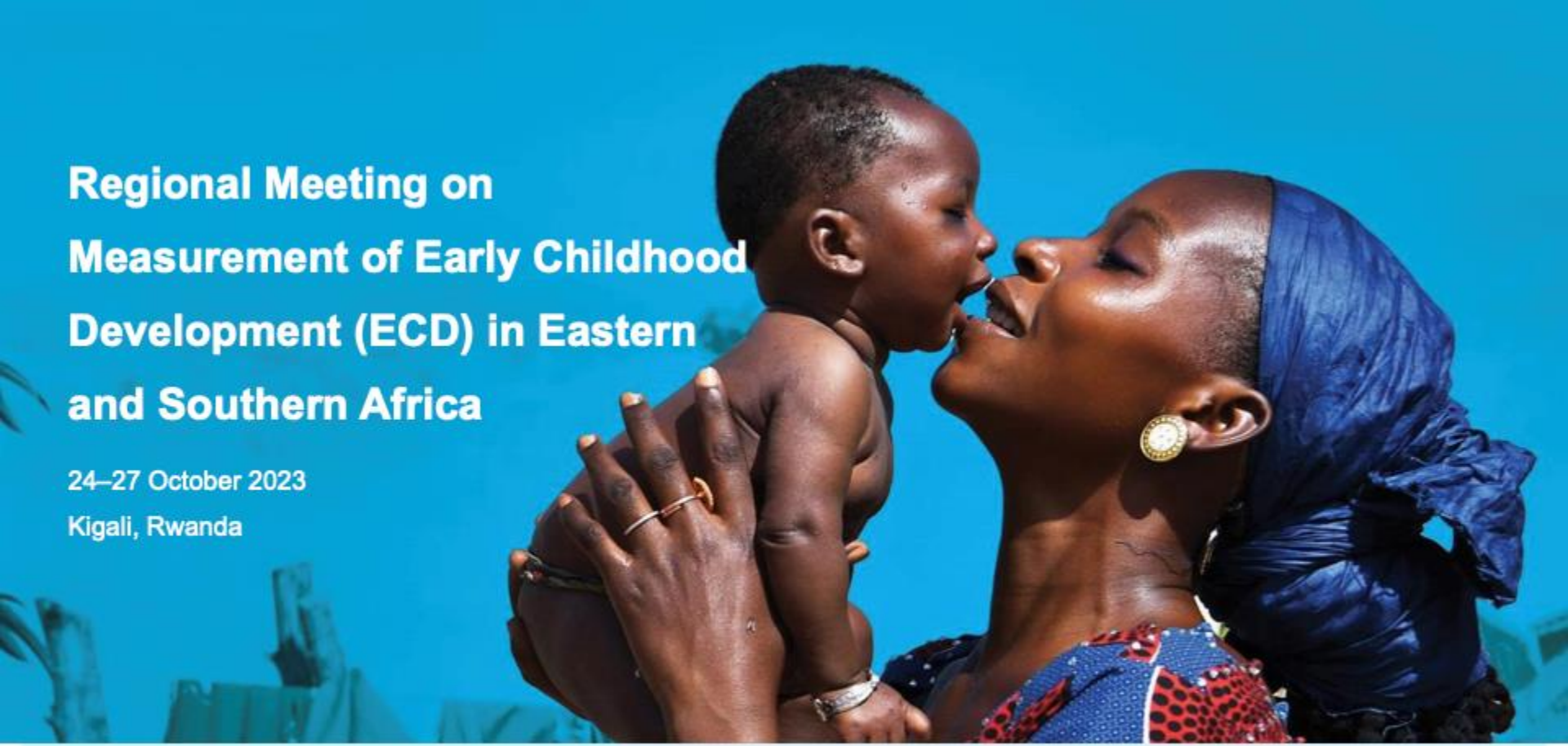
Regional Meeting on Measurement of Early Childhood Development (ECD) in Eastern and Southern Africa

24–27 October 2023

Kigali, Rwanda



unicef for every child

World Health Organization African Region

AfECN

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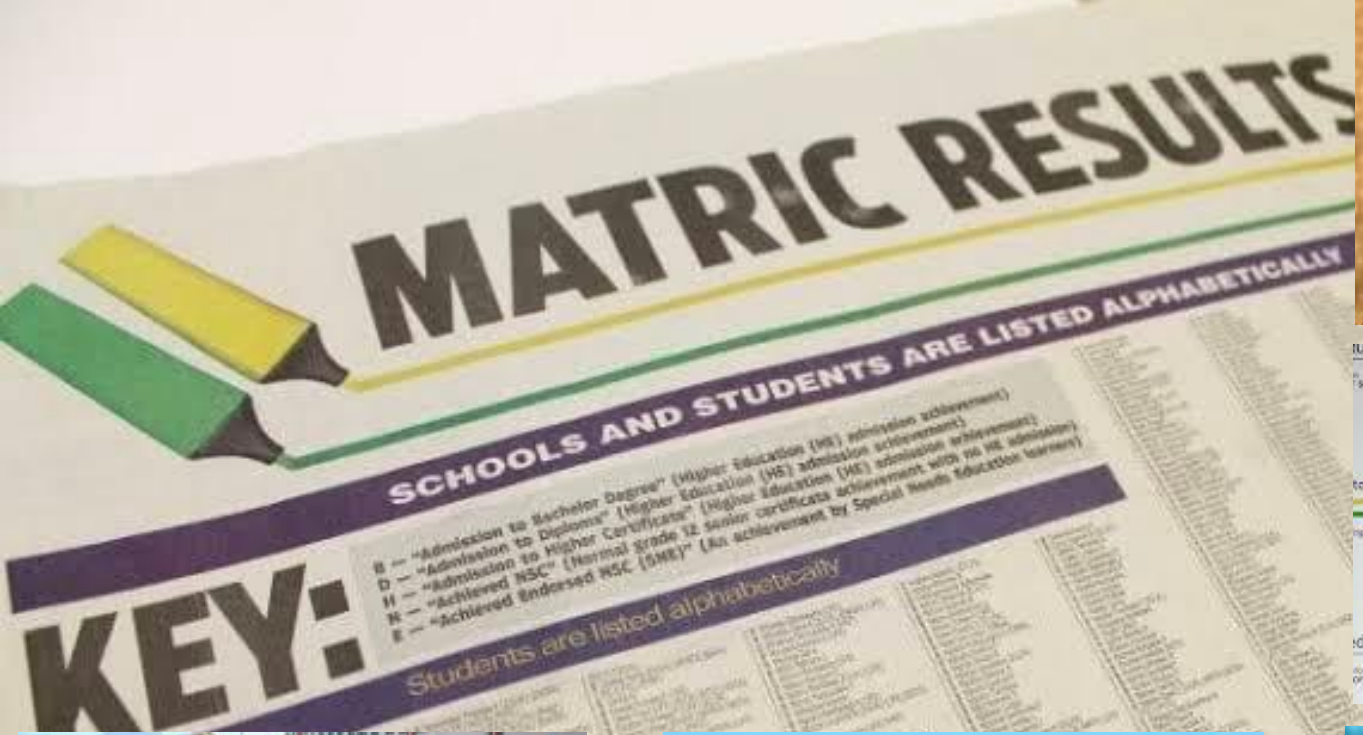
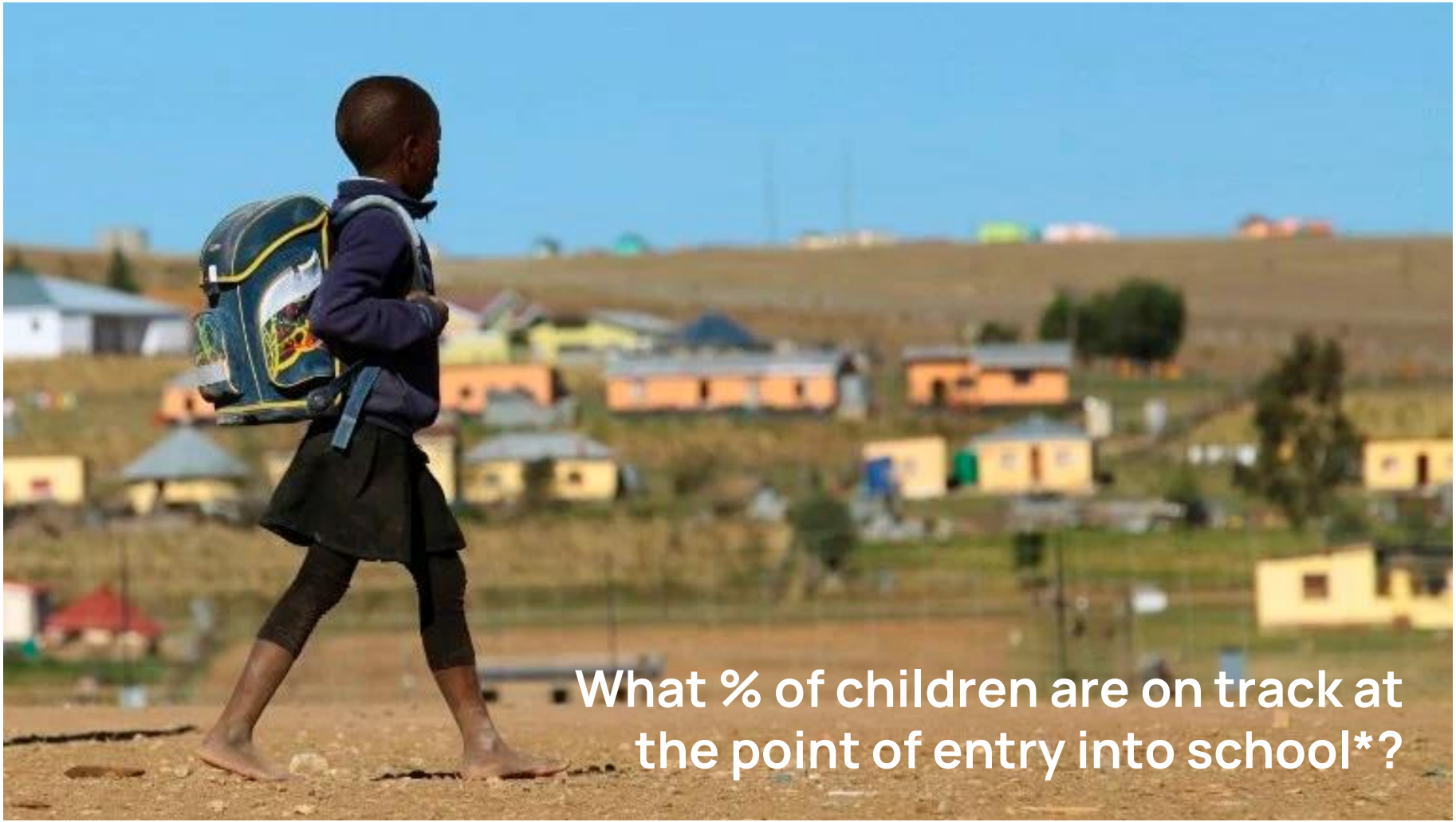
ECDAN

Child Outcomes Data as an Enabler of Change within a Dynamic Ecosystem: Lessons from South Africa

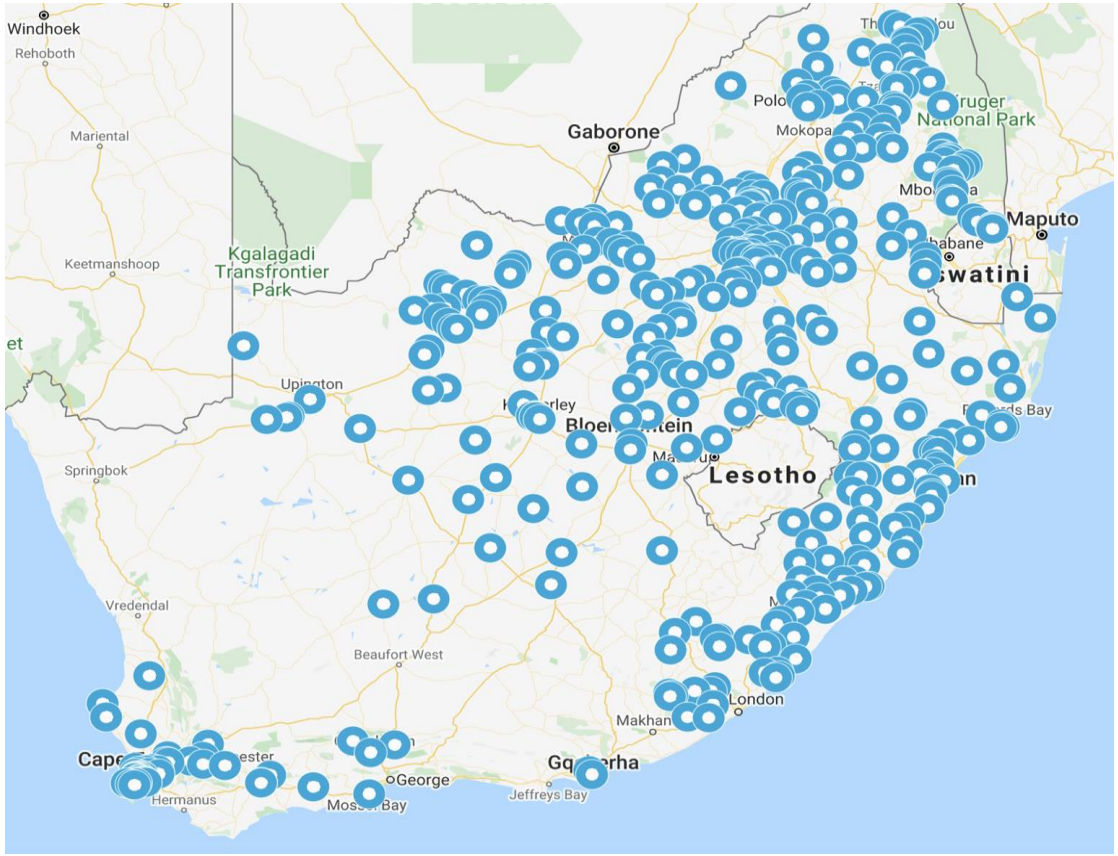
Sonja Giese
DataDrive2030


MATRIC RESULTS
SCHOOLS AND STUDENTS ARE LISTED ALPHABETICALLY
KEY:
Students are listed alphabetically

NATIONAL
SENIOR


What % of children are on track at the point of entry into school*?

Child Outcomes Index =
potentially unifying measure of progress within the ECD ecosystem



Largest national survey of preschool children, undertaken Sept-Nov 2021

Assessed over 5,100 children (50- 59 months), enrolled in 1,247 ELPs*.

Every child was individually assessed in their mother tongue using locally developed, standardised assessment tools.

Classroom observations and interviews with principals and practitioners were also conducted in ⅓ of the ELPs.

Early Learning:

1. Gross Motor Development
2. Fine Motor Coordination & Visual Motor Integration
3. Numeracy & Mathematics
4. Literacy & Language
5. Cognition & Executive Functioning
6. Task orientation

Physical Growth:

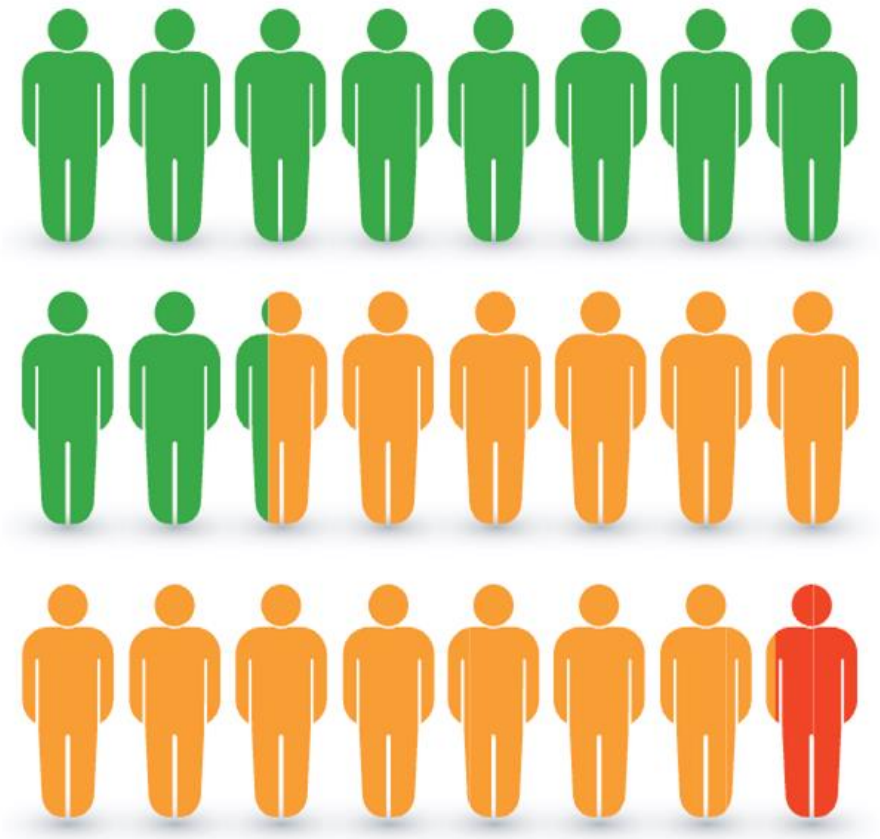
7. Height for age - Stunting

Social-Emotional Functioning:

8. Social Relations with Peers & Adults
9. Emotional Readiness for School

Early learning programme

10. Quality assessment



43% of children (attending ELPs) Thrive by Five - on track for both **early learning** overall and **physical growth** **(not stunted)**

53% face barriers to thriving - falling behind for either learning or physical growth

4% face extensive barriers to thriving - falling behind for both learning and physical growth

The Thrive by Five Index was launched in April 2022 as a multisectoral partnership (led by DBE) - website, extensive media coverage and subsequent targeted engagements with various key stakeholder groups.

1. How have the data been used to drive systems change?

1. From our experience, what are enablers and challenges of data driven change?

Tell the Story

2021

2024

2027

2030

Baseline

1st Trend Data

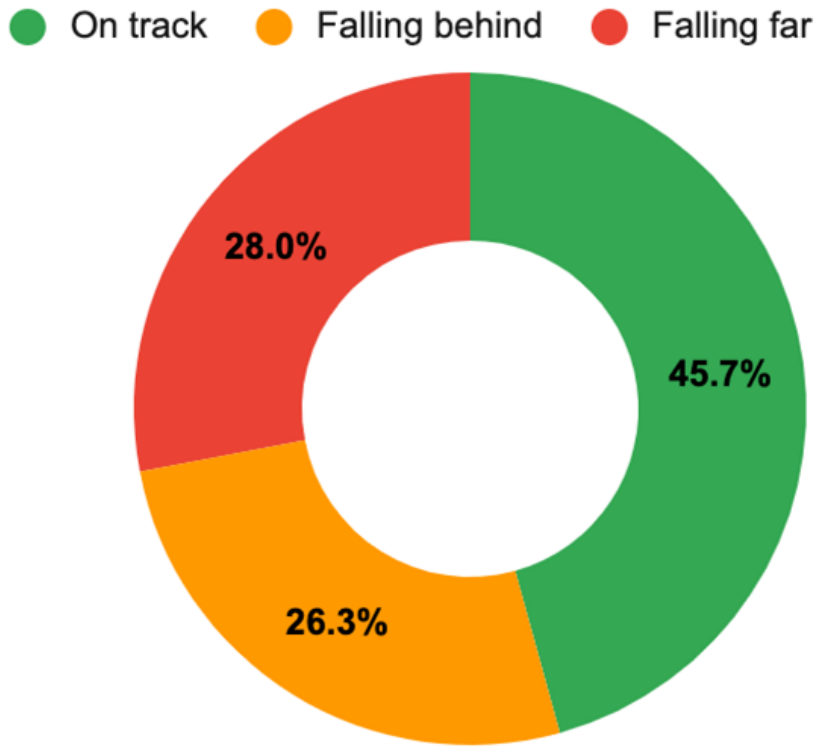
Action cycle

Action cycle

Action cycle

Change the Story

Telling the Story: Less than half of children who attend an Early Learning Programme in SA start school with **the right learning foundations in place**



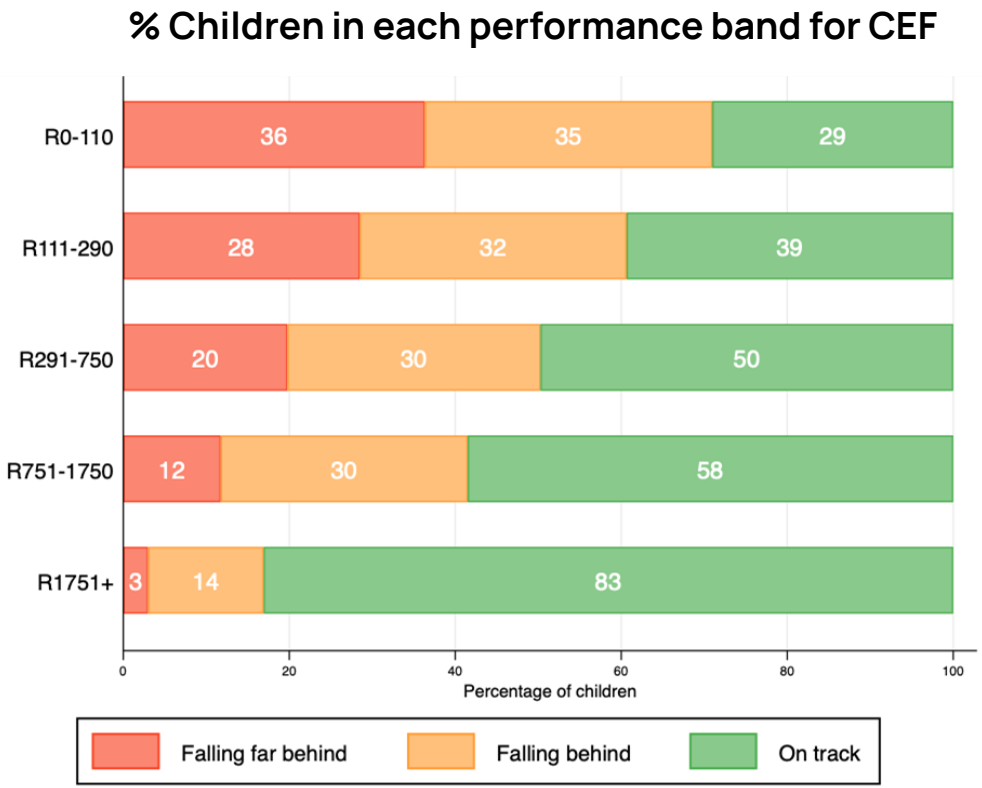
46% of children attending ELPs are **On Track** overall for learning and are able to do the tasks expected of children their age

26% are **Falling Behind** and will need support to help them catch up

28% are **Falling Far Behind** and will need intensive intervention as they transition into school

Specific areas of development require greater attention

(similarly data illustrate other potential targeting strategies e.g. geographic)



7 out of 10 children in low fee ELPs are unable to do the basic CEF tasks required of children their age.

The implications of this are significant as children begin school.

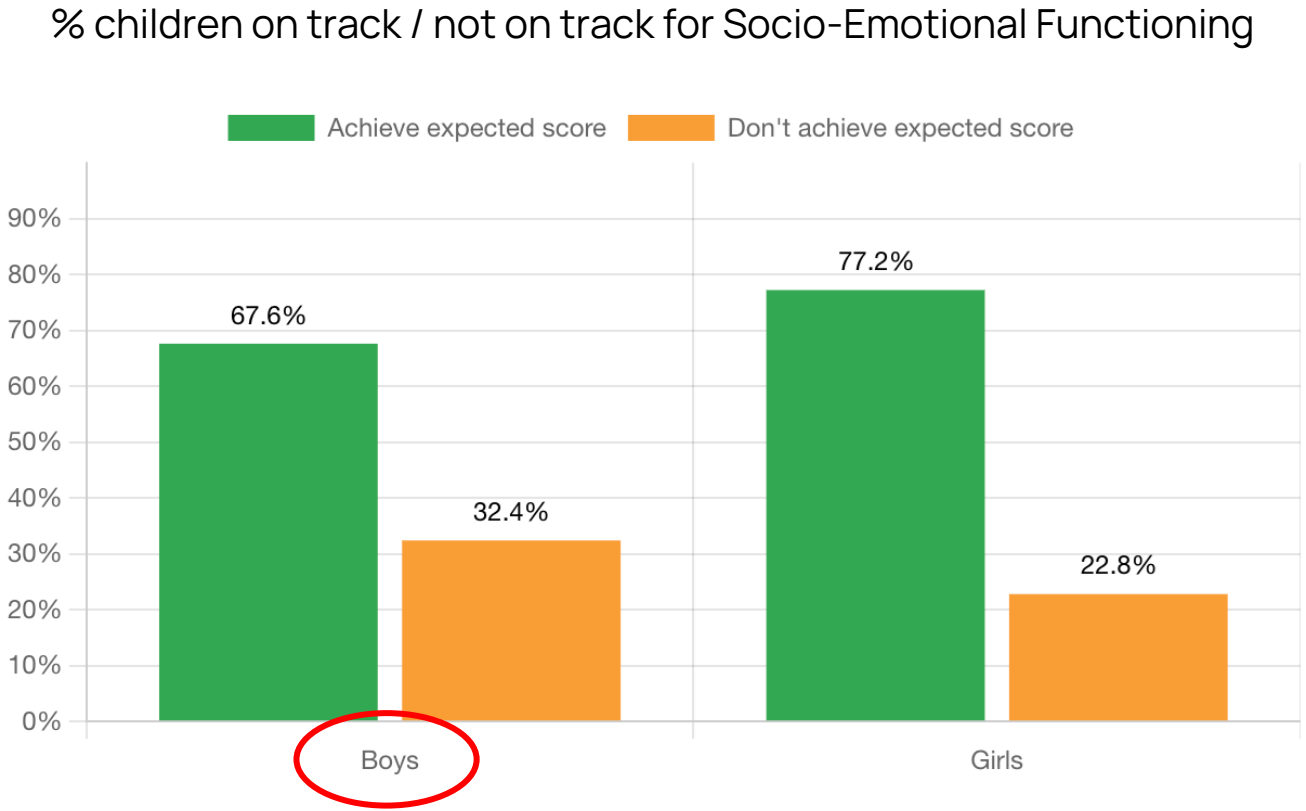
Data illustrate the relationship between different elements of the nurturing care framework

- Nutritional stunting is a key risk factor - A 4 year old child who is stunted is on average 5-6 months behind their peers, when it comes to early learning

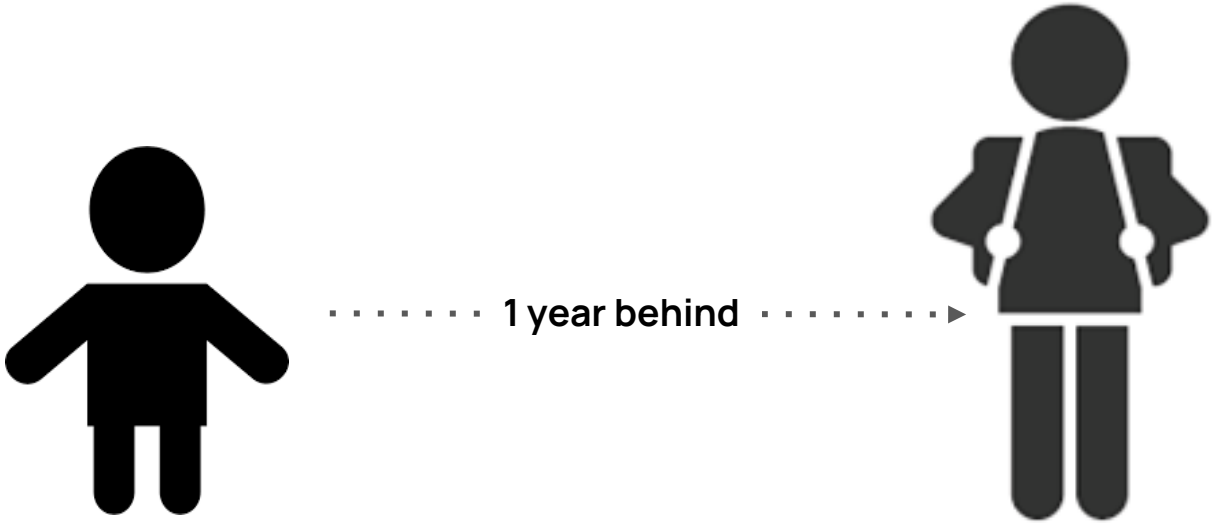
- Gains made by children attending ELPs is heavily dependent on quality, with leadership and practitioner-child interactions being key (attentiveness, proximity, praise, embedded learning)

- Higher levels of engagement with adult caregivers in the home are associated with better child outcomes

Socio-emotional functioning comes up repeatedly as a key risk / protective factor in child development



Data highlight multiple deprivations which compound risk



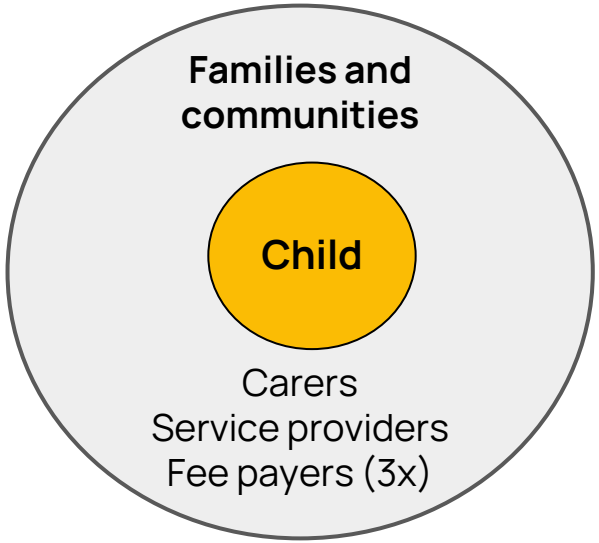
By the age of 4 years, a child in the lowest income group who is stunted is developmentally roughly *one whole year* behind a child of normal growth in the wealthiest income group, when it comes to early learning.

Changing the Story!

Broaden our concept of "the ECD ecosystem"?

Multiple potential change-makers: 'data consumers' & 'data intermediaries'

Require differentiated strategies



Government - Nat, Prov, Local Departments

Service provider
Regulator
Funder
Policy maker
Employer

Civil Society Organisations

Employer
Service provider - [early learning, safety and security, nutrition, parenting]

Private Sector

Employer
Funder
Service provider

Social entrepreneurs

Funders (philanthropy, impact investing)

Researchers, academics, consultants

Media

The same suite of tools is used at multiple levels for different purposes

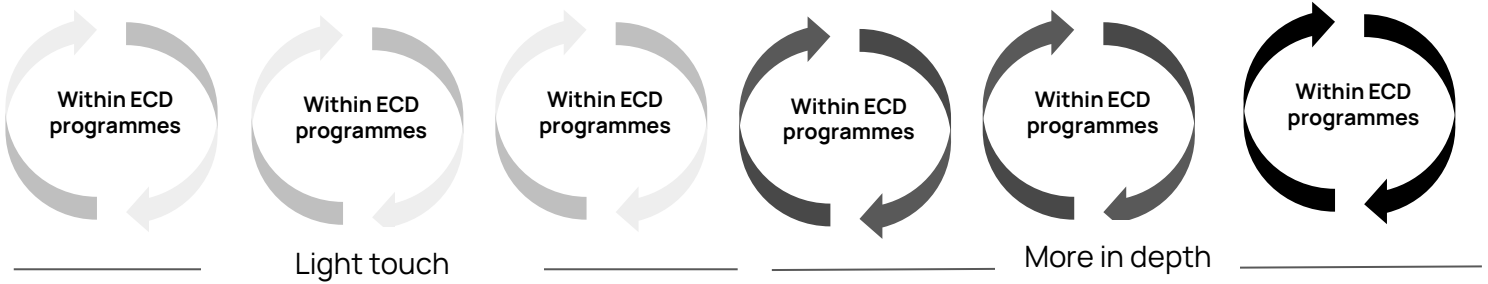
Macro perspective

Micro change at scale

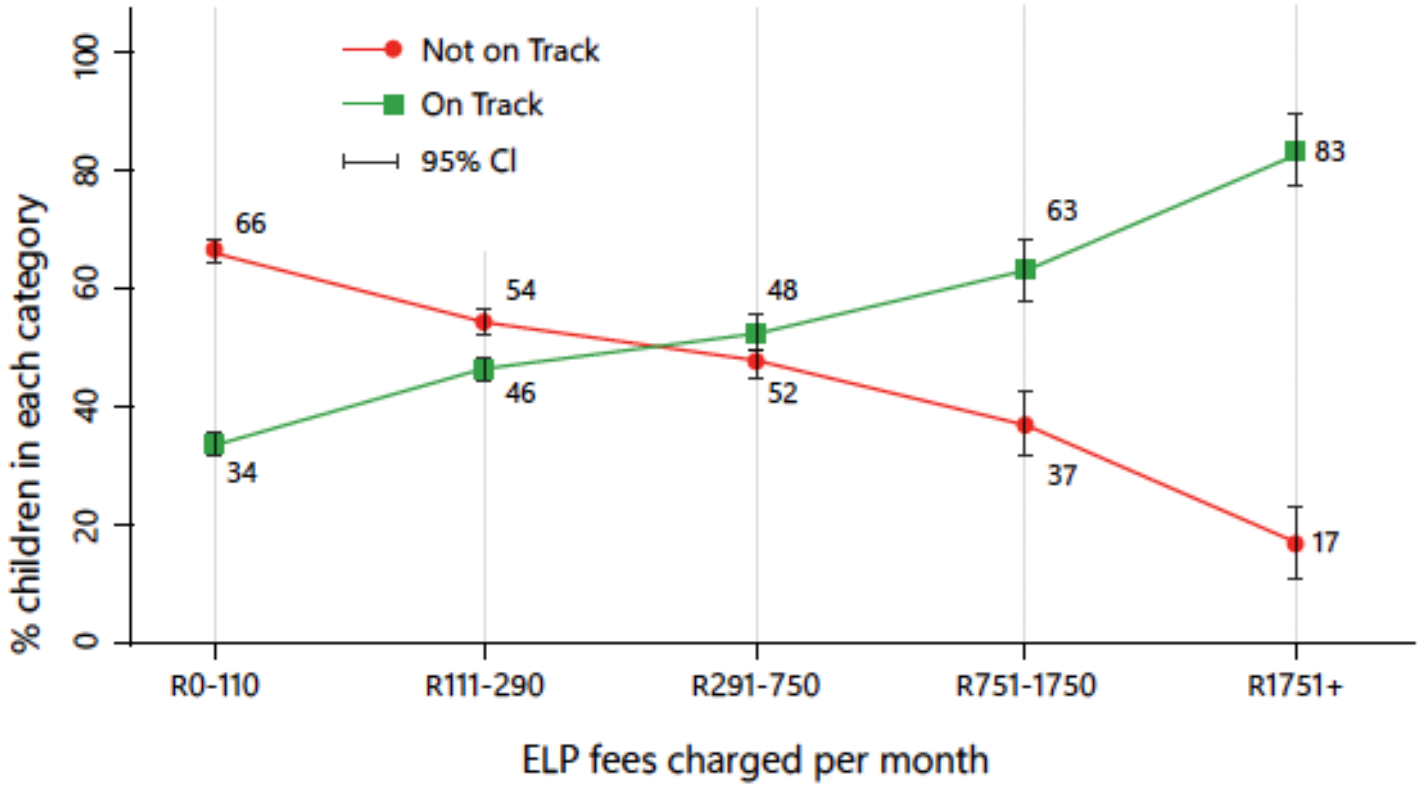
thrive^5

thrive by five | INDEX

Research / programme evaluation



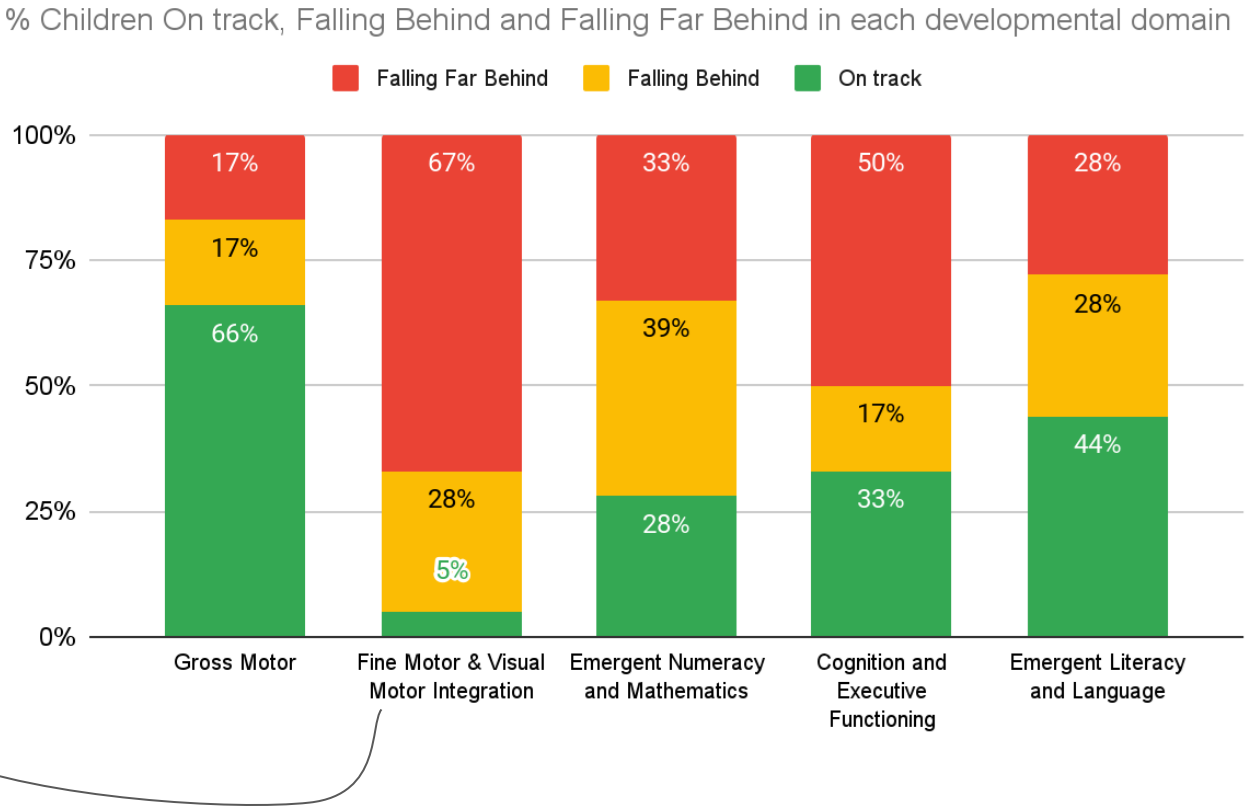
The striking socio-economic gradient in learning outcomes is being used to **motivate for greater investment** in early learning, with **increased attention to issues of quality**



ELP operators use tools as “dipstick” measure to identify programme strengths and weaknesses and “***course correct***”. **User reports are designed to inspire and enable changes in practice**

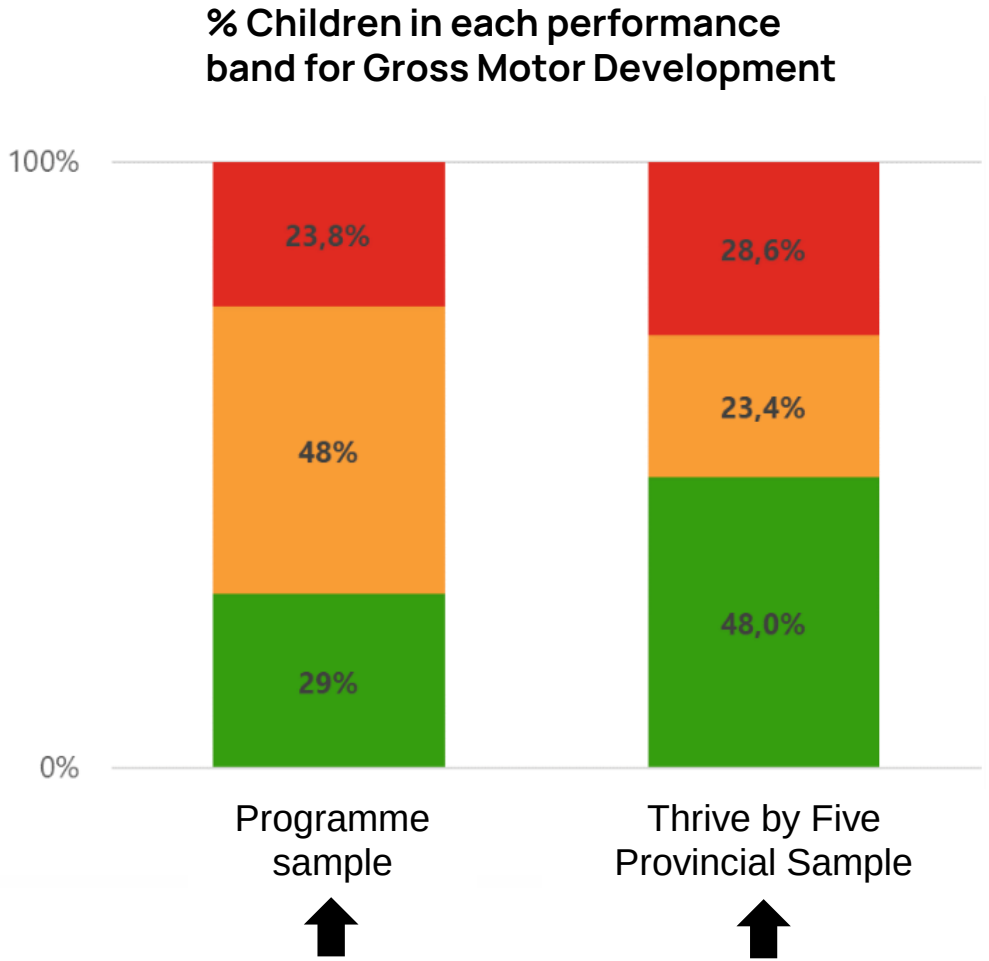
Curated resources offer guidance on how to address poor learning outcomes in key domains

Common areas of need across programmes are being more systematically addressed

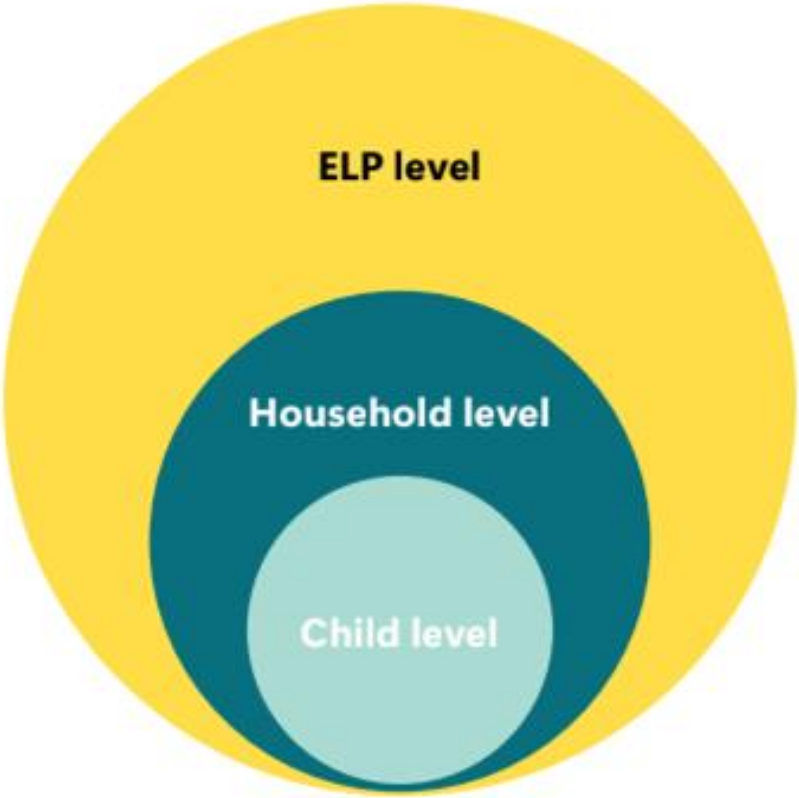


The Index provides **comparative reference groups**, enabling practitioners, funders, researchers… to compare child outcomes within a given area / programme with -

- Urban / rural average
- Provincial average
- Girls' / boys' average
- Specific domain average
- Income level average



Because the same tools are used, we are able to merge multiple datasets to detect patterns - this gives us insights into what IS working: *Positive Deviants*



Thus far we have looked at what characteristics of child / household / learning programmes are associated with better child learning outcomes*, esp in low resource contexts.

Is it possible to replicate conditions / behaviours to drive improved outcomes for other children?

Insights from this work are **informing programme interventions, Govt quality assurance and support systems and funding.**

Important Enablers: Approach to tool development
(ELOM suite of tools, development began in 2016+)

- A user-centred approach to development and testing to ensure contextual fit - with partners, partners, partners!!
- Deep technical expertise within a multidisciplinary and collaborative team
- Patient and flexible capital from mission-aligned investors
- Legitimacy of tools -
    - Informed by predictors of achievement and local development standards
    - Psychometrically sound, valid, reliable - age validity, construct validity, item difficulty, concurrent validity, test retest reliability
    - Fair - including language and cultural equivalence
    - Standardised, defensible performance benchmarks (cut-scores for on track, falling behind, falling far behind)
    - Transparency - publication, technical manuals, continuous learning
- Designed for population-level administration - duration, cost, digitalisation, enumerator requirements

4 & 5 YEARS ASSESSMENT TOOL

Measures whether preschool children are on track for their age in key areas of development.

4 & 5 YEARS TARGETING TOOL

Identifies children who may be experiencing developmental delays, so that appropriate, targeted support can be provided.

6 & 7 YEARS LITERACY TOOL

Measures whether Grade R children are on track for their age in literacy.

6 & 7 YEARS MATHS TOOL

Measures whether Grade R children are on track for their age in mathematics.

SOCIAL - EMOTIONAL RATING SCALE

Measures a child's social and emotional functioning.

LEARNING PROGRAMME QUALITY TOOL

Measures the quality of group learning programmes targeting children aged 3 to 5 years.

HOME LEARNING ENVIRONMENT TOOL

Measures home aspects associated with early language, numeracy and cognitive functioning.

The ELOM **suite of tools** accurately measure a range of developmental outcomes in young children, and provide an indication of the quality of the early learning environment in home and programme settings.

Important Enablers: Supporting the use of the tools and data

- Enumerator workforce - standardised training, inter rater reliability, accreditation (for direct child assessments), continued professional development, quality monitoring
- Tools are embedded within a full 'data value chain'
  - User journey approach - from intention setting to behaviour change
  - Real time quality monitoring and management embedded within assessment protocols and processes (including digital dashboards)
  - Clearly defined and consistent approach to sampling, check/ exclusion variables, data cleaning and analysis
  - Simple guides to help understand the data e.g. maturation effect, reference groups, programme effect sizes
- Emphasis on ethical data use
- Open access data sharing with necessary supporting documents (geolocated and timestamped enables merging)
- A fit-for-purpose institutional home
- Ongoing collaboration e.g. Index Steering Committee
- Integration into Govt strategic plans and targets

What is the (optimum) relationship between local and global tools?

EARLY CHILDHOOD DEVELOPMENT

2023 updates

South Africa

Countdown to 2030

Women's, Children's & Adolescents' Health

Demographics

Population	59,893,886
Annual births	1,155,858
Children under 5	5,818,687 (10%)
Under-five mortality	33/1,000

Threats to Early Childhood Development

Maternal mortality	127/100,000	Adolescent birth rate	41/1,000
Low birthweight	17%	Preterm births	8%
Child poverty	no data	Under-five stunting	23%
Violent discipline	no data	Inadequate supervision	no data

Young children at risk of poor development

Risk by sex and residence

Children with functional difficulty — no data

Children developmentally on-track — no data

Local tools which are contextually relevant and embedded can be powerful enablers of change

Global tools allow for comparable reporting

Choose btw them

Use both / all

Integrate e.g. GSED

Concurrent validity

Item level comparison

Thank you

unicef for every child

World Health Organization African Region

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