

SmartStart Child Outcomes Evaluation 2023

It is well established that children's access to the right development and learning opportunities before they start school, has the potential to transform outcomes across the life course. In this context, SmartStart was set up in 2015, to achieve population-level change in access to quality early learning in South Africa. From the outset, SmartStart sought to build a delivery system that could achieve scale by, first, harnessing the potential of affordable home and community-based early learning programmes (ELPs) in order to reach children in low-income communities; and, second, by working with and through a national network of implementing partners.

In 2018, an independent evaluation found that children attending SmartStart ELPs saw significant improvements in their developmental and learning outcomes. Now, after a period of rapid expansion, a central question has been whether SmartStart can maintain quality and impact at scale.

To answer this question, SmartStart commissioned a team of external researchers, to conduct a new, larger child outcomes evaluation. The team was also asked to look at associations between SmartStart's programme quality assurance (PQA) tool and child outcomes, as well as between components of SmartStart's platform design and child outcomes. It was hoped that this additional analysis might generate new insights into the mechanisms and conditions of positive change in an at-scale early learning intervention.

Does a pragmatic home and community-based solution for access to early learning, like SmartStart, work at scale?

The answer to this question has substantial implications for how we think about the most affordable and immediate ways to **close the early learning gap**, including re-framing **theories of quality**, both in South Africa and globally.

Study design

The researchers used a cohort field study design, to track the progress of a representative sample of 551 children in 325 SmartStart ELPs over an eight-month period. As in 2018, the *Early Learning Outcomes Measure (ELOM)* was used, meaning that the studies could be compared with each other, and with the Thrive by Five Index (see box overleaf).

Key findings

- ★ Overall, the percentage of SmartStart children 'On track' increased by 20 points in just eight months, from 45% to 65%, while the proportion of children 'Falling far behind' nearly halved.
- ★ Children's performance improved in all domains, with the largest increase in early maths, followed by fine motor skills and early literacy.
- ★ The SmartStart sample outperformed the Thrive by Five index across all domains, even after controlling for differences.
- ★ The performance gap between children attending ELPs in the highest and lowest income quintiles narrowed substantially, from 25 points to 6 points.
- ★ Children in SmartStart's 2018 evaluation showed higher gains overall than the 2023 sample, but the proportion of children 'On track' for Total ELOM was higher in 2023.

What is the ELOM tool?

The ELOM tool is an age-validated standardised instrument for measuring the developmental status of 4–5 year-olds.

It consists of 23 assessment items clustered in five domains: Gross Motor Development (GMD); Fine Motor Development & Visual Motor Integration (FMDVMI); Emergent Numeracy & Mathematics (ENM); Cognition & Executive Functioning (CEF); and Emergent Literacy & Language (ELL).

The ELOM was standardised on a sample of 1,331 South African children aged 50–69 months. The expected ELOM performance standard (*On track*) was benchmarked at the score of the top 40% of children. Those who are *Falling far behind* are in the bottom 32%. Children who are *Falling Behind* are in the middle.

The ELOM has a form of in-built control for age, by standardising the three performance bands for two age sub-groups, children aged 50–59 and 60–69 months.

This enables children to be allocated to a performance band according to their age. **With an 8-month baseline-to-endline study design, most children move between the age sub-groups during the study, meaning they are benchmarked against older children at endline, and therefore their performance band does not change as a function of their increasing age alone. This means that the three performance bands also provide a form of in-built control group.**

Thrive by Five Index

The Thrive by Five Index is a nationally representative survey of 5,222 South African attending pre-school, using the ELOM tool, and was last conducted in 2021.

Background

SmartStart’s programme design was based on studies of the ingredients of quality in ELPs, including process factors such as pedagogy and interactions, as well as key support structures such as coaching and quality assurance systems.

The 2018 evaluation confirmed that the programme design was sound and significantly shifting outcomes for children. However, by 2023, the SmartStart network had more than doubled to 8,629 ELPs and 66,051 children (and has grown further to nearly 13,000 ELPs and 120,000 children in 2025), primarily operating in low-income communities. As programmes like SmartStart are seldom delivered at such scale, it was timely to investigate whether or not programme impact is being maintained as SmartStart moves towards its target of reaching one million children every year.

Scope

The research team was led by Professor Sarah Chapman at the University of Cape Town and data specialists at ikapadata. The research questions focused on the extent to which SmartStart programmes are shifting outcomes for children, and whether potential mechanisms of change can be identified. In terms of the latter area of inquiry, the researchers investigated associations between child outcomes and a) SmartStart’s PQA tool, and b) components of SmartStart’s platform design and support. These findings are described in Briefing 2.

Sample

A representative sample of 404 ELPs was drawn from a pool of almost 9,000 SmartStart ELPs. Two children were randomly selected from each ELP. Due to child drop-out, attrition and other factors, 77 ELPs were excluded at endline, resulting in a sample of 325 ELPs for the analysis, at which, 551 children had valid ELOM assessments.

The sampled children’s average age at baseline was 54.4 months and at endline was 62.3 months, with a gender split of 53% girls and 47% boys. 52% of children had participated in SmartStart for three years and 31% for two years. Children came from nine language groups, with over half from isiZulu and isiXhosa speaking homes.

Nearly 90% of sampled ELPs were ECD centres (mainly run in home and community venues), and the rest were childminders or playgroups. Nearly half of practitioners did not have a school Matric qualification. The ELPs were from all nine provinces, with 63% in urban areas. About one-third of ELPs were run in informal structures, and 54% charged less than R200 (about \$11) per month. 60% of the ELPs had an adult-child ratio of 1-10, and 77% held a ‘Green’ (*good*) PQA status.

A valid comparison

The ELOM tool enables the performance of SmartStart children to be benchmarked against other South African children. The Thrive by Five Index provides another useful reference group.

Findings

Children’s performance on the ELOM

There was a notable increase in the proportion of children ‘On track’, rising by 20 percentage points from 45% to 65% of children. The proportion of children categorised as ‘Falling far behind’ decreased from 26% to 14%, a significant drop of 12 percentage points.

Figure 1 shows that children’s performance improved in all domains, with the largest increase in ENM, followed by FMCVMI and ELL. Lower gains were observed in CEF and GMD.

Height-for-age measurements indicate a 30% reduction in stunting levels, from 9.8% of children at baseline to 6.9% at endline (however, stunting rates are known to decrease in this period).

Figure 1: Proportion of children ‘On track’ at baseline and endline by domain

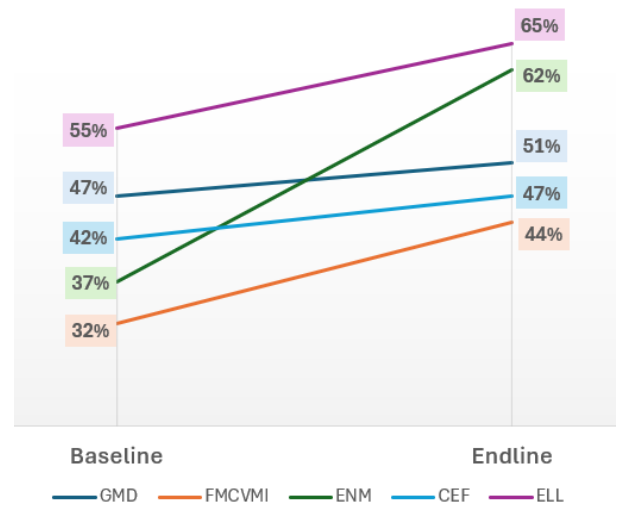
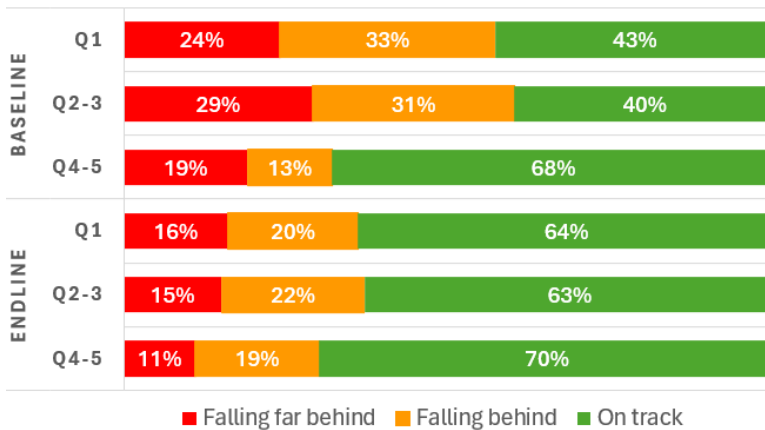


Figure 2: Proportion of children per performance band at baseline and endline by ELP quintile



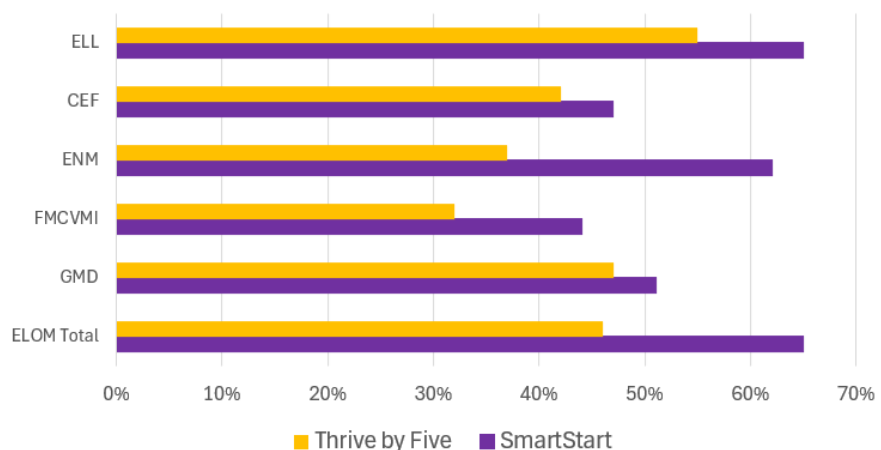
Quintile analysis

Baseline-to-endline gains were highest for ELPs in low income quintiles. Q1 saw its mean Total ELOM score rise from 44 to 55, Q2-3 from 43 to 56, and Q4-5 from 51 to 60. Figure 2 shows that the proportion of children ‘On track’ in Q1-3 ELPs increased by 21-23 percentage points, and the proportion of children ‘Falling far behind’ decreased by 8-14 points. Crucially, this means that the performance gap between children in ELPs in the highest and lowest income quintiles narrowed substantially, from 25 points to 6 points.

Comparison with Thrive by Five (TbF) Index

The average Total ELOM score for SmartStart children at endline, was 11 points higher than the TbF Index, and a significantly higher proportion of SmartStart children was ‘On track’ at endline (65% vs 46%). A regression analysis to control for difference in the samples, showed that across all domains except CEF, the SmartStart sample significantly outperformed the TbF sample. However, as the TbF Index uses a representative sample of children, the difference in gains would be likely to be larger for a TbF sub-sample matched for socio-economic status.

Figure 3: Proportion of children ‘On track’: Comparison of SmartStart and the Thrive by Five Index



Comparison with SmartStart’s 2018 evaluation

Overall, children in SmartStart’s 2018 evaluation had higher baseline-to-endline gains compared to those in the 2023 sample. In 2018, there was a 26.9 percentage point improvement in the proportion of children ‘On track’ for Total ELOM, compared with a 20 percentage point improvement in 2023. At the same time, the proportion of children ‘On track’ for Total ELOM was higher at endline for the 2023 sample – 65.2% compared to 59.3% in 2018.

There were significant differences between the 2018 and 2023 samples. In 2018, the sample was smaller, all the ELPs were rated ‘green’ and most were playgroups and day mothers. A regression analysis to control for some differences showed that the findings regarding ELOM gains remained consistent. However, data for some key variables was not available – including years of practitioner experience and ELP quintile – the absence of which, could introduce potential omitted variable bias.

Discussion and conclusion

The main purpose of this study was to establish whether or not an early learning delivery platform focused on home and community-based settings in low-income communities, can shift outcomes for children as it goes to scale. The study has found conclusively that, in the case of SmartStart, it can.

When this finding is set alongside the particular design and architecture of the SmartStart platform – which acts as enabler of an ecosystem of partners, practitioners, families and communities – it has significant implications for strategies to close the early learning access gap. This is partly because SmartStart harnesses resources that already exist in communities (such as homes and under-employed women), meaning its mechanism is both affordable and immediate. It is also because, by placing network and collaboration at the heart of the platform, SmartStart can partner strategically with government to reach every child.

The evaluation also has implications for conceptions of quality in early learning provisioning, shifting the focus to *what* the programme provides and *how* this can be supported in even the most under-resourced contexts, as well as to the capabilities of paraprofessionals and the role of micro-credentialling.

One of the most exciting findings is the extent to which SmartStart is closing the achievement gap between children from low- and high-income homes. This is critical, not only from a rights and equity point of view, but also because standards across the whole education system will only when every child enters school with a comparable starting-point.

Briefing 2 unpacks the study’s findings on the mechanisms associated with the observed gains in child outcomes. The findings foreground the importance of regular, quality Coach visits and fidelity to an evidence-based daily programme, in overcoming structural excluders of both ELPs and children.

In conclusion, SmartStart’s 2023 evaluation offers compelling evidence that:

- ★ a carefully designed delivery system for home and community-based ELPs, can substantially improve early childhood outcomes, even at scale;
- ★ in under-resourced contexts, with the key ingredients of quality in place, these ELPs can close the opportunity gap for children in low-income communities relative to other children;
- ★ because this delivery method can be implemented more quickly and affordably, it should be a focus for funding solutions and inform a more contextually-appropriate regulatory framework.

New policy approaches

The message for government is that regulatory and funding frameworks which are *embedded in context*, are an essential pre-condition of equity in early learning access and quality.