and Year



	Grade 4 EC	Grade 6 EC	Grade 10 EC	Grade 11 EC	Grade 4 GT	Grade 6 GT	Grade 10 GT	Grade 11 GT	Grade 4 KZN	Grade 6 KZN	Grade 10 KZN	Grade 11 KZN	Grade 4 LP	Grade 6 LP	Grade 10 LP	Grade 11 LP
2018	4,33	4,18	5,83	6	11,31	11,44	11,63	12,43	5,12	5,08	5,89	5,81	2,14	2,02	3,69	3,89
2019	4,45	4,27	5,98	6,28	12,48	12,6	13,55	14,16	5,47	5,78	6,82	6,91	2,43	2,32	4,5	4,82
2022	5,03	4,67	4,99	4,83	18,91	18,63	16,47	16,99	8,24	7,51	7,19	7,21	3,89	3,7	5,25	5,39
2023	4,77	4,4	4,55	4,48	16,69	16,92	14,45	14,86	7,52	7,32	6,39	6,41	3,56	3,5	4,66	4,96

CHAPTER 5
USING SA-SAMS DATA FROM SIX PROVINCES TO UNDERSTAND THE GRADES AND SUBJECTS TEACHERS TEACH

This chapter was prepared by Martin Gustafsson

Summary

Data from the widely used South African School Administration and Management System has vastly improved the state of information on the schooling system. In recent years, data emerging from this system on the teaching responsibilities of every teacher have provided new and important analysis opportunities. **This chapter uses around a decade of data on what grades and subjects teachers teach, plus certain teacher characteristics, to explore two things: teachers who appear to follow learners over years in Grades 1 to 3, insofar as they move up one grade; and patterns of grade and subject specialisation in Grades 4 to 7.** Following learners up grades is relatively uncommon, yet a full 8% of Grades 2 and 3 teachers had been teaching one grade down in the previous year. Though the data do not allow individual learners and educators to be linked, the analysis and anecdotal evidence suggest this is about a deliberate strategy to facilitate learning. Evidence from abroad suggests that the familiarity between the teacher and learners made possible by moving with learners beyond just one year is educationally beneficial. The analysis presented here demonstrates a statistically significant association between 'learner-following' and a reduction in grade repetition. The magnitude of the link is not large, but this could in part be because of limitations in the data. Turning to Grades 4 to 7, it is found that patterns of specialisation across grades and subjects differ mainly in relation to school size. Predictably, smaller schools permit less specialisation. When similarly sized schools are compared across provinces and quintiles, very similar patterns emerge, suggesting there is a 'natural' and optimal way of arranging teaching responsibilities. While Grades 4 to 7 teachers are trained to teach all subjects in the curriculum, the rather specialised nature of teacher time use raises questions around whether more subject specialisation already at the initial training stage is desirable, along the lines of the highly specialised training for Grades 8 to 12 teachers.

5.1 Introduction

This chapter takes forward work started in Chapter 4 of Van der Berg et al (2023) relating to the spread of teacher effort across grades and subjects. The earlier work focussed extensively on the quality and completeness of the SA-SAMS[1] data used for the analysis, and on specialisation-specific demand seen in the SA-SAMS data compared to demand calculated for an earlier Department of Higher Education and Training (2020) report. For the 2023 chapter, data from three provinces were accessible: Eastern Cape, Gauteng and Limpopo.

For the current chapter, data became accessible for three additional provinces: KwaZulu-Natal, Mpumalanga and North West. The new dataset covered the years 2015 to 2024 – the three-province dataset went up to 2023 only. In the new data 2023 was the year with the greatest number of observations. Previously that had been 2022.

There are many important analyses which can be performed using the SA-SAMS teacher data. This chapter focusses on two questions which are of great importance for the training of primary-level teachers, be it at university during initial training or during in-service training, and for school management. Better teaching at the primary level is a key priority of government, and has been underscored by the new Minister of Basic Education who assumed power in 2024 as part of the Government of National Unity[2]. The two questions are:

In the Foundation Phase, to what extent do teachers follow the same learners across years? This has been found to be advantageous in other countries for learning in the early grades[3]. Even if the phenomenon is limited in public schools in South Africa, it seems important to know where it appears, as this could carry lessons for the broader system. It also seems important to explore the reasons why some schools follow this teacher utilisation strategy, and what the possible consequences could be.

Across all primary grades, what is the extent of class teaching, where a teacher teaches all subjects to a class, as opposed to subject teaching, where a teacher focuses on just one or more specific subjects, perhaps across several grades? It is known that the former is particularly common in Grades 1 to 3, while the latter is common in Grades 4 to 7. This has obvious implications for how teachers are trained, particularly with respect to pedagogically complex and foundational subjects such as mathematics and languages.

1 South African School Administration and Management System.
2 See for instance the Minister's 2024 budget speech to Parliament.
3 See for instance Hill and Jones (2018), an analysis using data from United States.

It appears the above questions have not been addressed previously using South African data on teaching responsibilities, either in the 2023 chapter or anywhere else[4]. This informs the emphasis of the current chapter.

This chapter does not update the analysis on the subject combinations of secondary teachers presented in the 2023 chapter. Such an analysis would be valuable, but it is likely that the three additional provinces would display patterns similar to those of the first three. Moreover, there are fewer complexities at the secondary level insofar as teachers specialise in two subjects in their training and to a large degree also in their actual teaching practices. Essentially, the option of class teaching does not exist, and for secondary learners having the same teacher follow the learner, even for specific subjects, appears to be of less interest than at the primary level – the available research in this area seems to focus almost exclusively on the primary level. While data quality issues explored in the 2023 chapter were explored for the current chapter, findings in this regard are only presented in summary form. As will be seen, these issues for the three new provinces were similar to those of the previous three.

5.2 Data Quality and Completeness

The six-province SA-SAMS dataset, obtained by through the Data Driven Districts (DDD) initiative, consisted of 7 442 804 observations[5]. There were 21 853 schools and 365 610 teachers appearing in the data. The he following list of variables reflect all variables available in the data, plus a few additionally derived variables, appearing in square brackets. Asterisks indicate the minimum set of five variables needed to identify the observations uniquely.

- School features
  - Province
  - School EMIS number *
  - [Whether public or independent]
  - [Whether ordinary or special needs]
  - [Quintile classification]
  - [District]
- Teacher features
  - Anonymised teacher identifier *
  - Year of birth
  - Gender
  - Who employs the teacher
  - Qualification level in terms of REQV
  - Years of experience
- Record of teaching responsibility
  - Year *
  - Grade *
  - Subject *

4 A cursory and quite limited analysis in relation to the second question appears in Department of Higher Education and Training (2020: 32). The current chapter provides a far more in-depth analysis.

5 This is after a few obvious duplicates had been removed.

As for the earlier three-province dataset, in the six-province dataset the anonymised teacher identifier appears to be a reliable unique identifier of each teacher. Table 5.1 below confirms that 2023 was the year with the highest number of educators across all provinces. The percentage of expected educators covered is, for the three original provinces, roughly the same for 2023 as it was previously for 2022. Gauteng remains a province with exceptionally low data coverage. In all other provinces the 2023 level of coverage appears at least satisfactory for the analysis required.

TABLE 5.1 Educators in the Data

	EC	GP	KN	LP	MP	NW	Total
2015	0	10 644	742	6 816	12 762	1 895	32 859
2016	22 039	20 486	15 655	21 144	17 440	10 305	107 069
2017	30 840	26 516	44 441	26 471	19 197	13 318	160 783
2018	35 431	31 317	57 225	29 364	20 528	15 406	189 271
2019	39 337	33 028	64 495	32 720	22 050	17 625	209 255
2020	41 213	30 850	63 790	34 736	24 218	19 552	214 359
2021	46 200	37 994	76 434	39 721	25 943	22 327	248 619
2022	50 937	48 072	85 113	46 197	27 970	25 176	283 465
2023	57 296	58 468	92 797	51 643	32 082	28 627	320 913
2024	51 278	21 999	37 947	35 483	20 806	12 502	180 015
% 2023 over Realities	93	60	95	93	86	98	85

The final row of Table 5.1 presents 2023 SA-SAMS values, with special school educators subtracted, divided by official public plus independent ordinary (non-special) school educator counts as appearing in the 2023 School Realities publication of the Department of Basic Education (DBE). Apart from Gauteng, teacher coverage in 2023 is at least 86% per province, and goes as high as 98% for North West.

Table 5.2 below provides the percentages of schools existing in the official 2023 master list of schools which have data on teaching responsibilities for 2023 in the SA-SAMS data. Overall, 97% of the expected schools are found in SA-SAMS. The figures are lower for the relatively small sub-sets of public special and independent schools. As for the earlier three-province analysis, it is noteworthy that Gauteng's coverage of schools is much higher than its coverage of teachers – Table 5.1 showed the latter was just 60%.

TABLE 5.2 Percentages of Schools in the Data in 2023

	All public ordinary	Q1	Q2	Q3	Q4	Q5	Public special	Indep.	All
EC	98.9	100.0	100.0	99.6	98.8	98.2	97.7	84.0	98.8
GP	86.1	98.2	96.9	98.8	98.5	96.6	63.9	61.2	84.9
KN	99.2	100.0	100.0	100.0	100.0	100.0	96.3	81.8	99.2
LP	99.6	100.0	100.0	100.0	100.0	100.0	88.9	93.6	99.5
MP	99.2	100.0	100.0	100.0	100.0	100.0	75.0	88.7	98.9
NW	98.4	99.8	100.0	100.0	100.0	100.0	68.8	81.7	97.8
All	97.3	99.9	99.9	99.7	99.4	98.1	77.5	73.6	96.9

Note: The fact that quintile-specific values tend to be higher than 'All public ordinary' values would be due to public ordinary schools with a missing quintile value being more likely to be missing in the SA-SAMS data.

A concern in the three-province analysis was that missing publicly employed educators in the SA-SAMS data were found to be biasing attrition rates downward because public educators who were not in the SA-SAMS data tended to be older and non-permanent employees, in other words educators more likely to leave. Patterns in the new data suggest this problem persists. Comparing all publicly employed educators in the Persal payroll system in November 2023 to 2023 'Paid by state' numbers in SA-SAMS points to the latter being between 6% and 10% lower than the former in all provinces other than Gauteng – it was a much higher 24% in Gauteng. A gap is to be expected as not all publicly paid educators are based in a school, though the expected gap with good data should only be around 3%[6]. In the earlier analysis the average age of educators in 2018 across the three provinces in SA-SAMS was found to be 45.7 years, against 46.5 for schools-based educators in Persal in the three provinces, a gap of 1.2 years. Average age in 2023 in the new SA-SAMS data is 44.7 years, against 45.1 in comparable Persal data, a gap of 0.4 years. Again, this points to older educators, such as schools-based educators in management posts, being under-represented in the available SA-SAMS data, even if this problem may have declined with the new data. The problem is unlikely to affect the analysis that follows unduly as it focuses largely on what non-managing 'level 1' teachers do in their classrooms. Yet the data completeness issue must be kept in mind.

6 Based on Persal data queried within the DBE.

Speculatively, older educators are excluded from the SA-SAMS data as SA-SAMS is viewed largely as a tool for monitoring level 1 teachers, not as a tool for monitoring the managers. Put differently, school managers want the data and insist on its entry into the system, to monitor non-managers.

5.3 Teachers Following Learners in the Foundation Phase

Table 5.3 below reflects the movements of 55 832 teachers between 2022 and 2023 with respect to grades. This set of teachers includes only those who taught just one grade in the range R to 3 in each of the years 2022 and 2023, and excludes teachers from small schools. Small schools were defined as schools where the number of teachers teaching Grades R to 3 was less than the number of grades offered in the range R to 3 (generally this range would be four grades). Moreover, the teacher had to be in the same school in both years. Clearly, the great majority, specifically 87% of the 55 832 teachers, stayed in the same grade. What is interesting, however, is that there is an indication of limited learner-following. For instance, of those teaching Grade 1 in 2022 and not returning to the same grade the next year, the most common movement was clearly to Grade 2, meaning the teacher is likely to have followed the learners. The same can be said of Grade 2 teachers moving to Grade 3, though here the phenomenon is less prominent. What is least clear is whether the cycle is repeated to any significant degree, with teachers reaching Grade 3 'looping' back to Grade 1 to link up with a new cohort of learners. Table 5.3 barely supports the existence of such looping, even for a few schools.

TABLE 5.3 2022 to 2023 across-Grade Movements

2023→ ↓ 2022	R	1	2	3
R	12 038	336	208	182
1	260	12 462	1 276	532
2	151	812	11 570	1 337
3	134	918	849	12 767

Importantly, it is not possible to tell from the data whether a teacher moving up one grade between one year and the next actually follows the same learners. In schools with more than one class per grade, it is possible for a 'follower' teacher to move to a different class group. The extent of this warrants attention, though there appears not to be system-wide data that would allow for the required analysis. It is also possible for a school not to respect the integrity of a class between one year and the next. To illustrate, the Grade 1A and Grade 1B classes in a school may be reorganised for Grade 2, resulting in a mixing of learners. That could also undermine possible benefits arising out of teachers moving up one grade. Despite these concerns, anecdotal evidence suggests that if teachers move up one grade, the result is that they are with the same learners in the next year.

There would be teachers moving to different grades all the time, and only some of this would be to the next grade in the next year. The key thing that Table 5.3 confirms is that where movement occurs, moving to the next grade seems to be particularly common. If this were not the case, it would be likely that movement up one grade was random, and not the outcome of a specific educational decision.

In short, while following learners is clearly not a widespread phenomenon, it appears to exist as a deliberate strategy in a few schools. This appears to warrant further analysis. Where is this limited phenomenon occurring in the system? What indicators should be used to detect the phenomenon? What can the data tell us about possible causes and benefits?

Given the relatively low movement out of and into Grade R seen in Table 5.3, and given that in many ways Grade R functions rather differently to the subsequent grades, Grade R is excluded from the analysis that follows. Table 5.4 draws from the data of 44 292 teachers. This is 46% of all 95 647 educators in the data teaching Grades 1 to 3 in either 2022 or 2023. Removing teachers who teach more than one of the three grades in any year reduces, as an example, the 2023 teachers from 68 790 to 59 973. Retaining just teachers who teach in both 2022 and 2023 reduces the number to 45 774. This number falls to the aforementioned 44 292 when small schools are excluded, small schools being defined here as schools with fewer teachers teaching Grades 1 to 3 than there are grades offered in the range 1 to 3. With regard to small schools, many of these would be removed even in the earlier step where teachers teaching more than one grade are excluded.

A useful indicator would be the percentage of teachers who move with their learners' grades over two years. The values in Table 5.3 would produce a value of 6.1% – 1 276 plus 1 337 over everyone who taught Grades 1 to 3 in 2022. Almost exactly half of this 6.1% is accounted for by movement from Grade 1 to Grade 2, as opposed to from Grade 2 to Grade 3. Table 5.4 also provides a global mean of 6.1% and includes disaggregations using categories from earlier Table 5.2. What patterns stand out? Following learners appears more common in North West. The phenomenon is roughly as common in public as independent schools. In four of the six provinces, following learners is relatively uncommon in quintile 5 schools. However, for KwaZulu-Natal and Mpumalanga this is not true.

TABLE 5.4 Percentage of across-Grade Movements 2022–2023 with Learner-Following

	All public ordinary	Q1	Q2	Q3	Q4	Q5	Public special	Indep.	All
EC	4.3	4.7	4.5	4.8	2.4	1.1	8.8	4.0	4.4
GP	6.6	10.4	10.4	7.6	8.0	3.3	6.7	7.4	6.7
KN	6.4	6.1	5.8	6.0	8.1	7.7	8.0	5.3	6.4
LP	5.1	5.2	5.4	5.7	0.0	1.3	15.0	5.8	5.3
MP	4.8	3.9	5.8	3.5	6.0	5.0	0.0	4.2	4.8
NW	10.4	10.8	11.7	12.4	2.9	1.5	3.9	11.5	10.4
All	6.1	6.3	6.5	6.4	6.6	4.1	8.4	6.2	6.1

Table 5.5 below extends Table 5.4 to all years in the 2017 to 2024 period. Here 231 834 transitions by class teachers working in Grades 1 to 3 across two years in 10 991 non-small schools were considered. The patterns are very similar to those of Table 5.4, suggesting teachers follow learners in a minority of schools in a manner that is fairly consistent over time.

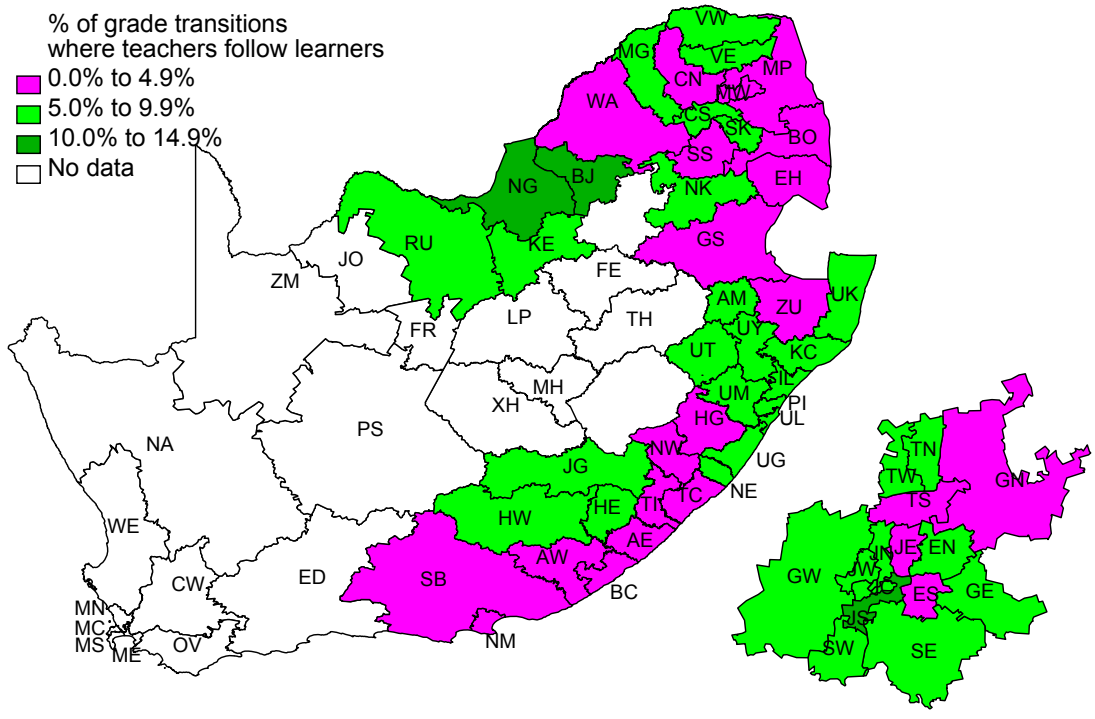
TABLE 5.5 Percentage of across-Grade Movements 2017–2024 with Learner-Following

	All public ordinary	Q1	Q2	Q3	Q4	Q5	Public special	Indep.	All
EC	4.4	4.5	4.1	4.9	3.0	2.0	5.7	4.6	4.4
GP	6.6	11.9	9.9	7.2	8.8	3.2	4.7	6.5	6.8
KN	6.0	5.3	5.6	5.5	8.8	7.6	7.9	4.6	6.0
LP	4.7	4.5	5.1	4.9	2.5	2.5	9.9	6.0	4.8
MP	5.0	4.9	6.2	4.1	5.1	4.3	0.0	4.5	5.0
NW	10.6	11.9	12.4	11.5	3.5	2.5	7.3	6.2	10.5
All	5.9	6.2	6.2	6.1	6.9	4.1	7.1	5.6	6.0

Note: The final column would reflect data from all 10 991 schools, as province was derived from the school's EMIS number. However, for the rest of the table, percentages exclude a few schools not linkable to the 2023 master list of schools. In all, there were 556 such schools, which are likely to be schools not existing in 2023.

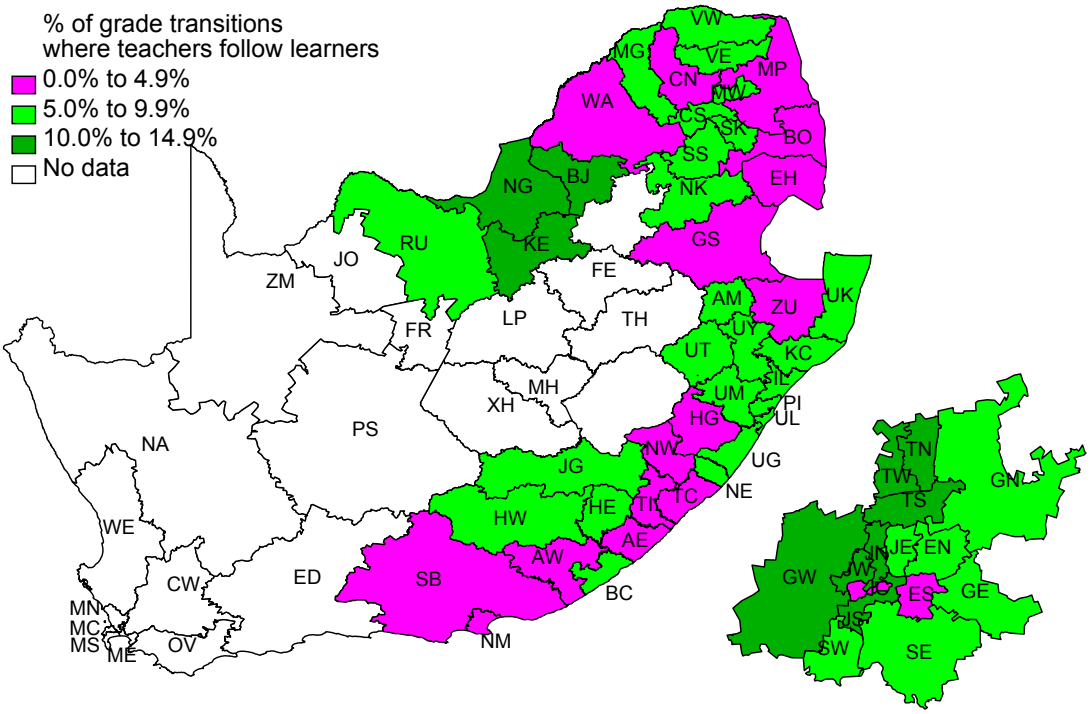
The following three maps illustrate the same statistics, by district. The second and third maps draw only from quintiles 1 to 3 public ordinary schools, while the first covers such schools across all quintiles. Comparing Figure 5.2, which looks at 2022–2023 transitions, to Figure 5.3, which looks at the situation five years before that, is telling. The districts with more following of learners tend to be the same. This is most noteworthy in the three provinces Limpopo, KwaZulu-Natal and Eastern Cape, where some districts appear to consistently stand out as being different.

FIGURE 5.1 Learner-Following by District 2022–2023



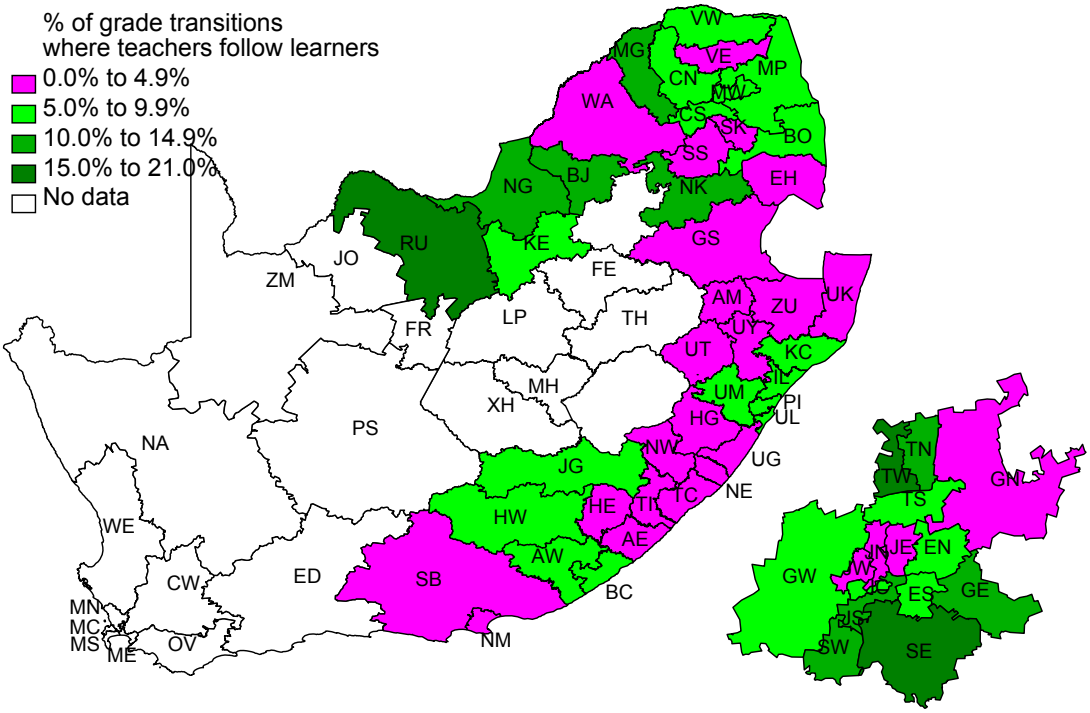
Note: Map draws from the data of 8 345 public ordinary schools.

FIGURE 5.2 Learner-Following by District 2022–2023, Quintiles 1 to 3



Note: Map draws from the data of 6 957 public ordinary schools in quintiles 1 to 3.

FIGURE 5.3 Learner-Following by District 2017–2018, Quintiles 1 to 3



Note: Map draws from the data of 6 154 public ordinary schools in quintiles 1 to 3.

According to Figure 5.4, the extent of learner-following does not vary much by school size[7]. Figure 5.5 reflects trends over time for 3 222 schools which were found for every year in the range 2017 to 2024 (2024 on the horizontal axis on the graph refers to movements between

7 The fact that there are schools with only one or two transitions reflects a number of situations. Transitions may be missing within the data, a school may be new and only offering grades 1 and 2, or transitions may have been filtered out, because for instance a teacher was teaching more than one grade.

2023 and 2024). Learner-following accounts for just over 5% of all transitions across the 3 222 schools. However, if in each year only schools with at least one learner-following transition are considered, the analysis is reduced to, for instance, 488 schools for 2018 and 702 schools for 2024. The percentage of the 3 222 schools with some following thus increases from around 15% to 19% (the right-hand vertical axis of Figure 5.5). The percentage of transitions in the reduced set of schools which involves following learners declines, however, from 40% to 26%. This would be consistent with more schools attempting learner-following, but with new learner-following schools being less intensive about doing this. Figure 5.6 confirms a less intensive process in later years.

FIGURE 5.4 The Extent of Learner-Following and School Size

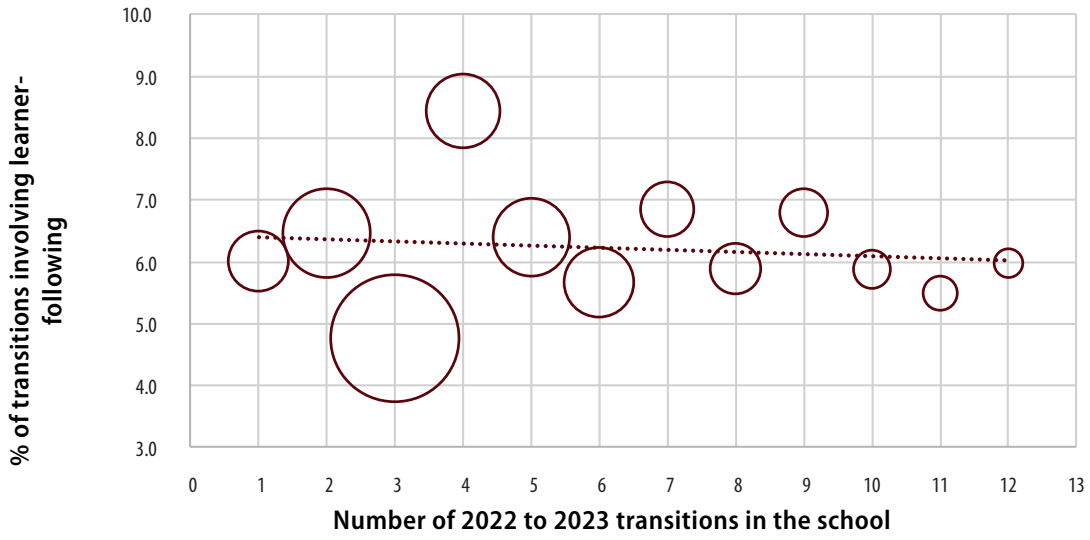


FIGURE 5.5 Learner-Following Trends over Time

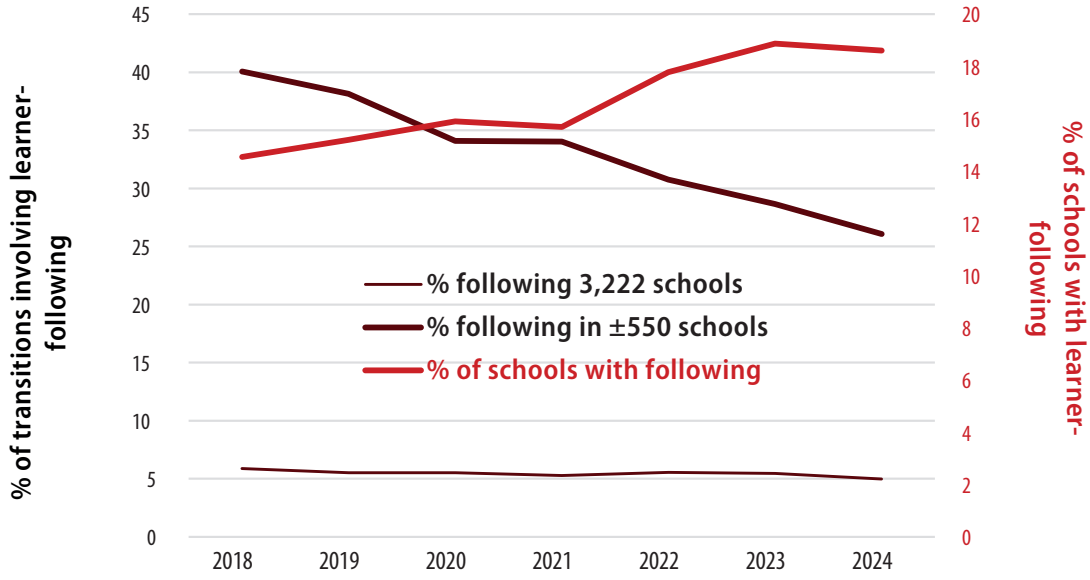
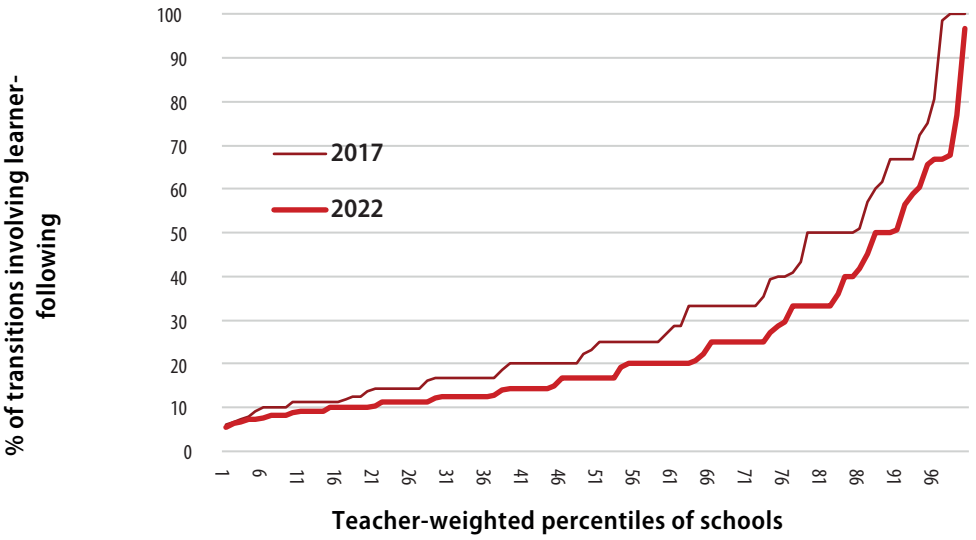


FIGURE 5.6 Distribution of Learner-Following Intensity



The following two tables display the relevant values for two actual schools, to facilitate an understanding of what is actually happening in schools. Ethubalethu from KwaZulu-Natal (Table 5.6) is a school with a considerable degree of learner-following. For 2022 to 2023 transitions, it would display an indicator value of 63% (this would be in line with the method used for Table 5.4), while for transitions over the longer 2017 to 2024 period, its value would be 46% (earlier Table 5.5). Where a cell is coloured light red, the teacher would be teaching the next grade and is likely to be following learners. The approach is not a perfect looping approach. For instance, Teacher 1, who often follows learners, did not follow learners between 2017 and 2018, or between 2021 and 2021.

TABLE 5.6 Learner-Following in ETHUBALETHU PRIMARY (KN)

Teacher	2017	2018	2019	2020	2021	2022	2023	2024
1	1	1	2	3	1	1	2	
2	1	2	3	1	2	2	3	2
3	1	2	3	2	3	2	3	1
4	2	3	1	1	2	3	1	3
5	2	3	1	1	2		3	
6	2	3	1	2	3	3	1	3
7	3	1	2	3	1	1	2	1
8	3	1	2	3	1	1	2	1
9				2	2	2	1	2

Note: Vaues in the table refer to grade taught in a specific year.

J K Zondi from Eastern Cape, illustrated in the next table, displays less learner-following, and would thus carry indicator values of just 33% for 2022 to 2023 and 13% for the longer 2017 to 2024 period.

TABLE 5.7 Learner-Following in J K ZONDI PRIMARY (EC)

Teacher	2017	2018	2019	2020	2021	2022	2023	2024
1	1	1	1	2				
2	2	2	2					
3	3	3	3					
4		1	1	2	2	2	3	3
5			1	1	1	1	1	1
6			1	3	3	3	2	2

Ethubalethu has learner-following for all seven of the seven years in the 2018 to 2024 range, according to Table 5.6. As seen in Figure 5.7, such consistency is found in only around 200 of the aforementioned 3 222 schools which had the required data. The most common number of years is just two, though for some 30% of schools the value is four or more years. This confirms that there are many schools among the 3 222 which pause the learner-following in certain years.

FIGURE 5.7 Years of Learner-Following per School

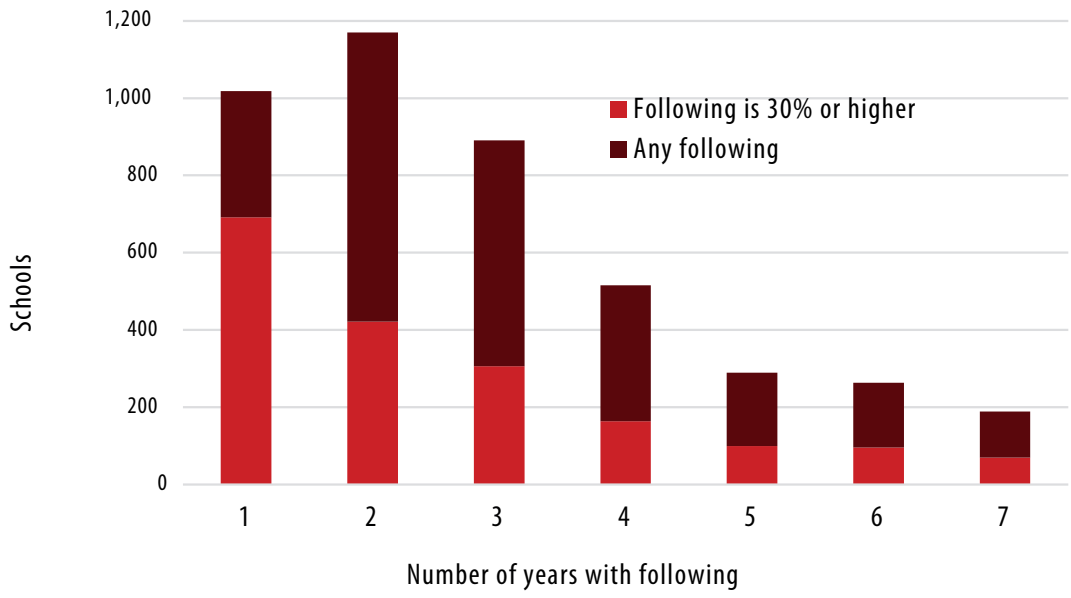


Table 5.9 below reflects a regression analysis that attempts to reveal the possible impacts of learner-following. Comparable assessment results were not easily available for the analysis, so grade repetition was used as an indication of learners' inability to cope with their learning.

Descriptive statistics are presented in Table 5.8. To illustrate, the relationship of interest was that between, say, the percentage of Grade 3 teachers with learner-following in 2023 in school X, and the percentage of Grade 2 learners who were repeaters in 2023 in school X. If learner-following assisted learning, as some research has indicated, one might expect a school with more learner-following in Grade 3 in 2023 to see proportionally fewer repeaters left behind in Grade 2 in 2023. To obtain the repeater statistics per year, school and grade, LURITS[8] learner-level enrolment data from the DBE were used.

TABLE 5.8 Descriptive Statistics for Grade Repetition Regression

Variable	min.	mean	s.d.	max.
Fraction repeating	0	0.08	0.09	1
Fraction following learners	0	0.09	0.25	1
Fraction with other change	0	0.04	0.17	1
Year of learner-following	0	2.12	1.42	4
Learners	1	81.79	50.95	405
Is GP	0	0.11	0.31	1
Is KN	0	0.31	0.46	1
Is LP	0	0.18	0.38	1
Is MP	0	0.10	0.30	1
Is NW	0	0.10	0.29	1
Is Q1 to Q4	0	0.91	0.29	1

In all, 65 310 year-, school- and grade-specific transitions were considered in the regression. There were five years, 2019 to 2023, recoded as years 0 to 4. These were the years when the following could be occurring. There were 9 551 schools, and two grades, Grades 2 and 3. Only public schools with a quintile classification were included. In line with the above analysis, learner-following in Grade 1 was not considered as Grade R was excluded from the data used. The mean across schools for the percentage of learners repeating the previous grade was 8%, as shown in Table 5.8. The mean across schools for the percentage of teachers following was 9% – this was higher than the roughly 6% seen in, for instance, Table 5.5 as Grade 1 as a current grade was excluded. An explanatory variable reflecting a grade change, but not a change implying learner-following, was constructed as an additional control. This would provide the percentage of transitions involving a move from Grade 1 to Grade 3 or Grade 3 to Grade 2. The purpose of this explanatory variable will be explained below. The number of learners in the current year, school and grade was a further explanatory variable, essentially controlling for school size. Dummy variables for all provinces other than Eastern Cape were constructed. Finally, whether a school was in quintiles 1 to 4 was included.

8 Learner Unit Record Information Tracking System. These data are described in for instance Department of Basic Education (2023, 2024).

TABLE 5.9 Regression of Grade Repetition on Learner-Following

Dependent variable: Fraction repeating the previous grade		
	Coefficient	**p**
Constant	0.0995***	0.000
Fraction following learners	–0.0042***	0.002
Fraction with other change	0.0006	0.761
Year of learner-following	–0.0098***	0.000
Learners	–0.0001***	0.000
Is GP	–0.0209***	0.000
Is KN	–0.0293***	0.000
Is LP	–0.0483***	0.000
Is MP	–0.0339***	0.000
Is NW	–0.0302***	0.000
Is Q1 to Q4	0.0396***	0.000
N		65 310
Number of schools		9 551
Adjusted R2		0.071

*Note: *** indicates that the estimate is significant at the 1% level of significance,*

The p values in Table 5.9 point to all but one of the explanatory variables being highly statistically significant, which is not surprising given the population (non-sample) nature of the data. Quintiles 1 to 4 schools have higher levels of repetition than quintile 5 schools. All five provinces listed in the table have levels of grade repetition which are lower than in the reference province, Eastern Cape. Larger schools have less repetition – having an additional 100 learners in the grade reduces the percentage repeating by one percentage point. Crucially, if the data point to learner-following, this is associated with a 0.4 percentage point reduction in grade repetition. This is in a context where on average 8% of learners are repeating. The association is thus not large, according to this analysis. However, the association is likely to emerge stronger with better data. In particular, if the data were able to distinguish teachers moving up one grade, but not following exactly the same -learners, the association could become stronger.

Importantly, what appears not to be supported is the hypothesis that schools simply moving teachers more from grade to grade over time are schools with lower grade repetition. The 'fraction with other change' variable exerts no influence on grade repetition. The grade change must be up one grade for the association with slightly lower grade repetition to come through.

Importantly, the above regression analysis is strongly suggestive, rather than being definitive. There are factors not included in the model which could be influential. In particular, what we cannot exclude is the possibility that it is particular kinds of teachers, above all good ones, who insist on following learners up the grades. In that case, it could be the quality of the teacher, and not just the act of following the learners, which explains the lower level of grade repetition.

Table 5.10 provides the results of a logit regression that attempts to predict when learner-following occurs. Here each observation is a teacher teaching a specific grade in a specific year, and the dependent variable is binary, with 0 or 1 indicating whether learner-following occurs. The binary nature of the dependent variable is what makes a logit analysis necessary.

On the whole, the available data predict the phenomenon only weakly – see the low R squared value of 0.017. Being ten years older as a teacher reduces the probability that one is following learners by just 0.2 percentage points. Being a more qualified teacher, with REQV 14 or above, is associated with a 0.5 percentage point reduction in learner-following. Having an additional 100 learners in a grade increases the probability of learner-following by one percentage point only. The strongest predictor is being in North West, which is associated with a probability that is 9 percentage points higher.

TABLE 5.10 Logit Analysis of Learner-Following and Contextual Factors

	Increase in probability associated with the characteristic	p
Age	–0.0002***	0.010
Is female	0.0200***	0.000
Is REQV 14+	–0.0053**	0.027
Is state-paid	0.0098**	0.015
Year	0.0002	0.790
Learners	0.0001***	0.000
Is GP	0.0570***	0.000
Is KN	0.0286***	0.000
Is LP	0.0034	0.322
Is MP	0.0075*	0.061
Is NW	0.0930***	0.000
Is Q1 to Q4	0.0380***	0.000
N		110 575
Number of schools		9 540
Pseudo R2		0.017

Note: Stata command 'logit' used, followed by 'mfx compute'.

One thing that stands out in the descriptive statistics of Table 5.11 is how few male teachers there are in the Foundation Phase. Of the teachers in the data used for the last regression, 98% are female.

TABLE 5.11 Descriptive Statistics for the above Logit Regression

Variable	min.	mean	s.d.	max.
Age	18	47.52	9.52	76
Is female	0	0.98	0.15	1
Is REQV 14+	0	0.85	0.36	1
Is state-paid	0	0.95	0.22	1
Year	0	2.19	1.42	4
Learners	1	103.13	58.45	405
Is GP	0	0.16	0.37	1
Is KN	0	0.30	0.46	1
Is LP	0	0.16	0.37	1
Is MP	0	0.10	0.30	1
Is NW	0	0.10	0.30	1
Is Q1 to Q4	0	0.87	0.33	1

The policy implications of this section are discussed in Section 5.5.

5.4 Grade and Subject Specialisation in Grades 4 to 7

Grades 1 to 3 function very differently to Grades 4 to 7 when it comes to the use of teaching time[9]. Teachers teaching Grades 1 to 3 rarely spend time teaching Grades 4 to 7, and vice versa. In the six-province dataset used for the current analysis, only 2% of Grades 1 to 7 teachers in public ordinary schools teach across both phases. In the new data, 95% of teachers teaching just in the Grades 1 to 3 range teach just one grade. The figure is a much lower 40% for Grades 4 to 7 teachers. Thus, Grades 4 to 7 teachers are mostly considered subject teachers, available to teach across several grades, and not single-grade, and possibly also single-class teachers, as is the case in Grades 1 to 3. Given the different dynamics, the two phases need to be examined separately.

This section will illustrate what subjects Grades 4 to 7 teachers actually focus on, even if they were trained to teach all subjects. The analysis is confined to public ordinary schools with a valid quintile value. These schools cover 92% of Grades 4 to 7 teachers in the six-province dataset, and are of special interest to policymakers. Moreover, the analysis focuses on the situation in 2023, a recent year with good data – see earlier Table 5.1.

9 Van der Berg ***et al***, 2023: 51.

It has been found, based on old data from 2011, that middle-class (higher quintile) schools are more inclined to limit Grades 4 to 7 educators to single grades[10]. It has been speculated that schools serving poorer communities, which often struggle to attract good teachers, identify teachers who are good in specific subjects and spread these teachers across several grades, requiring them to teach mostly the subject or subjects they are best at. This hypothesis is not supported by the new data, as explained below.

Table 5.12 is designed to reflect grade and subject specialisations in one school. Several such school profiles were generated programmatically from the new data. The school Nkambako in Limpopo displayed in the table is not unusual. Nine of the ten key subjects, or groups of subjects, are represented as column headings – Afrikaans is excluded as the school did not offer this language. The nine African languages were grouped into one category, 'African language', to simplify the representation. Teachers are very unlikely to teach more than one African language: only 0.4% of African language teachers do so. However, the offering of more than one African language in a school is not that uncommon. Though only 4% of teachers in the provinces outside Gauteng are in such a school, the figure is 31% for the highly multilingual Gauteng. Not differentiating between African languages in an analysis such as Table 5.12 clearly removes important information but also helps to produce a more compact analysis.

Turning to non-language subjects, columns coloured grey in the table represent subjects that change between Grade 6 and Grade 7. The single subject 'natural sciences and technology' in Grade 6 becomes two separate subjects, natural sciences and technology, in Grade 7. A Grades 4 to 6 teacher is counted twice in this analysis, across each of the two columns for the two subjects. A further two subjects, 'economic management sciences' and 'creative arts', are introduced in Grade 7. There were a number of very small subjects falling outside the regular curriculum which were excluded from the analysis. The largest of these was 'coding and robotics', accounting for just 0.1% of the teaching responsibility observations in the data.

10 Department of Higher Education and Training, 2020: 33.

TABLE 5.12 Grades 4 to 7 in 2023 in NKAMBAKO (LP)

Teacher	Grades	Subjects	English	African language	Mathematics	Natural Sciences	Technology	Social Sciences	Life Orientation	Economic Management Sciences	Creative Arts
1	1	1	4								
2	2	2	5		4						
3	2	4	6				7		6		7
4	2	1	67								
5	1	1			4						
6	1	1			6						
7	2	1			45						
8	2	1			67						
9	2	2				45	45				
10	2	4				67	6		7	7	
11	2	3		4				4	5		
12	2	1						67			
13	1	1		5							
14	2	1		67							

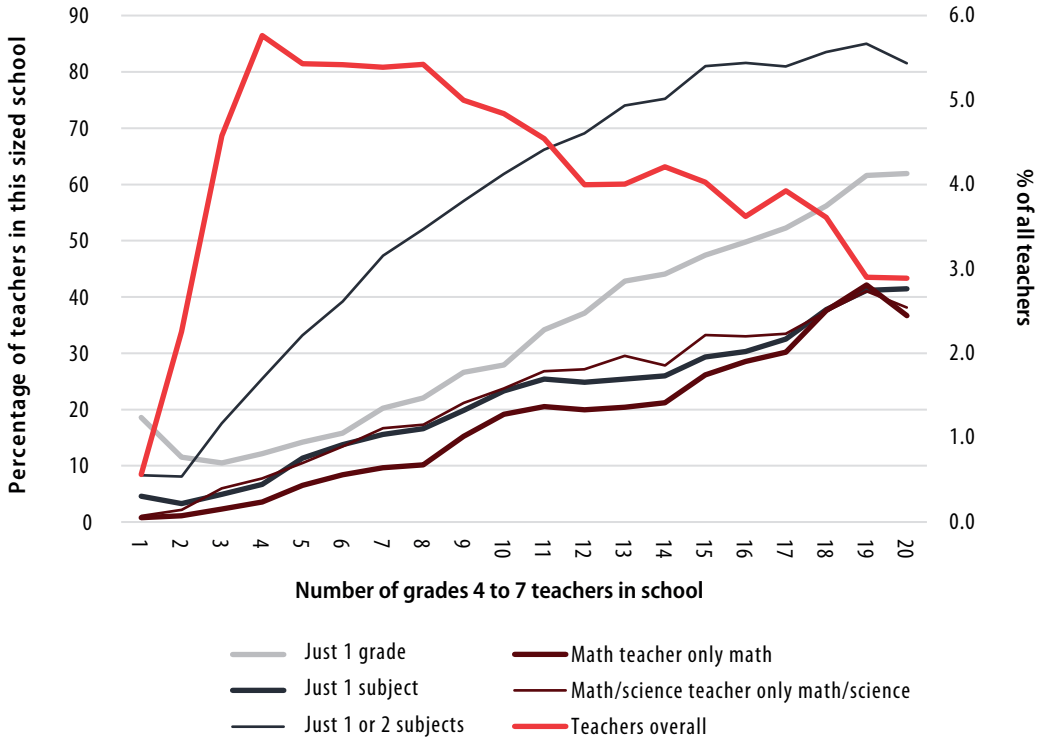
In Nkambulo, like in many other schools, mathematics teachers focus considerably on just mathematics. Teachers 5, 6, 7 and 8 in Table 5.12 teach only mathematics, in either one grade (for instance '4') or two grades (see for instance '45'). A fifth mathematics teachers, Teacher 2, teaches both mathematics and English.

As one might expect, specialisation becomes more common the larger the school. This is the focus of Figure 5.8. As a school's size, in terms of the number of Grades 4 to 7 teachers, increases, higher levels of grade and subject specialisation are seen. This is to be expected. As the number of classes in one grade increases, the likelihood that a mathematics teacher will concentrate just on that grade increases. Mathematics teaching in just one grade may then be enough to fill up the weekly roster of a teacher. Similarly, in a larger school it becomes more likely that a good mathematics teacher will be able to focus on mathematics and nothing else. Figure 5.8 illustrates, for instance, that among the approximately 33% of teachers who teach some mathematics[11], some 40% will teach only this subject when the school reaches a size of 20 Grades 4 to 7 teachers. In a school of this size as many as 80% of teachers teach just one or two subjects, though all teachers have been trained to teach across the curriculum, or across seven non-language subjects[12] and two language subjects.

11 See last row of Table 5.14.

12 This is a reference to the seven non-language subjects of Table 5.12.

FIGURE 5.8 Subject and Grade Specialisation by School Size



Note: The red curve should be read against the right-hand vertical axis.

The red curve of Figure 5.8 shows that the most common school size, using the metric of the graph, is four Grades 4 to 7 teachers. Yet half of all teachers are in schools with 12 or more of these teachers (there are large schools to the right of 20 teachers not shown in the graph). Figure 5.9 illustrates the distribution of school size by province, while Figure 5.10 does the same for quintiles. Eastern Cape's schools are especially small, while Gauteng's schools are especially large. Quintiles 1 and 2 schools are especially small. Given the relationship between school size and degree of specialisation, differences across, say, provinces in the specialisation statistics need to be interpreted with caution.

FIGURE 5.9 School Sizes by Province

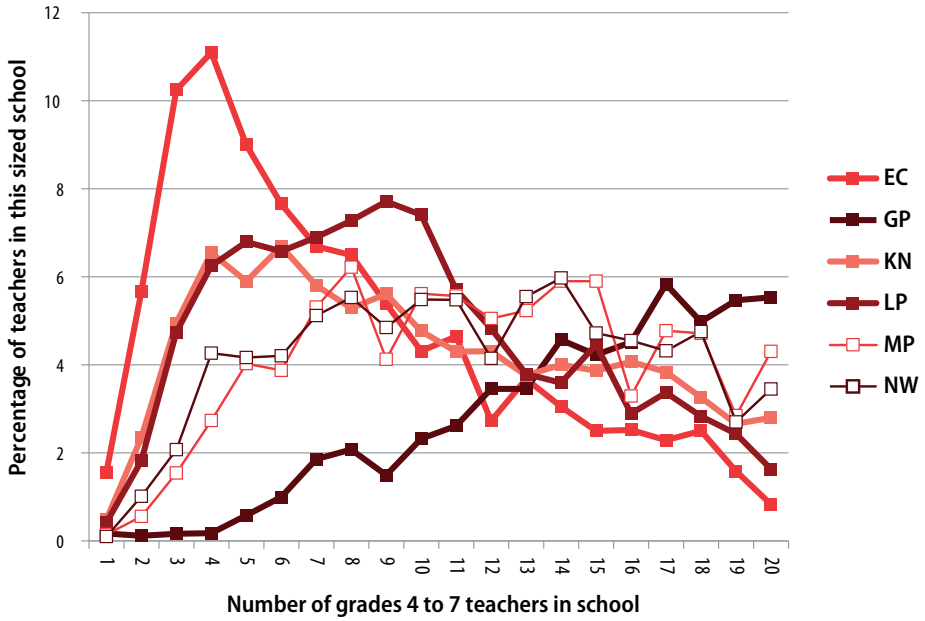


FIGURE 5.10 School Sizes by Quintile

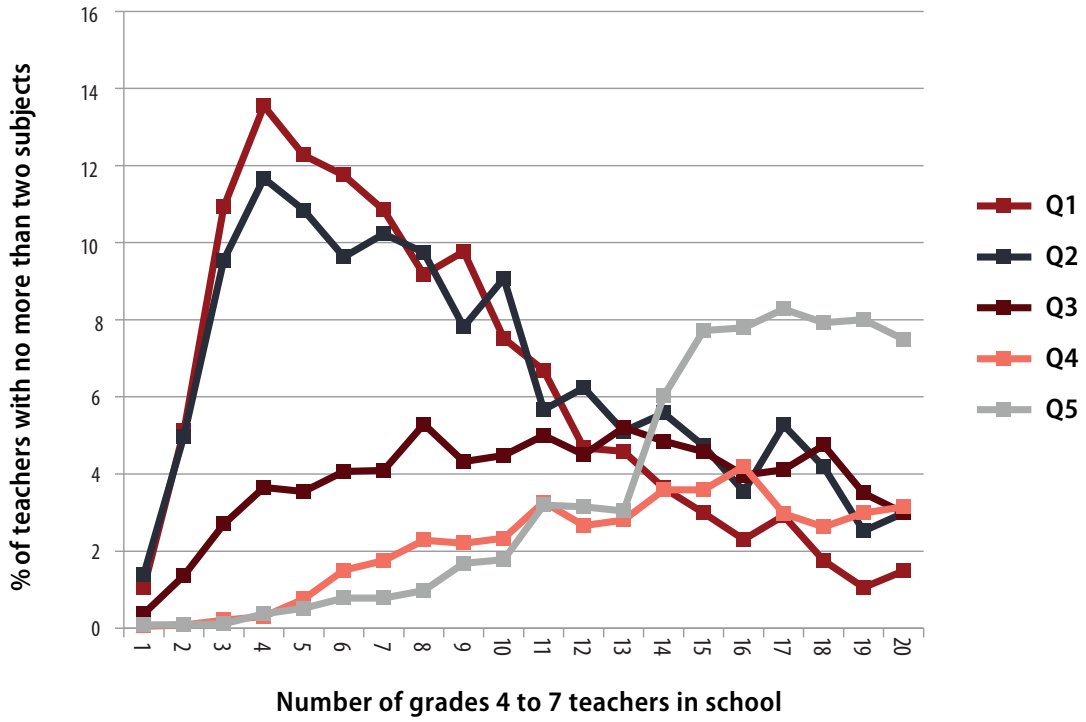


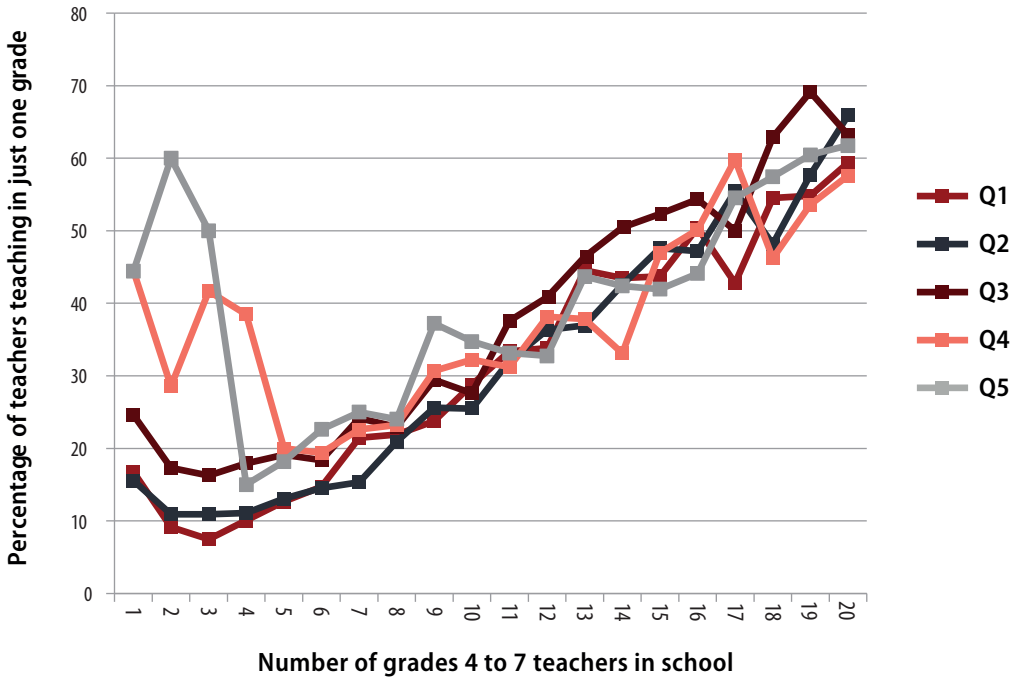
Table 5.13 updates an earlier analysis using 2011 data of the across-quintile differences in grade specialisation. The differences across quintiles are even larger here compared to those seen in the earlier analysis[13]. For instance, 9% of Grade 4 teachers in quintile 1 schools teach only that grade, against 38% for quintile 5. This would be consistent with more class teaching in quintile 5 schools. However, this is not because quintile 5 schools have a different pedagogical model. Quintile 5 schools are, on average, larger, making grade specialisation easier to achieve. Figure 5.11 below indicates that for similarly sized schools, grade specialisation is roughly the same across the quintiles. (The jumpiness of the quintiles 4 and 5 curves for very small schools is due to there being very few such schools, meaning outlier schools easily influence the statistics.)

TABLE 5.13 Percentage of Teachers Teaching in just one Grade by Quintile

Grade	Q1	Q2	Q3	Q4	Q5
4	9	14	26	30	38
5	6	9	18	22	27
6	6	8	17	21	26
7	20	20	28	32	36

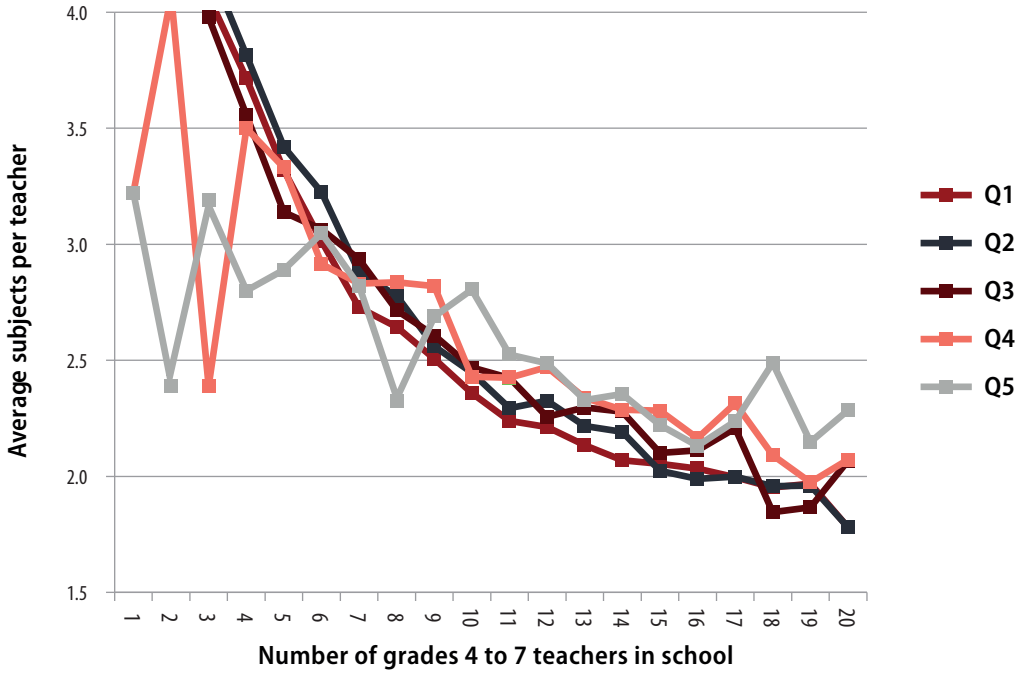
13 Department of Higher Education and Training, 2020: 33.

FIGURE 5.11 Teaching just one Grade by Quintile and School Size



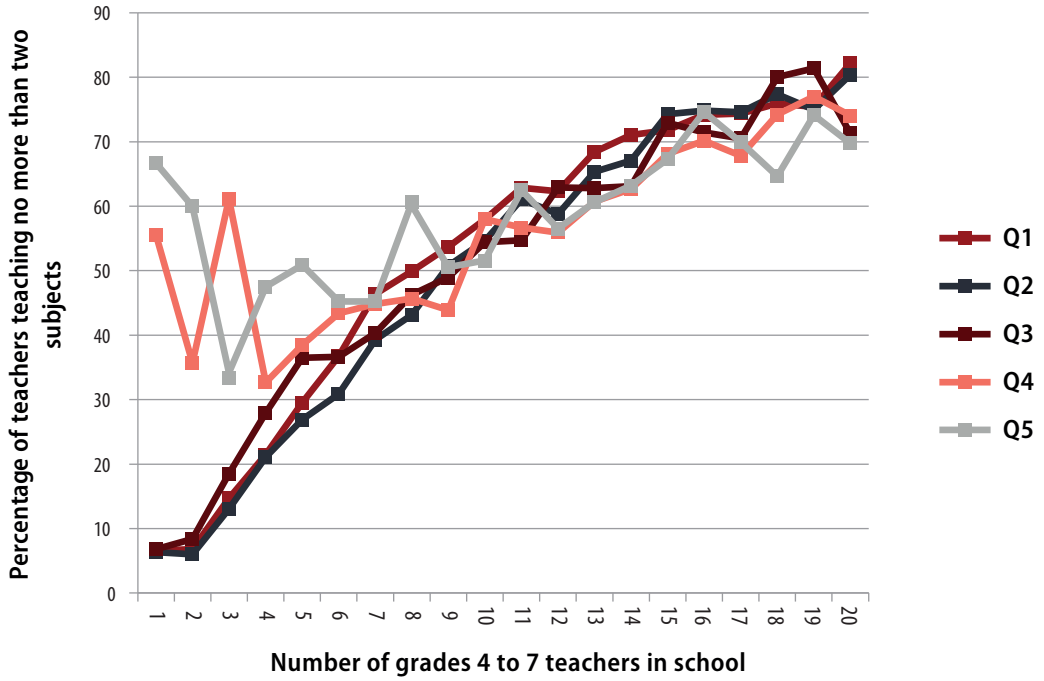
There appears to be slightly less subject specialisation in quintile 5 schools, compared in particular to quintile 1 schools, even when schools of a similar size are compared. This can be seen in Figure 5.12 below, which illustrates the average number of subjects, out of ten, taught per teacher. The overall average is 2.6 subjects per teacher. The full set of ten are the subjects, or cluster of subjects, in the case of the nine African languages, underpinning Table 5.12[14]. The same finding of slightly more subject specialisation in quintile 1 schools emerges from Figure 5.13, which focuses on teachers teaching no more than two subjects. But the differences are small. The statistics behind Figure 5.13 point, for instance, to 71% of quintile 1 teachers in schools of 12 to 20 teachers teaching no more than two subjects, against 68% for quintile 5 schools.

FIGURE 5.12 Subjects per Teacher by Quintile and School Size



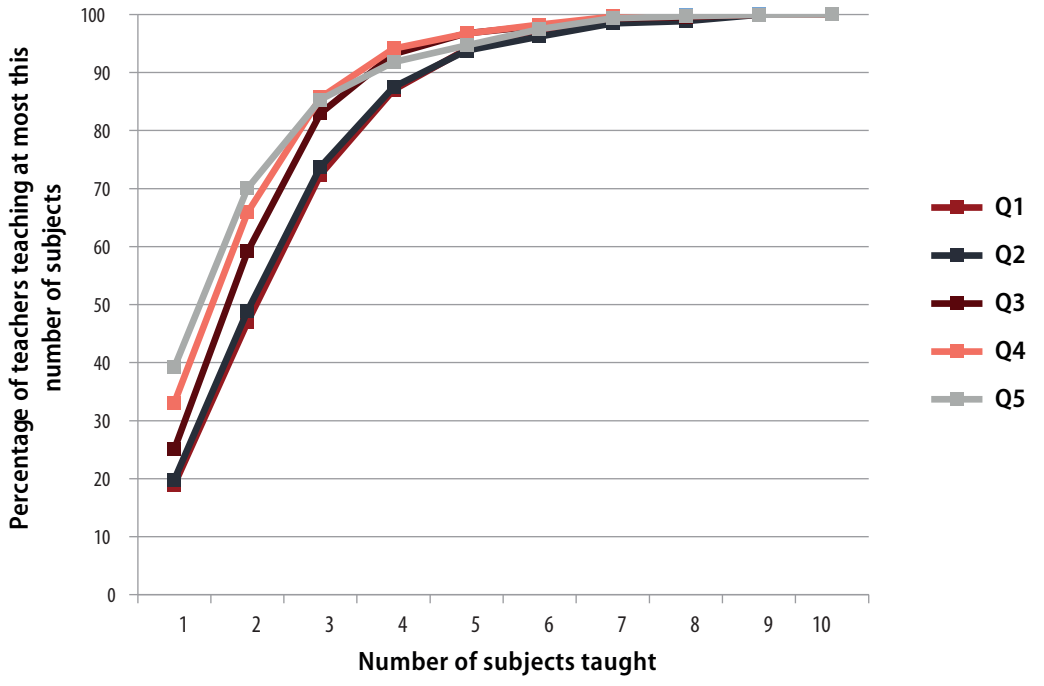
14 Adding Afrikaans would produce ten.

FIGURE 5.13 Teaching just one or two Subjects by Quintile and School Size



However, overall there is clearly less subject specialisation in schools serving poorer communities, largely because such schools tend to be smaller and thus less conducive to specialisation. This can be seen in Figure 5.14, which does not control for school size. To illustrate, in quintiles 1 and 2 schools, only some 20% of teachers teach one subject, against 40% for quintile 5. And in quintiles 1 and 2 just under half of teachers teach one or two subjects, against a figure of 70% for quintile 5 schools.

FIGURE 5.14 Subjects Taught by Quintile



The following ten tables use the basic structure introduced for Table 5.12, but present aggregate statistics for various groups of schools. The objective is in part to detect differences across these groups. Moreover, people working with specific groups of schools are likely to want to see statistics specific to their group.

To illustrate, Table 5.14, which deals with all public schools with a valid quintile value in 2023, offers the top 20 of 706 combinations of the ten subjects, or clusters of subjects. These top 20 account for 52% of teachers. Many of the non-included combinations are insignificant, and include just one or two teachers. The most common combination, accounting for 6% of all teachers, is teaching mathematics only. The average number of grades taught per teacher here is 1.4. In all, 33% of Grades 4 to 7 teachers teach mathematics – see the bottom row. Some 40% of mathematics teachers are covered within the top 20 combinations shown in the table. It is common for these teachers to teach a combination of mathematics, natural sciences and technology – in Grades 4 to 6 this would be two subjects as the latter two are considered one subject. The twelfth row in the table indicates that teaching mathematics and life orientation is a further relatively common combination. And so on. The reason why none of the top 20 combinations in Table 5.14 involve economic management sciences or creative arts – the last two columns – is that these are relatively small subjects as they only start in Grade 7.

TABLE 5.14 Subject Combinations for Whole Grades 4 to 7 System

English	Afrikaans	African language	Mathematics	Natural Sciences	Technology	Social Sciences	Life Orientation	Economic Management Sciences	Creative Arts	Cumulative % of teachers
			1.4							6
1.4										11
		1.6								15
			1.7	1.7	1.6					19
							1.6			22
1.4							1.3			25
		1.6					1.3			28
		1.6				1.5				31
						1.6				33
1.5						1.5				36
				1.7	1.6					38
			1.4				1.2			40
						1.6	1.4			42
1.4				1.5	1.4					44
		1.6		1.5	1.5					45
1.5						1.6	1.4			47
		1.6				1.6	1.3			48
				1.6	1.5		1.4			49
			1.4			1.3				51
	1.5									52
34	5	29	33	32	33	33	39	12	12	

Note: Cell values represent the average number of grades taught. The top 20 subject combinations for Grades 4 to 7 teachers are shown, with the most common combinations coming first. Horizontal lines dividing groups of five combinations are simply intended to facilitate the reading of the table. The last column is the cumulative percentage of educators – 100% here would represent 108 745 teachers. The last row is the percentage of teachers teaching that subject.

The following nine tables, for nine sub-groups within the data, display patterns which are similar to those seen in the data as a whole. But some differences are noteworthy. The average number of grades taught by teachers in smaller schools (Table 5.15) is relatively high, given that the scale of the school allows for less grade specialisation. The same applies to Eastern Cape (Table 5.18), with its many small schools. Smaller schools are more likely to have a major combination which covers both a language and mathematics. On the whole, teaching both a language and mathematics is not that uncommon. Using all the combinations behind Table 5.14, and not just the top 20 combinations, reveals that 13% of all teachers teach across both subjects – the value for quintiles 1 to 3 schools is also 13%, with 11% for quintile 5 schools. Combining mathematics and social sciences is a little less common, with 9% of teachers overall experiencing this. Larger schools, which have more subject specialisation, tend to have fewer combinations. Hence the top 20 combinations in Table 5.16 encompass as many as 71% of all teachers in larger schools.

Though the KwaZulu-Natal table (Table 5.20) does not clearly point to less specialisation, in one regard this province is exceptionally non-specialised: 17% of all teachers teach mathematics and a language, and 13% teach mathematics and social sciences. As mentioned above, the overall statistics are 13% and 9% and for the five provinces other than KwaZulu-Natal they are 11% and 7%. The KwaZulu-Natal statistics are even higher than those for Eastern Cape, with its concentration of smaller schools. In Eastern Cape, 16% of teachers teach mathematics and a language, and 11% teach mathematics and social sciences.

TABLE 5.15 Subject Combinations for Smaller Schools (up to 11 Teachers)

English	Afrikaans	African language	Mathematics	Natural Sciences	Technology	Social Sciences	Life Orientation	Economic Management Sciences	Creative Arts	Cumulative % of teachers
			2.1	2.0	1.9					4
			1.9							7
		2.1								10
		2.0				1.9				13
		2.0					1.6			15
2.0										17
1.9						1.9				20
2.0							1.6			22
1.6		1.6	1.6	1.6	1.6	1.6	1.6			24
							1.5			26
		1.8				1.8	1.4			28
1.8						1.8	1.5			29
						1.8				31
1.8				1.9	1.8					32
			1.9				1.4			34
		2.0		1.9	1.8					35
			1.9	1.9	1.8		1.4			37
				2.1	2.0					38
2.9		2.8	2.9	2.8	2.8	2.8	2.8	1.0	1.0	39
						2.2	1.7			40
40	2	37	39	39	41	39	45	17	17	

Note: 100% here would represent 53 500 teachers. See also note to Table 5.14.

TABLE 5.16 Subject Combinations for Larger Schools (12 or more Teachers)

English	Afrikaans	African language	Mathematics	Natural Sciences	Technology	Social Sciences	Life Orientation	Economic Management Sciences	Creative Arts	Cumulative % of teachers
			1.3							10
1.3										17
		1.4								23
							1.6			28
1.1							1.2			32
						1.5				36
				1.6	1.5					40
		1.2					1.2			44
			1.2	1.2	1.2					47
		1.2				1.2				50
1.1						1.2				53
			1.1				1.1			56
						1.3	1.3			59
	1.4									61
1.1				1.2	1.2					63
				1.3	1.3		1.2			65
			1.1			1.1				67
		1.2		1.2	1.2					69
				1.3	1.2	1.2				70
1.1						1.2	1.1			71
31	8	23	30	27	28	29	36	8	8	

Note: 100% Here Would Represent 55 245 Teachers. See Also Note To Table 5.14.

TABLE 5.17 Subject Combinations for Quintiles 1 to 3

English	Afrikaans	African language	Mathematics	Natural Sciences	Technology	Social Sciences	Life Orientation	Economic Management Sciences	Creative Arts	Cumulative % of teachers
			1.5							5
		1.6								10
1.5										14
			1.8	1.7	1.6					18
		1.6					1.4			21
		1.6				1.5				24
1.5							1.4			27

1.5						1.5				30
							1.4			33
						1.6				35
				1.7	1.6					37
			1.4				1.2			39
1.4				1.5	1.5					41
		1.6		1.5	1.5					43
						1.6	1.4			44
		1.7				1.6	1.4			46
1.6						1.6	1.4			47
			1.4			1.3				49
1.6		1.6	1.6	1.6	1.6	1.6	1.6			50
				1.7	1.6		1.4			51
34	1	34	34	34	35	34	39	13	13	

Note: 100% here would represent 84 962 teachers. See also note to Table 5.14.

TABLE 5.18 Subject Combinations for Eastern Cape

English	Afrikaans	African language	Mathematics	Natural Sciences	Technology	Social Sciences	Life Orientation	Economic Management Sciences	Creative Arts	Cumulative % of teachers
			2.2	2.1	2.0					5
			1.8							9
1.8										12
		1.9								16
		2.0				1.9				18
1.9							1.6			21
1.9						1.8				24
		2.0					1.6			26
							1.8			29
						1.8				31
1.7		1.7	1.8	1.7	1.7	1.7	1.7			33
				2.0	1.9					35
			1.8				1.4			36
2.0						2.0	1.7			38
1.8				1.7	1.7					39
						2.0	1.7			41
		2.1				2.0	1.6			42
3.3		3.3	3.3	3.2	3.2	3.3	3.2	1.0	1.0	43
		2.1		2.0	1.9					45
				2.2	2.1		1.7			46
36	5	31	36	37	39	36	42	16	16	

Note: 100% here would represent 21 555 teachers. See also note to Table 5.14.

TABLE 5.19 Subject Combinations for Gauteng

English	Afrikaans	African language	Mathematics	Natural Sciences	Technology	Social Sciences	Life Orientation	Economic Management Sciences	Creative Arts	Cumulative % of teachers
			1.3							10
1.3										17
	1.3									21
							1.8			25
1.2							1.3			29
				1.6	1.5					32
						1.6				35
		1.7								39
			1.3	1.3	1.3					41
		1.4					1.3			44
						1.4	1.4			47
1.2						1.2				50
			1.2				1.2			52
		1.4				1.3				55
				1.4	1.4		1.3			57
1.2				1.3	1.3					59
	1.2						1.2			60
		1.4		1.4	1.4					62
			1.2			1.2				63
				1.3	1.3	1.4				64
28	10	20	28	24	25	26	34	8	8	

Note: 100% here would represent 18 071 teachers. See also note to Table 5.14.

TABLE 5.20 Subject Combinations for KwaZulu-Natal

English	Afrikaans	African language	Mathematics	Natural Sciences	Technology	Social Sciences	Life Orientation	Economic Management Sciences	Creative Arts	Cumulative % of teachers
			1.4							5
		1.5								10
1.4										14
							1.4			17
1.4							1.3			20
		1.5					1.3			23
			1.7	1.6	1.5					26
		1.5				1.4				28

						1.4				31
1.4						1.4				33
			1.3				1.2			35
				1.6	1.5					37
1.5		1.5	1.5	1.5	1.5	1.5	1.5			39
1.4				1.5	1.4					40
						1.5	1.3			42
1.5						1.4	1.3			43
		1.6				1.5	1.3			45
			1.4			1.2				46
		1.5		1.4	1.4					48
				1.4	1.4		1.3			49
16	6	12	16	14	14	15	20	5	5	

Note: 100% here would represent 31 451 teachers. See also note to Table 5.14.

TABLE 5.21 Subject Combinations for Limpopo

English	Afrikaans	African language	Mathematics	Natural Sciences	Technology	Social Sciences	Life Orientation	Economic Management Sciences	Creative Arts	Cumulative % of teachers
			1.4							5
			1.6	1.5	1.5					9
		1.5								13
1.4										17
		1.5				1.4				20
		1.4					1.3			24
1.4						1.5				27
1.3							1.3			30
							1.4			32
						1.6				34
			1.3				1.2			36
				1.7	1.6					38
		1.5				1.5	1.3			40
1.3				1.4	1.4					42
		1.5		1.4	1.4					44
						1.6	1.3			45
1.4						1.5	1.3			47
				1.5	1.5		1.2			48
			1.3			1.3				49
1.3			1.4							50
35	1	33	34	33	34	33	39	13	13	

Note: 100% here would represent 17 149 teachers. See also note to Table 5.14.

TABLE 5.22 Subject Combinations for Mpumalanga

English	Afrikaans	African language	Mathematics	Natural Sciences	Technology	Social Sciences	Life Orientation	Economic Management Sciences	Creative Arts	Cumulative % of teachers
			1.4							9
1.3										15
		1.5								21
				1.6	1.5					25
							1.5			28
						1.5				32
1.3							1.2			35
		1.5					1.3			38
			1.5	1.5	1.4					41
1.4						1.5				44
		1.4				1.3				47
						1.5	1.3			49
			1.3				1.2			51
1.3				1.4	1.4					53
		1.4		1.3	1.4					55
			1.4			1.2				56
				1.4	1.4		1.3			58
	1.5									59
				1.6	1.5	1.4				60
1.3						1.4	1.3			62
29	4	25	28	27	27	27	32	9	9	

Note: 100% here would represent 10 679 teachers. See also note to Table 5.14.

TABLE 5.23 Subject Combinations for North West

English	Afrikaans	African language	Mathematics	Natural Sciences	Technology	Social Sciences	Life Orientation	Economic Management Sciences	Creative Arts	Cumulative % of teachers
			1.4							7
1.4										13
		1.5								18
			1.5	1.5	1.4					21
1.5							1.4			25
						1.6				29
		1.5					1.3			32
							1.5			35
1.4						1.5				39
				1.8	1.7					42
		1.4				1.4				44
1.3				1.6	1.5					46
						1.5	1.4			48
			1.3				1.2			50
1.5						1.5	1.3			51
		1.5		1.5	1.5					53
	1.5									54
			1.2			1.3				56
				1.7	1.7		1.5			57
				1.9	1.7	1.5				58
31	4	25	30	27	28	29	34	11	11	

Note: 100% here would represent 9 840 teachers. See also note to Table 5.14.

5.5 Policy Conclusions

There are important and lively debates in South Africa about how to improve foundational learning in primary schools[15]. Tackling South Africa's relatively low learning outcomes is a central theme in the country's education policy debates. How might the current chapter assist?

Class sizes at the primary level are clearly excessive and present an obvious barrier to improving learning. This is especially so when there are many more learners in a classroom than what the classroom was built to accommodate[16]. Much of the debate around reducing class sizes focusses on the largely unaffordable solution of employing many more teachers. What is often forgotten are various efficiency-focussed interventions, which could also reduce class sizes and are more realistic from a budget perspective[17]. One approach would be to reduce grade repetition in the early grades, for instance by placing a cap on what percentage of learners may repeat a grade in any year. Such a cap does not exist in South Africa. In a context where 8% of learners are repeating in the earliest grades[18], eliminating grade repetition would essentially reduce class sizes by 8%.

The current chapter has brought to the fore a matter which has barely been considered previously, namely that allowing teachers to follow learners up the grades in Grades 1, 2 and 3 appears to reduce grade repetition. The link is probably not a strong one, even if it appears likely that better data could reveal a larger effect. Yet learner-following should probably be considered a part of any strategy to reduce grade repetition.

If one assumes that learner-following reduces grade repetition because learners learn better, and are thus more likely to be promoted to the next grade, then learner-following, like most quality interventions, would work through two mechanisms. On the one hand, it would improve learning directly, because teachers develop a better understanding of individual learners and their learning challenges. On the other, it would improve learning indirectly, by reducing class sizes, something achieved through less repetition.

The data available for the current chapter were not able to pin down rigorously cause and effect. More certainty could be achieved through an analysis that included data on which teachers teach which learners each year, and standardised measures of learning outcomes. The former can probably be derived from SA-SAMS. The latter are only readily available for the early grades in Western Cape and Gauteng[19]. School-based assessment (SBA) results found in SA-SAMS are likely to be problematic for this analysis as their degree of standardisation across schools is weak[20].

Turning to Grades 4 to 6, this chapter has demonstrated that lower levels of grade specialisation in schools serving poorer communities is not due to a different educational strategy aimed

15 Department of Basic Education, 2020; 2030 Reading Panel, 2024; Gustafsson, 2024.
16 Department of Basic Education, 2024: 32.
17 Wills, 2023.
18 Table 5.8.
19 Gustafsson, 2024.
20 Department of Basic Education, 2020: 51.

at making better use of scarce subject-specific skills, but rather due to these schools being on average smaller. When schools of a similar size are compared across quintiles, or provinces, the spread of teaching responsibilities across grades and subjects emerges as remarkably uniform. This could point to a 'natural' optimum approach to the use of teacher time, which differs by school size, and which is followed by most schools.

Though Grades 4 to 7 teachers are trained to teach two language subjects plus the seven non-language subjects, on average these teachers teach just 2.6 subjects on average. This rises to around 4.0 in small schools[21]. Does this mean that pre-service training at universities is spreading the focus of student teachers too widely across subjects? Should the training of Grades 4 to 7 teachers look more like the training of Grades 8 to 12 subjects, where specialisation in two subjects is the norm[22]? A hybrid approach between the current Grades 4 to 7 and the current Grades 8 to 12 approach is of course a possibility. This policy question seems to warrant more attention than is currently the case, and answering it can be facilitated by further analysis of the SA-SAMS data. In particular, what the above analysis has not explored is the extent to which Grades 4 to 7 subject specialisations are stable over time.

It has been noted that the online DDD viewing screens should become a more integral part of the schooling system[23]. By implication, this means that the role of DDD in promoting better learning outcomes should be made more explicit. Such a 'theory of change' could help to sharpen the design of DDD. The current chapter has pointed to a few possible enhancements. The extent of learner-following could be made explicit in the viewing screens. A 'map' of how each school spreads the teaching responsibilities of each teacher, along the lines of Table 5.12, could be useful for those planning school interventions and in-service training.

21 Figure 5.12.
22 Government Notice 111 of 2015.
23 Beyond the Numbers Report, 2019.

CHAPTER 6
CONCLUSION

This report builds on longitudinal data to provide critical insights into South Africa's education system, focusing on key issues of learner progression, subject choices, absenteeism and teacher deployment. These findings underscore the systemic challenges and opportunities that continue to shape educational outcomes across the country.

The analyses presented reveal how the **COVID-19 pandemic** and subsequent changes in school promotion policies significantly influenced grade progression and matric results. While promotion leniency allowed more learners to advance, particularly in Grade 10, it exacerbated foundational skill deficits for those not fully prepared. By 2022, matric pass rates were approximately 21% higher than anticipated, with much of this increase linked to policy changes rather than academic improvement. These trends highlight the tension between maintaining learner progression and addressing learning gaps that persist across the system.

In addition to promotion dynamics, the report examines **subject choices in the Further Education and Training (FET) phase,** where learners must decide between Mathematics and Mathematical Literacy. While Mathematics is essential for STEM careers and other university programmes, its difficulty discourages many learners, particularly those in poorer schools, from pursuing it. As a result, learners often face high failure rates when they lack sufficient preparation in earlier grades. The pandemic further accelerated the shift towards Mathematical Literacy in disadvantaged contexts, limiting access to tertiary opportunities. These findings emphasise the importance of foundational mathematical skills developed in earlier phases of schooling.

This report also introduces new perspectives on **early entry into Grade 1** and its long-term implications for learner performance. Evidence indicates that learners who enter Grade 1 at a young are at greater risk of repeating. These trends are particularly pronounced in schools serving lower socio-economic communities, where systemic inequalities compound learning challenges. Addressing age-appropriate school entry and strengthening early-grade

readiness remain essential for improving long-term progression and performance outcomes.

Insights into **linguistic interdependence** further illuminate the link between Home Language proficiency and later academic success. The transition to English as the language of learning and teaching (LOLT) in Grade 4 poses significant challenges for learners who lack a strong foundation in their Home Language. Longitudinal data demonstrate that higher achievement in Grade 3 Home Language is closely associated with better performance in English First Additional Language (EFAL) in subsequent years. However, boys continue to face greater risks of repetition and poorer performance, underscoring the need to address gendered disparities in foundational learning outcomes.

The report's findings are grounded in high-quality administrative data sources, including SA-SAMS and the DDD programme. While these datasets are rich and valuable, further improvements in data consistency and completeness will enhance their utility for longitudinal analysis. Developing balanced panels and expanding coverage across schools and provinces will provide even deeper insights into trends in repetition, progression, and absenteeism.

This analysis reflects ongoing efforts to understand and address systemic challenges in South Africa's education system. By identifying key trends and illuminating areas for further research, this report contributes to evidence-based discussions on improving foundational learning, supporting transitions across phases, and strengthening the overall quality of education for all learners.

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