LEARNING PATHWAYS AND SYSTEM PERFORMANCE IN SOUTH AFRICAN SCHOOLS

Insights from administrative data

Authors
Servaas van der Berg,
Heleen Hofmeyr, Chris van Wyk,
Bianca Böhmer, Ros Clayton
and Rebecca Selkirk

With inputs from
Eldridge Moses, Jess Qvist,
Daniel de Gouveia and
Charisa Geyer

RESEP
Research on Socio-Economic Policy

Stellenbosch
UNIVERSITY
IYUNIVESITHI
UNIVERSITEIT
forward together
sonke siya phambili
saam vorentoe

Michael & Susan Dell
FOUNDATION
We gratefully acknowledge funding support
from the Michael & Susan Dell Foundation

Authors:
Servaas van der Berg, Heleen Hofmeyr, Chris van Wyk, Bianca Böhmer, Ros Clayton and Rebecca Selkirk

With inputs from Eldridge Moses, Jess Qvist, Daniel de Gouveia and Charisa Geyer

Acknowledgements:
We gratefully acknowledge the support of the Michael & Susan Dell Foundation, whose funding and partnership made this work possible. We also thank the New Leaders Foundation for facilitating access to the DDD data. The continued collaboration of both these organisations has been essential to enabling this analysis. Thank you also to Erin Chothia-Lakay and Herman Meyer for project support.

Design and layout:
Ink Design Publishing Solutions, Cape Town, www.inkdesign.co.za

Cover photo:
AdobeStock

December 2025

We gratefully acknowledge support from the Michael & Susan Dell Foundation

Michael & Susan Dell FOUNDATION
We gratefully acknowledge funding support from the Michael & Susan Dell Foundation

CONTENTS

List of Figures

List of Tables

List of Boxes

EXECUTIVE SUMMARY

Overview

South Africa's administrative education data provide an important window into how learners move through the system, where they encounter difficulties, and how policies are implemented in practice. The analyses in this report draw on several large datasets to examine learner flows, early schooling patterns, Mathematics pathways, teacher supply pressures and absenteeism. Across these areas, two themes recur. The first is the persistence of deep inequalities in learning opportunities and progression. The second is the wide variation in how national policies are interpreted, recorded and acted on across provinces and between fee-paying and non-fee-paying schools. These variations have important implications for both system performance and the reliability of the administrative data used to monitor it.

Key Findings

1. **A significant proportion of learners cannot be reliably tracked across years, limiting the accuracy of dropout measures.**
   A key finding of the report is that data errors (such as misspelling of names, and incorrect SA ID numbers) made it difficult to track learners across years, particularly when learners move between schools. The Grade 7 to Grade 8 transition illustrates this clearly. Large numbers of learners appear as "new" Grade 8 entrants, while many Grade 7 learners cannot be matched to a Grade 8 record at all. These mismatches reflect administrative errors rather than true dropout, and they limit the accuracy of dropout statistics. Improving the quality of data capture (especially learner names, SA ID numbers and birth dates) is therefore essential for producing reliable information on learner flows.

2. **Primary school outcomes are strongly influenced by school-entry age and early grade repetition.**
   Learners who enter Grade 1 younger face a much higher risk of repeating. The analysis shows that, for learners close to the promotion threshold in the early grades, repetition is associated with short-term learning gains. These findings point to the importance of coherent school-entry-age policies and careful assessment of readiness for promotion, while recognising that repetition is a limited and costly intervention. The broader policy focus should be on strengthening early learning so that fewer learners require remediation.

3. **Grade 9 Mathematics marks are not a reliable indicator of readiness for FET Mathematics, and learners who failed Grade 9 Mathematics face extremely low probabilities of success in Grade 10.**
   The analysis of Mathematics pathways reveals that many learners enter Grade 10 without the foundational skills needed to succeed, and those who failed Grade 9 Mathematics but choose Mathematics in Grade 10 face a very high risk of repetition. Upward mark adjustments also mean that a recorded pass in Grade 9 Mathematics may not always reflect underlying achievement. The evidence suggests that learners who fail Grade 9 Mathematics should not be permitted to take Mathematics in Grade 10 unless they can demonstrate clear evidence of additional support.

4. **Reported absenteeism differs sharply across provinces and school types, reflecting administrative practices rather than genuine differences in learner behaviour.**
   The analysis of absenteeism shows that reported absence patterns reflect substantial differences in administrative practices. Gauteng, in particular, shows dramatic spikes in learner absenteeism during examination periods, despite having similar absenteeism to other provinces during non-examination periods. This strongly points to provincial differences in how learner absenteeism is recorded, and means that provincial comparisons are not straightforward. Without improvements in reporting consistency and compliance, learner absenteeism data cannot be used reliably as a performance indicator.

5. **Provinces often implement policies differently, creating wide variation in how administrative data is recorded and interpreted.**
   A finding that cuts across the report is that provinces often apply national policies in different ways. The age-at-entry policy, the use of mark adjustments, the application of progression rules and the recording of absenteeism all vary considerably across provinces. Similar differences appear between fee-paying and non-fee-paying schools, though to a lesser extent. These variations complicate efforts to compare learning environments and outcomes and suggest that schools and districts often follow local norms or administrative routines rather than national policy guidance.

Overall, the report highlights both the potential and the limitations of the administrative data currently available in the system. These datasets enable large-scale analyses of learner pathways, but their value depends on the consistency and accuracy of the information captured. Strengthening learner identifiers, clarifying expectations around reporting, improving data quality assurance processes and providing clearer guidance at key transition points would significantly enhance the usefulness of administrative data and improve the system's ability to support learners effectively.

”

Gaps in curriculum mastery play a central role in shaping how learners move through the education system, influencing patterns of grade repetition, dropout and academic performance.

CHAPTER 1
INTRODUCTION

1.1 The South African schooling context

South Africa's basic education system continues to be shaped by a core problem: widespread gaps in curriculum mastery (Department of Basic Education, 2024a) that compound each year as learners progress through school (Spaull & Kotzé, 2015). Critically, these gaps mirror underlying socio-economic inequalities, as differences in school quality, instructional support, and resource availability shape the conditions under which teaching and learning occur.

Gaps in curriculum mastery play a central role in shaping how learners move through the education system, influencing patterns of grade repetition, dropout and academic performance. These learning shortfalls also affect subject choices in the later grades and subsequent academic performance in those subjects. Lastly, understanding the broader context also requires attention to where teachers are deployed and whether staffing aligns with areas of greatest need.

Administrative data provide a valuable window into these dynamics, offering system-wide information on enrolment, assessment outcomes and teacher deployment. When analysed together, these datasets allow one to trace how learners move through the schooling system and subject pathways, and to examine where teacher supply aligns with learner needs. While administrative data cannot capture every dimension of teaching and learning, they offer a powerful means of identifying patterns at scale and highlighting the systemic bottlenecks that constrain learner performance.

1.2 Data in education systems

High-quality administrative data plays a critical role in understanding how education systems function and where they fall short. When collected consistently and linked across years, datasets such as the South African School Administration Management System (SA-SAMS) and Learner Unit Record Information and Tracking System (LURITS) make it possible to trace learner movements, identify points at which progression slows and assess whether policy intentions translate into practice. These data sources offer insights that are rarely visible through surveys or examination results alone, particularly around repetition, dropout, absenteeism and the uneven pace at which learners move through the system. The growing availability of administrative data has expanded the range of analyses that can be undertaken and strengthened the evidence base for planning, budgeting, and evaluating education policy.

Administrative data also plays a complementary role alongside other forms of evidence. While it cannot capture classroom practices, pedagogical quality or household circumstances directly, it provides essential system-level markers that help identify where deeper investigation may be needed. For example, unexpected shifts in repetition rates, subject choices or absenteeism patterns often signal underlying changes in school behaviour, community conditions or policy implementation. In this sense, administrative data serves as an early warning system that can guide more targeted qualitative or survey-based research.

At the same time, the value of administrative data ultimately depends on the accuracy, completeness and consistency of the information captured. Even the most sophisticated analysis cannot compensate for data that are recorded unevenly, interpreted differently across contexts or miss key elements. Investigating data quality is therefore a critical component of any system-wide analysis: it helps distinguish genuine patterns from artefacts of data capture, ensures that comparisons across schools or provinces are meaningful and highlights where improvements in administrative processes are needed

1.3 Purpose and scope of this report

South Africa has invested heavily in strengthening its administrative education data systems, recognising that good data is essential for planning, budgeting and evidence-based policy. Systems like the South African School Administration Management System SA-SAMS and LURITS were designed to provide a clearer view of how learners move through school, where blockages occur and how well the system supports progression to Grade 12. When these datasets are collected consistently and linked across years, they offer a powerful tool for mapping learner trajectories across their schooling careers.

The Data Driven Districts (DDD) programme, implemented by the New Leaders Foundation, has been central to these improvements. By consolidating SA-SAMS data, the programme has made it possible to work with more reliable, longitudinal datasets. This has allowed for deeper analysis of learner flows, repetition and dropout patterns, as well as learner absenteeism and teacher deployment.

Since 2018, the Research on Socio-Economic Policy (Resep) group at Stellenbosch University has been analysing the DDD data. By making use of unique learner identifiers, Resep has been able to track learners across years with far greater accuracy than before. This collaboration has already generated several reports that document system-level trends and highlight areas where improved efficiency and support are most needed.

The aim of this report is twofold: First, it presents system-level patterns in learner progression, repetition, dropout, Grade R participation, academic performance and subject choice, drawing on administrative data to describe how learners move through the schooling system. Second, it assesses selected aspects of data quality, identifying cases where observed patterns may reflect differences in data-capture practices across schools or provinces or where inconsistent use of learner identifiers limits the ability to track learners over time. By examining these patterns, the report aims to contribute to a broader understanding of the pressures and opportunities within the schooling system and to inform ongoing efforts to improve learner outcomes.

Taken together, these objectives position the report as a continuation of ongoing efforts to use administrative data to build an evidence base for system improvement. The intention is not to provide a comprehensive account of all aspects of schooling, but rather to highlight specific patterns that are visible in administrative datasets and that have clear implications for policy, system efficiency and learner experience.

BOX 1.1 DATA SOURCES

The analysis in this publication primarily draws on administrative data generated by the South African school system. Three linked datasets are used: SA-SAMS, the Data-Driven Districts (DDD) system and LURITS. Together, they provide national coverage and allow learners to be tracked across years, although not perfectly.

SA-SAMS

The South African School Administration and Management System (SA-SAMS) is the school-level platform used by almost all public schools to record learner information, class lists, assessment marks and other administrative data. It is developed and supported by the Department of Basic Education (DBE). A small number of schools use alternative systems and the Western Cape operates a different platform, but these can generally be converted into a SA-SAMS-compatible format for analysis.

Data Driven Districts (DDD)

The DDD system is derived from SA-SAMS data that has been cleaned, standardised and compiled by the New Leaders Foundation. Through a collaboration between Resep and the Michael & Susan Dell Foundation, it has become possible to track learners from one grade and year to the next using anonymised identifiers derived from DDD data spanning multiple years. All personal information is removed before Resep receives the data, but the anonymisation process still allows matching learners across years, a requirement for analysing grade flows, repetition and dropout. This makes DDD the most reliable source for longitudinal learner analysis in the six provinces covered by this data.

LURITS

The Learner Unit Record Information and Tracking System (LURITS), also based on SA-SAMS data, aims to track every learner nationally from Grade R to Grade 12, including movements between schools and provinces. Each learner is intended to have a unique tracking number that remains with them throughout schooling. In practice, inconsistent use of identifiers across schools and years limits the effectiveness of longitudinal tracking.

BOX 1.1 **DATA SOURCES** *(… continued)*

Matching and anonymisation

Before Resep receives the data, identifying information is removed and anonymised. Despite this, anonymised identifiers generated by a fixed anonymisation algorithm allow learners to be matched across years in most cases, enabling longitudinal analysis. Tracking breaks down when records are incomplete, incorrectly captured, missing for a given year, or when learners transfer between schools without consistent identifiers.

Balanced panels

To ensure comparability over time, analyses in this report often use balanced panels of schools, that is, only including schools that submitted valid data for every year in the analysis period. This approach reduces distortions caused by missing data and allows observed changes to reflect genuine system trends rather than reporting inconsistencies. It does, however, mean that estimates based on the data do not always cover the whole school system. In most cases, more than 95% of all schools are covered.

Limitations

Although both DDD and LURITS enable learner tracking, the process is imperfect. Learners may become "unaccounted for" because of:

- data capture errors
- missing or inconsistent identifiers
- school transfers
- emigration
- enrolment in TVET colleges
- death or
- dropout.

For this reason, unaccounted-for learners should not automatically be interpreted as dropouts, although dropping out remains a major contributing factor.

1.4 Structure of this report

This report is structured as follows. **Chapter 2** provides a system-wide view of learner flows, examining enrolment patterns, repetition, and the extent of learners who are unaccounted for, drawing on LURITS data to highlight where the system loses learners and where tracking challenges persist. **Chapter 3** turns to early schooling, analysing Grade R access, school-entry-age patterns, and early-grade repetition to show how learners' initial experiences shape their trajectories through the primary grades. **Chapter 4** follows a cohort from Grade 9 into the FET phase, exploring how Grade 9 achievement influences subject choice between Mathematics and Mathematical Literacy, subsequent switching, repetition and eventual NSC outcomes. **Chapter 5** shifts attention to teachers, describing the distribution of the existing teacher workforce and analysing the deployment of newly appointed teachers in 2023 across provinces and school contexts. Finally, **Chapter 6** examines learner absenteeism, investigating both genuine attendance patterns and the effects of differing administrative and reporting practices across provinces. Together, these chapters provide a comprehensive picture of how learners move through the system, the factors that shape their progression and the data quality considerations that influence how these patterns should be interpreted. **Chapter 7** concludes.

Across all years, repetition peaks consistently in Grades 1, 4, 8 and 10.

CHAPTER 2
LEARNER FLOWS IN SOUTH AFRICA

Analysis for this chapter was conducted by Chris van Wyk and Servaas van der Berg.

2.1 Introduction

South Africa has achieved near-universal access to schooling, with almost all children enrolled up to at least the early secondary school years. However, high levels of repetition, late progression and dropout continue to shape learners' pathways through the system, particularly in the secondary grades. Understanding how learners move through the grades – where they are promoted, where they repeat and where they leave the system – is essential for interpreting educational outcomes and for effective planning.

This chapter examines patterns of enrolment and learner flows across grades and provinces, drawing on administrative data that allow learners to be followed over time. LURITS data is used to do this. To allow for longitudinal analysis in LURITS, learners must be accurately linked across yearly datasets using a consistent unique identifier. Because SA-SAMS assigns learner IDs that are only unique within a school – and are reissued when learners change schools – LURITS data was used to generate a new system-wide identifier using a combination of variables such as first name, surname, date of birth and South African ID number, all of which were anonymised. By analysing promotion, repetition and the number of learners who cannot be tracked from one year to the next, the chapter sheds light on where the system functions well and where it loses learners. These patterns highlight persistent inequalities between schools and communities as well as the structural pressures that emerge even before learners reach the senior grades.

2.2 Learner flows: Enrolment, repetition and learners unaccounted for

School enrolment in South Africa is now almost universal up to about age 16. In the years following the Covid-19 pandemic, which disrupted schooling in 2020 and 2021 and also gave rise to more lenient assessment practices (Hoadley, 2025), repetition rates declined and the number of learners who could not be tracked within the system also appeared to fall.

Though flows through the system have risen, repetition rates remain high in the upper grades and some learners either drop out or cannot be tracked because they have moved between schools or their details were not captured accurately in the administrative system. As with all administrative data, inconsistent or incomplete learner information limits the accuracy of tracking across years. For instance, since names and SA ID numbers were used to create system-wide unique IDs that could be used to track learners through the system, misspelling of names or inaccurate recording of ID numbers makes it difficult to track learners over time. These data inconsistencies sometimes result in learners appearing to drop out or re-enter the system ("drop-ins") when their records cannot be reliably linked across years. Therefore, it is very difficult to distinguish between those who have dropped out of the system and those who were unaccounted for due to other reasons. This makes it very difficult to determine the exact extent of dropout. The analysis presented in this chapter therefore examines patterns of drop-ins and drop-outs to better understand the broader group of learners who are unaccounted for, recognising that this approach does not reliably distinguish between true dropouts and other reasons for learners disappearing from the dataset.

2.3 Repetition

The repetition rate is calculated as the proportion of learners who remain in the same grade for a second consecutive year. It is computed using enrolment data from two successive school years. The repetition rate is derived using the following formula:

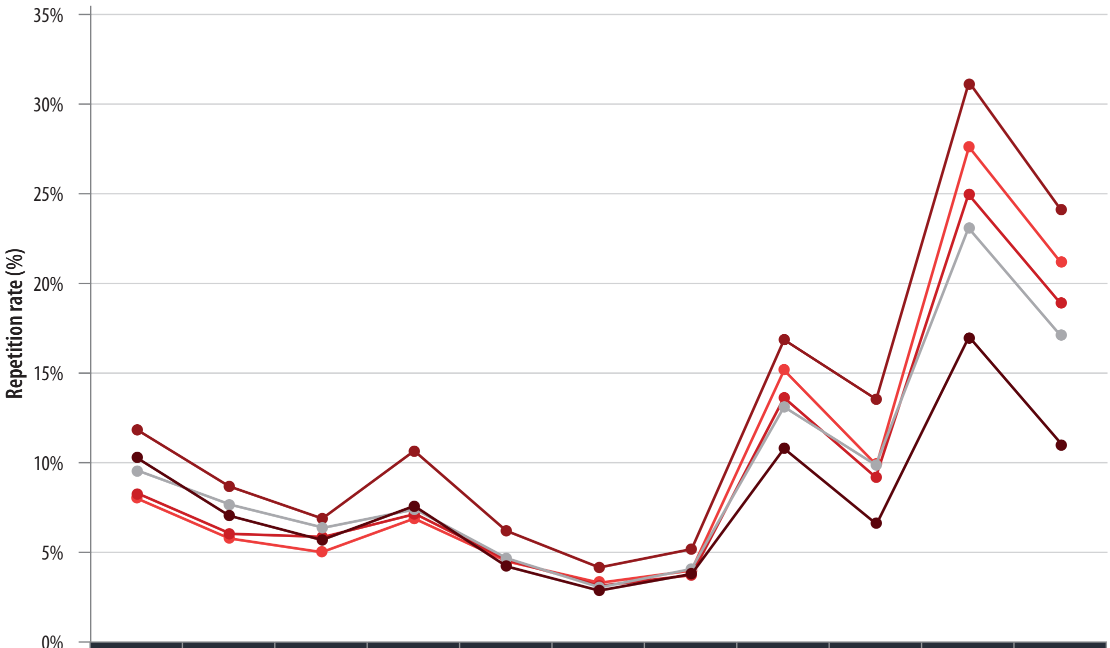
$$\text{Repetition rate} = \left(\frac{\text{Number of repeaters in Grade } X \text{ in year } Y + 1}{\text{Number of learners enrolled in Grade } X \text{ in year } Y}\right) \times 100$$

Figure 2.1 presents national repetition rates by grade from 2019, the year before the pandemic, through to 2023, after pandemic-related disruptions had subsided. To identify 2023 repeaters it was necessary to use 2024 enrolment data. The years 2020 and 2021 were when the pandemic most severely affected schooling.

Across all years, repetition peaks consistently in Grades 1, 4, 8 and 10. This aligns with transitions between schooling phases. The Department of Basic Education's progression policy stipulates that a learner may not repeat more than once within a school phase. For the Foundation Phase (Grades 1–3), this means that learners who repeat Grade 1 are generally promoted through Grades 2 and 3. The next opportunity for repetition for such learners arises in Grade 4, at the start of the Intermediate Phase. While one might expect another clear peak in Grade 7 (the first grade of the Senior Phase), this is not observed. Instead, a far more pronounced peak emerges in Grade 8. This occurs because primary schools tend to promote many weaker learners rather than retain them, resulting in a high concentration of academically vulnerable learners entering Grade 8 and subsequently repeating.

The most substantial peak occurs in Grade 10, the first year of the Further Education and Training (FET) Phase. Many schools hold back learners at this point to protect matric outcomes, contributing to very high repetition rates – 27% nationally in 2023. Repetition rates were highest in 2019, before the pandemic. The relaxation of progression rules in 2020 led to a sharp decline, most notably in Grade 10, where the national repetition rate fell from 31% in 2019 to 17% in 2020. Rates then increased again in 2021, 2022 and 2023, indicating that repetition in the FET Phase appears to be reverting towards its pre-pandemic levels, although it has not yet fully stabilised.

FIGURE 2.1 National repetition rates by grade and year



	GR1	GR2	GR3	GR4	GR5	GR6	GR7	GR8	GR9	GR10	GR11
2019	12%	9%	7%	11%	6%	4%	5%	17%	13%	31%	24%
2020	10%	7%	6%	7%	4%	3%	4%	11%	6%	17%	11%
2021	9%	8%	6%	7%	5%	3%	4%	13%	10%	23%	17%
2022	8%	6%	6%	7%	4%	3%	4%	13%	9%	25%	19%
2023	8%	6%	5%	7%	4%	3%	4%	15%	10%	27%	21%

Source: Calculated from LURITS data for 2019 to 2024. Data includes both public and independent schools. To ensure comparability of results over time, the analysis is based on a balanced panel that includes only schools that consistently submitted data for every year within the analysis period.

Table 2.1 shows this pattern clearly for Grade 10, the grade with the highest repetition nationally, with all provinces experiencing an initial drop in repetition in 2020, followed by a subsequent rise. Overall, the provincial data aligns with the national pattern: a sharp decline in 2020, followed by a steady increase as schools reinstated normal progression standards after the pandemic. The Western Cape followed a similar trajectory, but maintained substantially lower repetition rates in Grade 10 than the other provinces throughout the period.

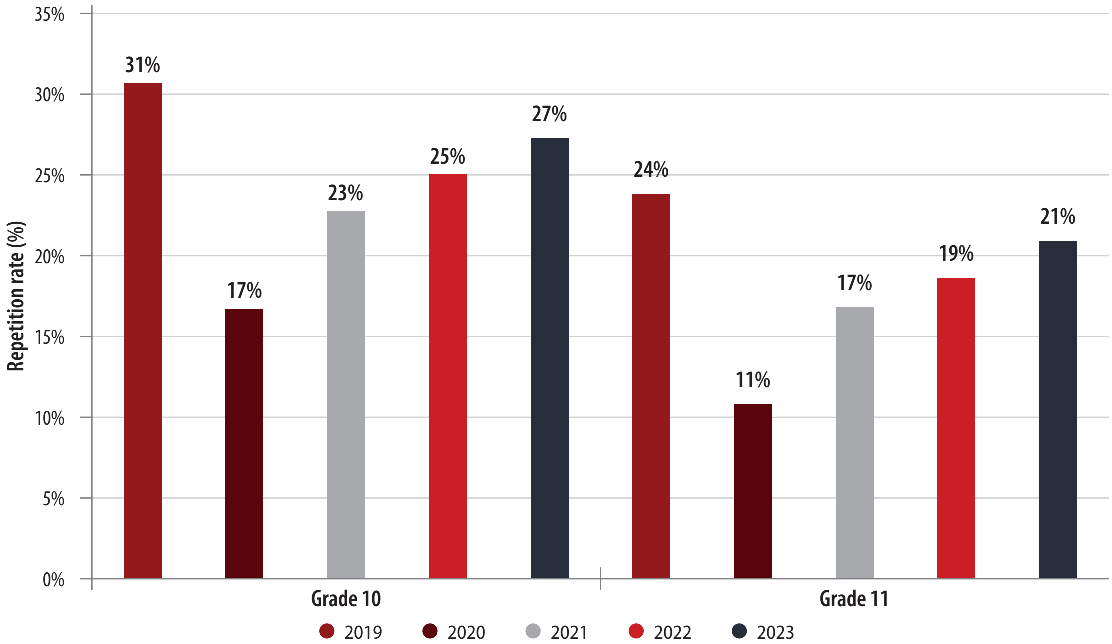
TABLE 2.1 Repetition rate in Grade 10 by province and year

	2019	2020	2021	2022	2023
EC	31%	16%	21%	22%	23%
FS	35%	24%	28%	28%	31%
GT	27%	14%	21%	21%	24%
KZN	29%	15%	24%	27%	27%
LP	39%	21%	27%	34%	37%
MP	33%	18%	22%	25%	29%
NC	34%	22%	28%	27%	31%
NW	35%	21%	25%	28%	33%
WC	17%	10%	12%	11%	15%
SA	31%	17%	23%	25%	27%

Source: Calculated from LURITS data for 2019 to 2024. Data includes both public and independent schools. To ensure comparability of results over time, the analysis is based on a balanced panel that includes only schools that consistently submitted data for every year within the analysis period.

Figure 2.2 compares national repetition in Grades 10 and 11, the two grades with the highest rates in the system, across the last five years. Both grades show a sharp decline in 2020, followed by steady increases thereafter. By 2023, national repetition in Grade 10 had risen to 27% and in Grade 11 to 21%.

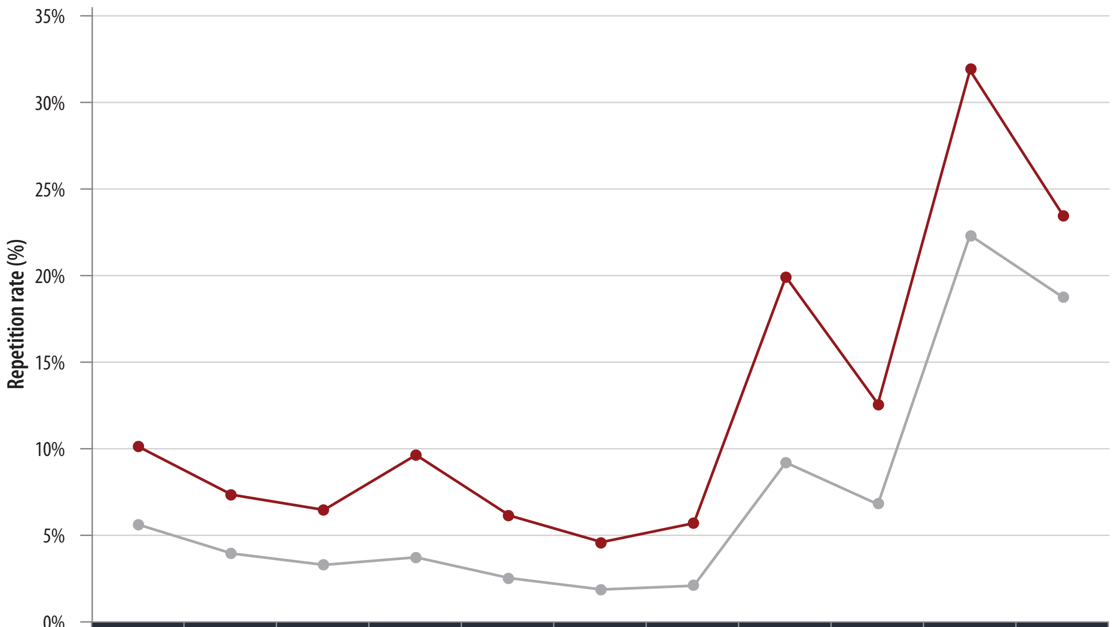
FIGURE 2.2 National repetition rates in Grades 10 and 11 by year



Source: Calculated from LURITS data for 2019 to 2024. Data includes both public and independent schools. To ensure comparability of results over time, the analysis is based on a balanced panel that includes only schools that consistently submitted data for every year within the analysis period.

Figure 2.3 shows repetition rates by grade and gender for 2023. Boys have considerably higher repetition rates than girls across all grades. While both groups were affected by the pandemic, the overall pattern of gender differences remained stable over time.

FIGURE 2.3 Repetition rates by grade and gender in 2023

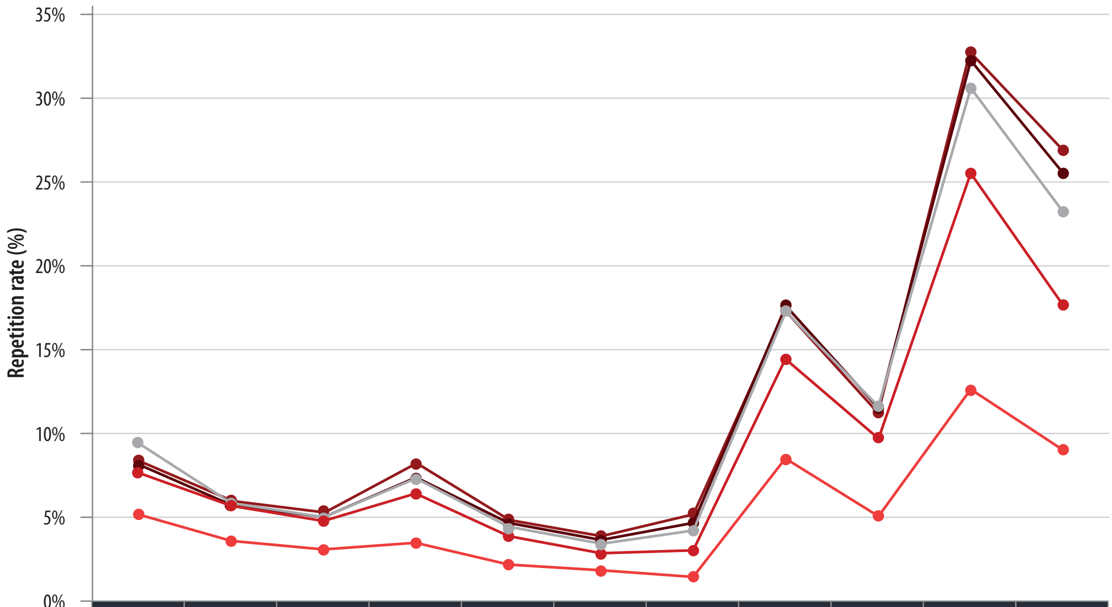


	GR1	GR2	GR3	GR4	GR5	GR6	GR7	GR8	GR9	GR10	GR11
Series 1	6%	4%	3%	4%	2%	2%	2%	9%	7%	22%	19%
Series 2	10%	7%	6%	10%	6%	5%	6%	20%	13%	32%	23%

Source: Calculated from LURITS data for 2023 and 2024. Data includes both public and independent schools. To ensure comparability of results over time, the analysis is based on a balanced panel that includes only schools that consistently submitted data for every year within the analysis period.

Repetition rates by grade and school quintile follow broadly similar patterns, both during and after the pandemic. **Figure 2.4** provides a snapshot for 2023. Quintile 5 schools show substantially lower repetition rates than schools in Quintiles 1 to 4, with the largest differences emerging in the secondary grades. Repetition is particularly prevalent in Quintiles 1 to 3, the non-fee-paying schools[1], and remains high in Quintile 4 as well, although Quintile 4 has lower rates of repetition than the lower quintiles in Grades 10 and 11. The consistently high repetition rates in most South African schools reflect widespread difficulties in mastering the curriculum, visible even in the early grades. In addition, the repetition rates by quintile indicate the continued persistence of inequalities in school performance across the wealth distribution.

FIGURE 2.4 National Repetition rates by grade and quintile, 2023



	GR1	GR2	GR3	GR4	GR5	GR6	GR7	GR8	GR9	GR10	GR11
Q1	8%	6%	5%	8%	5%	4%	5%	17%	11%	32%	26%
Q2	8%	6%	5%	7%	5%	4%	5%	17%	11%	32%	25%
Q3	9%	6%	5%	7%	4%	3%	4%	17%	11%	30%	23%
Q4	8%	6%	5%	6%	4%	3%	3%	14%	10%	25%	17%
Q5	5%	3%	3%	3%	2%	2%	1%	8%	5%	12%	9%

Source: Calculated from LURITS data for 2023 and 2024. Data includes both public and independent schools. To ensure comparability of results over time, the analysis is based on a balanced panel that includes only schools that consistently submitted data for every year within the analysis period.

2.4 Learners unaccounted for versus true dropout

South Africa has historically experienced substantial dropout in the secondary grades, particularly in Grades 9 to 11. Weak achievement and high repetition mean that many learners reach the FET Phase at an advanced age and many subsequently leave school before completing Grade 12. The temporary relaxation of promotion rules during the COVID-19 pandemic reduced repetition and created the appearance of lower dropout, but interpreting these patterns requires caution.

1 National policy determines that schools in Quintiles 1 to 3 may not raise school funds by imposing school fees. In addition, some provinces expanded this restriction to some Quintile 4 schools.

The estimates used in this report are derived from a *balanced panel*, meaning that only schools that submitted data in consecutive years are included. When a school fails to report in a given year, its learners cannot be matched across years, reducing the accuracy of dropout measurement. For this reason, the broad category of "unaccounted learners" is more appropriate than confirmed dropouts.

Learners may be unaccounted for because of transfers between schools without consistent learner identifiers, incorrect or incomplete personal information (names, ID numbers), weak administrative capture within SA-SAMS and LURITS, migration, enrolment in TVET colleges, death, or genuine dropout. Thus, dropout is only one component of the broader "unaccounted for" group.

Table 2.2 shows the proportion of unaccounted-for learners in the LURITS data, by grade and quintile. The table points to quite consistent patterns across most grades and school quintiles. A prominent spike in Grade 7 (around 7–8% across all quintiles) is evident and is strongly linked to the transition from primary to secondary school. This is a point at which many learners change schools, and where the incomplete implementation of unique learner identifiers leads to significant tracking losses.

TABLE 2.2 2023 learners unaccounted for in 2024 by grade and quintile

	Q1	Q2	Q3	Q4	Q5
Gr1	3.2%	3.1%	3.1%	2.6%	2.9%
Gr2	2.7%	2.5%	2.4%	2.2%	2.7%
Gr3	2.5%	2.3%	2.3%	2.1%	2.7%
Gr4	2.4%	2.2%	2.4%	2.2%	2.7%
Gr5	2.3%	2.2%	2.1%	2.2%	2.6%
Gr6	2.4%	2.2%	2.2%	2.1%	2.3%
Gr7	7.4%	7.4%	7.7%	8.0%	7.6%
Gr8	5.4%	5.2%	5.8%	5.5%	4.1%
Gr9	6.8%	6.1%	6.7%	5.9%	4.3%
Gr10	10.7%	9.7%	10.5%	9.5%	6.3%
Gr11	11.0%	10.1%	10.2%	7.6%	4.8%
All Gr1 – Gr11	**5.1%**	**4.8%**	**5.2%**	**4.6%**	**3.9%**

Source: Calculated from LURITS data for 2023 and 2024. Data includes both public and independent schools. To ensure comparability of results over time, the analysis is based on a balanced panel that includes only schools that consistently submitted data for every year within the analysis period.

From Grade 8 onwards, the proportion of learners who are unaccounted for rise steadily. In the FET Phase (Grades 10 and 11), this reaches over 10% in Quintiles 1–3, compared with 6–7% in Quintile 5. These patterns align with known inequalities in data quality, learner mobility and the risk of disengagement in weaker parts of the school system. While many of these learners may still be in school, the magnitudes point to two persistent system challenges: Learner tracking remains unreliable, especially at transitions between phases, and a substantial share of learners may leave the school system before Grade 12. However, the administrative data alone cannot separate true dropouts from movement between schools or incomplete records. These findings underline the need to strengthen the implementation of unique learner identifiers and to improve data capture during phase transitions. It is therefore important to emphasise that the figures presented here reflect tracking losses as well as actual dropout, and should not be interpreted as a definitive measure of school leaving.

A complementary approach is to compare learners who disappear from the system (apparent drop-outs) with those who appear unexpectedly the following year (drop-ins). One way to estimate the number of learners who are not being reliably tracked within the school system is to compare the 663 026 learners who seemingly "dropped out" of Grades 1–11 in 2022 with the 429 688 who appeared in the system in 2023, even though they were not recorded in 2022. These are learners who were present in 2023 but not identified in the previous year, often because their details were not correctly captured or because they moved schools.

This makes it very difficult to determine the exact extent of dropout. Comparing drop-ins to apparent drop-outs provides a better understanding of the broader group of learners who are unaccounted for. Still, it does not allow us to reliably distinguish between true dropouts and other reasons for learners disappearing from the dataset.

Table 2.3 shows the number and proportion of learners who were unaccounted for in 2023 and those who appeared in the dataset for the first time that year, disaggregated by grades. It is clear from the table that the transition from Grade 7 to Grade 8 (i.e. from primary school to secondary school) is the most problematic: about 9% of learners who were in Grade 7 in 2022 were unaccounted for in 2023, whilst 6% of Grade 8s appeared in the dataset for the first time in 2023. This strongly suggests that many of the learners who were unaccounted for in 2023 did not leave the system, but were instead assigned new learner IDs when they enrolled in Grade 8. This implies that a substantial share of the unaccounted-for learners are not exiting the system but are showing up as "new" learners because their unique IDs change when they move schools.

TABLE 2.3 Learners unaccounted for in 2023 and learners not tracked back in 2023 to their previous school

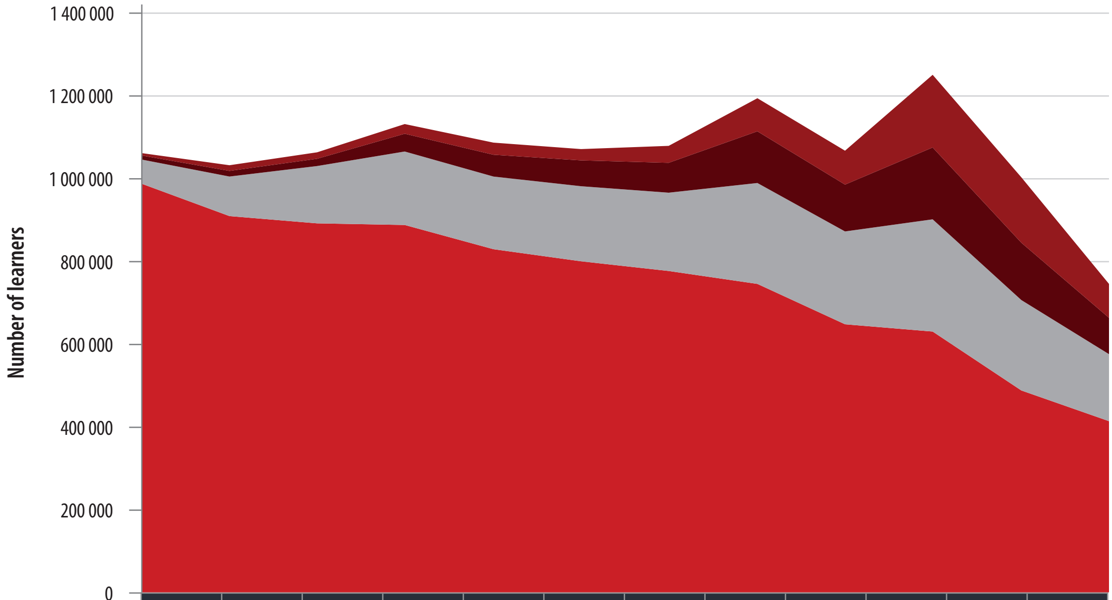
Grade in 2022	2022 learners unaccounted for in 2023	% drop-out	Grade in 2023	2023 learners who could not be tracked back to 2022	% drop-in
Gr1	43 356	4%	Gr2	44 826	4%
Gr2	37 211	3%	Gr3	35 374	3%
Gr3	35 477	3%	Gr4	32 990	3%
Gr4	36 155	3%	Gr5	30 663	3%
Gr5	34 771	3%	Gr6	27 251	3%
Gr6	32 826	3%	Gr7	24 548	2%
Gr7	98 695	9%	Gr8	73 286	6%
Gr8	66 307	6%	Gr9	45 202	4%
Gr9	77 081	7%	Gr10	44 263	4%
Gr10	114 442	10%	Gr11	41 068	4%
Gr11	86 705	9%	Gr12	30 217	4%
Total	**663 026**	–	**Total**	**429 688**	–

Source: Calculated from LURITS data for 2019 to 2024. Data includes both public and independent schools. To ensure comparability of results over time, the analysis is based on a balanced panel that includes only schools that consistently submitted data for every year within the analysis period.

2.5 Age distribution

Patterns of repetition and drop-out also shape the age distribution of learners across grades. **Figure 2.5** presents the age distribution of learners by grade in 2024. The proportion of over-age learners increases steadily across the grades. Using the standard calendar year rule (see Chapter 3 for a discussion), learners are expected to start Grade 1 in the year they turn seven, meaning that the appropriate age for Grade 12 is 18. Learners who are three or more years over-age in Grade 12 are therefore at least 21 years old. The figure shows that the total number of learners peaks in Grade 10, consistent with the very high repetition rates observed in this grade. After Grade 10, the share of over-age learners declines from more than 50% in Grade 10 to 45% in Grade 12. This decline reflects the combined effects of repetition and dropout: over-age learners are more likely to repeat and to leave the system before completing Grade 12.

FIGURE 2.5 Distribution of years over-age by grade, 2024



	GR1	GR2	GR3	GR4	GR5	GR6	GR7	GR8	GR9	GR10	GR11	GR12
3+ yrs over-age	7 213	12 457	15 082	22 025	28 586	28 132	40 240	79 812	82 117	174 903	157 181	81 889
2yrs over-age	7 826	13 653	18 922	43 827	53 635	61 647	71 966	124 199	112 507	173 495	139 088	88 329
1 yr over-age	59 490	97 199	137 208	177 443	176 144	182 423	190 516	244 975	225 872	272 580	218 270	162 146
Correct age	988 075	909 017	892 902	888 455	829 228	799 831	776 320	745 472	647 723	629 777	488 486	413 764

Calculated from LURITS data for 2024. Data includes both public and independent schools. To ensure comparability of results over time, the analysis is based on a balanced panel that includes only schools that consistently submitted data for every year within the analysis period.

2.6 Conclusion

The analyses presented in this chapter highlight the points at which learners move smoothly through the schooling system and where they are most likely to experience delays or disappear from administrative data. Although access to schooling is now almost universal, high repetition rates (especially in the first grade of each phase) and the large numbers of learners who cannot be reliably linked across years point to persistent weaknesses in progression and data quality. These patterns show how administrative inconsistencies, learner mobility and late progression shape the distribution of learners across grades, contributing to the substantial numbers of over-age learners in the upper years. A key implication of these findings is that current administrative data do not permit an accurate estimate of the true school dropout. Learners who receive new identifiers, who transfer between schools, or whose information is captured inconsistently cannot be distinguished from those who have genuinely left the system. As a result, the broad category of “unaccounted-for” learners conflates administrative tracking losses with actual dropout. This is a major weakness of South Africa’s learner data, as understanding the scale, location and timing of true dropout is essential for targeting support, allocating resources and designing interventions aimed at keeping learners in school. Strengthening the implementation of unique learner identifiers, improving the quality and completeness of information recorded in SA-SAMS and LURITS and addressing tracking losses during phase and school transitions will therefore be vital for developing a clearer and more reliable picture of learner pathways, and for supporting more effective planning across the system.

CHAPTER 3
EARLY SCHOOLING PATHWAYS: ACCESS, ENTRY AGE AND REPETITION

"Compulsory status will not only increase demand but will also place new pressure on provinces to ensure that every child has a place in a Grade R class.

The results presented in this chapter draw on analysis conducted by Bianca Böhmer and Ros Clayton, as part of the MILAPS project. The findings presented here are drawn from these working papers:

- Böhmer, B. (forthcoming). "An unequal start: The impact of age of school entry on academic progression and performance in Grades 1–4". *RESEP working papers.* Stellenbosch University.
- Clayton, R. (forthcoming). "The impact of early grade repetition on test scores: Evidence from a regression discontinuity design in South Africa". *RESEP working papers.* Stellenbosch University.

3.1 Introduction

Learners' early experiences in Grade R and the conditions under which they enter Grade 1 play a central role in shaping their subsequent schooling trajectories. This chapter therefore begins by describing recent patterns in school-based Grade R enrolment and provision, before examining how school-entry-age policies are implemented in practice and how age-at-entry relates to repetition and early achievement outcomes. It then considers the extent to which repetition functions as an effective remedial mechanism in the primary school grades. Together, these analyses provide insights into how learners' early experiences in the system influence their progress through the primary school grades.

3.2 The growing importance of Grade R

The expansion of Grade R has been one of the most significant structural shifts in South African basic education over the past two decades. Given that the Basic Education Laws Amendment Act (No. 32 of 2024) introduced a legal requirement for attendance in Grade R (Republic of South Africa, 2024), understanding patterns of access has become even more important. Compulsory status will not only increase demand but will also place new pressure on provinces to ensure that every child has a place in a Grade R class.

Against this background, it is essential to examine how access to school-based Grade R has evolved, which provinces and quintiles have expanded most rapidly and where notable gaps remain. Trends in Grade R enrolment provide an early indication of the system's readiness for compulsory implementation and highlight areas where infrastructure, staffing or funding constraints may continue to limit access.

The analysis that follows therefore focuses on how many Grade 1 entrants had previously attended Grade R at a primary school, how these patterns differ across provinces and quintiles, and how the availability of Grade R classes has expanded across public and independent schools. This provides a useful foundation for assessing equity and preparedness as the system moves towards universal, compulsory Grade R. The analysis uses the DDD data. To identify first-time entrants in the DDD data, a rolling balanced panel was used, including only learners whose schools reported data in consecutive years. Learners are included in the dataset if the school they attended that year also had information available in the previous year, thereby allowing the analysis to identify repeaters who remained at the same school.

Table 3.1 shows the proportion of first-time Grade 1 entrants who had attended Grade R at a primary school (not necessarily the same school) over the period 2018 to 2023. For comparison, the final row provides the equivalent estimate for 2023 from the national School Realities dataset. The table shows that, for the six provinces in the DDD data, the proportion of first-time Grade 1 entrants who had attended Grade R at a primary school was already high at 74.8% in 2019 and grew to 79.5% in 2023. The table further points to substantial provincial differences in school-based Grade R attendance. In Gauteng, for example, only 59.0% of Grade 1 entrants had attended Grade R at a primary school, compared to 93.8% in Limpopo. This lower figure in Gauteng likely reflects both the greater availability of alternative ECD provision and persistent space constraints in urban primary schools.

TABLE 3.1 Percentage of Grade 1 first-time entrants who attended Grade R at a school in six provinces in the previous year

Grade 1 Year	EC	GP	KZN	LP	MP	NW	Total for the six provinces
2018	76.5%	47.5%	75.3%	87.8%	66.2%	70.7%	**70.6%**
2019	80.5%	53.3%	78.1%	92.4%	74.2%	77.0%	**74.8%**
2020	83.2%	55.3%	83.4%	93.1%	75.0%	77.7%	**77.4%**
2021	80.7%	54.9%	82.4%	92.6%	73.5%	75.8%	**76.1%**
2022	81.9%	57.2%	84.1%	93.2%	75.3%	78.0%	**77.3%**
2023	83.2%	59.0%	86.4%	93.8%	78.4%	80.0%	**79.5%**
Alternative estimate for 2023: School Realities	84.7%	58.3%	80.4%	92.1%	77.8%	76.7%	**76.6%**

Notes: Sources: DDD learner panel 2017–2023 and School Realities data for 2022 and 2024. Grade 1 learners were included in the DDD learner panel only if their school had data in the previous year, and Grade R learners only if their school had data in the following year. Proportions in the School Realities data were calculated by comparing Grade R enrolment in 2022 with Grade 2 enrolment in 2024 within each province. Grade 2 numbers were used as an estimate of cohort size. Grade 1 cannot be used because high repetition rates in Grade 1 lead to inflated enrolment numbers relative to the number of children entering Grade 1 for the first time. Grade 2, with lower repetition rates, makes for a better comparison group.

Table 3.2 shows the same information, this time by school quintile, in 2023. Results show that in five of the six provinces in the DDD data, the proportion of Grade 1 entrants who had attended Grade R at a primary school is highest among Quintile 1–3 schools. For example, in KwaZulu-Natal, between 87% and 92% of Grade 1 entrants in Quintile 1–3 schools had attended Grade R at a primary school, compared with 64% in Quintile 5 schools. A potential driver of this pattern is the affordability of early-childhood services: while ECD centres charge fees, school-based Grade R in Quintile 1–3 public schools is free, making it a more accessible option for families in lower-income communities. North West is the only exception, showing no clear differences between quintiles in the proportion of Grade 1 entrants who had attended Grade R at a primary school.

TABLE 3.2 Percentage of Grade 1 first-time entrants who had attended Grade R at a primary school by quintile, 2023

Quintile	EC	GP	KZN	LP	MP	NW	Total
Q1	88.3%	61.0%	92.2%	95.8%	87.8%	83.0%	86.8%
Q2	88.4%	65.2%	89.7%	96.1%	79.8%	84.9%	86.5%
Q3	81.0%	69.9%	86.5%	93.6%	84.9%	78.1%	82.6%
Q4	78.0%	63.2%	78.4%	84.5%	73.5%	73.1%	70.5%
Q5	69.1%	50.4%	63.8%	71.9%	60.9%	84.8%	55.9%
Missing quintile	48.3%	68.5%	74.4%	79.7%	76.9%	84.7%	75.4%
Independent	69.2%	43.6%	64.8%	81.0%	54.0%	66.9%	62.5%
Total	**83.2%**	**59.0%**	**86.4%**	**93.8%**	**78.4%**	**80.0%**	**79.5%**

Source: DDD learner panel 2017–2023. A rolling panel was created, with Grade 1 learners included only if their school had data in the previous year, and Grade R learners included only if their school had data in the following year.

The analysis next considers Grade R provision by primary schools. **Table 3.3** shows the proportion of primary schools offering Grade R between 2018 and 2023. The results indicate that by 2023, Grade R availability at public schools in the six provinces was almost universal at 98%. This is an improvement from 2018, when 95% of public schools already offered Grade R. Independent and Quintile 5 schools are less likely to offer Grade R, with Quintile 4 schools also somewhat less likely to do so, though to a lesser extent. However, the proportion of schools offering Grade R in these categories also increased between 2018 and 2023. The table highlights that the provision of Grade R at primary schools remains unequal across school quintiles, with the highest provision among Quintile 1–3 schools. At the same time, coverage increased across all school quintiles as well as independent schools during the period 2018–2023.

TABLE 3.3 Percentage of schools with at least one Grade R class by province and school quintile, 2018 and 2023

	EC	GT	KZN	LP	MP	NW	All six provinces
2018							
Quintile 1	98%	97%	87%	98%	93%	93%	95%
Quintile 2	96%	95%	95%	99%	96%	97%	96%
Quintile 3	98%	99%	96%	99%	97%	96%	97%
Quintile 4	93%	99%	94%	94%	89%	80%	94%
Quintile 5	80%	84%	92%	93%	80%	75%	85%
Missing Quintile	75%	54%	90%	80%	33%	50%	68%
Total (Public)	97%	93%	92%	98%	93%	94%	95%
Independent	92%	69%	87%	90%	78%	95%	81%
Total (P. & I.)	**97%**	**89%**	**92%**	**98%**	**92%**	**94%**	**94%**
2023							
Quintile 1	100%	97%	99%	99%	98%	97%	99%
Quintile 2	97%	99%	100%	100%	98%	100%	99%
Quintile 3	99%	100%	100%	100%	100%	99%	99%
Quintile 4	95%	98%	94%	100%	95%	99%	96%
Quintile 5	89%	91%	88%	100%	88%	86%	90%
Missing Quintile	67%	63%	85%	90%	88%	88%	76%
Total (Public)	98%	95%	98%	100%	97%	98%	98%
Independent	98%	71%	81%	98%	84%	94%	85%
Total (P. & I.)	**98%**	**91%**	**98%**	**100%**	**96%**	**98%**	**97%**

Source: DDD learner panel 2017–2023. Schools are included only if they offered Grade 1 in the relevant year. The table indicates whether these schools also had a Grade R class, providing a comparable measure of Grade R availability across provinces and quintiles. The last row shows the total proportion across public (P) and independent (I) schools.

Overall, the data shows that school-based Grade R attendance is high and broadly consistent with the near-universal provision of Grade R classes in public primary schools. At the same time, substantial provincial and socioeconomic variation remains. Five of the six provinces in the DDD data have very high rates of school-based Grade R attendance, while Gauteng shows lower rates. Clear gradients also emerge across the socioeconomic distribution: learners in Quintile 1–3 schools are far more likely to have attended Grade R at a primary school, whereas learners in Quintile 5 and independent schools more commonly attend Grade R in private ECD centres. An important caveat is that enrolment data do not allow us to assess the relative quality of Grade R in these different settings. If the quality of Grade R delivered in Quintile 1–3 schools is substantially lower than that provided in private ECD centres, then equalising access through compulsory Grade R may not translate into equal early learning opportunities. Understanding these potential quality differences will therefore be critical for ensuring that the expansion of Grade R supports, rather than reinforces, existing inequalities in school readiness. These patterns in Grade R access form part of the broader picture of how children enter the schooling system. Another part of that picture is the age at which children start school, to which the discussion now turns.

3.3 Age of school entry and impacts on later achievement

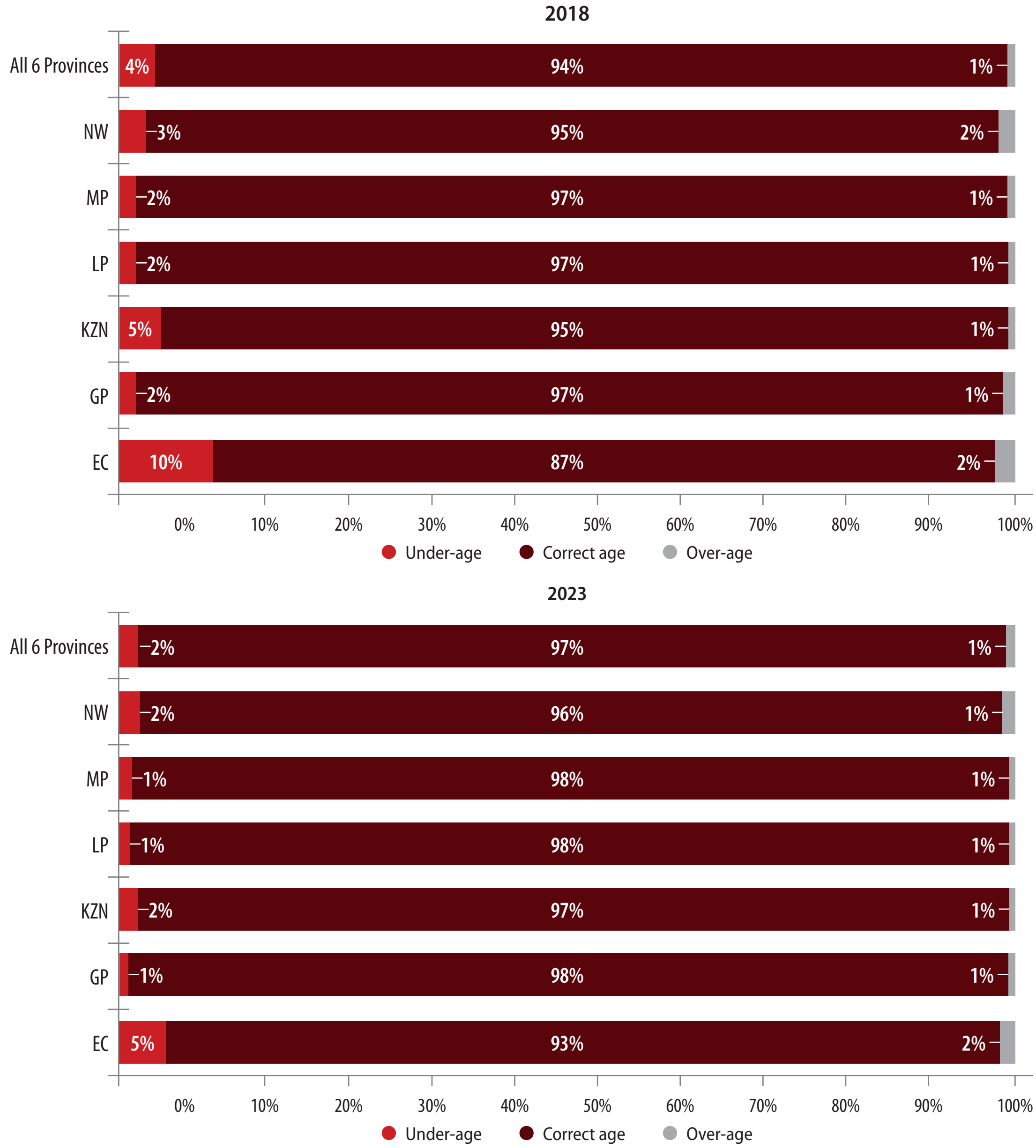
Due to the way school entry ages are stipulated in South African legislation[2], there is effectively an 18-month age range that can be considered the "school-starting age". This section first describes how school-entry-age policies are implemented in schools and how strictly the legislated guidelines are applied. It then examines how age-at-entry relates to the probability of repeating Grade 1 and to early academic performance, drawing on learner-level longitudinal data.

2 For a detailed description, see pages 4–6 in Böhmer, B. (forthcoming). "An unequal start: The impact of age of school entry on academic progression and performance in Grades 1–4". *RESEP working papers*. Stellenbosch University.

3.3.1 Age of school entry compliance

Figure 3.1 shows the proportion of Grade R learners who were over-age, under-age and correctly-aged in each of the six provinces in the DDD dataset in 2018 and 2023. In 2018, North West, Mpumalanga, Limpopo, KwaZulu-Natal and Gauteng all had compliance rates with the school-age legislation exceeding 90%, well above those of comparable nations (Givord, 2020). Even the Eastern Cape, with the lowest compliance rate among the six provinces at 88% in 2018, compares favourably with comparable countries, which can have compliance rates below 80%. Encouragingly, compliance improved across all provinces over the five years, even from these high rates. It should be noted, however, that an 18-month range for school entry is unusual (most countries have a one-year range).

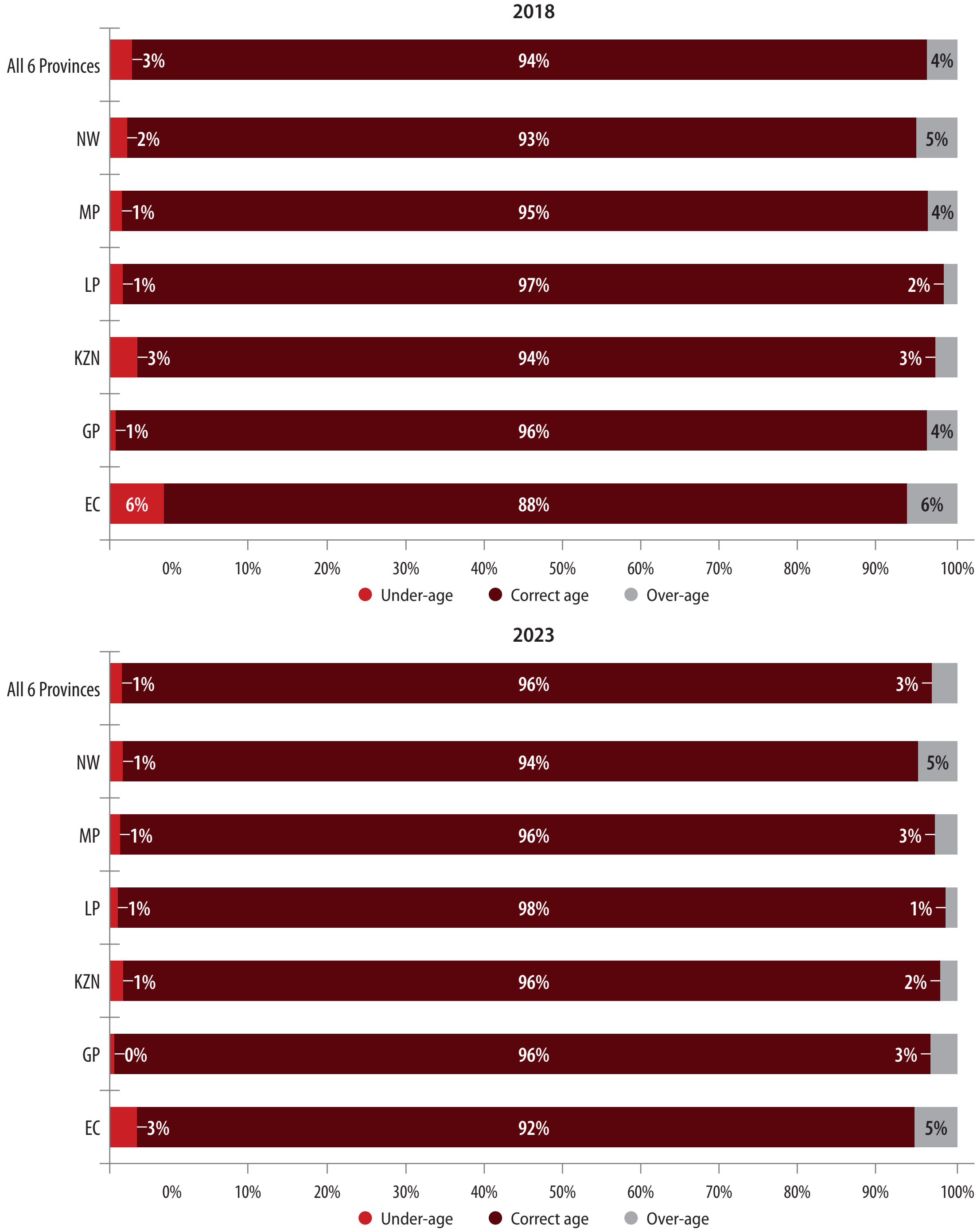
FIGURE 3.1 Percentage of under-age, correctly-aged and over-age Grade R first entrants by province, 2018 & 2023



Source: DDD learner panel, 2017–2023 for six provinces: EC, GT, KZN, LP, MP and NW. Only included schools that had information in the previous year, to ensure that repeaters and first time entrants into Grade R could be correctly identified, provided the child stayed within the same school.

Figure 3.2 shows the same information as **Figure 3.1**, this time for Grade 1 learners. Similar patterns are observed. It is particularly encouraging to see the progress in reducing the number of under-age learners admitted to schools. The Eastern Cape reduced the proportion of under-age learners in Grade 1 from 6% to 3% between 2018 and 2023, while KwaZulu-Natal reduced it from 3% to 1% over the same period.

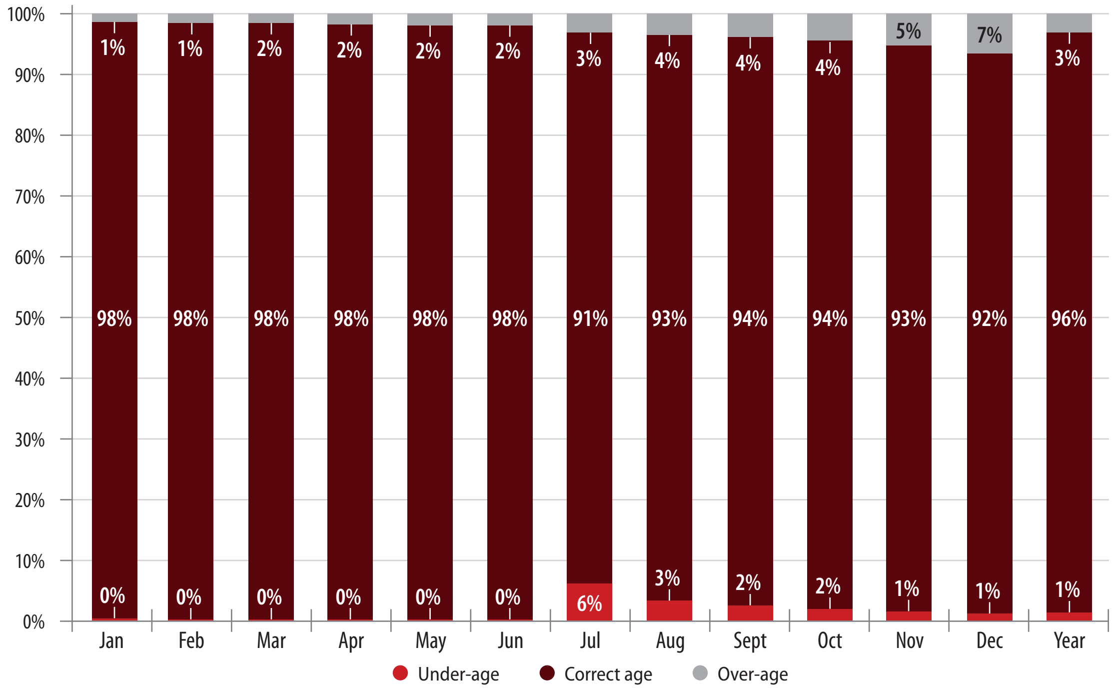
FIGURE 3.2 Percentage of under-age, correctly-aged and over-age Grade 1 first entrants by province, 2018 & 2023



Source: DDD learner panel, 2017–2023 for six provinces: EC, GT, KZN, LP, MP and NW. This only includes schools that had information in the previous year, to ensure that repeaters and first time entrants into Grade 1 could be correctly identified.

Non-compliance also tends to take place near the age thresholds. **Figure 3.3** shows that most under-aged learners were born in July or August, meaning they are just below the 5½-year cutoff for Grade 1 entry. Similarly, most over-aged learners were born in the second half of the year, typically in December or November, making them only a month or two older than the oldest learners in the cohort. This fuzziness near the age cutoffs and the clustering around them suggest a degree of flexibility or discretion in admissions decisions, with parents and schools making judgment calls based on individual children's circumstances.

FIGURE 3.3 Over-aged, under-aged and correctly-aged Grade 1 first-time entrants by month of birth in 2023

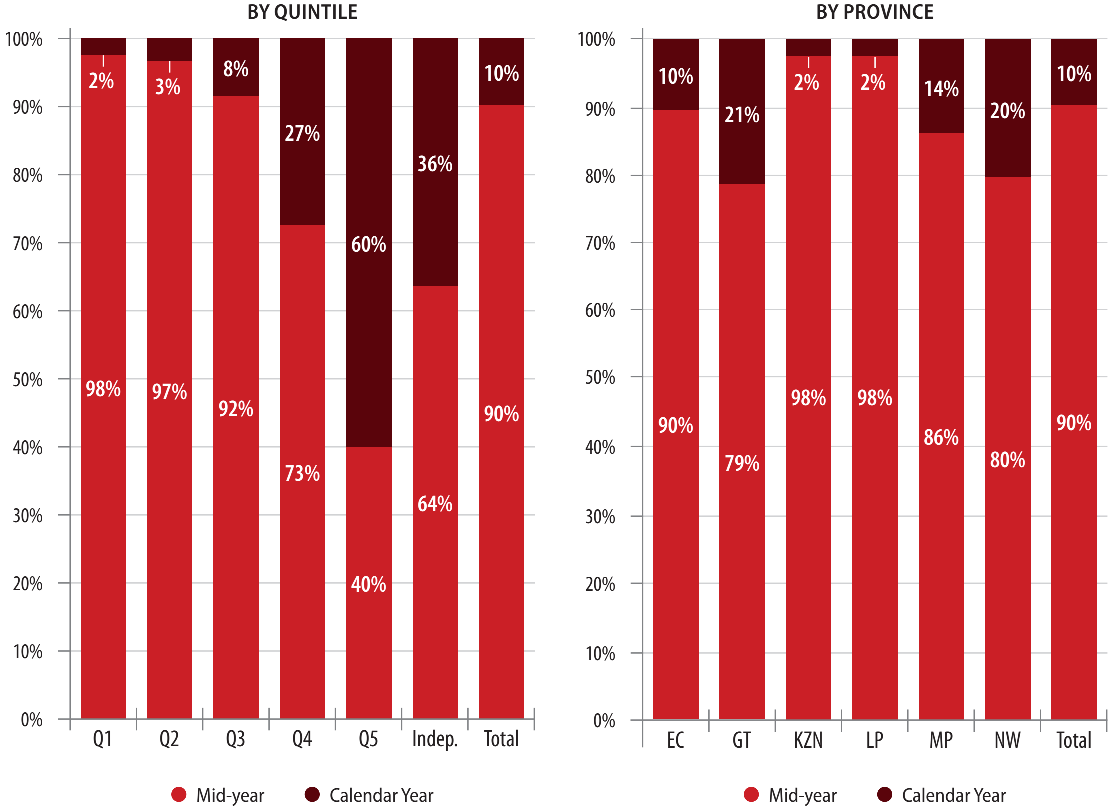


Source: DDD learner panel, 2017–2023 for six provinces: EC, GT, KZN, LP, MP and NW. Only included schools that had information in the previous year, to ensure that repeaters and first time entrants into Grade R could be correctly identified.

Although learners may start Grade 1 during the legislated 18-month period, in practice most schools admit learners within a 12-month cohort, applying either the "mid-year policy" or the "calendar-year policy". Under the mid-year policy, learners are considered age-appropriate for Grade 1 if they turn six within the six months preceding the start of the school year or within the first six months of that school year. Under the calendar-year policy, learners are considered age-appropriate for Grade 1 in the calendar year (January–December) in which they turn seven.

Figure 3.4 shows the proportion of learners admitted under the mid-year and calendar-year policies, respectively, by school quintile and province. Quintile 1–3 schools almost exclusively follow the mid-year policy, whilst more than half of Quintile 5 and just over a third of independent schools follow the calendar-year policy. There are also provincial differences: schools in Limpopo and KwaZulu-Natal generally follow the mid-year policy, whilst there is a mix in provinces like Gauteng and North West.

FIGURE 3.4 Proportion of schools that follow the mid-year vs. calendar-year policy by school quintile and province



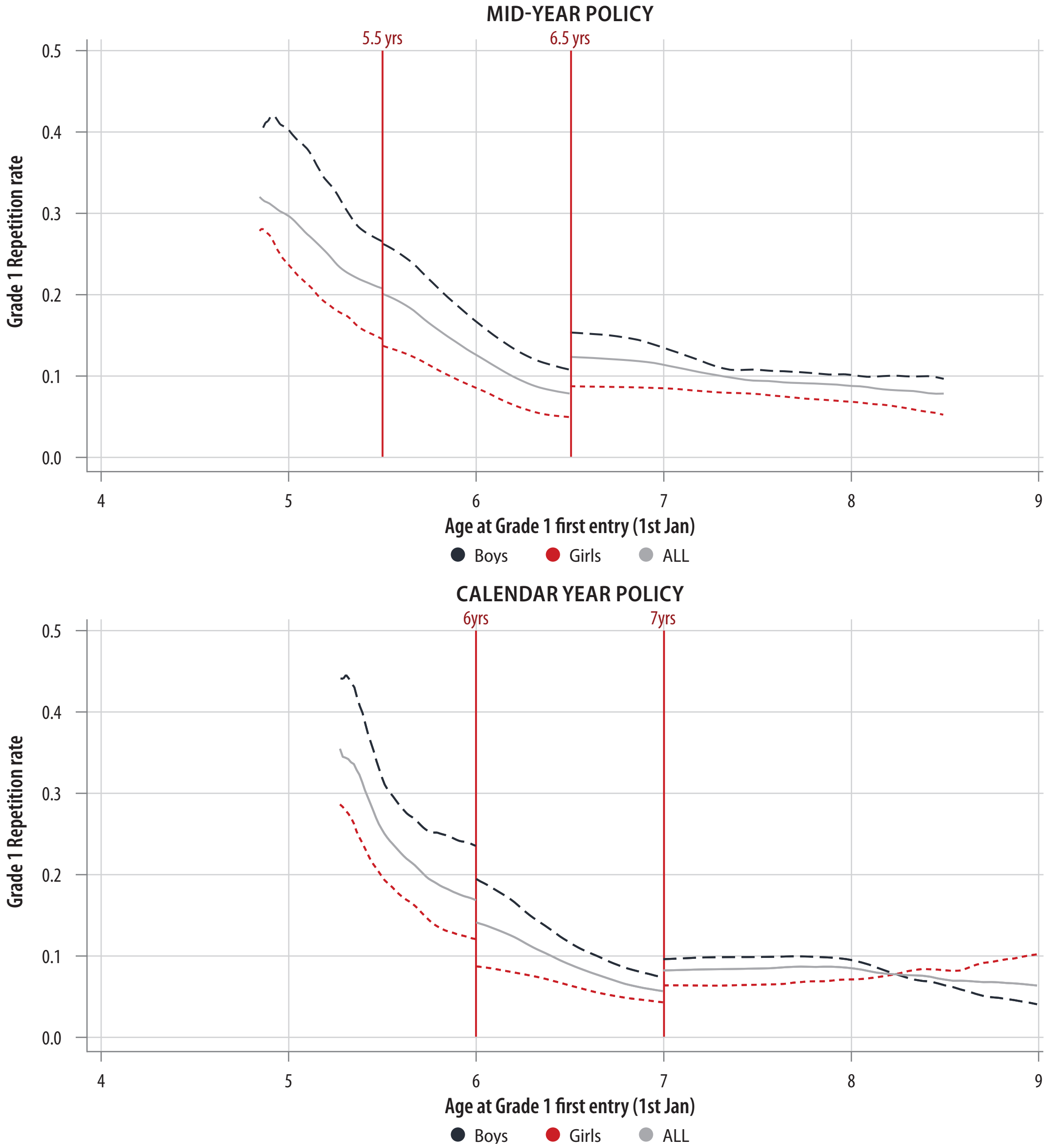
Source: DDD learner panel, 2017–2023 for six provinces: EC, GT, KZN, LP, MP and NW. Schools were assigned to each policy (mid-year or calendar year) based on the proportion of learners in a given year whose ages fell within the relevant 12-month age range. The most commonly used policy by that school over time was then assigned to each school.

3.3.2 Impact of school entry age on academic achievement

Under fixed school-entry cut-offs, a child's birth month becomes the key determinant of whether they enter a cohort as relatively younger or older. Although older learners often perform better within their class (Givord, 2020; Pedraja-Chaparro, Santín & Simancas, 2015), younger learners within a class may have an advantage over their older classmates as they benefit from exposure to older peers. To estimate the effects of school entry age on learning outcomes, a balanced panel was created using the DDD data. The panel was constructed for the cohort of learners who entered Grade 1 for the first time in 2018.

The impact of age at school entry on the probability of repeating Grade 1 is examined first. **Figure 3.5** shows Grade 1 repetition rates by age for this cohort of learners, with separate lines for boys, girls and the combined cohort. The panel on the left shows the relationship between school-entry age and repetition for schools that apply the mid-year policy, and the panel on the right shows the relationship for schools that apply the calendar-year policy. The figure shows that repetition rates are highest among the youngest entrants and decline steadily as children enter school older, flattening out from around age seven onwards. Across schools using the mid-year policy or the calendar-year policy, the relationship between age-at-entry and repetition remains the same: younger entrants face a substantially higher risk of repeating Grade 1. The boys' and girls' lines show that, although boys consistently repeat at higher rates than girls at every age, the age patterns are very similar for both.

FIGURE 3.5 Grade 1 repetition rate by age at first school entry and gender, 2018 Grade 1 cohort



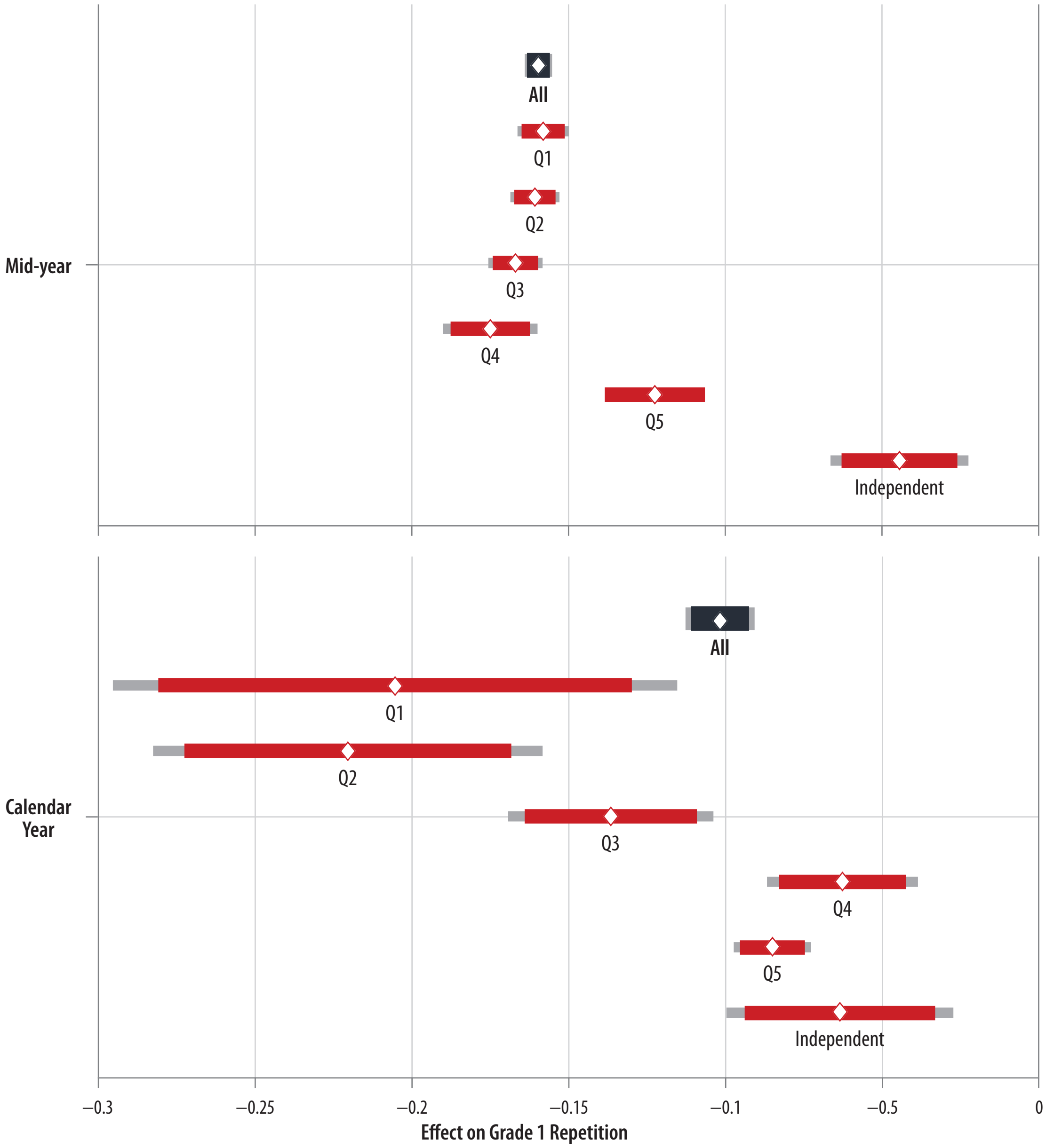
Source: Reproduced from Böhmer (forthcoming), Figure 4. Grade 1 and Grade 4 panel data tracking the Grade 1 2018 cohort. Created from DDD learner panel, 2017–2023 for six provinces: EC, GT, KZN, LP, MP and NW. The panel only includes schools that had information in 2017, 2018, 2021 and 2022 to ensure that first time entrants into Grade R could be correctly identified.

While these descriptive patterns are informative, they are not an exact measure as they reflect both selection into early or delayed schools entry as well the effect of age itself. Statistical techniques were used to estimate the effect of being a year older at school entry while accounting for some of these selection effects.[3] The analysis estimates effects both on the probability of repeating Grade 1 and achievement in school-based assessments (SBAs).

3 Delayed or early entry into Grade 1 is not random. This decision is generally made taking into account the child's characteristics and circumstances, including factors such as ability, family socio-economic status and health status, which can also influence later academic performance. To account for some of these selection effects, birth month is applied as an instrument for the actual school-entry age and a two-stage least squares regression is estimated. The regression accounts for school fixed effects to account for the differences in marking reflected in the school-based assessments (SBAs) across schools.

Results are presented in **Figure 3.6** and **Figure 3.7**, respectively. In both figures, estimated effects are presented separately by school-age admission policy (mid-year or calendar-year) and school quintile.

FIGURE 3.6 Effect of being a year older at Grade 1 first entry on Grade 1 repetition, by school-age admission policy and school quintile

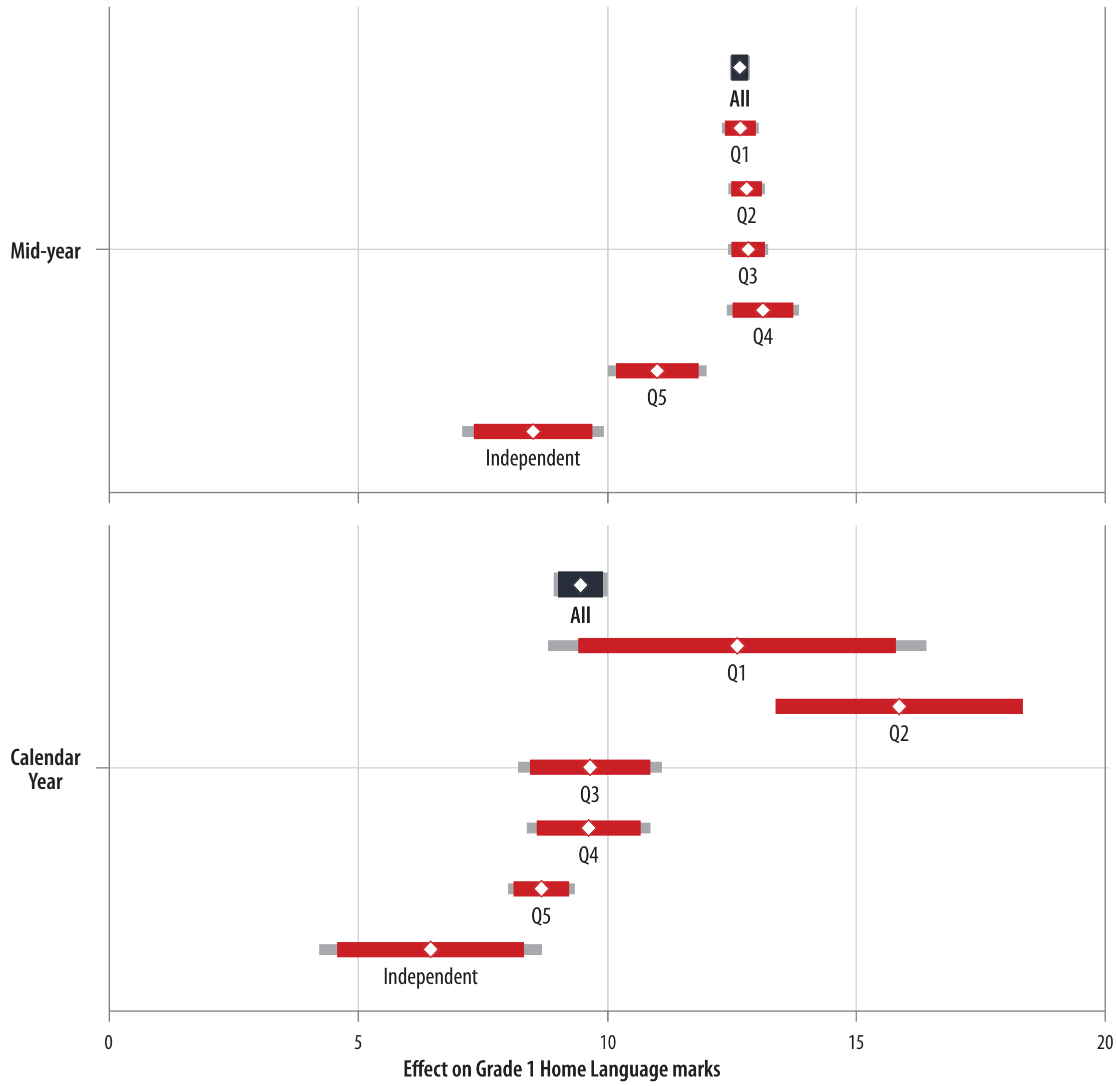


Source: Grade 1 and Grade 4 panel data tracking the Grade 1 2018 cohort. Created from DDD learner panel, 2017–2023 for six provinces: EC, GT, KZN, LP, MP and NW. The panel includes only schools that had information in 2017, 2018, 2021, and 2022 to ensure that first time entrants into Grade R could be correctly identified. Estimated effects are shown separately by school-age admission policy (mid-year or calendar-year) and school quintile (Q1–5 and independent schools).

Figure 3.6 shows that in schools applying the mid-year policy, learners who are a year older than their younger peers are about 16 percentage points less likely to repeat Grade 1, whilst learners who are one year older in calendar-year schools are roughly 10 percentage points less likely to repeat Grade 1.

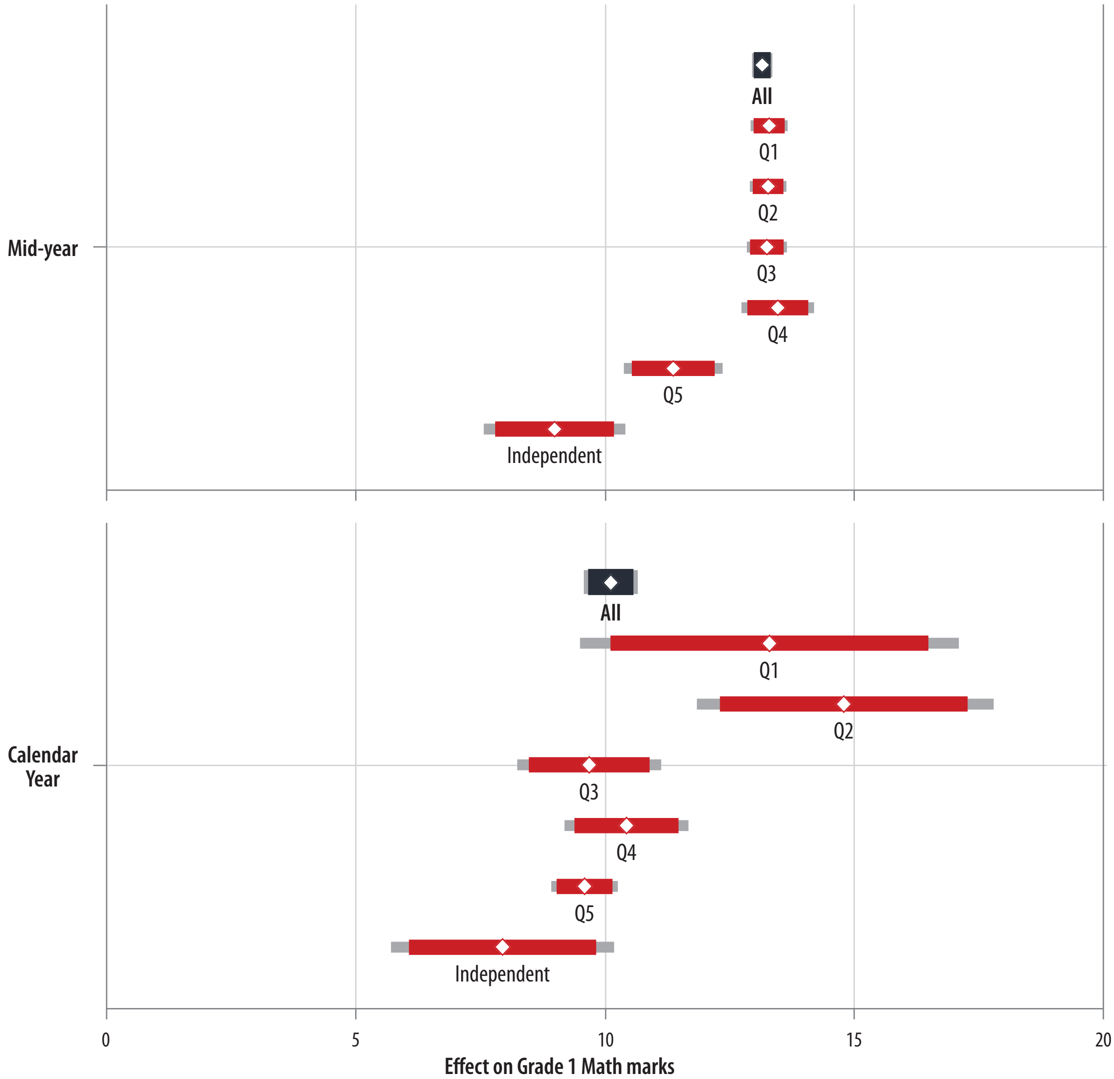
Similarly, when looking at Grade 1 Home Language (HL) marks (**Figure 3.7**), learners in mid-year schools who are a year older score about 13 percentage points higher in Home Language. In schools applying the calendar-year policy, the difference is slightly smaller – around 9 percentage points. Similar patterns are observed in Mathematics, shown in **Figure 3.8**. In schools applying the mid-year policy, learners who were a year older than their peers also scored around 13 percentage points higher in Mathematics. In schools applying the calendar-year policy, these learners scored about 10 percentage points higher in Mathematics. These results indicate that younger learners' lower marks are a key driver of their higher repetition rates.

FIGURE 3.7 Effect of being a year older at first entry in Grade 1 on Home Language (HL) SBA marks, by school-age admission policy and school quintile



Source: Grade 1 and Grade 4 panel data tracking the Grade 1 2018 cohort. Created from DDD learner panel, 2017–2023 for six provinces: EC, GT, KZN, LP, MP and NW. The panel includes only schools that had information in 2017, 2018, 2021, and 2022 to ensure that first time entrants into Grade R could be correctly identified. Estimated effects are shown separately by school-age admission policy (mid-year or calendar-year) and school quintile (Q1–5 and independent schools).

FIGURE 3.8 Effect of being a year older at first entry in Grade 1 on Mathematics SBA marks, by school-age admission policy and school quintile



Source: Grade 1 and Grade 4 panel data tracking the Grade 1 2018 cohort. Created from DDD learner panel, 2017–2023 for six provinces: EC, GT, KZN, LP, MP and NW. The panel includes only schools that had information in 2017, 2018, 2021, and 2022 to ensure that first time entrants into Grade R could be correctly identified. Estimated effects are shown separately by school-age admission policy (mid-year or calendar-year) and school quintile (Q1–5 and independent schools).

The age-at-entry patterns observed above point to positive effects of being a year older at school entry. Learners who are a year older at the start of Grade 1 are less likely to repeat the grade, and score higher marks in Home Language and Mathematics, on average. These patterns raise an important question about the role of repetition in the Foundation Phase: if being older is associated with better outcomes, then repeating a grade (thereby increasing a learner's age relative to their cohort) may also confer some benefit. The next section therefore examines the impact of repetition directly, using a regression discontinuity approach to isolate its effects for learners close to the promotion thresholds.

3.4 Repetition as remediation in Grades 1–7

The prevalence of repetition in the early grades raises an important question: to what extent does repeating a grade improve later performance, or does it merely delay progression without addressing underlying learning gaps? Descriptive comparisons cannot answer this, as learners who repeat often differ from those who are promoted in ways that are not fully captured in the available data, such as motivation, support at home or underlying learning difficulties.

In South Africa, promotion in Grades 1 and 4 is tied to explicit subject thresholds: at least 50% in Home Language, 40% in Mathematics and 40% in First Additional Language. Because learners just below and just above these thresholds are very similar in most respects, sharp differences in later outcomes around the cut-off can be interpreted as the causal effect of repetition for learners close to the threshold. This approach, known as a regression discontinuity design, therefore compares learners who narrowly fail and repeat with those who narrowly pass and are promoted. A complication arises because repeaters progress through the system one year later than promoted learners. Their later outcomes must therefore be evaluated with this lag taken into account. The analysis accordingly compares the subsequent performance of promoted and repeating learners at equivalent points in their schooling, rather than in the same calendar year, making it possible to assess whether repetition provides meaningful remediation or simply postpones the difficulties learners' experience.[4]

Table 3.4 summarises the construction of the balanced learner panels used for this purpose and shows the number of learners included in the analysis.

4 Given evidence that some schools adjust marks upward to meet these pass thresholds, the analysis was also conducted using a sub-sample of schools where such mark inflation was not observed. The results from this cleaner sample were highly consistent with those from the full dataset presented in the text, strengthening confidence in the findings. However, this might partly be due to how the panel was constructed, with only learners who were age-appropriate in Grade 4 included.

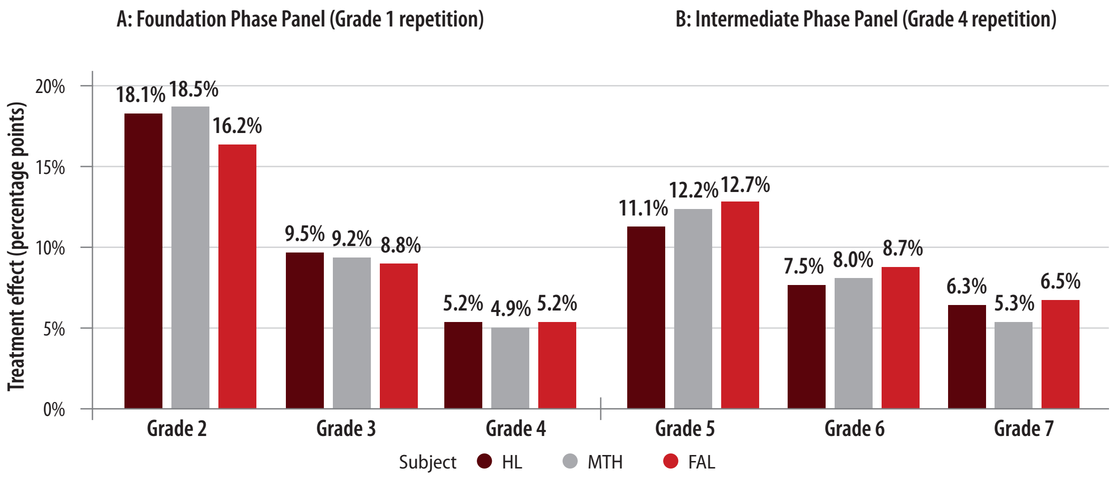
TABLE 3.4 Transition matrix for the cohorts who started Grade 1 (or 4) in 2017

		2017	2018	2019	2020	2021	2022
Foundation Phase Panel (Grade 1 repetition)	Total	481 606 (100%)	481 606 (100%)	481 606 (100%)	481 606 (100%)	123 572 (25.7%)	10 258 (2.1%)
	Grade 4				358 034 (74.3%)	113 314 (23.5%)	10 258 (2.1%)
	Grade 3			382 888 (79.5%)	117 793 (24.5%)	10 258 (2.1%)	
	Grade 2		420 261 (87.3%)	97 572 (20.3%)	5 779 (1.2%)		
	Grade 1	481 606 (100%)	61 345 (12.7%)	1 146 (0.2%)			
Intermediate Phase Panel (Grade 4 repetition)	Total	369 190 (100%)	369 190 (100%)	369 190 (100%)	369 190 (100%)	50 618 (13.7%)	2 990 (0.8%)
	Grade 7				318 572 (86.3%)	47 628 (12.9%)	2 990 (0.8%)
	Grade 6			326 739 (88.5%)	48 525 (13.1%)	2 990 (0.8%)	
	Grade 5		341 463 (92.5%)	41 920 (11.4%)	2 093 (0.6%)		
	Grade 4	369 190 (100%)	27 727 (7.5%)	531 (0.1%)			

Source: Reproduced from Clayton (forthcoming), Table 1. Calculations based a longitudinal sample of DDD data from 2017 to 2023.

Figure 3.9 presents the estimated causal effects of repeating Grade 1 (Panel A) and Grade 4 (Panel B) on later outcomes. For learners close to the promotion threshold, repeating Grade 1 is associated with substantial short-term gains in achievement. Repeating learners scored, on average, 18 percentage points higher in Home Language in Grade 2, 10 percentage points higher in Grade 3 and 5 percentage points higher in Grade 4 than learners just above the promotion threshold, although a year later. Mathematics and First Additional Language results follow similar patterns, albeit with slightly smaller effects. For learners close to the promotion threshold, repeating Grade 4 also produces substantial gains across all three subjects. The immediate improvements are not as large as those caused by Grade 1 repetition, but there is less fadeout. By Grade 7, learners' Home Language marks remained around six percentage points higher than those of learners just above the promotion threshold in Grade 4, with similar patterns in Mathematics and First Additional Language.

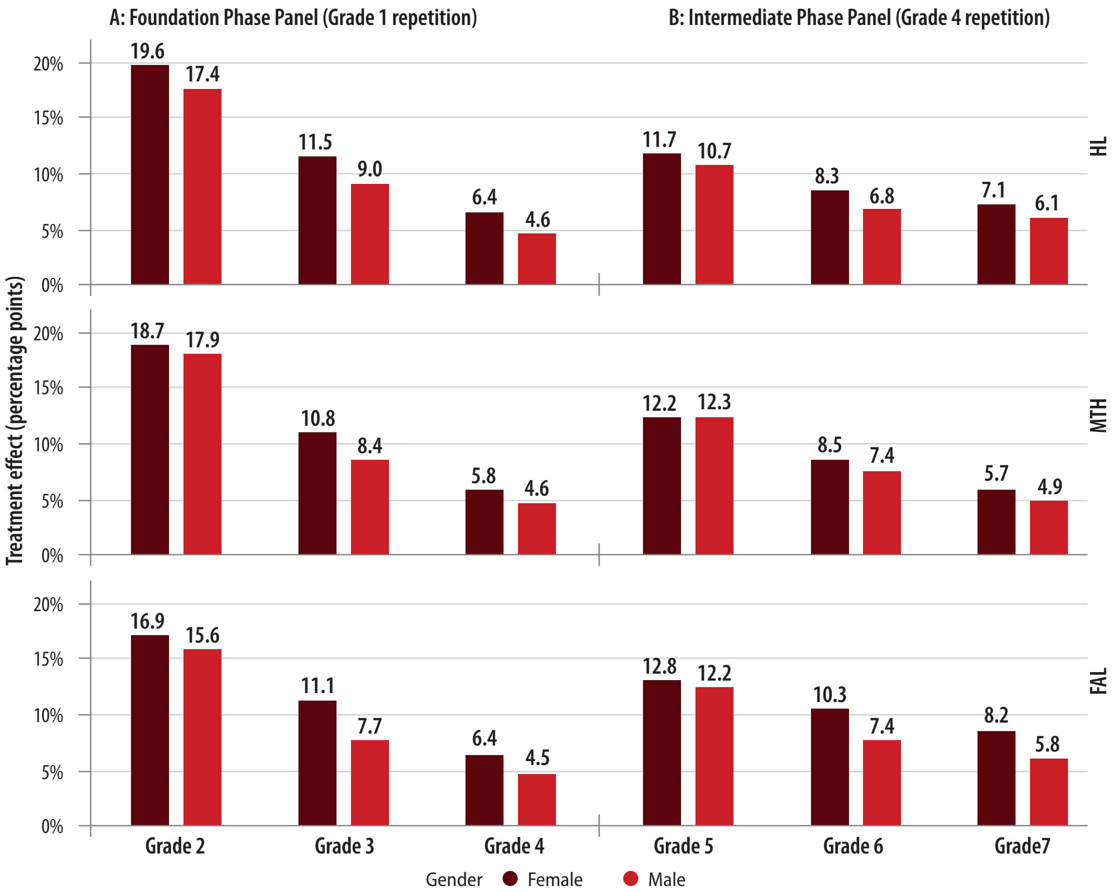
FIGURE 3.9 Estimated effect of repetition on learner marks, by subject



Source: Reproduced from Clayton (2025), Figure 1. Calculations based on a longitudinal sample of DDD data from 2017 to 2023. Notes: Bars show 95% confidence intervals. HL = Home Language, MTH = Mathematics, FAL = First Additional Language.

Figure 3.10 summarises the estimated causal effects of repeating Grade 1 and Grade 4 on later achievement, separately for girls and boys. While some gender differences emerge (particularly after Grade 1 repetition), these patterns largely mirror the broader gendered differences in learning progress rather than indicating that repetition itself has intrinsically different effects for boys and girls. In the Foundation Phase, girls typically make faster academic gains, and this is reflected in the larger estimated effects for girls following Grade 1 repetition. However, the Intermediate Phase results in panel B show a different pattern: girls and boys gain roughly the same benefit from Grade 4 repetition in Grade 5 for both Home Language and Mathematics, indicating that repetition may slow the widening of the gender gap at this stage. By Grades 6 and 7, however, the pro-female advantage begins to re-emerge, as boys experience greater fadeout of the repetition benefits. However, a substantially higher share of boys than girls repeat in Grade 1 and Grade 4, meaning that more boys receive the intervention. This helps to narrow the average gender gap in the later grades.

FIGURE 3.10 Estimated effect of repetition on learner marks, by gender



Source: Reproduced from Clayton (2025), Figure 2. Calculations based on a longitudinal sample of DDD data from 2017 to 2023. Notes: Bars show 95% confidence intervals. HL = Home Language, MTH = Mathematics, FAL = First Additional Language.

3.5 Interpreting the effects of repetition: Important considerations

The results presented above indicate that, for learners close to the promotion threshold in Grade 1 and Grade 4, repetition is associated with meaningful improvements in subsequent achievement. These findings contribute new evidence to an area where robust causal estimates have been limited. However, there are several important considerations that need to be kept in mind when interpreting these results and when thinking about their potential policy relevance.

The first consideration relates to the nature of the regression discontinuity design. The estimated effects apply only to learners whose marks placed them just below or just above the promotion threshold in a given year. These learners are not representative of all learners who repeat a grade. The analysis therefore cannot speak to the effects of repetition for learners with very low achievement, who may face different learning barriers and respond differently to repetition.

A second issue concerns the grades for which evidence is available. The analysis focuses on the primary school phases where most repeaters remain in school. This stands in contrast to patterns observed in the secondary phases. Previous longitudinal research in the Western Cape shows that repetition in Grade 9 is strongly associated with dropout, with only about one quarter of Grade 9 repeaters remaining in the system three years later (Van Wyk, Gondwe & De Villiers, 2017). The potential consequences of repetition may therefore differ substantially between the primary and secondary phases.

Third, repetition carries significant financial implications. Earlier estimates suggest that roughly 8% to 12% of the national education budget in 2018/19 was spent on supporting learners who repeated a grade (Van der Berg et al., 2019). These costs represent a considerable share of public expenditure and raise important questions about opportunity costs relative to other remedial interventions that schools and provinces might pursue.

Finally, although the results show large immediate positive effects, there is evidence that these gains diminish over time. The available data do not allow us to determine whether the benefits persist in the longer term or whether they fade out completely.

> … for learners close to the promotion threshold in Grade 1 and Grade 4, repetition is associated with meaningful improvements in subsequent achievement.

3.6 Conclusion

Overall, the evidence presented in this chapter shows that early patterns of school entry and repetition shape learners' trajectories in important ways. Younger entrants are more likely to repeat Grade 1, and the regression discontinuity analysis indicates that, for learners close to the promotion threshold in the primary grades, repetition is associated with short-term improvements in achievement. There is some indication that these gains diminish over time, although the available data do not allow us to determine whether they fade out completely. It is important to keep in mind that the analysis focuses only on borderline learners in the early grades and does not reflect the experiences of learners with very low achievement or those in the secondary phase, where repetition is strongly associated with dropout. Repetition also carries a considerable fiscal costs.

South Africa already invests in a range of interventions aimed at strengthening foundational learning, yet persistent gaps in early literacy and numeracy indicate that many learners are not receiving the support they need in the first place. The central policy question should therefore focus on how to reduce the need for remediation rather than how best to remediate. This requires sustained improvements in the quality of teaching and learning in the early grades so that fewer learners fall behind to begin with.

"Weak Mathematics performance in the preparatory grades constrains future academic trajectories and reinforces long-standing inequalities in learning

CHAPTER 4
PROGRESSION, SUBJECT CHOICE AND OUTCOMES FROM GRADE 9 TO GRADE 12

Analysis for this chapter was conducted by Rebecca Selkirk and Charisa Geyer.

4.1 Introduction and analytical approach

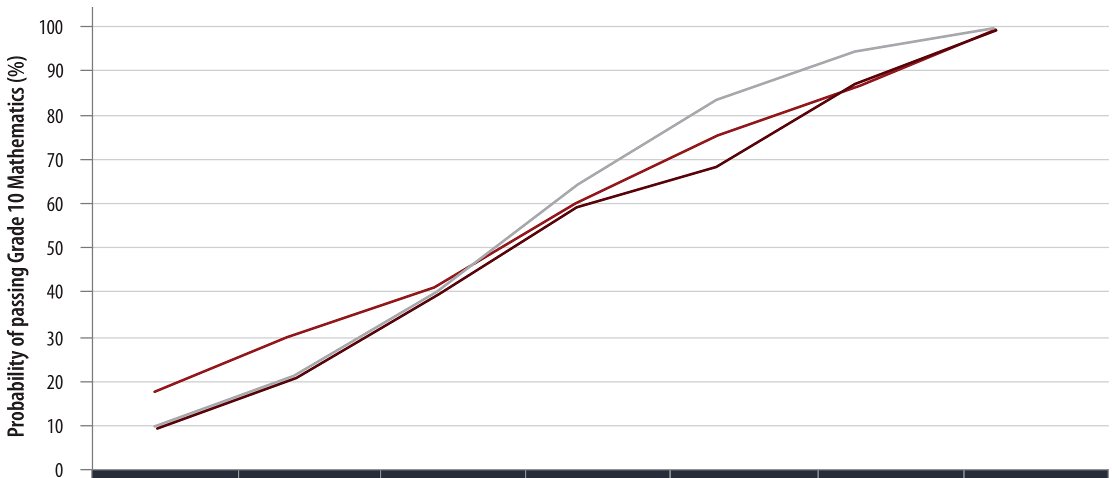
Learners' progression through the Further Education and Training (FET) phase is shaped by a complex interaction of prior achievement, school-level opportunity and subject choice. Among these subject decisions, the choice between Mathematics and Mathematical Literacy in Grade 10 is one of the most important. Mathematics remains a gateway subject in South Africa: it opens access to a wide range of tertiary fields, such as engineering, commerce, health sciences and the technical professions, and as a result is strongly associated with improved labour market prospects. At the same time, South African research consistently shows that many learners enter the FET phase without the foundational mathematical competencies needed for successful participation in the subject (Department of Basic Education, 2024b), and the consequences of an overly ambitious subject choice can be severe.

Previous Resep work has emphasised that weak Mathematics performance in the preparatory grades constrains future academic trajectories and reinforces long-standing inequalities in learning (see for example Spaull & Kotzé (2015)). For many Grade 9 learners, the 40% promotion threshold in Mathematics may give a misleading signal of readiness for the demands of the FET curriculum. As a result, large numbers of learners, particularly in poorer schools, begin Grade 10 at a substantial academic disadvantage. Choosing Mathematics in this context may be aspirational, driven by hopes of accessing high-status post-school pathways. However, it carries a heightened risk of having to switch to Mathematical Literacy at a later stage, or of failing to reach matric within the expected timeframe due to a higher risk of repetition or dropout.

The opposite dilemma is also extreme. Choosing Mathematical Literacy may increase the likelihood of reaching and passing Grade 12, but it can limit access to university programmes and high-return career opportunities. Learners and parents therefore face a difficult trade-off between what might be termed, from a systems perspective, an *"ambitious"* choice – taking Mathematics to keep a wider range of post-school possibilities open – and a more *"realistic"* choice that increases the likelihood of meeting NSC requirements but narrows access to certain academic and labour-market pathways. Schools and teachers play a decisive role in shaping these choices. Yet, their guidance is often constrained by limited diagnostic information on foundational competencies and by institutional pressures to promote higher Mathematics enrolment.

To illustrate more concretely how subject choice between Mathematics and Mathematical Literacy relates to later academic outcomes, **Figure 4.1** shows the average percentage of learners who passed Grade 10 mathematics for different performance bands of Grade 9 mathematics achievement. DDD data from the Eastern Cape, Gauteng and Limpopo for the period 2022–2023 is used to plot this relationship. Across all three provinces and all five years shown, the association is strikingly stable: learners' Grade 9 marks are strongly correlated with their chances of passing Mathematics in Grade 10. Those with weak prior achievement seldom pass, whereas learners with stronger foundations have substantially higher probabilities of passing. These results show that Grade 9 Mathematics performance provides a reliable indication of readiness for the more demanding Grade 10 curriculum. This underscores the importance of carefully taking into account Grade 9 results when making Grade 10 subject choices.

FIGURE 4.1 Proportion of learners who passed Grade 10 Mathematics, by Grade 9 Mathematics performance bands



	0–29%	30–39%	40–49%	50–59%	60–69%	70–79%	80–100%
EC	18	31	41	60	75	86	99
GT	10	22	40	64	83	94	99
LP	9	21	39	59	68	87	99

Grade 9 Mathematics mark

Source: DDD learner panel 2022–2023. The rolling panel includes only learners with consecutive records in Grade 9 and Grade 10, capturing their last recorded attempt in Grade 9 and their first recorded attempt in Grade 10. Average values across the period 2012–2023 are shown. Percentages are expressed as a proportion of the cohort who had chosen Mathematics in Grade 10.

Against this background, this chapter examines the progression of a cohort of learners who were in Grade 9 in 2018 and entered Grade 10 in 2019 across three provinces: Eastern Cape, Gauteng and Limpopo. The analysis links Grade 9 achievement, subject choice between Mathematics and Mathematical Literacy in Grade 10, switching between these two subjects, and eventual NSC outcomes in 2021 and 2022. By following a large cohort of learners (about a quarter of a million) over five years, the chapter provides empirical insight into how learners' initial preparedness interacts with their subject choices, and the extent to which these decisions either enable or constrain their academic prospects.

Three questions guide the analysis:

- How well prepared were learners when entering Grade 10, particularly in Mathematics?
- How did choosing Mathematics instead of Mathematical Literacy affect the probability of repeating Grade 10?
- How did these choices relate to later subject switching and NSC outcomes?

In answering these questions, the chapter highlights the central tension facing learners: balancing aspirations with a realistic assessment of their preparedness. This has implications not only for individual pathways, but also for systemic efficiency, as inappropriate subject choice contributes to high rates of subject switching, repetition and dropout in the FET phase.

In addition to descriptive patterns, the chapter also presents regression estimates that quantify how Grade 9 Mathematics performance and subject choice shape the probability of repeating Grade 10 or completing the NSC on track (i.e. without repetition or dropout). These results help to distinguish associations driven by prior achievement from those linked to subject choice itself, and they provide clearer insight into the levels of Grade 9 Mathematics achievement at which the Mathematics pathway becomes academically viable in the FET phase.

4.2 Data and sample construction

The analytic sample comprises learners who were in Grade 9 in 2018 and in Grade 10 in 2019. A balanced panel of schools was constructed over the 2018 to 2022 period, and learners outside of these schools or learners missing information necessary for the analysis – as explained in the sample selection process described in **Box 4.1** – were excluded from the sample. As a result, data completeness varied across provinces. This can be seen in **Table 4.1**, which shows the number of learners in the final sample in each province. These numbers are also expressed as a proportion of all first-time Grade 10 entrants in 2019 in each province to provide an indication of the completeness of learner record linkages between Grade 9 (2018) and Grade 10 (2019) and the quality of the DDD data recorded over the 2018–2022 period. Limpopo has the most complete overall sample for the period 2018–2022, with 87.5% of 2019 first-time Grade 10 entrants being traceable to Grade 9 in 2018. Eastern Cape has a similarly high rate of complete records, at 83.6%. Gauteng's sample retention rate is much lower, at 64.3%. This is largely due to learners missing anonymised SA ID numbers, as well as lower matches to the 2018 Grade 9 Mathematics marks. The latter limitation also plagues the Eastern Cape data, but to a much lesser extent.

TABLE 4.1 Composition of the sample of learners

	Eastern Cape	Gauteng	Limpopo
Learners in final sample	79 679	84 479	78 160
Sample as % of all first-time Gr10s	(83.6%)	(64.3%)	(87.5%)

Source: DDD learner panel 2018–2022. See Box 4.1 for details of how the final sample was reached.

BOX 4.1 **HOW THE FINAL SAMPLE FOR ANALYSIS WAS REACHED**

To achieve an initial sample of 2019 Grade 10 learners against which the final sample numbers could be compared, the following steps were taken:

1. Learners' anonymised SA ID numbers (taken from the 2017–2023 enrolment data) were used to reduce cases where a single learner was assigned two or more unique learner identifiers.
2. Using the improved unique learner identifiers, Grade 10 subject data was used to identify how many Grade 10 learners had achievement information recorded in Term 4 of 2019 ("All 2019 Grade 10s") and how many of these learners were appearing in Grade 10 for the first time in 2019 ("All first-time Grade 10s"), which served as the reference categories in Tables 4.1 and 4.2.

Furthermore, a baseline reference group of first-time Grade 10 learners with "no issues" was created ("All no-issue first-time Grade 10s"), which excluded learners who met any of the following criteria:

- A missing SA ID number (required for the SBA-NSC match)
- A South African ID number that was shared by multiple unique learner identifiers which did not appear to identify a single student (based on date of birth, gender, home language, and race).
- A learner with non-missing and non-zero Grade 10 Term 4 achievement information submitted in two or more different schools in 2019.

Learners with any of these issues were excluded from the final sample. To be included in the final sample for analysis, learners had also to meet all of the following criteria:

- Have a mathematics mark recorded for Grade 9 in 2018.
- Have Grade 10 Term 4 achievement data recorded in 2019, meeting the following criteria:
  - Marks recorded in seven or more non-duplicate subjects, with at least four non-zero marks
  - At least one of these subjects should be an official Home Language subject, and exactly one subject should be either Mathematics or Mathematical Literacy
  - No subjects exclusive to the Technical Pathway should be taken
  - Grade 10 absenteeism data should be non-missing
  - The learner's Grade 10 school needed to be contained within a balanced panel of schools which submitted enrolment data in every year between 2018 and 2022.
  - Enrolment data had to confirm that 2019 was a learners' first attempt at Grade 10

BOX 4.1 HOW THE FINAL SAMPLE FOR ANALYSIS WAS REACHED *(… continued)*

After restricting the sample in these ways (along with other minor cleaning of specific errors), the final sample of first-time Grade 10 learners in 2019 that was used for the analysis was reached. Table 4.2 shows the differences in sample by province, with Gauteng's sample being the lowest due to its lower SA ID completeness and a lower proportion of learners that could be matched to Grade 9 mathematics achievement (due to the province's lower 2018 data capturing).

TABLE 4.2 Final sample, as a proportion of 2019 Grade 10s

	Eastern Cape	Gauteng	Limpopo
All "no-issue" first-time 2019 Grade 10s	85.6%	71.5%	89.2%
All first-time 2019 Grade 10s	83.6%	64.3%	87.5%
All 2019 Grade 10s	61.4%	51.3%	54.8%
Number of learners in the final sample	79 679	84 479	78 160

Source: DDD learner panel 2018–2022. Note that Limpopo has more repeaters in Grade 10 than the other provinces, which is why the sample as a proportion of all 2019 Grade 10s is relatively low.

4.3 Grade 9 achievement and Grade 10 subject choice

4.3.1 Interpreting Grade 9 Mathematics marks in light of promotion policy

The transition from Grade 9 to Grade 10 is a critical point in learners' Mathematics pathways. Because Mathematics opens access to a wider set of post-school study and career options, many learners and schools may prefer to keep learners on the Mathematics track even when foundational mastery is weak. At the same time, promotion and assessment policies introduce ambiguity into how Grade 9 Mathematics marks should be interpreted. Promotion policy during the period under consideration allowed for mark adjustment, whereby a learner who fell just short of the pass threshold by up to 7 percentage points could be assigned the minimum required mark that would allow them to pass (Department of Basic Education, 2015). That is, a mark of 33% in Grade 9 Mathematics could be adjusted upward to 40% if doing so would result in the learner meeting the pass requirements for Grade 9. As a result, some recorded Grade 9 marks represent policy-adjusted scores rather than actual achievement, which introduces ambiguity into their interpretation.

4.3.2 Provincial differences in Grade 9 achievement and subject choice in Grade 10

Given this scenario, it is important to understand how many learners enter Grade 10 with the minimum level of mathematical preparedness, and how this varies across provinces. **Table 4.3** shows the proportion of 2019 first-time Grade 10 entrants who had passed Mathematics in Grade 9, had chosen Mathematics as a subject (instead of Mathematical Literacy), and had failed Mathematics in Grade 9 and chosen Mathematics in Grade 10. The table shows that the three provinces differed markedly in the proportions of learners entering Grade 10 with a recorded pass in Grade 9 Mathematics. In both Gauteng and Limpopo, fewer than half of first-time Grade 10 learners had met the formal Mathematics promotion requirement in Grade 9 (roughly 40% and 46%, respectively). This proportion was 71% among learners in the Eastern Cape, an unusually high proportion which suggests extensive mark adjustment in the province, an issue investigated further in **Figure 4.2**.

Table 4.3 also shows the overall proportions of learners choosing Mathematics in Grade 10 by province, as well as the proportions of learners who had failed Mathematics in Grade 9 and subsequently chosen Mathematics in Grade 10. Due to the variation in Grade 9 mathematics performance highlighted above, the proportions of learners who failed Mathematics in Grade 9 and went on to choose Mathematics in Grade 10 also varies by province, despite similar overall proportions of learners choosing Mathematics in the three provinces. For example, although roughly 54% of first-entry Grade 10s chose Mathematics in both the Eastern Cape and Limpopo, the higher average Grade 9 Mathematics achievement in the Eastern Cape means that 27.4% of learners who chose Mathematics in the Eastern Cape had failed Grade 9 Mathematics, compared to roughly 40% in Limpopo.

TABLE 4.3 Subject choice according to Grade 9 Mathematics results

Share of all first-time Grade 10 entrants who:	EC	GT	LP
… had passed Grade 9 Mathematics	70.7%	40.3%	45.5%
… took Mathematics rather than Mathematical Literacy in Grade 10	54.2%	42.9%	54.4%
… had failed Grade 9 Mathematics and chose Mathematics in Grade 10	27.4%	23.5%	39.5%

Source: DDD learner panel 2018–2022 (see Box 4.1). "Passed Grade 9 Mathematics" refers to achieving a mark of 40% or higher.

The results in **Table 4.3** point to a striking finding: many first-time entrants into Grade 10 in 2019 had failed Mathematics in Grade 9. This finding is explored in more detail in **Figure 4.2**, which shows the distributions of Mathematics marks for the 2019 first-entry Grade 10 cohort by province. The figure shows that a large proportion of learners scored Mathematics marks below the 40% promotion threshold, confirming that many learners were progressed to Grade 10 despite not meeting the promotion requirements. There are two policy provisions that make this possible, discussed in **Box 4.2**.

> … many first-time entrants into Grade 10 in 2019 had failed Mathematics in Grade 9.

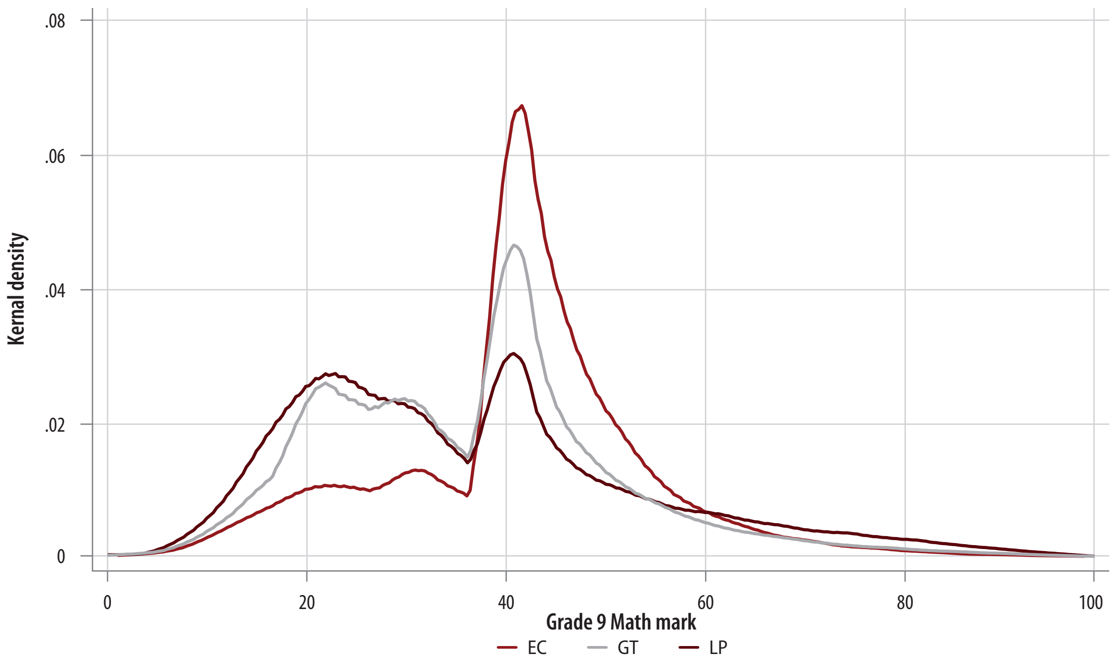
Another important finding from **Figure 4.2** speaks to the unusually high proportion of learners who passed Grade 9 Mathematics in the Eastern Cape: While all three provinces show spikes in the number of learners who achieved marks at the pass threshold (40%), this was particularly pronounced in the Eastern Cape. This finding strongly suggests that the Eastern Cape's higher proportion of Grade 9 learners who passed Mathematics reported in **Table 4.3** is driven largely by more extensive mark adjustment in that province, rather than superior performance in Mathematics.

BOX 4.2 HOW IS IT POSSIBLE TO FAIL MATHEMATICS IN GRADE 9 AND STILL PROGRESS TO GRADE 10?

According to the National Policy Pertaining to the Programme and Promotion Requirements of the National Curriculum Statement Grades R–12 (NPPPR) (Department of Basic Education, 2013), there are two distinct policy provisions that can result in a learner being advanced to Grade 10 despite failing Grade 9 Mathematics:

1. **Progression after a prior repetition in the phase:**
   The NPPPR stipulates that a learner should not repeat more than once in a phase (Foundation, Intermediate, Senior or FET phase). If a learner has already repeated a grade earlier in the Senior Phase (Grades 7–9), the school should progress the learner to the next grade – even if the learner does not meet the formal promotion requirements in Grade 9 Mathematics. This means that a learner who has already repeated once in Grades 7–9 cannot be retained again and will therefore be advanced to Grade 10, regardless of their Mathematics result.
2. **Condonation in cases where Mathematics is the only failed subject:**
   The NPPPR also provides for condonation, where a learner may be promoted despite failing one subject if all other promotion requirements are met. When Mathematics is the only subject failed, the school's promotion committee may condone the Mathematics mark and promote the learner to Grade 10. In this case, the Mathematics mark remains below the pass threshold, but the learner is still formally recorded as promoted under the NPPPR's condonation provision.

FIGURE 4.2 Grade 9 Mathematics mark distributions for first-entry Grade 10s in 2019



Source: DDD learner panel 2018–2022 (see Box 4.1). To smooth the kernel density graphs, a wider bandwidth of 1.5 was used for each province.

These patterns suggest that a significant share of learners in all three provinces begin Grade 10 Mathematics with weak foundations. This creates a misalignment between learners' readiness and the demands of the FET Mathematics curriculum. The remaining sections in this chapter explore how this misalignment translates into heightened risk of switching between subjects, delayed progression later in the FET phase, and dropout.

4.4 Subject switching between Grade 10 and the NSC

Switching from Mathematics to Mathematical Literacy between Grade 10 and the NSC examination at the end of Grade 12 is widespread and may reflect either academic difficulties or strategic positioning for the examination. **Table 4.4** shows the proportion of learners in the 2019 Grade 10 cohort who had switched from Mathematics to Mathematical Literacy by the NSC examination. Results are split across those who had failed Mathematics and Grade 9 and those who had passed the subject. The table points to clear differences in the extent of switching from Mathematics to Mathematical Literacy by Grade 9 achievement: Among learners who failed Grade 9 Mathematics but took Mathematics in Grade 10, approximately one-quarter in the Eastern Cape and Limpopo, and one-third in Gauteng, had switched to Mathematical Literacy by the time of the 2021/22 NSC. Although less pronounced among learners who had passed Grade 9 Mathematics, switching remained common: 15% to 20% in all three provinces shifted to Mathematical Literacy before reaching the NSC.

Table 4.4 further reports the proportions of learners in each province who had not reached the NSC examinations by 2022. Since the 2019 Grade 10 cohort should have reached the NSC by 2021 if on-track, the 2022 NSC would include learners who had repeated once between Grade 10 and Grade 12. The results in the table show that a large proportion of learners did not reach the NSC within the timeframe, from 17.9% in Gauteng to 26% in the Eastern Cape. These patterns underscore the academic risks of choosing Mathematics in Grade 10 after failing it in Grade 9. It also reinforces the importance of accurate assessment and promotion practices, providing learners and parents with sufficient information to plan subject choices and even career options based on their Grade 9 performance. These patterns not only place academic strain on learners but also contribute to inefficiencies in the schooling system, as repetition both prolongs learners' time in school and adds to the instructional burden faced by teachers.

TABLE 4.4 Outcomes for learners who chose Mathematics in Grade 10 in 2019

	Learners who failed Grade 9 Mathematics			Learners who passed Grade 9 Mathematics		
	EC	GT	LP	EC	GT	LP
Changed to Mathematical Literacy by NSC	24.8%	35.8%	24.1%	14.6%	19.4%	15.5%
Did not reach the NSC by 2022*	26.0%	17.9%	20.7%	22.3%	8.6%	11.2%
Number of Grade 10 Mathematics learners	6 403	11 874	17 133	36 812	24 362	25 383

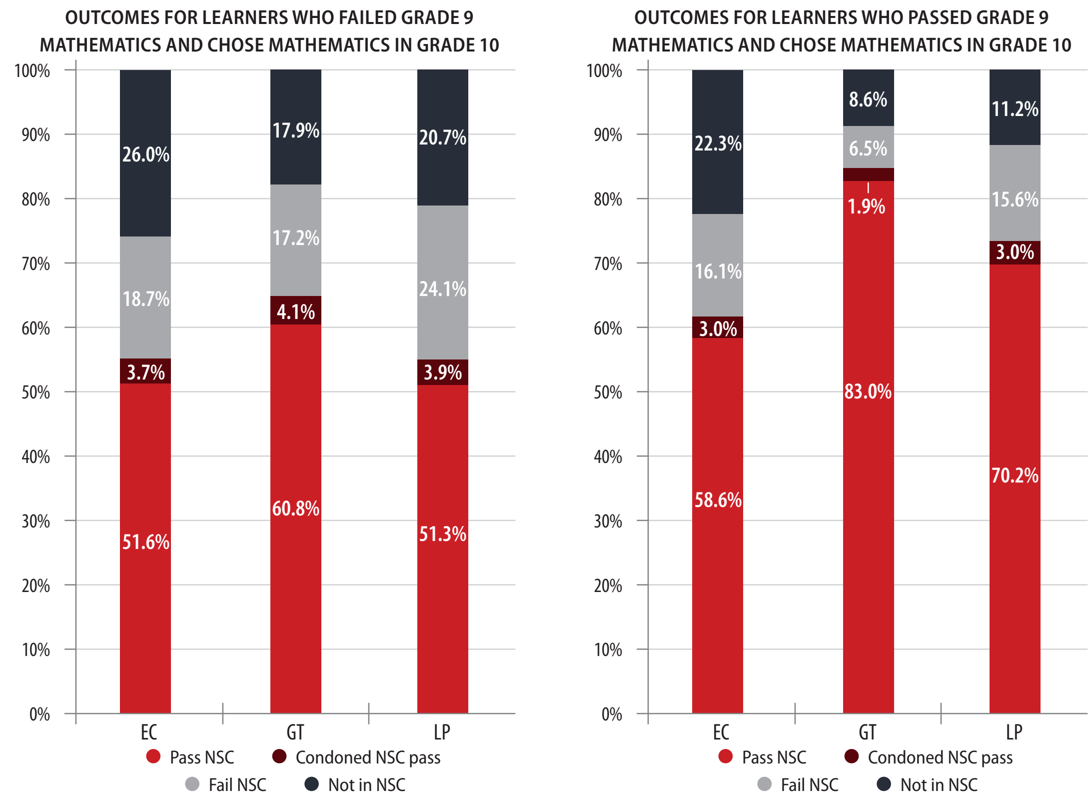
*Source: DDD learner panel 2018–2022 (see Box 4.1). *"Did not reach the NSC by 2022" refers to learners who could not be matched to the 2021 or 2022 NSC data, due to dropout, changing provinces, or multiple grade repetitions between Grade 10 and 12.*

4.5 NSC outcomes for learners who took Mathematics in Grade 10

Among learners who took Mathematics in Grade 10, NSC performance differed predictably by prior achievement. Learners who failed Grade 9 Mathematics performed significantly worse in the NSC than their peers who passed Grade 9 Mathematics, as the two panels of **Figure 4.3** show. This confirms that the Grade 9 Mathematics requirement captures real differences in readiness, despite differences in assessment standards across schools. The Eastern Cape stands out for the much smaller distinction between the two groups. This is consistent with the earlier-discussed finding that the practice of upward mark adjustment to the minimum pass requirement in Grade 9 is much more widespread in the Eastern Cape than the other two provinces. That is, these results strongly suggest that there were many learners in the Eastern Cape who did not achieve a passing mark in Mathematics in Grade 9, but whose marks were adjusted upward to the pass mark. As a result, there is less of a meaningful distinction between learners who passed and failed Mathematics in Grade 9 in terms of later NSC outcomes in the Eastern Cape than is the case in the other two provinces.

Gauteng's comparatively better NSC outcomes may partly reflect its lower overall proportion of learners choosing Mathematics, both among those who had passed Grade 9 Mathematics and, especially, among those who did not. That is, Gauteng may be more selective in allowing or encouraging learners who did not pass Mathematics in Grade 9 to pursue the Mathematics pathway.

FIGURE 4.3 NSC outcomes for learners who took Mathematics in Grade 10



Source: DDD learner panel 2018–2022 (see Box 4.1). The above figures do not distinguish between which year the NSC was written (2021 or 2022), but only a learners' first attempt on the NSC is considered. "Not in NSC" refers to learners who were not matched to the 2021/22 NSC data. NSC data was not available post-2022.

4.6 Regression findings specific to subject choice

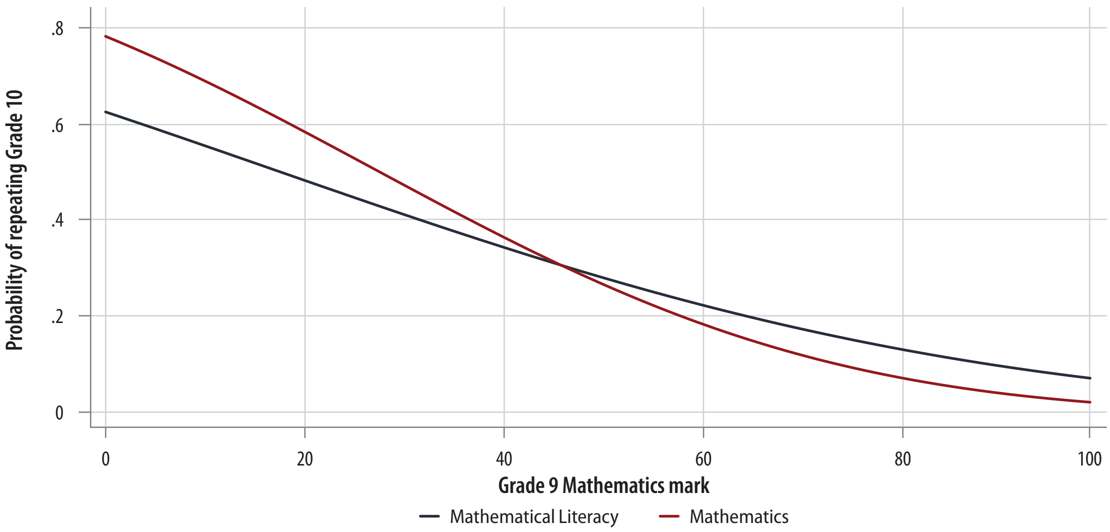
4.6.1 Overview of the regression analysis

The descriptive results show clear associations between Grade 9 Mathematics achievement, Grade 10 subject choice, and subsequent progression outcomes. To better understand which factors predict whether a learner repeats Grade 10, a statistical model was estimated using data for learners in the longitudinal sample. These models predict two outcomes: (1) whether learners repeat Grade 10, and (2) whether they reach and pass the NSC "on track" by 2021. The models interact a learner's mathematics subject choice in Grade 10 with their prior Mathematics performance, while holding constant a range of background characteristics such as Physical Science subject choice, attendance, age, gender, and school quintile. This approach makes it possible to identify the levels of Grade 9 Mathematics performance at which Mathematics become a viable pathway, as well as which other factors are associated with the likelihood of repeating Grade 10, independent of other influences.

4.6.2 Predicting Grade 10 repetition

Figure 4.4 shows the predicted probability of repeating Grade 10 at different Grade 9 Mathematics marks, separately for learners who choose Mathematics and those who choose Mathematical Literacy. The figure shows that the probability of repeating Grade 10 declines steadily as Grade 9 Mathematics achievement increases, but the strength of this relationship varies by subject choice. For learners who scored below 40% in Mathematics in Grade 9 (i.e. did not achieve a pass mark), choosing Mathematics in Grade 10 was associated with a significantly higher risk of repeating Grade 10 than taking Mathematical Literacy, even after controlling for school characteristics, age, gender and Grade 10 absenteeism. In contrast, among learners with better Grade 9 marks, Mathematics became the lower-risk option in terms of repeating Grade 10.

FIGURE 4.4 Probability of repeating Grade 10 given subject choice and Grade 9 Mathematics mark



Source: DDD learner panel 2018–2022 (see Box 4.1). Probabilities are based on the probit regression model presented in Table 2.5, and the sample includes all three provinces

Table 4.5 shows the full regression results for the probability of repeating Grade 10. Other covariates in the model behave as expected.[5] For example, choosing Physical Science as a subject was associated with a modest increase in the probability of repeating Grade 10.[6] Male learners were more likely to repeat Grade 10 than female learners. Age also mattered: older learners were substantially more likely to repeat, with the risk increasing incrementally for those above the age-for-grade norm.

School characteristics also played a meaningful role in predicting the probability of repeating Grade 10. Although the probability of Grade 10 repetition did not differ significantly across Quintiles 1 and 3, learners in Quintile 4 and particularly in Quintile 5 (and independent) schools had notably lower probabilities of repeating Grade 10 than learners in Quintile 1 schools. This highlights the extent to which school-level resources and support structures mediate progression in the FET phase.

5 Individual regression results and graphs not shown.

6 Additional analysis which interacted the choice of Mathematics and Physical Science in Grade 10 with Grade 9 Mathematics achievement showed that choosing both of these subjects was associated with even poorer Grade 10 and NSC outcomes for learners with Grade 9 Mathematics marks below 40%.

Absenteeism in Grade 10 also emerged as a strong predictor of repetition (see Chapter 6 for an explanation of how the periods over which absenteeism was measured were selected.) While absenteeism at any point in the year was associated with worse outcomes, the relationship was stronger when it occurs later in the academic year. This pattern is driven largely by Limpopo, though the direction of the association between absenteeism and repetition was consistent across all three provinces.

When performing the analysis separately by province, provincial comparisons reveal meaningful variation. The "crossing point" at which Mathematics becomes a lower-risk choice for repetition differs: around the mid- to high 50s in the Eastern Cape, the high 40s in Gauteng, and the high 30s in Limpopo. Gauteng showed the strongest association between being male and the probability of repetition, while Limpopo displayed the highest overall repetition risk. These provincial differences likely reflected variation in both learner preparedness and province-specific repetition rates.

TABLE 4.5 Probit regression of the probability of passing Grade 10 on the first attempt

	(1)
Outcome:	**Repeats Grade 10**
Grade 10 Math	0.507*** (0.048)
Grade 9 Math mark	−0.020*** (0.001)
Grade 10 Math Lit x Grade 9 Math mark	0.000 (0.000)
Grade 10 Math x Grade 9 Math mark	−0.011*** (0.001)
Grade 10 Physical Science	0.075*** (0.021)
Province (reference category: EC)	
GT	−0.010 (0.038)
LP	0.171*** (0.032)
Male	0.171*** (0.008)
Age in Grade 10 (reference category: 15 or younger)	
Age 16	0.123*** (0.010)
Age 17	0.522*** (0.012)

TABLE 4.5 Probit regression of the probability of passing Grade 10 on the first attempt (continued)

	(1)
Outcome:	**Repeats Grade 10**
Age in Grade 10 (reference category: 15 or younger)	
Age 18	0.806*** (0.017)
Age 19 or older	1.060*** (0.022)
Grade 10 school quintile (reference category: Q1)	
Quintile 2	0.029 (0.036)
Quintile 3	–0.015 (0.036)
Quintile 4	–0.172*** (0.053)
Quintile 5	–0.844*** (0.056)
Independent/Missing quintile	–0.605*** (0.088)
Multiple Grade 9 attempts	0.152*** (0.020)
Days absent in May window	0.048*** (0.006)
Grade 10 school quintile (reference category: Q1)	
Days absent in Aug window	0.069*** (0.006)
Days absent in Oct window	0.073*** (0.006)
Constant	**–0.035** **(0.053)**
Observations	**242 318**
Pseudo-R2	**0.1900**

*Source: Probit model using the DDD learner panel 2018–2022 (see Box 4.1). The outcome variable is the probability of repeating Grade 10. Robust standard errors (clustered at a Grade 10 school level) in parentheses. Note that subject names (i.e. Grade 10 Math, Grade 10 Math Lit, Grade 10 Physical Science) refer to dummy variables indicating if the subject was taken in Grade 10. The reference groups are as specified. "Days absent in X window" refers to the number of days absent within the 10-day periods as defined in Chapter 6, with counts in the May period scaled up due to the election day (8 May 2019) during the 10-day window which resulted in only 9 school days within the 10-day window. Asterisks indicate statistically significant associations such that *** p<0.01, ** p<0.05, * p<0.1. Standard errors reported in brackets.*

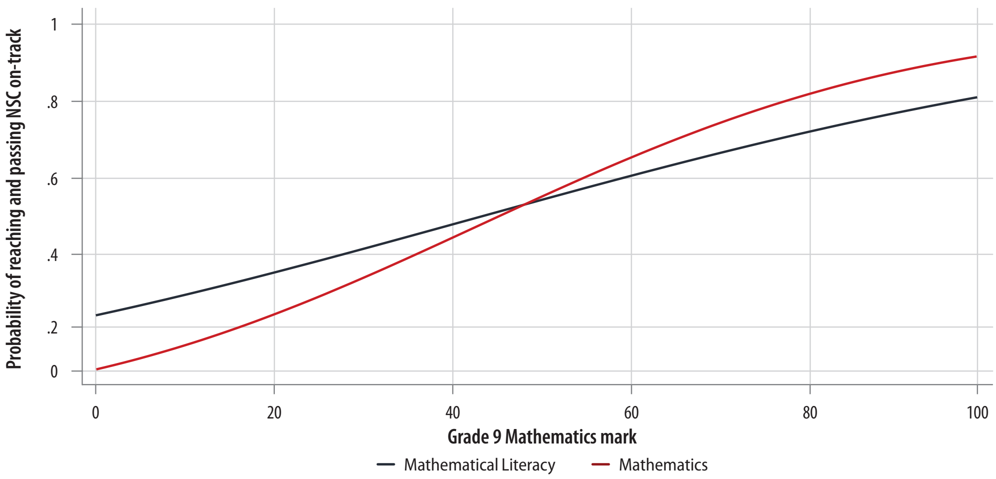
4.6.3 Predicting on-track NSC attainment

Figure 4.5 shows the predicted probability of reaching and passing the NSC on track at different Grade 9 Mathematics marks, separately for learners who chose Mathematics and those who chose Mathematical Literacy. The results mirror those for Grade 10 repetition. Higher Grade 9 Mathematics marks were associated with sharply increased probabilities of passing the NSC in 2021. Subject choice again played an important role. At low levels of prior achievement, learners who took Mathematical Literacy were substantially more likely to reach and pass the NSC on schedule than similar learners who took Mathematics. At higher levels of achievement, Mathematics became a more advantageous pathway.

Table 4.6 shows the full regression results for the probability of passing the NSC on time. School-level differences were more pronounced in the NSC model compared to the Grade 10 repetition model. Learners in higher-quintile schools had considerably higher probabilities of completing the NSC on track, even given their Grade 9 Mathematics performance, with the largest gains observed in Quintile 5 schools. Grade 10 absenteeism remained a negative predictor of on-track NSC completion, particularly when absences occurred in the latter part of Grade 10 – likely reflecting the association between absenteeism and Grade 10 repetition. Patterns for gender, science choice and multiple Grade 9 attempts aligned broadly with those observed in the repetition model, albeit with smaller magnitudes.

As with repetition, the provincial crossover points differed.[7] Mathematics began to offer an advantage at relatively high Grade 9 marks in Gauteng (around the low-60s), but at lower Grade 9 marks in the Eastern Cape (high-40s), and at an even lower point in Limpopo (high-30s). Furthermore, the advantage Mathematics offered to the highest Grade 9 achievers in Gauteng was small, and much smaller than those found in other provinces. These differences suggest that the signalling value of a Grade 9 mark varies across provinces, possibly due to differences in marking standards and repetition policies, as well as mark adjustment practices.

FIGURE 4.5 Probability of reaching and passing NSC on-track according to Grade 9 Mathematics mark and Grade 10 subject choice



Source: DDD learner panel 2018–2022 (see Box 4.1). Probabilities are based on the probit regression model presented in Table 4.5, and the sample includes all three provinces.

7 Individual regression results and graphs not shown.

TABLE 4.6 Probit regression of the probability of reaching and passing the NSC on track (in 2021)

Outcome:	Reached and passed NSC on track
Grade 10 Math	−0.550*** (0.041)
Grade 9 Math mark	0.019*** (0.001)
Grade 10 Math Lit x Grade 9 Math mark	0.000 (0.000)
Grade 10 Math x Grade 9 Math mark	0.012*** (0.001)
Grade 10 Physical Science	−0.181*** (0.017)
Province (reference category: EC)	
GT	0.114*** (0.033)
LP	-0.036 (0.027)
Male	−0.052*** (0.008)
Age in Grade 10 (reference category: 15 or younger)	
Age 16	−0.186*** (0.009)
Age 17	−0.654*** (0.011)
Age 18	−1.058*** (0.015)
Age 19 or older	−1.426*** (0.021)
Grade 10 school quintile (ref: Q1)	
Quintile 2	0.078** (0.031)
Quintile 3	0.159*** (0.030)
Quintile 4	0.356*** (0.046)
Quintile 5	0.861*** (0.043)
Independent/Missing quintile	0.451*** (0.058)
Multiple Grade 9 attempts	−0.207*** (0.016)

TABLE 4.6 Probit regression of the probability of reaching and passing the NSC on track (in 2021) (continued)

Outcome:	Reached and passed NSC on track
Days absent in May window	–0.062*** (0.008)
Days absent in Aug window	–0.098*** (0.007)
Days absent in Oct window	–0.094*** (0.006)
Constant	**–0.511*** (0.045)**
Observations	**242 318**
Pseudo-R2	**0.2053**

*Source: Probit model using the DDD learner panel 2018–2022 (see Box 4.1). Robust standard errors (clustered at a Grade 10 school level) in parentheses. Note that subject names (i.e. Grade 10 Math, Grade 10 Math Lit, Grade 10 Physical Science) refer to dummy variables indicating if the subject was taken in Grade 10. The reference groups are as specified. "Days absent in X window" refers to the number of days absent within the 10-day periods as defined in Chapter 6, with counts in the May period scaled up due to the election day (8 May 2019) during the 10-day window which resulted in only 9 school days within the 10-day window. Asterisks indicate statistically significant associations such that *** p<0.01, ** p<0.05, * p<0.1. Standard errors reported in brackets.*

4.7 Stability of the relationship between Grade 9 and Grade 10 performance

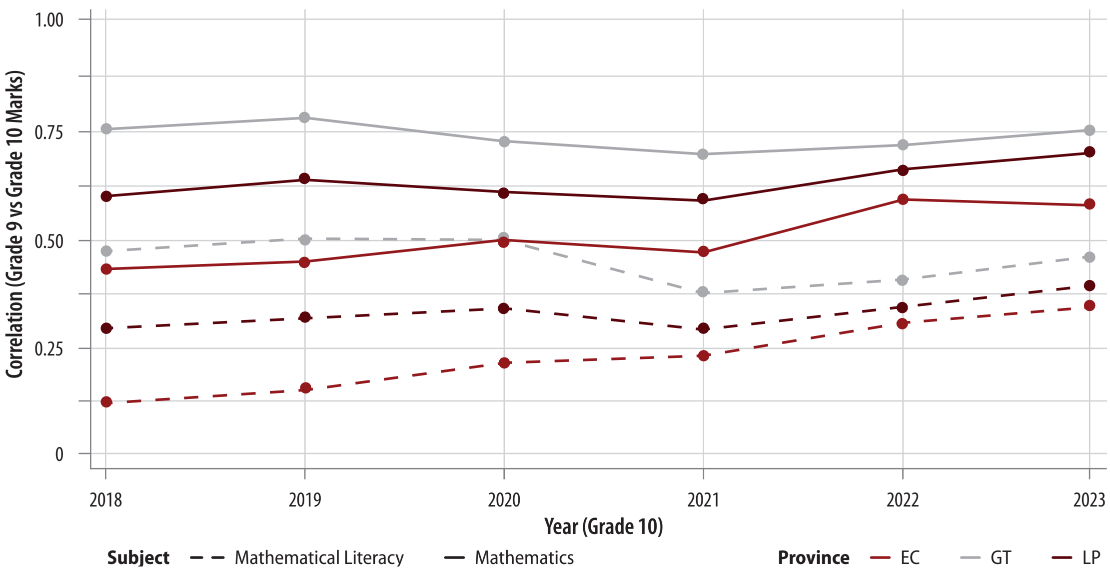
The preceding analyses have focused mainly on the 2019 Grade 10 cohort. To assess whether the relationship between Grade 9 and Grade 10 performance is consistent across years, correlation coefficients were calculated for each Grade 10 cohort from 2018 to 2022 in all three provinces. These provide a simple but informative measure of how well Grade 9 Mathematics achievement predicts subsequent outcomes in both Mathematics and Mathematical Literacy.

Results are shown in **Figure 4.6**. Across the five years, the correlation between Grade 9 and Grade 10 Mathematics marks is strong and relatively stable. Gauteng consistently shows the highest association, averaging around 0.75, while the Eastern Cape and Limpopo display slightly lower, but still substantial, values. This stability suggests that the predictive relationship between Grade 9 and Grade 10 Mathematics performance has not shifted materially over time, despite evolving assessment practices and the disruptions associated with the COVID-19 pandemic.

A similar but weaker pattern emerges when examining the relationship between Grade 9 Mathematics marks and Grade 10 Mathematical Literacy outcomes. This likely reflects greater variation in Mathematical Literacy assessments or the broader range of competencies captured in the Mathematical Literacy curriculum. Nonetheless, the correlations remain remarkably consistent across years, reinforcing the notion that Grade 9 Mathematics achievement provides a reliable indicator of learners' broader Mathematical readiness.

Taken together, these trends highlight the robustness of Grade 9 Mathematics performance as a predictor of achievement in the first year of the FET phase. The stability of these relationships across provinces and over time supports the use of Grade 9 achievement as a key benchmark for guiding subject choice decisions and identifying learners who may require additional support before entering the more demanding FET Mathematics curriculum.

FIGURE 4.6 Correlation between Grade 9 Mathematics mark and the Grade 10 Mathematics and Mathematical Literacy marks by province and year



Source: DDD learner panel 2017–2023. The dataset includes only learners with consecutive records in Grade 9 and Grade 10, capturing their last recorded attempt in Grade 9 and their first recorded attempt in Grade 10. Year refers to the year learner were in Grade 10.

4.8 Conclusion

This chapter has shown how Grade 9 Mathematics achievement, Grade 10 subject choice and subsequent subject switching behaviour interact to shape learners' trajectories through the FET phase. Across all three provinces, many learners entered Grade 10 Mathematics despite having failed Mathematics in Grade 9, and large proportions either switched to Mathematical Literacy or did not reach the NSC within four years. These patterns point to a persistent misalignment between learners' foundational competencies and the demands of the FET Mathematics curriculum.

Provincial differences further illustrate how these pressures play out in practice. Limpopo had the highest share of low-performing learners opting for Mathematics, and Gauteng showed both stronger NSC outcomes and more switching among weaker learners. At the same time, the Eastern Cape recorded higher Grade 9 Mathematics pass rates but smaller achievement gaps at matric, possibly reflecting more lenient marking standards and/or greater upward mark adjustment in Grade 9. These contrasts highlight the importance of considering both assessment practices and learner preparedness when interpreting provincial patterns.

The regression analysis strengthens and sharpens the descriptive findings. Learners with Grade 9 marks below 40% faced a highly elevated risk of repetition, delayed progression, and later switching when taking Mathematics in Grade 10. In contrast, Mathematical Literacy offered a more stable pathway for low-performing learners. Mathematics became the more advantageous option only at relatively high levels of Grade achievement, well above the formal 40% promotion threshold in most provinces. These results suggest that current Grade 9 marks do not always reliably indicate readiness for FET Mathematics.

These patterns also have implications for efficiency. Repetition and dropout impose substantial costs on the schooling system, as each additional year in a grade represents expenditure that does not translate into increased matriculation rates. For learners, delayed progression reduces the likelihood of successful school completion and limits access to post-school opportunities, reinforcing existing inequalities. Recognising these costs strengthens the case for a more deliberate approach to subject choice in Grade 10.

Against this backdrop, the findings point to a need for much clearer guidance to learners, parents, and schools regarding entry into the FET Mathematics pathway. Across all three provinces, learners who failed Grade 9 Mathematics but nonetheless continued with Mathematics in Grade 10 faced substantial academic and progression risks, with very low probabilities of success. In light of this, policymakers should consider a more explicit policy requirement that learners who do not meet the Grade 9 Mathematics threshold of 40% should not be permitted to enrol for Mathematics in Grade 10. This requirement should only be waived if learners can demonstrate additional evidence of readiness or schools can show that appropriate support structures are in place for these learners. Such a policy would not remove choice altogether, but it would ensure that learners pursue the Mathematics pathway only when there is a realistic chance of success, thereby improving learner outcomes and reducing inefficiencies in the system.

Schools with a disproportionately older staff complement may be more vulnerable to sudden losses of experienced teachers, making them priority sites for the deployment of newly qualified teachers.

CHAPTER 5
TEACHER DEPLOYMENT

Analysis for this chapter was conducted by Eldridge Moses.

5.1 Introduction

Ensuring an equitable and effective distribution of teachers remains a central challenge in South Africa's education system. Despite ongoing efforts to reduce historical disparities, poor and rural schools continue to struggle to attract and retain qualified teachers (Du Plessis & Mestry, 2019). Understanding where newly appointed teachers are placed, and how qualified and unqualified teachers are distributed across different geographical and socio-economic contexts, is therefore essential for assessing the country's progress towards narrowing these gaps.

In light of these equity concerns, this chapter examines the composition of the existing teacher workforce and describes how newly appointed teachers were deployed across schools in 2023. To contextualise the patterns of new teacher placements in 2023, this chapter draws on two complementary datasets. The 2022 Quarter 3 School Master List provides a snapshot of the schooling system before new teachers entered the workforce, including the size and composition of the existing teacher population and the learner–educator ratios across provinces and school quintiles. These indicators offer important insight into the broader pressures facing the system – such as ageing staff profiles and uneven staffing levels – that shape where additional teachers are likely to be needed. The 2023 DDD dataset is then used to describe the profile and placement of newly deployed teachers. Together, these data allow 2023 deployments to be situated within the wider context of existing staffing patterns and equity considerations across the six participating provinces.

BOX 5.1 **HOW ARE TEACHER POSTS ALLOCATED IN SOUTH AFRICA?**

Teacher deployment in South Africa is governed by the Post-Provisioning Model, which determines staff requirements at each school based primarily on the number of 'weighted' learners (Department of Education, 2002). School learner populations serve as the basis for post-provisioning norms, which are weighted by other factors such as resource inequalities, the need to promote a learning area, learner-educator ratios and school quintiles. Using these norms, provinces then determine the number of posts they can afford and in which schools post-filling is to be prioritised. Post allocations therefore reflect a combination of learner-driven need, equity weightings, and the affordability constraints of provincial budgets.

5.2 System-level indicators of staffing pressure in 2022

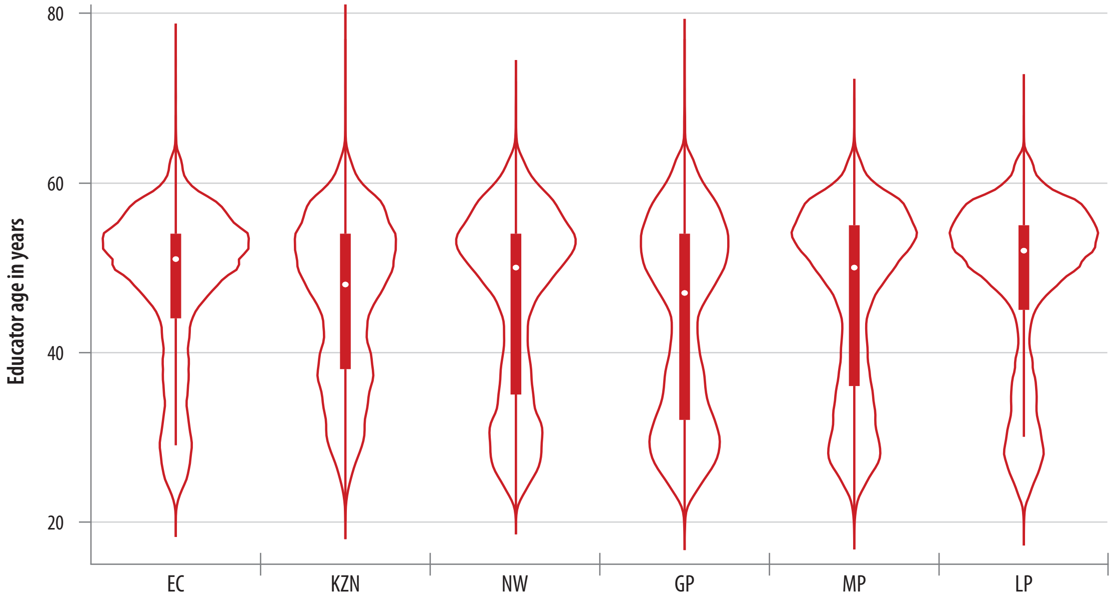
South Africa's ageing teacher population has been the subject of several recent studies.[8] Understanding the age profile of the existing teacher workforce helps identify provinces and schools likely to experience shortages due to upcoming retirements. Schools with a disproportionately older staff complement may be more vulnerable to sudden losses of experienced teachers, making them priority sites for the deployment of newly qualified teachers.

Figures 5.1 and **5.2** illustrate the age distributions of teachers across the six provinces included in the DDD dataset for primary and secondary schools, respectively. Each violin plot shows how teachers are spread across different ages: the wider sections indicate age ranges with more teachers, while the narrower sections indicate age ranges with fewer teachers.

Figure 5.1 reveals that primary schools in the Eastern Cape, North West, Mpumalanga and Limpopo have large proportions of the teacher population close to retirement age (wider bulges at the upper ends of the violin plots). In each of these provinces there is a relatively narrow lower end of the age distribution, suggesting that there is some risk of teacher shortages if new entrant numbers do not match impending retirements. The risk is particularly large in the Eastern Cape and Limpopo, where teachers in their 20s and 30s make up a very small proportion of the teacher workforce. While all provinces have a narrowing of the age distributions at just above 40 years of age, it is once again the primary schools in the Limpopo province where the narrowing is most pronounced for what would be mid-career teachers.

8 See the Teacher Demographic Dividend (TDD) project: tdd.sun.ac.za.

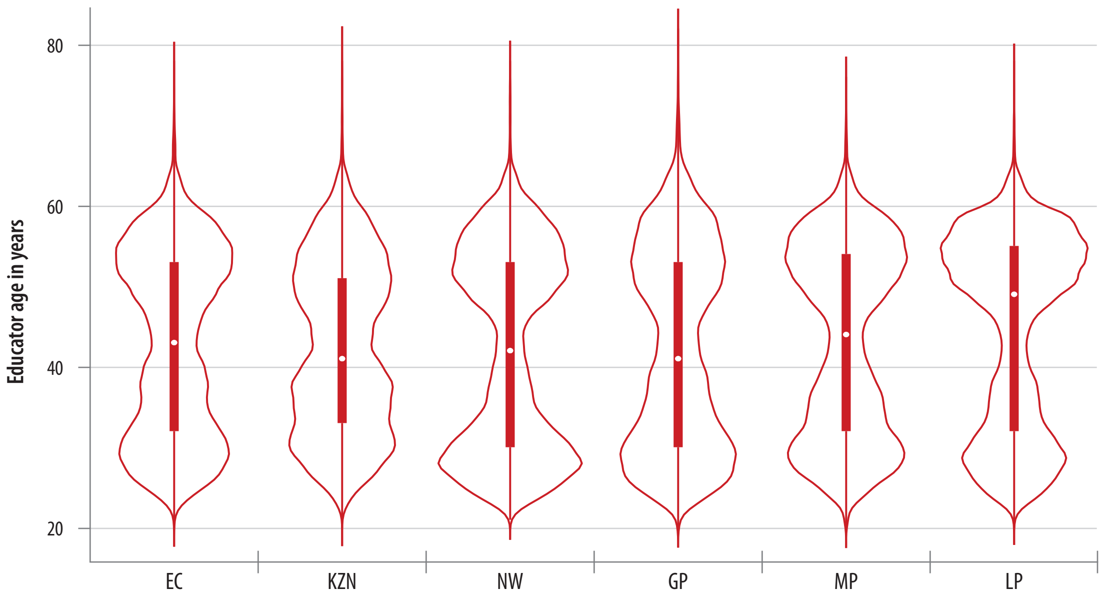
FIGURE 5.1 Primary school teacher age distributions by province (2022)



Source: 2023 DDD primary school teacher data. Only teachers in public schools are included. The graph shows the age distributions of teachers hired in 2022 or before.

For secondary school teachers (**Figure 5.2**), across most of the six provinces, two patterns stand out. First, there is a noticeable dip in the number of teachers aged 35–40 (i.e. a narrowing of the violin plot), once again reflecting a gap in mid-career teachers. Second, several provinces show a clear bulge of younger teachers in their late 20s and early 30s, suggesting a pipeline of new entrants who can replace teachers approaching retirement age. Limpopo, however, is an exception: while it has one of the largest concentrations of teachers aged 50 and above, it does not display a similarly pronounced bulge of younger teachers to fill more senior positions. This indicates a potential future staffing risk for the province if sufficient new appointments do not match retirements.

FIGURE 5.2 Secondary school teacher age distributions by province (2022)



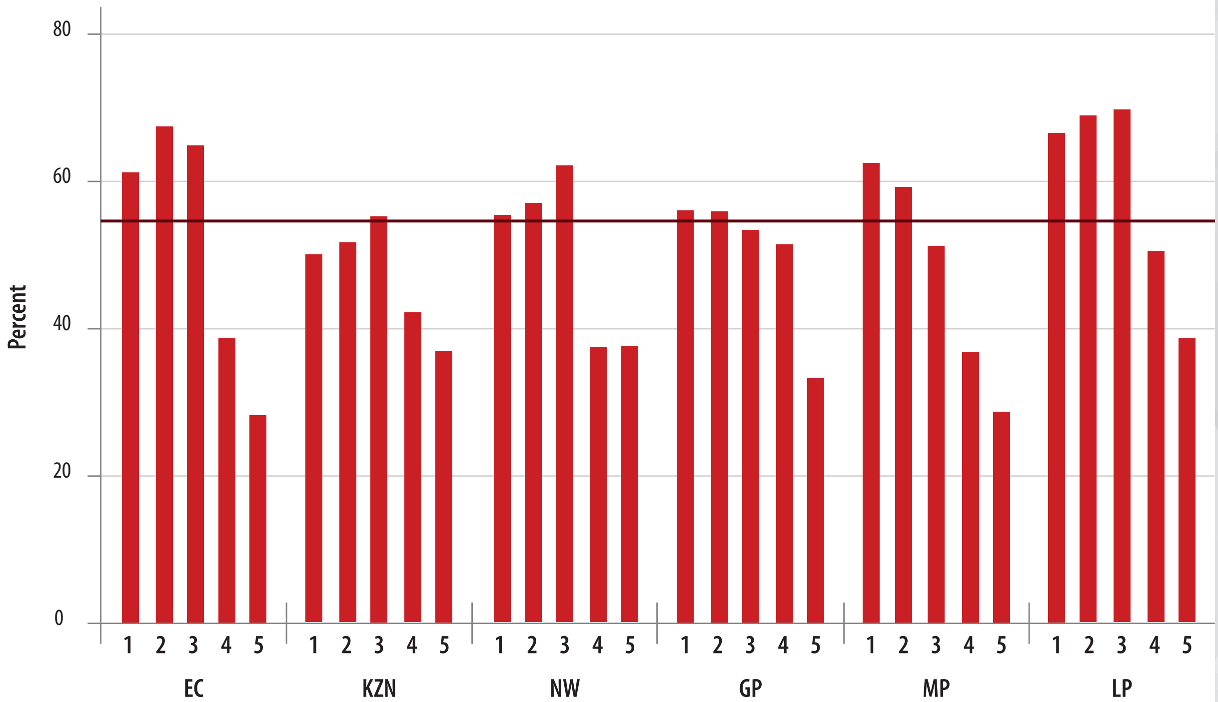
Source: 2023 DDD secondary school teacher data. Only teachers in public schools are included. The graph shows the age distributions of teachers hired in 2022 or before.

An alternative way to represent the ageing teacher population issue is to examine the percentages of teachers aged 50 or older by school quintile and province, as shown in **Figure 5.3** and **5.4**. Across the six provinces, 54% of primary school teachers and 37% of secondary school teachers were 50 years of age or older in 2022 (indicated by the horizontal red reference lines in **Figures 5.3** and **5.4**). The youngest of these teachers will be eligible for early retirement (at 55) in 2027. In other words, 54% of primary school teachers and 37% of secondary school teachers across the six provinces could retire by 2027. The need to replace these parts of the teaching population is most pronounced in Limpopo, where 62% of primary school teachers and 47% of secondary school teachers will be eligible for early retirement by 2027.

Disaggregated by school quintile in **Figure 5.3**, the need for new primary school teachers in 2022 was most pronounced in non-fee-paying (Quintile 1–3) schools. The need was particularly dire schools in the Eastern Cape and Limpopo, where more than 60% of primary school teachers in these quintiles were fifty years and older. Amongst primary schools in all provinces, quintiles 4 and 5 had relatively small percentages of teachers who were fifty years or older, indicating less of an immediate need for teacher replacement.

> … 54% of primary school teachers and 37% of secondary school teachers were 50 years of age or older in 2022 …

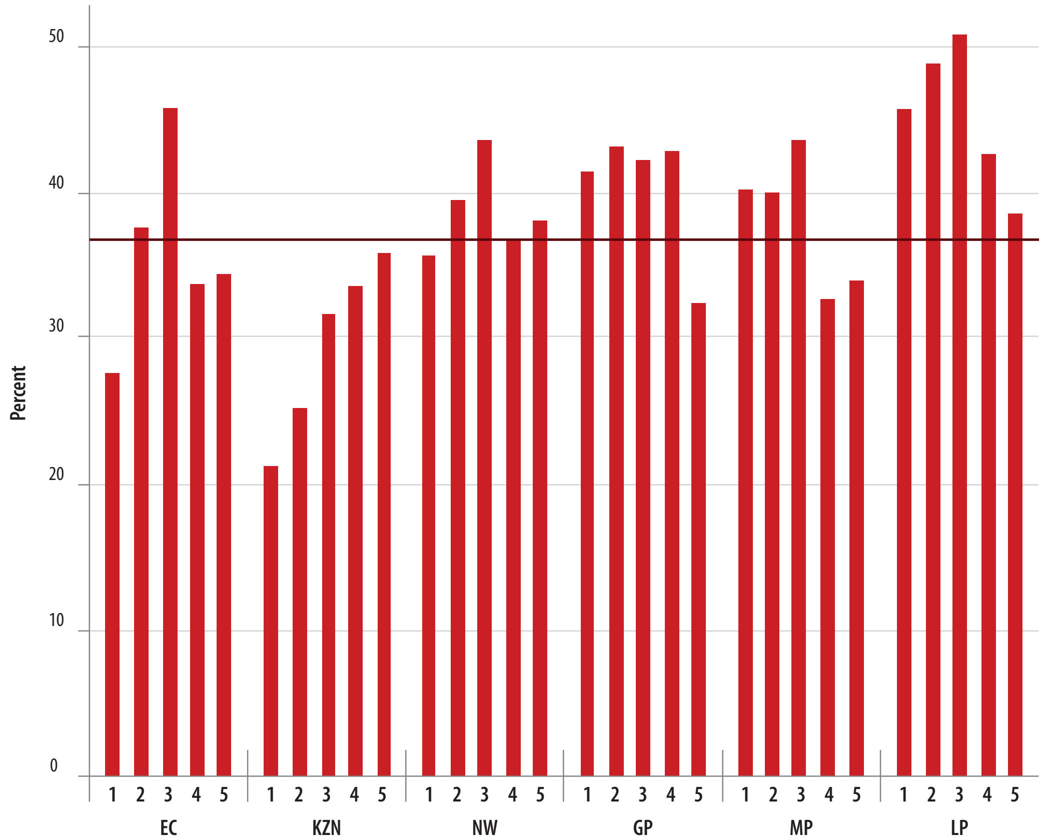
FIGURE 5.3 Percentage of primary school teachers who are 50 years or older by province and school quintile, 2022



Source: 2023 DDD primary school teacher data. Only teachers in public schools are included. The red horizontal line indicates the average percentage of teachers aged 50 years or older across the six provinces.

Amongst secondary schools (**Figure 5.4**), Limpopo's non-fee-paying schools seem to have the most urgent need for teachers to fill the impending retirement gap (between 45% and 52% of teachers were 50 years or older in these quintiles). The North West province, Gauteng and Mpumalanga also had older teacher populations on average in non-fee-paying secondary schools. Interestingly, secondary schools in KwaZulu-Natal had lower percentages of teachers aged 50 and older, with non-fee-paying schools in the province having, on average, younger teacher populations than more affluent schools.

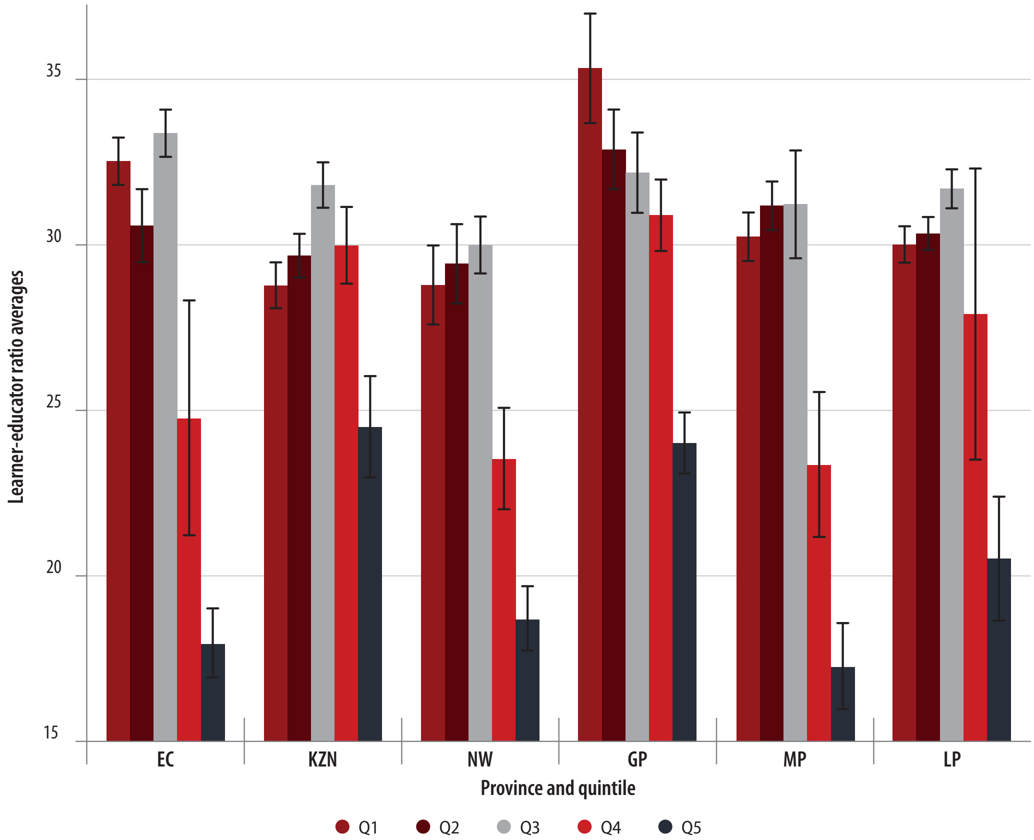
FIGURE 5.4 Percentage of secondary school teachers who are 50 years or older by province and school quintile, 2022



Source: 2023 DDD secondary school teacher data. Only teachers in public schools are included. The red horizontal line indicates the average percentage of teachers aged 50 years or older across the six provinces.

Alongside these age patterns, learner–educator ratios provide another perspective on where staffing pressures were most acute in 2022. **Figure 5.5** shows the learner-educator ratios by province and school quintile. The figure indicates extremely large inequalities in learner-educator ratios across school quintiles in all provinces, with the largest differences between Quintile 5 schools and other schools. Poorer schools continue to face much larger class sizes than better-resourced schools, reflecting their limited ability to appoint additional teachers beyond those funded by the province. In contrast, many Quintile 5 schools can supplement their staffing through SGB-funded posts, enabling smaller classes and easing pressure on provincial allocations.

FIGURE 5.5 Learner-educator ratios by province and quintile in 2022



Source: Master list 2022 Quarter 3 data (Department of Education, 2025). Bars show mean learner-educator ratios within province and quintile, and the respective 95% confidence intervals around the means.

While these system-level patterns highlight substantial staffing pressures, particularly in provinces with ageing workforces and high learner–educator ratios, they do not show how provinces responded when allocating new teachers in 2023. The following section therefore examines deployment patterns to assess whether recent appointments were aligned with areas of greatest need, especially in poorer schools and provinces facing the most urgent replacement demands.

5.3 Deployment patterns in 2023

The system-level staffing pressures outlined above, particularly ageing workforces, high learner–educator ratios and limited capacity in poorer schools to appoint additional staff, provide important context for understanding how provinces allocated new teachers in 2023. Across the six provinces, the vast majority of newly appointed teachers were deployed to schools serving poorer communities, with roughly 4 out of 5 placements occurring in Quintile 1–3 schools. This section therefore examines the deployment of newly appointed teachers across school quintiles and provinces, before considering the demographic and linguistic characteristics of those deployed. This allows the 2023 deployment patterns to be assessed on both equity and responsiveness to staffing needs.

Tables 5.1 and **5.2** show the distribution of newly appointed teachers across provinces and school quintiles in 2023 for primary and secondary schools, respectively. In 2023 Quintile 1–3 primary schools in the Eastern Cape, North West and Limpopo received between roughly 80% and 90% of teachers. The concentrations of new deployments in the Eastern Cape and Limpopo's non-fee-paying schools appear broadly consistent with the province's ageing workforce and higher anticipated replacement needs. Gauteng is a clear exception, with only 38% of newly deployed teachers appointed to Quintile 1–3 schools, compared to 47% to Quintile 5 schools.

The patterns are broadly similar amongst secondary schools. The bulk of teachers were deployed to non-fee-paying schools in all provinces, except for the relatively affluent Gauteng province where only 35.5% of newly deployed teachers were allocated to Quintile 1 to 3 schools.

TABLE 5.1 Newly deployed primary school teachers in 2023, by province and quintile (percent of provincial totals)

	1	2	3	4	5	Total
EC	27.4%	19.6%	37.6%	4.2%	11.2%	100%
KZN	22.1%	26.0%	26.2%	10.9%	14.8%	100%
NW	31.5%	14.4%	35.5%	14.0%	4.6%	100%
GP	14.4%	11.8%	11.5%	15.8%	46.6%	100%
MP	38.6%	28.4%	7.2%	14.7%	11.1%	100%
LP	34.0%	37.9%	20.2%	1.8%	6.1%	100%

Source: 2023 DDD primary school teacher data. Only teachers in public schools are included. Newly deployed teachers in 2023 include those newly employed by the Department of Education, as well as redeployment and voluntary movements of teachers already working for the Department.

TABLE 5.2 Newly deployed secondary school teachers in 2023, by province and quintile (percent of provincial totals)

	1	2	3	4	5	Total
EC	25.4%	16.3%	42.0%	4.6%	11.8%	100%
KZN	17.8%	22.5%	26.8%	12.4%	20.4%	100%
NW	22.3%	16.5%	38.9%	18.7%	3.5%	100%
GP	12.8%	10.9%	11.8%	16.2%	48.3%	100%
MP	39.8%	27.6%	8.3%	18.1%	6.1%	100%
LP	31.3%	37.3%	22.4%	2.4%	6.7%	100%

Source: 2023 DDD secondary school teacher data. Only teachers in public schools are included. Newly deployed teachers in 2023 include those newly employed by the Department of Education, as well as redeployment and voluntary movements of teachers already working for the Department.

In several provinces, however, deployment patterns appear less closely aligned with staffing pressures, particularly in Gauteng and KwaZulu-Natal, where relatively large proportions of new teachers seem to have been placed in better-resourced schools despite substantial class-size inequalities.

It is also important to consider the demographic characteristics of new teachers. The racial composition of newly deployed teachers across school quintiles is shown in **Tables 5.3** and **Tables 5.4**, for primary and secondary schools, respectively. For both primary and secondary schools, most newly deployed Black African teachers were placed in schools serving poorer communities, reflecting both the location of need and the demographic composition of the teaching workforce. Almost all newly deployed White primary and secondary school teachers were deployed in Quintile 4 and 5 schools. Coloured teachers display a slightly more even deployment pattern in primary and secondary schools across Quintiles 3, 4 and 5. Asian/Indian primary school teachers appointed in 2023 were spread relatively evenly across quintiles, but almost all *secondary* school Asian/Indian teachers were appointed by Quintile 4 and 5 schools.

TABLE 5.3 Primary school teachers newly deployed in 2023, by race and school quintile

	1	2	3	4	5	Total (%)	Number of teachers
African/Black	32.0%	27.5%	25.9%	7.1%	7.5%	100%	7 943
Coloured	2.7%	1.6%	40.6%	23.1%	32.0%	100%	372
Asian/Indian	0.0%	23.1%	7.7%	30.8%	38.5%	100%	13
White	0.6%	0.8%	2.5%	21.4%	74.9%	100%	1 461
Other	10.0%	10.0%	10.0%	30.0%	40.0%	100%	10
Total	**23.1**	**21.0**	**25.3**	**11.4**	**19.2**	**100**	**9 799**

Source: 2023 DDD primary school teacher data. Only teachers in public schools are included. Newly deployed teachers in 2023 include those newly employed by the Department of Education, as well as redeployment and voluntary movements of teachers already working for the Department.

TABLE 5.4 Secondary school teachers newly deployed in 2023, by race and school quintile

	1	2	3	4	5	Total (%)	Number of teachers
African/Black	27.5%	24.9%	28.7%	10.0%	8.9%	100%	7 651
Coloured	0.8%	0.8%	35.3%	19.2%	43.9%	100%	255
Asian/Indian	0.0%	0.0%	0.0%	9.1%	90.9%	100%	11
White	0.1%	0.3%	2.0%	18.6%	79.2%	100%	1 180
Other	0.0%	11.8%	5.9%	5.9%	76.5%	100%	17
Total	**23.1**	**21.0**	**25.3**	**11.4**	**19.2**	**100**	**9 114**

Source: 2023 DDD secondary school teacher data. Only teachers in public schools are included. Newly deployed teachers in 2023 include those newly employed by the Department of Education, as well as redeployment and voluntary movements of teachers already working for the Department.

Tables 5.5 and **5.6** show the proportions of newly deployed teachers by their home language in each of the six provinces considered. The results suggest that teacher placement by home language generally reflects the province's needs. For example, 69% of new primary school teachers in the Eastern Cape speak isiXhosa as their home language, and 79% of new primary school teachers in KwaZulu-Natal speak isiZulu. In the North West province, the language most spoken by new primary and high school teachers is Setswana, and in Mpumalanga, the two most dominant languages are isiZulu and SiSwati. Sepedi, Tshivenda and Xitsonga are the dominant languages spoken by new teachers in Limpopo. While about a quarter of Gauteng's new primary and secondary school teachers speak isiZulu, English and Afrikaans speakers make up 39% of newly deployed primary school and 37% of secondary school teachers in the province.

TABLE 5.5 Home language of newly deployed primary school teachers by province, 2023

	EC	KZN	NW	GP	MP	LP	Average across 6 provinces
Afrikaans	12.6%	3.8%	18.3%	21.8%	20.4%	5.4%	13.3%
English	12.4%	13.5%	2.6%	17.6%	4.8%	2.3%	10.2%
isiNdebele	0.2%	0.2%	0.3%	1.0%	7.2%	1.1%	1.2%
isiXhosa	69.2%	2.2%	3.8%	3.8%	0.9%	0.2%	14.2%
isiZulu	1.5%	78.9%	3.7%	22.9%	20.5%	2.8%	22.8%
Sepedi	0.0%	0.1%	3.3%	9.2%	9.5%	52.2%	13.4%
Sesotho	3.4%	0.2%	4.0%	7.0%	1.1%	0.8%	3.1%
Setswana	0.0%	0.0%	60.8%	7.5%	1.8%	1.1%	9.2%
siSwati	0.0%	0.1%	0.1%	1.0%	23.4%	0.5%	2.5%
Tshivenda	0.0%	0.0%	1.2%	1.6%	0.6%	17.7%	4.0%
Xitsonga	0.0%	0.1%	0.7%	3.0%	7.6%	14.3%	4.2%
Other	0.6%	1.1%	1.3%	3.7%	2.4%	1.6%	1.9%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Source: 2023 DDD secondary school teacher data. Newly deployed teachers in 2023 include those newly employed by the Department of Education, as well as redeployment and voluntary movements of teachers already working for the Department.

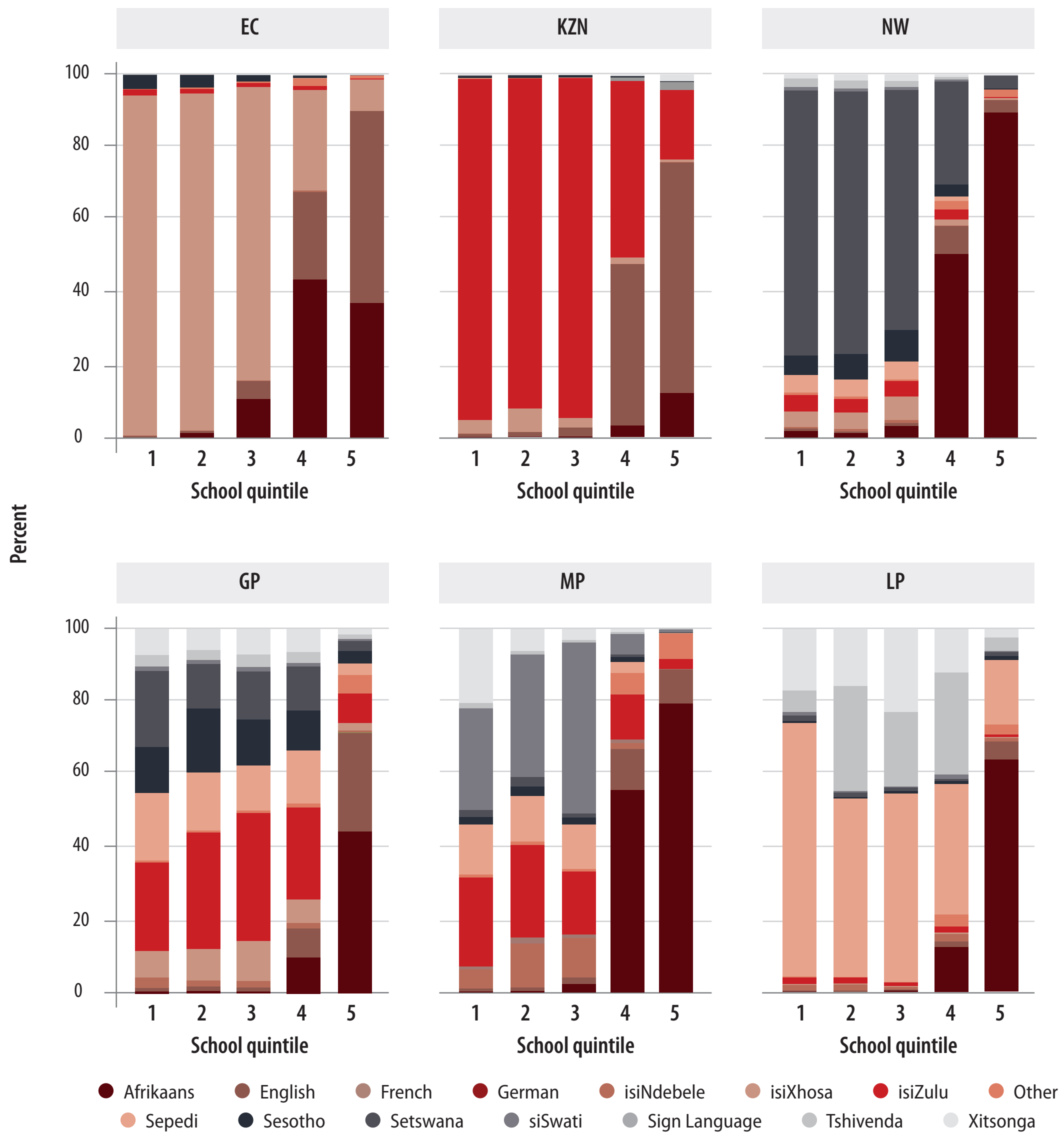
TABLE 5.6 Home language of newly deployed secondary school teachers by province, 2023

	EC	KZN	NW	GP	MP	LP	Average across 6 provinces
Afrikaans	10.5%	3.7%	11.3%	18.0%	15.6%	5.0%	10.9%
English	10.3%	11.3%	4.3%	18.5%	4.6%	2.5%	10.0%
isiNdebele	0.3%	0.1%	0.9%	2.1%	6.2%	1.3%	1.5%
isiXhosa	72.1%	3.5%	5.9%	4.6%	1.1%	0.9%	16.0%
isiZulu	2.4%	78.3%	9.8%	24.4%	23.9%	4.2%	24.0%
Sepedi	0.0%	0.0%	3.9%	7.4%	9.7%	51.3%	12.0%
Sesotho	3.4%	0.2%	6.2%	7.0%	1.2%	0.8%	3.5%
Setswana	0.0%	0.0%	49.6%	6.1%	2.0%	1.1%	8.3%
siSwati	0.2%	0.2%	2.2%	1.8%	26.2%	1.4%	3.4%
Tshivenda	0.0%	0.0%	1.9%	1.6%	0.9%	16.7%	3.6%
Xitsonga	0.0%	1.3%	2.1%	3.4%	6.9%	12.9%	4.2%
Other	0.9%	1.5%	2.1%	5.2%	1.9%	2.0%	2.5%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Source: 2023 DDD secondary school teacher data. Newly deployed teachers in 2023 include those newly employed by the Department of Education, as well as redeployment and voluntary movements of teachers already working for the Department.

Figure 5.6 shows that in all six provinces, teachers who speak African languages as their home language are predominantly deployed in Quintile 1–3 schools. This pattern is particularly noteworthy in the Eastern Cape and KwaZulu-Natal. By contrast, newly deployed teachers in Quintile 5 schools largely have English or Afrikaans as their home language.

FIGURE 5.6 Home language by province and quintile for all new teachers



Source: 2023 DDD primary and secondary school teacher data. Only teachers in public schools are included. Newly deployed teachers in 2023 include those newly employed by the Department of Education, as well as redeployment and voluntary movements of teachers already working for the Department.

5.4 Conclusion

Overall, the evidence suggests that the 2023 deployments broadly reflected equity considerations, with most new teachers placed in poorer schools and provinces facing the largest staffing pressures. This alignment is encouraging, particularly in light of high learner–educator ratios and the ageing profile of the teaching workforce in several provinces. However, it remains unclear whether the scale of these deployments is sufficient to offset expected retirements and continued growth in learner numbers, especially in provinces with rapidly ageing workforces or limited capacity to appoint additional teachers. Sustained attention to both provincial allocation decisions and school-level staffing dynamics will therefore be essential if deployment patterns are to support a more equitable and stable distribution of teachers over the medium term.

CHAPTER 6
EXPLORING LEARNER ABSENTEEISM DATA

Analysis for this chapter was conducted by Jess Qvist and Daniel de Gouveia.

6.1 Introduction

Learner absenteeism is an important indicator of school functioning and learner engagement, particularly in the post-COVID context. Using the Data Driven Districts (DDD) dataset, absenteeism patterns were initially analysed across four provinces (Eastern Cape, Limpopo, KwaZulu-Natal and Gauteng) and four grades (Grade 4, 6, 10 and 11) for 2023. Initial findings revealed unusually high absenteeism rates in Gauteng at the end of Term 2 and Term 4, especially in primary schools. These spikes suggested that recorded absenteeism may reflect not only learner behaviour but also administrative practices, exam timetables or province-specific reporting conventions.

To investigate this further, the analysis of the six provinces covered by the DDD dataset focused on selected 10-day teaching windows across the year, allowing comparisons between regular instructional periods and the final days of terms. Particular attention was given to one primary grade, Grade 6, and one secondary grade, Grade 10. The following sections present the main findings on end-of-term absenteeism, differences by school context and province, and finally, diagnostic checks on administrative compliance.

6.2 Grade 6 Absenteeism across provinces, with emphasis on end-of-term spikes

6.2.1 Absenteeism patterns in Grade 6

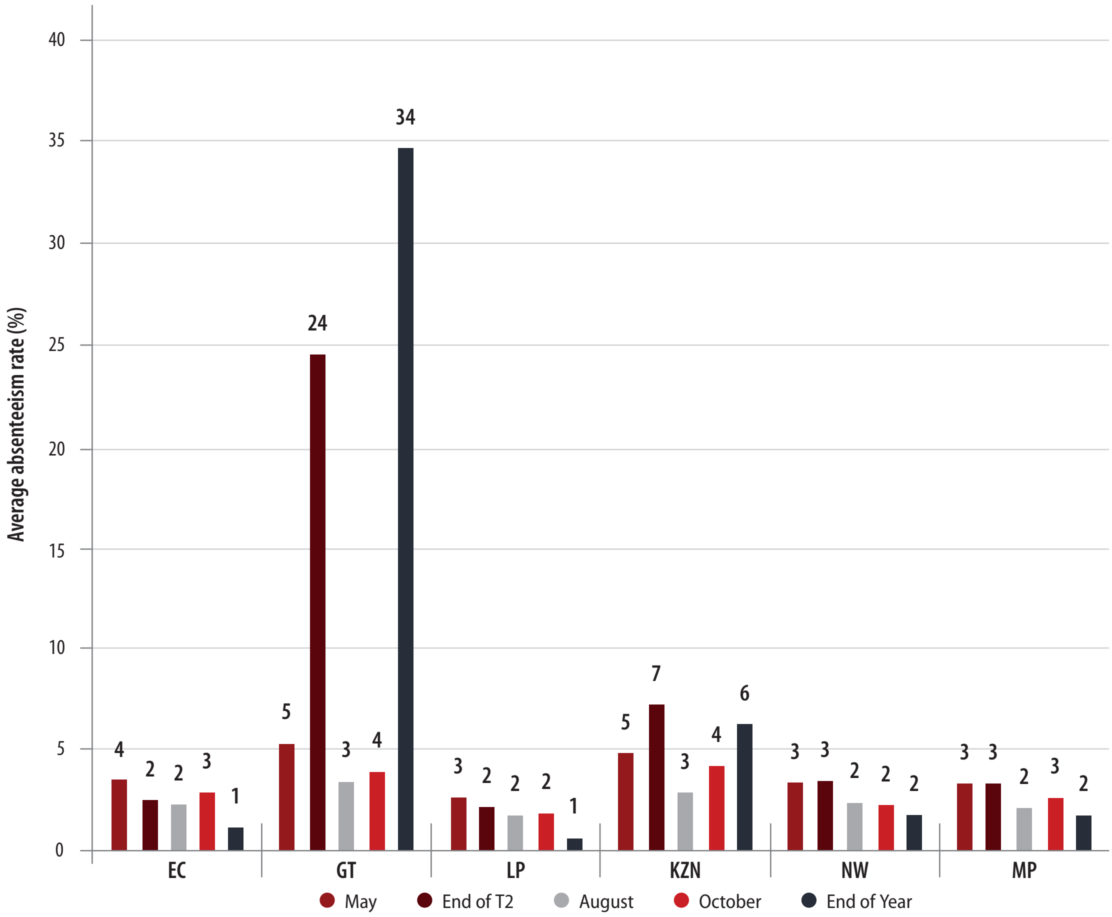
Absenteeism patterns were examined by comparing five 10-day windows in 2023: mid-May, end of Term 2, mid-August, mid-October and the end of the school year. These windows were selected to contrast regular classroom periods with the final days of the term, when reporting practices and attendance dynamics may differ.

> At the end of Term 2, absenteeism stood at around 2% in the Eastern Cape and Limpopo … but sharply higher at 24% in Gauteng.

Across the mid-May, mid-August and mid-October windows, Gauteng's Grade 6 absenteeism levels were broadly comparable to those of other provinces. However, pronounced spikes occurred both at the end of Term 2 and at the end of the year in Gauteng, as shown in **Figure 6.1**. At the end of Term 2, absenteeism stood at around 2% in the Eastern Cape and Limpopo, 3% in North West and Mpumalanga, 7% in KwaZulu-Natal, but sharply higher at 24% in Gauteng. The pattern was more extreme at year-end, with absenteeism of 1% in Eastern Cape and Limpopo, 2% in North West and Mpumalanga, 6% in KwaZulu-Natal and 34% in Gauteng.

These patterns suggest that Gauteng's high rates of absenteeism at the end of terms are unlikely to reflect ordinary learner behaviour and instead point to province-wide administrative or policy-related practices in the days after typical examination periods. These patterns suggest that Gauteng's end-of-term absenteeism spikes are not typical of primary-grade attendance and warrant separate consideration from absenteeism trends in higher grades.

FIGURE 6.1 Average absenteeism rates in various 10-day periods for Grade 6 learners by province, 2023

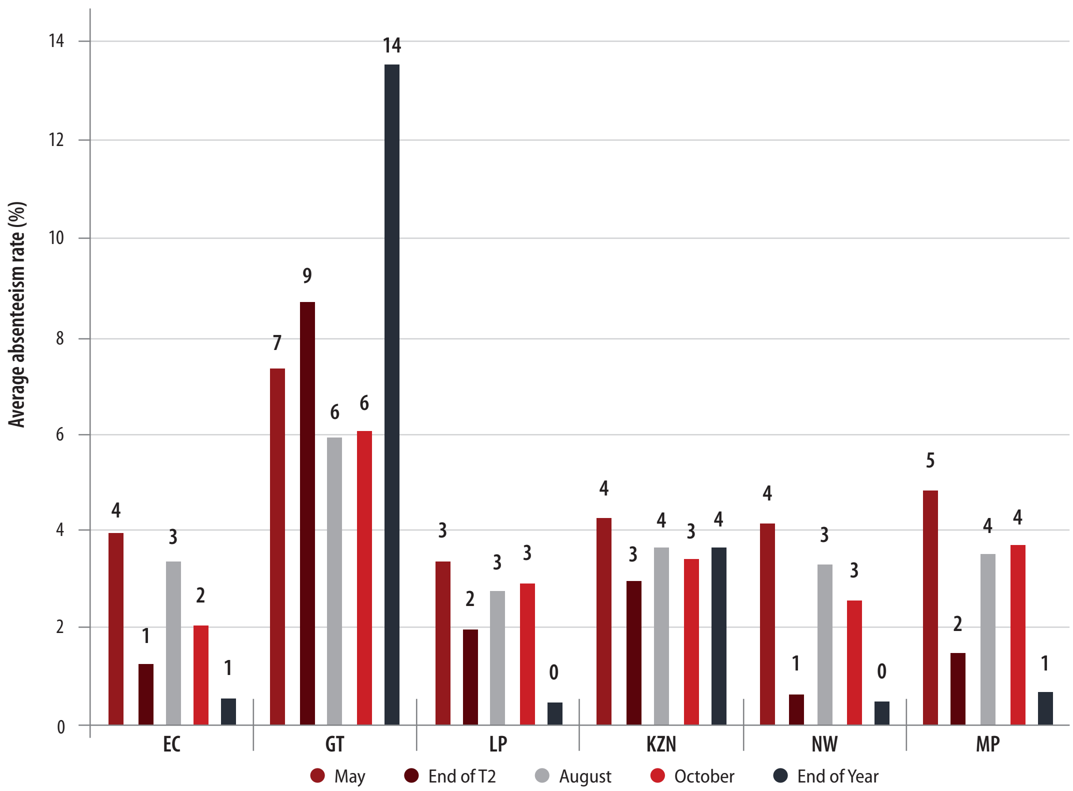


Source: DDD 2023 data. The absenteeism rate is the average percentage of learners absent on a given day over the 10 days. To ensure comparability of absenteeism rates, the sample excludes independent schools, which follow different holiday schedules.

6.2.2 Absenteeism patterns in Grade 10

In high schools, Gauteng generally reported higher absenteeism than the other provinces, even during non-exam teaching periods. Although end-of-term spikes were observed at year-end, they were less pronounced than those seen in primary schools. Still, the pattern depicted in **Figure 6.2** suggests that Gauteng's reporting practices affect absenteeism profiles across phases, albeit to different degrees.

FIGURE 6.2 Average absenteeism rates in 10-day periods for Grade 10 learners by province, 2023



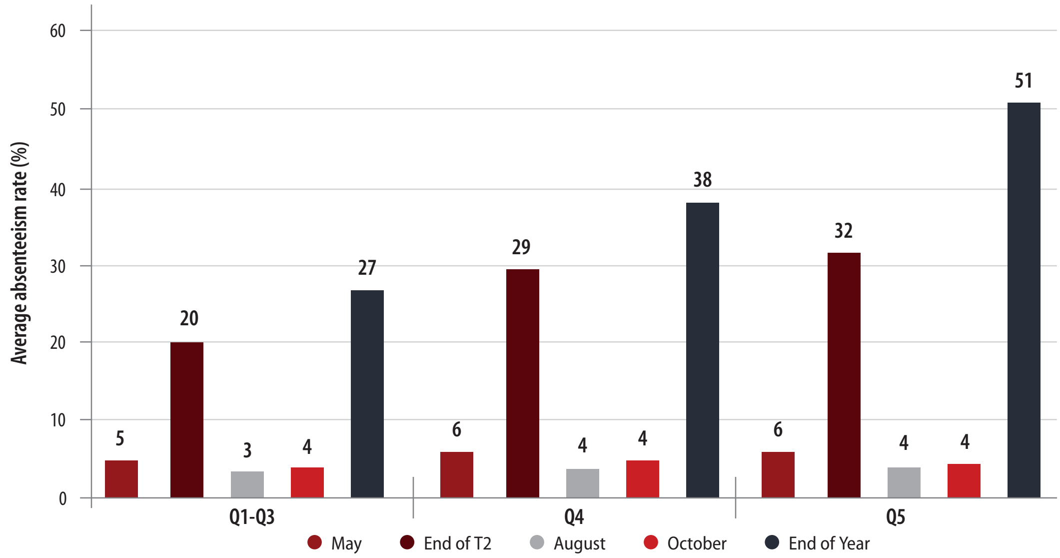
Source: DDD 2023 data. The absenteeism rate is the average percentage of learners absent on a given day over the 10 days. To ensure comparability of absenteeism rates, the sample excludes independent schools, which follow different holiday schedules.

6.3 Differences by school quintile and location

6.3.1 Absenteeism among Grade 6 learners in Gauteng

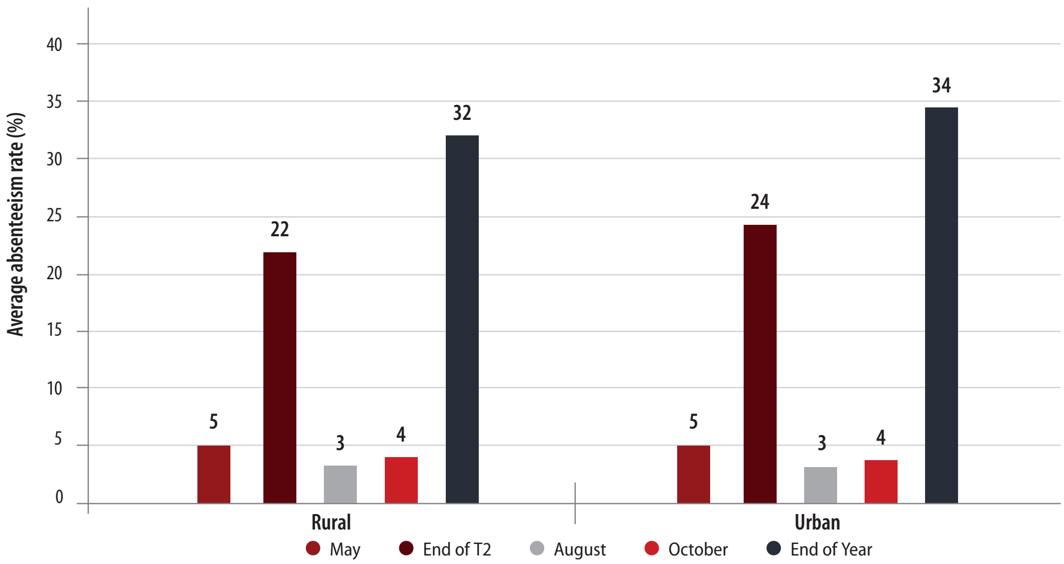
In primary schools, these end-of-term spikes in Gauteng are particularly pronounced. These spikes were displayed across school socioeconomic contexts, though the patterns varied in magnitude. Quintile 4 and 5 schools showed the largest spikes in Grade 6 absenteeism (**Figure 6.3**). During ordinary teaching periods, absenteeism rates ranged between 4% and 6%. At the end of Term 2, these rose to 29% (Q4) and 32% (Q5), and at year-end to 32% (Q4) and 51% (Q5). Quintile 1–3 schools displayed smaller but still substantial increases, rising from around 3–5% in regular months to 20% at the end of Term 2 and 27% at the end of the year. Patterns across urban and rural schools are shown in **Figure 6.4**. The figure points to similar spikes in learner absenteeism during exam periods across both types of geographic location, indicating a province-wide pattern rather than a context-specific issue.

FIGURE 6.3 Average absenteeism rates for Grade 6 learners in Gauteng in 2023 across quintiles



Source: DDD 2023 data merged with EMIS Master List of schools. The absenteeism rate is the average percentage of learners absent on a given day over the 10 days. To ensure comparability of absenteeism rates, the sample excludes independent schools, which follow different holiday schedules.

FIGURE 6.4 Average absenteeism rates for Grade 6 learners in Gauteng in 2023, by urban and rural area



Source: DDD 2023 data and EMIS Master List of schools. The absenteeism rate is the average percentage of learners absent on a given day over the 10 days. To ensure comparability of absenteeism rates, the sample excludes independent schools, which follow different holiday schedules.

6.3.2 Other provinces

Other provinces exhibited more moderate patterns. In the Eastern Cape, KwaZulu-Natal, North West and Mpumalanga, end-of-term spikes were concentrated in Quintiles 4–5, with Quintiles 1–3 showing little change across time periods. In Limpopo, an end-of-term spike appeared only in Quintile 5. These cross-provincial comparisons indicate that both school context and province-specific reporting practices influence end-of-term absenteeism patterns. This warrants a closer examination of administrative compliance in absenteeism reporting.

6.4 Administrative compliance in reporting absenteeism

Absenteeism statistics can only be interpreted meaningfully if the underlying administrative processes are reliable. To assess the quality of the DDD absenteeism data, diagnostic checks were conducted to determine whether any schools recorded no absenteeism for an entire year, or whether some schools perhaps recorded 100% absenteeism for an entire month. Underlying these checks is the assumption that it is highly unlikely for a whole grade to have perfect attendance for an entire year, just as it is implausible for all learners in a grade to be absent for a whole month.

Results show that non-reporting for the entire year was concentrated in primary schools. In Grade 6, 10% of schools in the Eastern Cape recorded no absenteeism at all, compared to much lower levels in KwaZulu-Natal (3%), Limpopo (2%), North West (2%) and Mpumalanga (1%), and no schools in Gauteng. In high schools, this issue largely disappeared, suggesting more consistent reporting at the secondary level. Results further show that extreme over-reporting of absenteeism for an entire month is rare – it occurred in only a small number of primary schools in December. These results show that under-reporting is a larger challenge than over-reporting.

6.5 Conclusion

The analysis demonstrates that DDD absenteeism data must be interpreted cautiously. Reported absenteeism levels reflect a mixture of genuine learner behaviour, provincial attendance and examination policies, and school-level administrative compliance. Gauteng exhibits very high absenteeism at the end of Term 2 and Term 4, especially in Quintiles 4 and 5, strongly suggesting province-wide end-of-term reporting or timetable practices rather than sharp, sudden drops in attendance. In high schools, the pattern is less pronounced but still visible. Other provinces display smaller spikes concentrated in higher-quintile and urban schools, indicating that reporting or attendance practices may differ by school context. Administrative non-compliance further complicates interpretation: large numbers of schools in the Eastern Cape and somewhat smaller numbers in KwaZulu-Natal, North West, Limpopo and Mpumalanga reported zero absenteeism for the whole year, suggesting absenteeism in these provinces is likely underestimated. Overall, both absenteeism levels and data quality vary substantially across provinces, phases and school socioeconomic contexts. Any use of DDD absenteeism data for policy or performance monitoring must therefore account for these differences in reporting practices and administrative reliability.

CHAPTER 7
CONCLUSION

"Enrolment and repetition data point to persistent inefficiencies, with large numbers of learners repeating, spending extended periods in school, or exiting the system before reaching Grade 12."

South Africa's education system continues to grapple with deep-seated inequalities in learning opportunities and foundational skill acquisition, and these disparities shape how learners move through the system from the earliest grades through to the FET phase. By drawing on administrative data across multiple phases of schooling, this report provides a system-wide perspective on key points of vulnerability – where learners fall behind, where they disengage, and where administrative processes obscure the true patterns of learner progress. Together, the analyses point to both the value and the limitations of existing administrative datasets and highlight the importance of strengthening data systems to inform more effective planning and decision-making.

Patterns in learner flows reveal substantial variation in how cohorts move through the system. Enrolment and repetition data point to persistent inefficiencies, with large numbers of learners repeating, spending extended periods in school, or exiting the system before reaching Grade 12. These patterns differ markedly across provinces and often reflect broader socio-economic inequalities. At the same time, the analysis highlights limitations in administrative data coverage, including mismatches in learner identifiers and gaps in year-on-year tracking. These gaps complicate efforts to quantify dropout, retention and grade progression with precision, reinforcing the need for improvements in the integrity and consistency of learner-level records.

Early schooling patterns similarly reflect the cumulative effects of structural inequality. Variation in Grade R access, differences in school-entry age, and high rates of early-grade repetition shape learners' trajectories long before they reach high school. Learners who enter school younger face a greater likelihood of repeating Grade 1, but for learners near the promotion threshold, early-grade repetition yields significant learning gains that persist into later grades. These findings highlight the importance of ensuring strong early learning environments and consistent developmental support across the Foundation Phase.

The transition from Grade 9 to Grade 10 emerges as a particularly consequential point in learners' Mathematics pathways. Many learners enter the FET phase without the foundational mathematical competencies required to succeed in Grade 10 Mathematics, and those who did not meet the Grade 9 standard but nonetheless attempt Mathematics in Grade 10 face substantial repetition and dropout risks. Differences in progression also reflect assessment and promotion policies that, in certain years, allowed for mark adjustment or condonation, creating ambiguity in the interpretation of Grade 9 Mathematics marks. The evidence points to the importance of clearer guidance for learners, parents, and schools on subject choice, as well as more deliberate policies that ensure learners pursue the FET Mathematics track only when there is a realistic likelihood of success. Specifically, the data support a policy stance that learners who fail Grade 9 Mathematics should not be permitted to take Mathematics in Grade 10 unless there is clear additional evidence of readiness or support.

The analysis of teacher deployment shows that provinces face markedly different staffing pressures, shaped by ageing workforces and large inequalities in learner–educator ratios, particularly in non-fee-paying schools. In this context, most provinces directed the bulk of newly appointed teachers in 2023 to Quintile 1–3 schools, broadly aligning new placements with areas of greatest need. However, Gauteng and KwaZulu-Natal stand out as exceptions, with comparatively large shares of new teachers deployed to better-resourced Quintile 5 schools despite significant class-size pressures elsewhere. The demographic and linguistic profiles of newly deployed teachers generally reflect provincial demand, suggesting that most appointments were responsive to local language contexts. Overall, the findings highlight both progress and persistent gaps in aligning new teacher deployments with system-wide staffing pressures. This points to the need for more consistent, needs-based allocation across provinces.

The analysis of learner absenteeism shows that provincial differences in absenteeism reported absenteeism in the DDD data partly reflects province-specific practices in how absenteeism is recorded during exam periods, as well as school-level reporting practices, rather than genuine differences in learner behaviour alone. Using selected 10-day teaching windows across 2023, the chapter documents very pronounced end-of-term spikes in Grade 6 absenteeism in Gauteng – reaching around a third of learners at year-end – despite absenteeism in ordinary

> These datasets make it possible to analyse learner pathways at unprecedented scale, yet they also reveal structural challenges in data capture, consistency, and reliability.

teaching periods being similar to other provinces, strongly suggesting province-wide end-of-term reporting or timetable practices rather than abrupt collapses in attendance. In other provinces, smaller spikes are observed and are concentrated mainly in higher-quintile and urban schools, again pointing to context-specific reporting or attendance practices rather than uniform behaviour across the system. Diagnostic checks further show that administrative non-compliance is a major concern: in Grade 6, around 10% of Eastern Cape primary schools, and smaller shares in KwaZulu-Natal, Limpopo, North West and Mpumalanga, recorded zero absenteeism for the entire year, while extreme over-reporting (100% absenteeism for a month) was rare. These results show that any use of DDD learner absenteeism data for policy or performance monitoring must explicitly account for these differences in reporting practices and administrative reliability.

Overall, the findings presented in this report show both the promise and the limitations of the administrative education data currently available in South Africa. These datasets make it possible to analyse learner pathways at unprecedented scale, yet they also reveal structural challenges in data capture, consistency, and reliability that must be addressed if administrative data is to fully support planning, accountability, and improvement efforts. The evidence highlights the need for a stronger foundation in early learning, clearer support at key transition points, and improved data systems to underpin oversight and intervention. Strengthening these areas will not only help close learning gaps but also build a more responsive, equitable, and resilient education system capable of supporting all learners to achieve meaningful success.

References

Böhmer, B. (forthcoming). An unequal start: The impact of age of school entry on academic progression and performance in Grades 1–4. *RESEP working papers.* Stellenbosch University.

Clayton, R. (forthcoming). The impact of early grade repetition on test scores: Evidence from a regression discontinuity design in South Africa. *RESEP working papers.* Stellenbosch University.

Clayton, R. (2025). The impact of early grade repetition on learner marks. *Resep policy brief.* Stellenbosch University.

Department of Basic Education. (2024a). *South African Systemic Evaluation 2022 Volume 2 Learner Proficiency Repor*t. Department of Basic Education: Pretoria.

Department of Basic Education. (2024b). *South African 2023 Trends in International Mathematics and Science Study (TIMSS) Highlights Report*. Department of Basic Education: Pretoria.

Department of Basic Education. (2015). *National Assessment Circular No. 3 of 2015. Mark adjustment for the Senior Phase (Grades 7–9).* Department of Basic Education: Pretoria.

Department of Basic Education. (2013). *National policy pertaining to the programme and promotion requirements of the National Curriculum Statement Grades R – 12.* Government Notices as 499 and 500, Government Gazette No. 36465 of 17 May 2013. Department of Basic Education: Pretoria.

Du Plessis, P and Mestry, R. (2019). Teachers for rural schools – a challenge for South Africa. *South African Journal of Education*. 39, Supplement 1. https://doi.org/10.15700/saje.v39ns1a1774

Givord, P. (2020). How student's month of birth is linked to performance at school: New evidence from PISA (OECD Education Working Papers No. 221; OECD Education Working Papers, Vol. 221). https://doi.org/10.1787/822ea6ce-en

Hoadley, U. (2025). Papering over the cracks: The Covid-19 and post-Covid South African Curriculum Policy Response. *Education as Change*. 29: 17664. https://doi.org/10.25159/1947-9417/17665

Pedraja-Chaparro, F., Santín, D., & Simancas, R. (2015). Determinants of grade retention in France and Spain: Does birth month matter? *Journal of Policy Modeling*, 37(5), 820–834. https://doi.org/10.1016/j.jpolmod.2015.04.004

Republic of South Africa. (2024). Act No. 32 of 2024: Basic Education Laws Amendment Act, 2024. *Government Gazette No. 51258.* https://www.gov.za/sites/default/files/gcis_document/202409/51258basiceducationlawsamendmentact32of2024.pdf

Spaull, N. & Kotzé, J. (2015). Starting behind and staying behind in South Africa: The case of insurmountable learning deficits in Mathematics. *International Journal of Educational Development*. 41: 13–24. https://doi.org/10.1016/j.ijedudev.2015.01.002

Van der Berg, S., Wills, G., Selkirk, R., Adams, C. & Van Wyk, C. (2019). The cost of repetition in South Africa. *Stellenbosch Economics Working Papers*. Stellenbosch University.

Van Wyk, C., Gondwe, A. & De Villiers, P. (2017). Learner flow through patterns in the Western Cape using CEMIS datasets from 2007 to 2014: A longitudinal cohort analysis. *Stellenbosch Economics Working Papers*. Stellenbosch University.

RESEP
Research on Socio-Economic Policy

Stellenbosch
UNIVERSITY
IYUNIVESITHI
UNIVERSITEIT
forward together
sonke siya phambili
saam vorentoe

Michael & Susan Dell
FOUNDATION

We gratefully acknowledge support from the
Michael & Susan Dell Foundation