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The impact of early grade repetition on learner marks

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Policy brief: The impact of early grade repetition on learner marks

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SUMMARY

Grade repetition in South Africa is commonly used as a remedial policy, aimed at helping learners mature and reinforce their academic foundations. Repetition rates are high compared to neighbouring countries, with repetition accounting for about 8% of the education budget annually[1]. However, the effectiveness of repetition remains contested internationally[2]. Understanding its impact in South Africa is key to evaluating the cost-effectiveness of repetition.

This policy brief draws on evidence from my forthcoming paper, *The impact of early grade repetition on test scores in South Africa: Evidence from a Regression Discontinuity design*, which draws on data from six provinces and provides causal evidence on the short- and medium-term effects of repeating Grade 1 or Grade 4. The analysis finds that, for repetition in both grades, repeaters whose marks were just below the threshold for repetition performed better in subsequent grades than similar learners who just passed. The effect in the grade immediately following the repetition is very large in relation to local early learning interventions[3], and while the size of the impact fades over time it remains statistically and practically meaningful by Grades 4 and 7 respectively. The benefits are evident across provinces and school quintiles. Girls benefit slightly more from repetition than boys; a pattern consistent with widening early-grade gender gaps[4].

The analysis shows that South Africa's grade promotion policy is achieving its purpose by supporting academic catch-up, especially among Grade 1 learners facing challenges in their home language. Despite these positive impacts, it is not feasible to simply increase the repetition rate: scaling up this practice would require additional teacher support to prevent larger class sizes and sustain learning gains. Policymakers should also weigh the longer-term risk of increased dropout rates in later grades, which can exist even when short-term progress is evident[5,6]. While the current data do not allow for an assessment of these long-term outcomes, extending the administrative data to enable such analyses will be important for designing informed repetition policies.

The precise results reported in this paper allow the medium-term impact of repetition to be compared to that of other proven interventions – such as targeted language learning support[3] and structured pedagogy[7] – and is therefore a first step in identifying the most cost-effective strategies to support learners who fall behind.

1 WHAT DOES THE RESEARCH TELL US ABOUT GRADE REPETITION?

Despite progress in recent years, learning outcomes in South African primary schools remain low by international standards[8], with the oft-cited figure that 81% of Grade 4 learners cannot read for meaning illustrating the depth of the challenge[9]. A range of interventions aim to improve early learning[10], yet grade repetition remains the default remediation strategy available to most learners, absorbing around 8% of the national education budget each year[1]. Repetition rates are high, even by regional standards, with approximately 12% of learners repeating Grade 1 and 11% repeating Grade 4 in 2019[11].

Grade repetition is intended to give learners time to catch up and, perhaps, to motivate greater effort amongst learners who wish to avoid it. However, the evidence on its effectiveness is mixed. International quasi-experimental research suggests that early-grade repetition can improve test scores in the short term when outcomes are compared at the same grade level[12-18], especially amongst learners whose instructional language is not their home language[17,19]. However, mid-primary repetition often shows little medium-term benefit, and repetition after Grade 5 has been linked to higher dropout risks[12,20]. Understanding the impact of this costly intervention in the South African context is therefore crucial for assessing whether it delivers the intended learning gains.

This brief summarises new analysis estimating the impact of repeating Grade 1 or Grade 4 on learner end-of-year marks over the subsequent three grades.

2 DATA AND METHOD

The study draws on a comprehensive administrative dataset (called the Data Driven Districts dataset) containing marks for almost all learners in the Eastern Cape, Gauteng, KwaZulu-Natal, Limpopo, Mpumalanga, and North West between 2017 and 2023. Two balanced longitudinal panels were constructed to track the same learners over time, allowing estimation of the impact of Grade 1 and Grade 4 repetition on later subject marks.

Identifying the causal effect of grade repetition is challenging because repetition is not random. Learners who repeat often differ in unobserved ways – such as ability, motivation, or home environment – that also influence later achievement. To overcome this, the study employs a regression discontinuity design, a quasi-experimental method used to estimate causal impacts even when such unobserved differences exist.

In South Africa, promotion in Grades 1 and 4 is tied to explicit mark thresholds: at least 50% in Home Language, 40% in Mathematics, and 40% in First Additional Language[21]. Because learners just below and just above the promotion thresholds are assumed to be similar in all respects other than their likelihood of repeating the grade, a sharp difference in later outcomes at these thresholds can be interpreted as the causal effect of repetition for learners just below the promotion threshold.

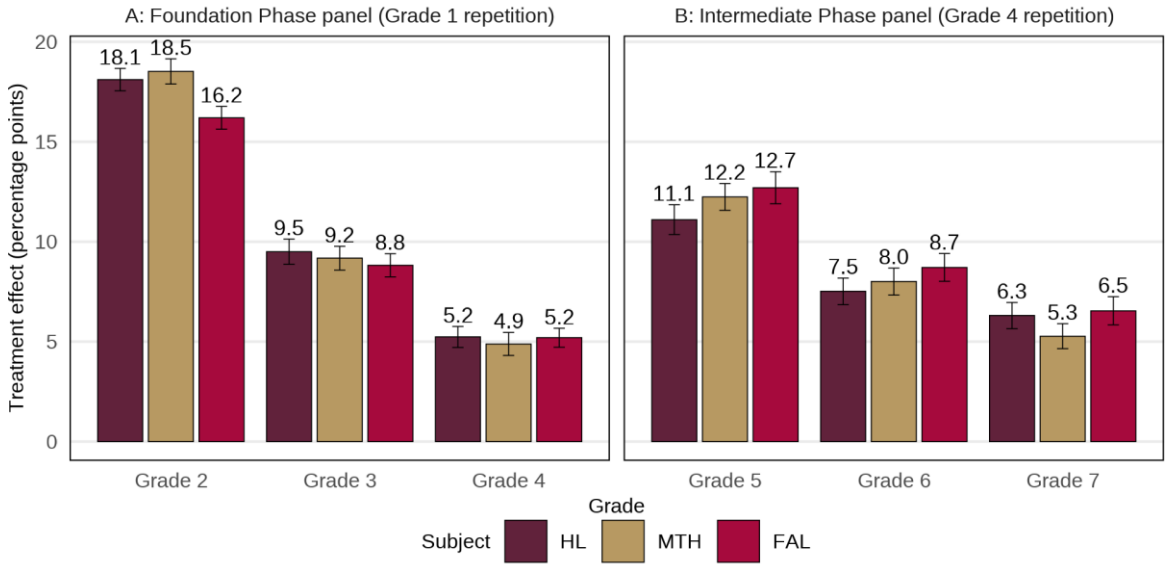
Given evidence that some schools adjust marks upward to meet these pass thresholds, the analysis was also conducted using a sub-sample of schools where such mark inflation is not observed. The results from the sample with less manipulation were highly consistent with those from the full dataset, strengthening confidence in the findings.

3 KEY FINDINGS

3.1 Grade 1 and Grade 4 repetition cause higher marks after four years

Figure 1 shows the effects of repeating Grade 1 and Grade 4 on end-of-year performance in subsequent grades, for those learners whose marks are just below the promotion thresholds. Learners who repeat Grade 1 see their Home Language (HL) scores increase by 18.3 percentage points in Grade 2, 9.5 points in Grade 3, and 5.2 points in Grade 4. Although the effect of repetition declines over time, it remains substantial and statistically significant through Grade 4. Mathematics and First Additional Language outcomes follow similar patterns and magnitudes. When standardised for improved comparability, the effect size is two to four times larger than that of the most effective literacy remediation interventions[22]. While not directly comparable, these interventions – which do not involve repetition – provide a useful benchmark for interpreting the size of the effect.

Figure 1. Estimated effect of repetition on learner marks, by subject



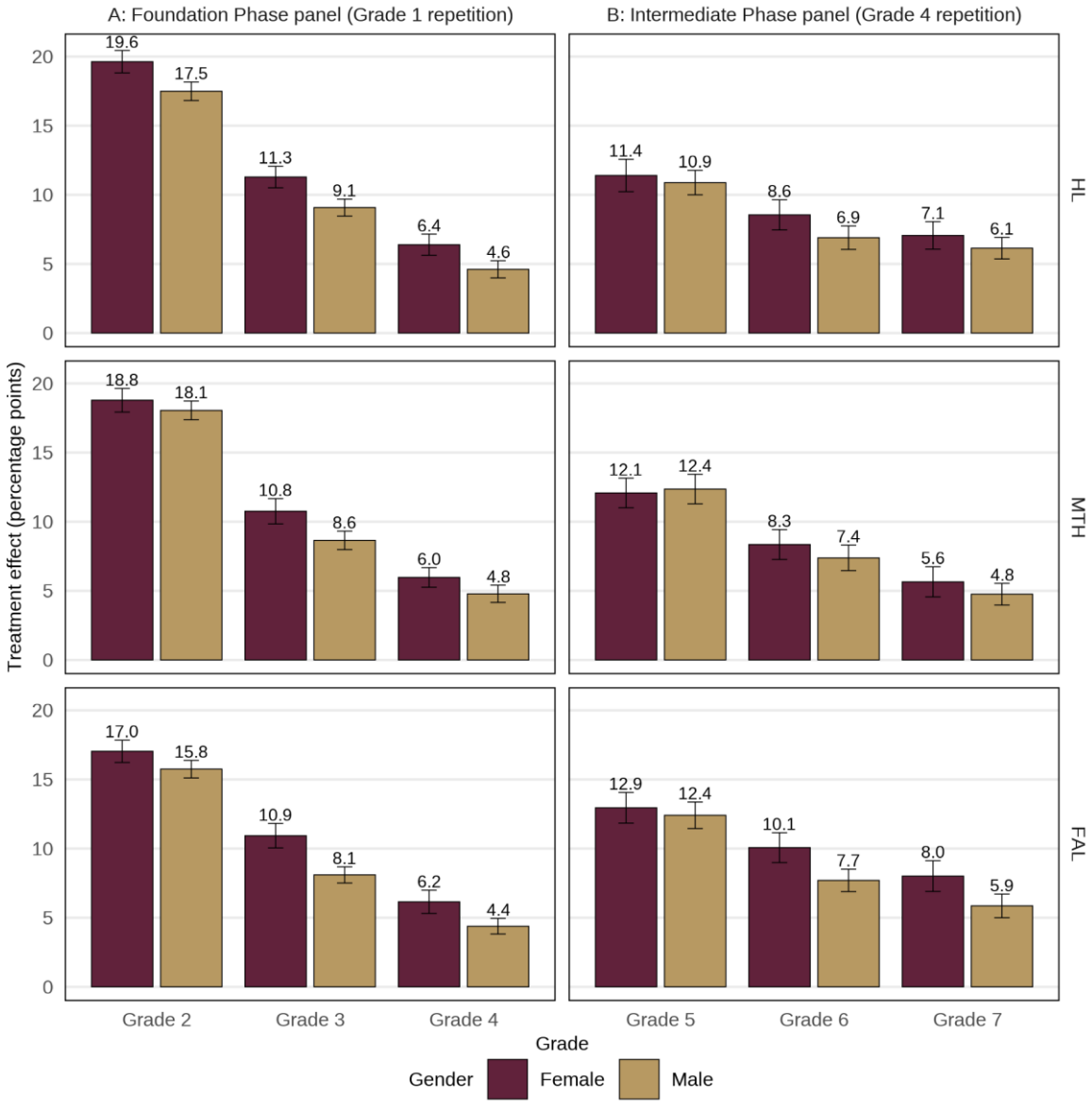
Source: Own calculations from a longitudinal sample of DDD data from 2017 to 2023. Notes: Error bars show 95% confidence intervals. HL = Home Language, MTH = Mathematics, FAL = First Additional Language.

Repeating Grade 4 also produces significant gains across all three subjects. Home Language scores for repeaters just below the cutoff are expected to be 11.1 percentage points higher in Grade 5, 7.5 points higher in Grade 6, and 6.3 points higher in Grade 7. Although the immediate effect of Grade 4 repetition is smaller than that of Grade 1 repetition, its benefits are more sustained over time, resulting in a comparable overall impact three years later.

3.2 The pro-female gender gap widens amongst repeaters

The impact of grade repetition was analysed separately for girls and boys. Figure 2 (Panel A) shows that girls benefit slightly more than boys from repeating Grade 1 in terms of language outcomes in Grade 2, while gains in Mathematics are similar for both groups. However, as learners progress through the Foundation Phase, boys' performance declines relative to that of girls, consistent with the broader trend of widening gender gaps in early learning outcomes[4]. Panel B reports the effect of Grade 4 repetition: in Grade 5, the effect is similar across genders, suggesting that Grade 4 repetition may temporarily halt the widening of the gap, at least among repeaters. Yet, by Grades 6 and 7, boys experience greater fade-out in repetition learning gains, restoring the growing girl advantage.

Figure 2. Estimated effect of repetition on learner marks, by gender

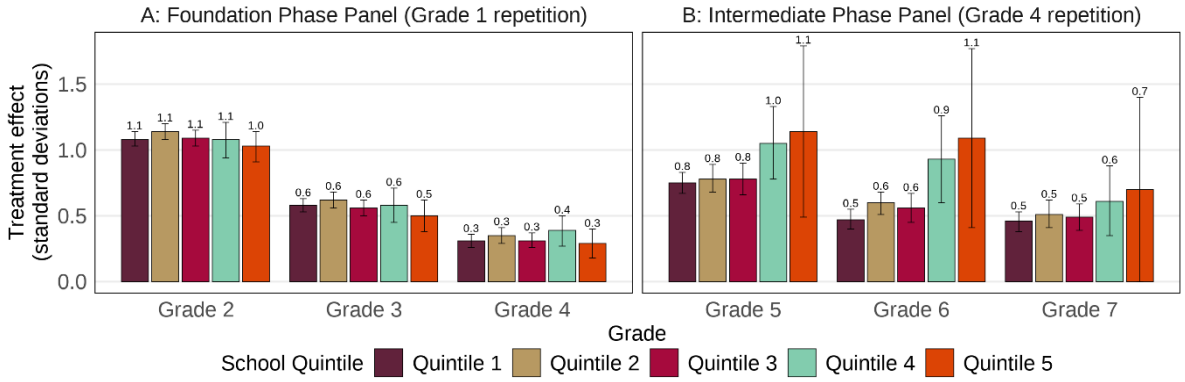


Source: Own calculations from a longitudinal sample of DDD data from 2017 to 2023. Notes: Error bars show 95% confidence intervals. HL = Home Language, MTH = Mathematics, FAL = First Additional Language.

3.3 The effect of repetition is similar across quintiles and provinces

To compare the impact of repetition across quintiles, it is necessary to use an outcome measure that is standardised across quintiles (since raw learner marks are not). I therefore standardise the results within each quintile such that the mean within each quintile is zero and the standard deviation is 1. Figure 3 presents the results using this standardised outcome, for Home Language (HL) only, since results are similar across subjects. The impact of Grade 1 repetition (Panel A) is consistent across quintiles: it increases Grade 2 HL marks by about 1 standard deviation, Grade 3 by 0.6 standard deviations, and Grade 4 by 0.3 standard deviations, irrespective of school quintile. Grade 4 repetition (Panel B) perhaps has a slightly larger impact in Quintiles 4 and 5 compared to Quintiles 1 to 3, but the former are very imprecisely estimated.

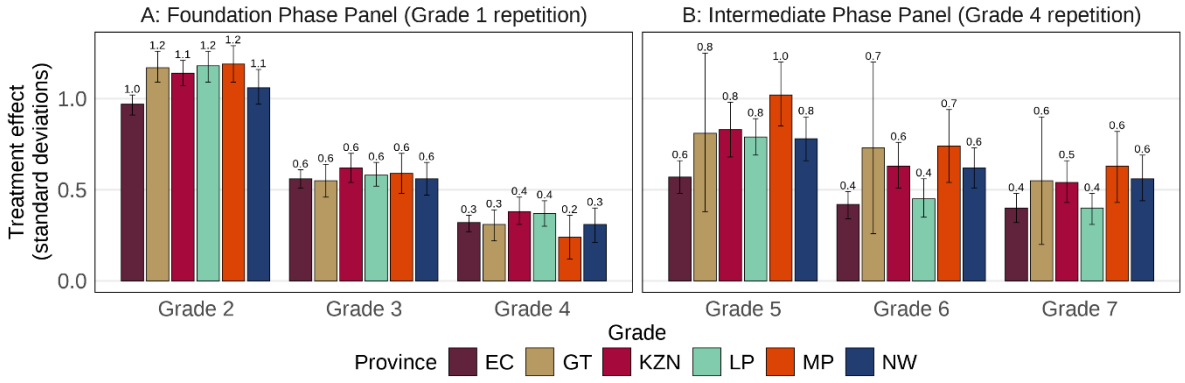
Figure 3. Estimated effect of repetition on learner Home Language marks, by school quintile



Source: Own calculations from a longitudinal sample of DDD data from 2017 to 2023. Notes: Error bars show 95% confidence intervals. HL = Home Language, MTH = Mathematics, FAL = First Additional Language.

The impact of repetition was also estimated separately for each of the six provinces included in the study. Results show a highly consistent positive effect of Grade 1 repetition across provinces. In contrast, the effects of Grade 4 repetition are less precisely estimated and appear to be slightly weaker in the Eastern Cape and Limpopo than in the other four provinces.

Figure 4. Estimated effect of repetition on learner Home Language marks, by province



Source: Own calculations from a longitudinal sample of DDD data from 2017 to 2023. Notes: Error bars show 95% confidence intervals. HL = Home Language, MTH = Mathematics, FAL = First Additional Language.

4 RECOMMENDATIONS

This study provides clear evidence that repetition in both Grade 1 and Grade 4 causes improved academic outcomes for learners just below promotion thresholds in at least the three grades following repetition. The size of the impact – 1 standard deviation in Grade 2, and 0.8 standard deviations in Grade 5 – is very large in relation to local interventions[3] and international repetition effects[2]. These findings lend support to existing repetition guidelines and to the practice of allowing repetition in the early grades. However, this is not a call to increase repetition rates (by, for instance, ending the practice of promoting some learners whose results do not meet promotion thresholds). Grade repetition increases class sizes, which are already very large in Grade 1[23]. Without additional teachers to maintain class sizes, further increasing repetition rates in the early grades could be harmful.

Most learners who repeat Grade 1 do so because they fail their Home Language subject, indicating that repetition is often used to remediate early language weaknesses. Policymakers should therefore consider the costs and benefits of repetition as a remediation strategy relative to alternative language support interventions, such as structured pedagogy[7] – or consider complementary language support for repeaters, which evidence suggests can further improve outcomes[2].

One mechanism through which grade repetition improves learning outcomes, especially in Grade 2, is through maturation: repeating learners are a year older, which supports both cognitive and non-cognitive development[24]. Thus, part of the benefit of repetition as remediation may stem from developmental readiness rather than extra instruction time alone. An alternative to increasing grade repetition rates might therefore be ensuring that learners who are below the minimum school-starting age are school-ready before allowing admission to Grade 1[25]. This would allow them to gain the benefits of additional maturity without repeating a grade. Any such policy, however, must guarantee access to alternative early-learning opportunities that include nutrition programs.

Sustaining and expanding the administrative data used in this study is critical. This would enable the study of longer-term outcomes, including dropout, and provide a more complete understanding of the consequences of grade repetition in South Africa. Furthermore, while the work of estimating the cost of repetition has begun[1], further refinement is needed to accurately assess its cost–benefit ratio..

When comparing the effectiveness of repetition with other remedial interventions, it is important to recognise that the method used in this paper estimates the impact of repetition only for learners just below the promotion thresholds. These are not average effects and may not reflect outcomes for the typical repeater, particularly those who struggle the most. In addition, repetition carries costs that extend beyond the education system – such as lost income from delayed entry into the workforce – which must be weighed against its learning benefits when assessing whether repetition is a superior remedial strategy.

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