Does Enrolment in Early Learning Programmes Improve Cognitive Outcomes? Evidence from Three South African Provinces

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Policy Brief

Key takeaways

- Children aged 4–5 years who are not enrolled in early learning programmes (ELPs) score lower on cognitive development than comparable enrolled peers, equivalent to a delay of approximately six months of typical development.
- These enrolment advantages are not uniform across programme conditions. In separate matched comparisons, the estimated gap is small and only weakly significant in programmes with inadequate instructional quality, but larger in programmes rated as basic or good, and among enrolled children with longer programme exposure.
- The largest estimated gaps are observed in language, executive functioning, and early numeracy, all skills critical for school readiness.
- Policy must therefore both expand access and improve quality. Expanding enrolment in low-quality programmes alone is unlikely to close developmental gaps.

Background

This brief is based on the working paper, *Cognitive Gains from Early Learning Programme Enrolment in Three South African Provinces: Analysis of the 2024 Thrive by Five Index (Kika-Mistry, 2026).* It draws on data from the 2024 Thrive by Five Index, which included, for the first time, a direct assessment of children who are not enrolled in any early learning programme (ELP).

The analysis compares cognitive outcomes for enrolled children and a sub-sample of non-enrolled children aged 4–5 years in Gauteng, KwaZulu-Natal, and the Western Cape.

Research consistently shows that high-quality early childhood education can improve children's cognitive and language development, particularly for children from disadvantaged backgrounds.[1] Yet, nearly one-third of 4–5-year-olds in South Africa are not enrolled in any ELP.[2]

Government policy, including the 2030 Strategy for Early Childhood Development and the Bana Pele Blueprint, has rightly prioritised expanding access. However, a critical policy question remains insufficiently answered: does enrolment itself improve cognitive outcomes, and under what conditions do these benefits materialise?

This policy brief addresses that question using evidence from the 2024 Thrive by Five Index.[3]

Importantly, this wave included a sub-study of children who are not enrolled in any programme. The analysis focuses on children aged 50–59 months from low-income communities (school quintiles 1–3) in Gauteng, KwaZulu-Natal, and the Western Cape.

Data and approach

To ensure a fair comparison, non-enrolled children were matched with enrolled children of the same age, gender, province, and from similar household backgrounds. Additional analyses controlled for household assets and home learning conditions. This approach helps show how children who are not enrolled are doing relative to similar children enrolled in an ELP.

Findings should be interpreted cautiously. The non-enrolled sample is relatively small and limited to three provinces. The analysis identifies associations rather than causal effects.

Main findings

1. Enrolment is associated with meaningful cognitive gains

Non-enrolled children show substantial developmental delays relative to comparable enrolled peers. The overall gap is about 5.8 ELOM points, equivalent to roughly five to six months of typical cognitive development.[4] For children entering the formal school system, a delay of this magnitude creates an early disadvantage that compounds over time and is difficult to reverse. The period before formal school (Grade R), therefore, represents a critical window for intervention. However, as the findings below show, the size of this advantage depends on the quality of the programme.

2. Gains are largest in skills that underpin later learning

The largest gaps in typical development between enrolled and non-enrolled children appear in the domains most closely linked to later academic success:

- Cognition and executive functioning: approximately 7 months;
- Emergent language and literacy: approximately 7–8 months;
- Emergent numeracy and mathematics: approximately 7 months.

Smaller but statistically significant gaps are observed in motor development.

These findings align with international evidence showing that structured early learning most strongly benefits language and higher-order cognitive skills.[5]

3. Longer enrolment is associated with larger developmental advantages

Children with longer programme exposure tend to show larger developmental advantages relative to non-enrolled children than those with shorter exposure.

The age-equivalent developmental gap relative to non-enrolled children increases with programme duration:

- 0–12 months enrolled: advantage equivalent to approximately 3 months;
- 13–24 months enrolled: advantage equivalent to approximately 7 months;
- 25+ months enrolled: advantage equivalent to approximately 8.5 months.

These comparisons are descriptive rather than causal, yet they are consistent with the view that sustained participation in early learning supports better developmental outcomes. Policies that support stable, sustained enrolment are therefore likely to play an important role.

4. Instructional quality and programme settings matters

While enrolment is generally associated with better outcomes, these advantages are not uniform across programmes. Children in programmes with inadequate instructional quality[6] show much smaller advantages over non-enrolled children, while programmes rated as basic or good show substantially larger advantages (Table 1).

While this does not prove that there is a single cut-off point at which benefits begin, it does suggest that children are more likely to benefit when instructional quality is stronger.

Across most structural dimensions, the larger enrolment advantages are observed in better-resourced programme settings (Table 2).

These patterns suggest that structural features, including registration status, subsidy receipt, infrastructure compliance, and practitioner qualifications, may help create stronger learning environments. However, the most consistent pattern in this study relates to instructional quality: children appear to benefit most where teaching and learning practices are stronger.

The findings suggest that expanding access without improving programme quality is unlikely to produce the strongest developmental gains. Public funding and regulation should therefore give greater attention to the quality of children's daily learning experiences, while also supporting the structural conditions that enable stronger teaching.

Table 1: Cognitive differences by instructional quality

Instructional quality level	Estimated cognitive gap between enrolled and non-enrolled children (ELOM points)	Age-equivalent delay
Inadequate (<60%)	2.6 points*	not significant (5% level)
Basic (60–80%)	9.5 points	approximately 9 months
Good (>80%)	7.4 points	approximately 7 months

** Weakly significant at the 10% level only. These subgroup estimates come from separate matched comparisons and should be read descriptively rather than as formal tests of differences across quality categories. In the sample, 23% of ELPs were rated as inadequate, 43% as basic, and 33% as good.*

Table 2: Cognitive differences by structural programme characteristics

Structural input	Estimated cognitive gap between enrolled and non-enrolled children (ELOM points)	What to note
Registration status	7.2 ELOM points for children in fully registered programmes and 4.5 points for children in unregistered programmes.	Larger enrolment advantages are seen in better-regulated settings, but these are separate comparisons against non-enrolled children, and not a direct comparison between registered and unregistered ELPs.
Subsidy receipt	7.9 ELOM points for children in subsidised programmes and 5.0 points for children in unsubsidised programmes.	Subsidised settings show somewhat larger enrolment advantages relative to non-enrolled children, although this does not show that the subsidy itself causes the difference.
Infrastructure compliance	9.0 ELOM points in the highest infrastructure group and 5.7 points in the lowest.	Larger enrolment advantages are seen in settings with higher infrastructure quality, suggesting that stronger physical conditions may support better learning.
Practitioner qualifications	8.5 ELOM points where practitioners have tertiary qualifications; 5.4 points where practitioners have less than Matric.	Large enrolment advantages are also seen where practitioners are more highly qualified.

Policy recommendations

To ensure that expanded access to early learning translates into stronger developmental outcomes for children, the following reforms are recommended:

Priority 1: Prioritise instructional quality in access expansion

- Set and enforce minimum instructional standards aligned with the Learning Programme Quality Assessment (LPQA) tool;
- Strengthen quality assurance and support systems so that public funding is increasingly aligned with the quality of children's daily learning experiences, including instructional practice.

Priority 2: Enable quality improvement

- Strengthen practitioner training and support focusing on instructional practice, not compliance alone;
- Review the current subsidy level (R24 per child per day), which is insufficient to support minimum quality standards.

Priority 3: Expand ELP access sustainably

- Simplify registration requirements and reduce financial barriers alongside quality safeguards;
- Support stable, continuous enrolment across at least two years of preschool, particularly for children in low-income communities.

Conclusion

Evidence from the 2024 Thrive by Five Index shows that non-enrolment is associated with substantial cognitive delays, but that enrolment advantages are not uniform across programme conditions.

In separate matched comparisons, the estimated gaps between enrolled and non-enrolled children are much smaller in programmes with inadequate instructional quality and larger in programmes rated as basic or good, as well as among children with longer programme exposure. While these findings should be interpreted descriptively rather than as formal tests of threshold effects, they suggest that expanding access alone, without improving programme quality, is unlikely to close developmental gaps. To improve children's outcomes, access and quality must be pursued together.

Study limitations

All estimates are associational rather than causal. The non-enrolled sample is relatively small, limited to three provinces and is not nationally or provincially representative. In addition, the subgroup comparisons by quality and duration are estimated on separate matched samples and should therefore be interpreted descriptively. Unobservable factors may still influence results. Despite these limitations, this study provides the first matched comparison of enrolled and non-enrolled children in South Africa and is broadly consistent with both local[7] and international[8] evidence.

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Endnotes

[1] Engle et al. (2011); Evans et al. (2024).

[2] Hall (2025).

[3] The analysis uses the 2024 Thrive by Five Index, a nationally representative survey of preschool child outcomes in South Africa.

[4] Dawes and Henry (2023).

[5] Engle et al. (2011); Evans et al. (2024).

[6] Instructional quality was assessed using the Learning Programme Quality Assessment (LPQA) tool. The LPQA rates observations of teaching and learning practices and grouped into three categories: inadequate, basic, and good.

[7] Van der Berg (2023); Kika-Mistry (forthcoming).

[8] Blimpo et al. (2022); Bouguen et al. (2018); Evans et al. (2024).

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