



SYSTEMS
THINKING FOR ECD

Scalable and Cost-Effective ECD Solution from the Global Majority: Evidence of what works



Wednesday, September 24, 2025
UN General Assembly
8:30 am EST – 10:00 am EST

SCALABLE AND COST-EFFECTIVE ECD SOLUTIONS FROM THE GLOBAL SOUTH

Evidence on what works

A DECADE OF GIVING EVERY
CHILD THE POWER TO SUCCEED.



UNIVERSITY OF CAPE TOWN
IYUNIVESITHI YASEKAPA • UNIVERSITEIT VAN KAAPSTAD



The SmartStart model



- ★ SmartStart is pioneering a new way to make sure children in every type of community in South Africa have access to quality early learning ★

WE PROVIDE A SINGLE NATIONAL DELIVERY PLATFORM

A national network of
13 NGOs and four
branches who...

license and support
over **14 000 early**
learning practitioners to
run micro social
enterprises which...

provide quality early
learning to **160,000 3-5**
year-old children in
home and community
settings

The context and challenge

4 million 0–5 year old children do not attend an ELP including over 1 million 3–5 year-olds

Steep social gradient to attendance – 66% vs 36%



Home and community venues are a key enabler of access

Proportion of ELPs being provided from homes has remained similar over the past decade at around 30-40%



Government's goal is universal access to quality ECD by 2030

But the delivery mechanisms to achieve this are not yet in place



TWO DIMENSIONS OF BUILDING AN EFFECTIVE EARLY LEARNING SYSTEM

ENLARGING SYSTEM CAPACITY AND IMPROVING QUALITY



SYSTEM CAPACITY

A SUPPLY OF EARLY LEARNING PROGRAMMES

HAS TWO MAIN COMPONENTS:

- ✓ PRACTITIONERS
- ✓ VENUES

SYSTEM QUALITY

PROGRAMME QUALITY
MUST BE GOOD ENOUGH TO
IMPROVE OUTCOMES FOR
CHILDREN



AFFORDABILITY

Home and community-based ELPs can enable equitable access to quality early learning, by solving for system capacity and quality together



How SmartStart creates impact



Enabling the early learning ecosystem

A unified architecture

- Coherent mechanism for ecosystem orchestration
- Efficiencies through a single, end-to-end value chain
- Shared infrastructure and brand



Closing the early learning access gap

- Recruiting, training and licensing practitioners
- Checks and basic resources for venues
- Support for registration, access to funding and business development

Building partnerships

- A network of implementing partners
- Movement-building around a shared vision
- Collaboration that amplifies network effects



Driving systems change

- New models of public-private partnership
- Technical support to government
- Research and data-gathering

Ensuring quality early learning

- Evidence-based curriculum and supporting materials
- Communities of practice (Clubs) and coaching
- Quality assurance processes

BUILDING FROM STRENGTH:

Seeing abundance
and enabling it to be
effective

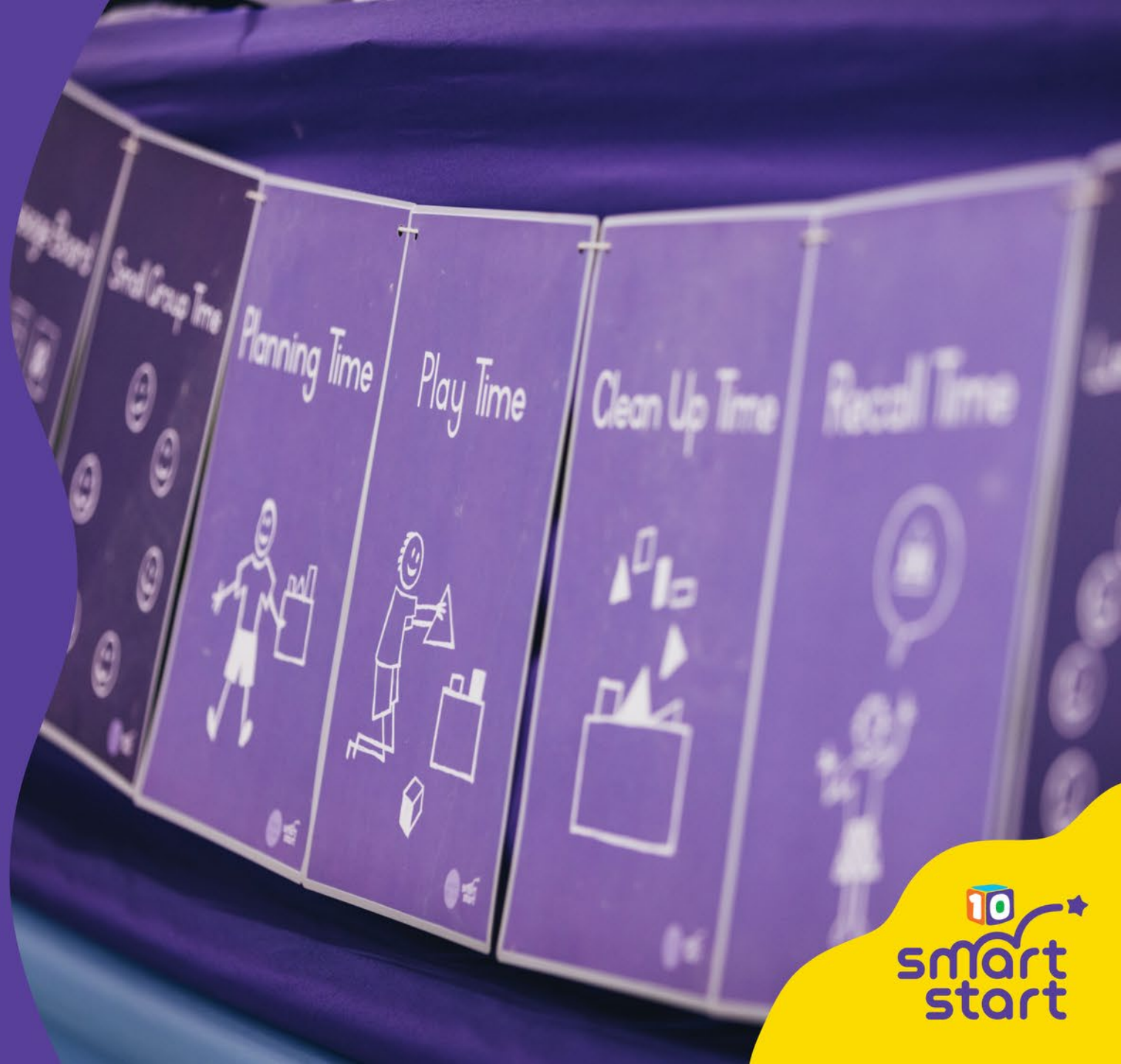
- ★ Seeing women's abundant domestic childcare efforts: time, aptitudes, home spaces, food
training and supporting these women to provide quality early learning
- ★ Seeing existing NGOs and community-based organisations
partnering with these organisations to put in place systems for quality access at scale
- ★ Seeing a vibrant informal economy
enabling economic participation for women through jobs and childcare

OUR QUESTION...

Does SmartStart work at scale?

The answer to this question could have significant implications for how we think about the best solutions for closing the early learning access gap, including re-framing theories of quality in early learning.

A DECADE OF GIVING EVERY
CHILD THE POWER TO SUCCEED.



METHODOLOGY

- ★ Cohort field study design
- ★ Representative sample of 551 children in 325 SmartStart ELPs tracked over 8 months
- ★ Early Learning Outcomes Measure (ELOM) tool used: A South African age-validated standardised instrument for measuring the developmental status of 4–5 year-olds

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).

- ★ Comparison with 2021 Thrive by Five Index, a nationally representative survey of 5,222 South African children attending pre-school, using the ELOM tool

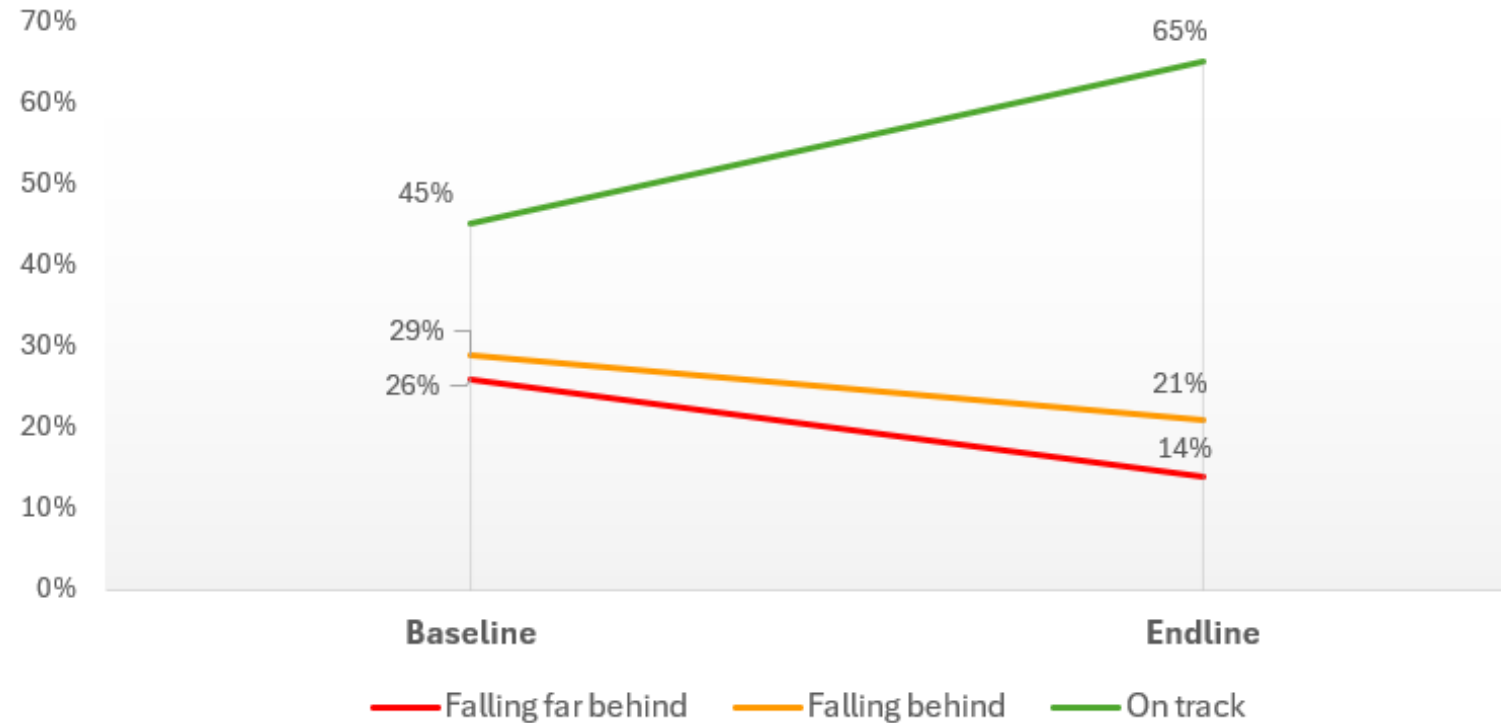
SAMPLE

- ★ Nearly 90% of sampled ELPs were ECD centres (defined as full-time with >6 children) mainly run in home and community venues
- ★ 10% were childminders or playgroups
- ★ Nearly half of practitioners did not have a school Matric qualification
- ★ About one-third of ELPs were run in informal structures
- ★ 54% charged less than R200 (about \$11) per month

KEY FINDING:

Overall, the proportion of SmartStart children '*On track*' increased by 20 percentage points, while the proportion of children '*Falling far behind*' nearly halved.

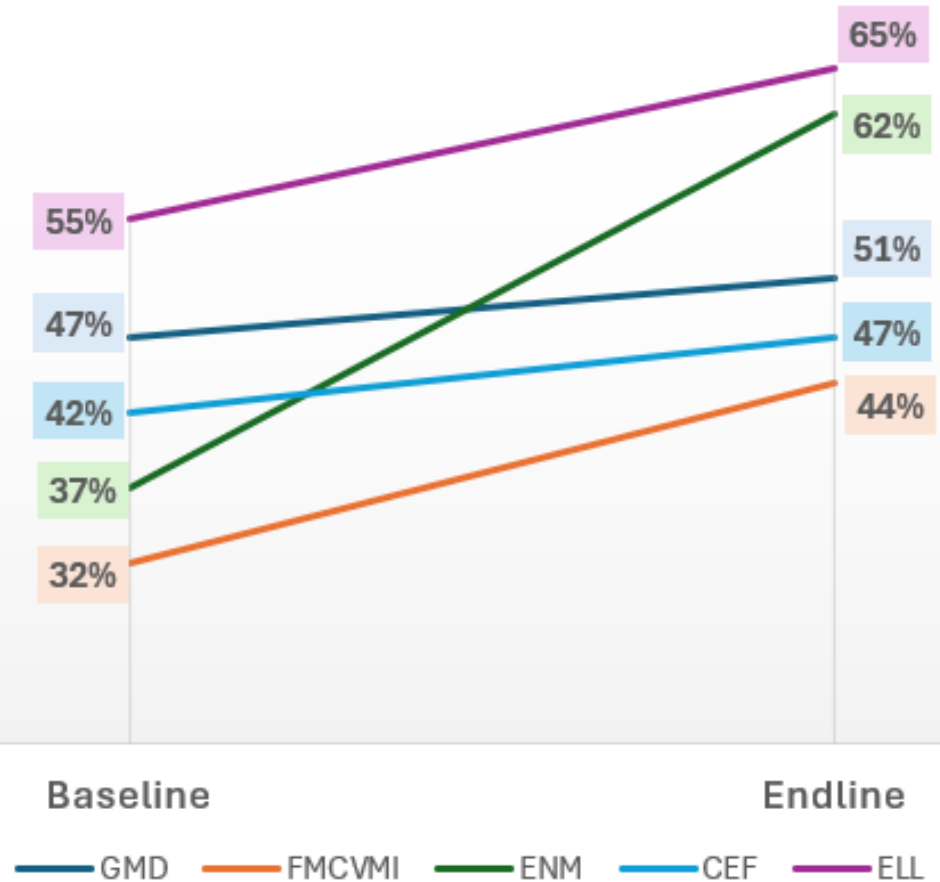
ELOM Total Score: Proportion of children by performance band at baseline and endline



KEY FINDING:

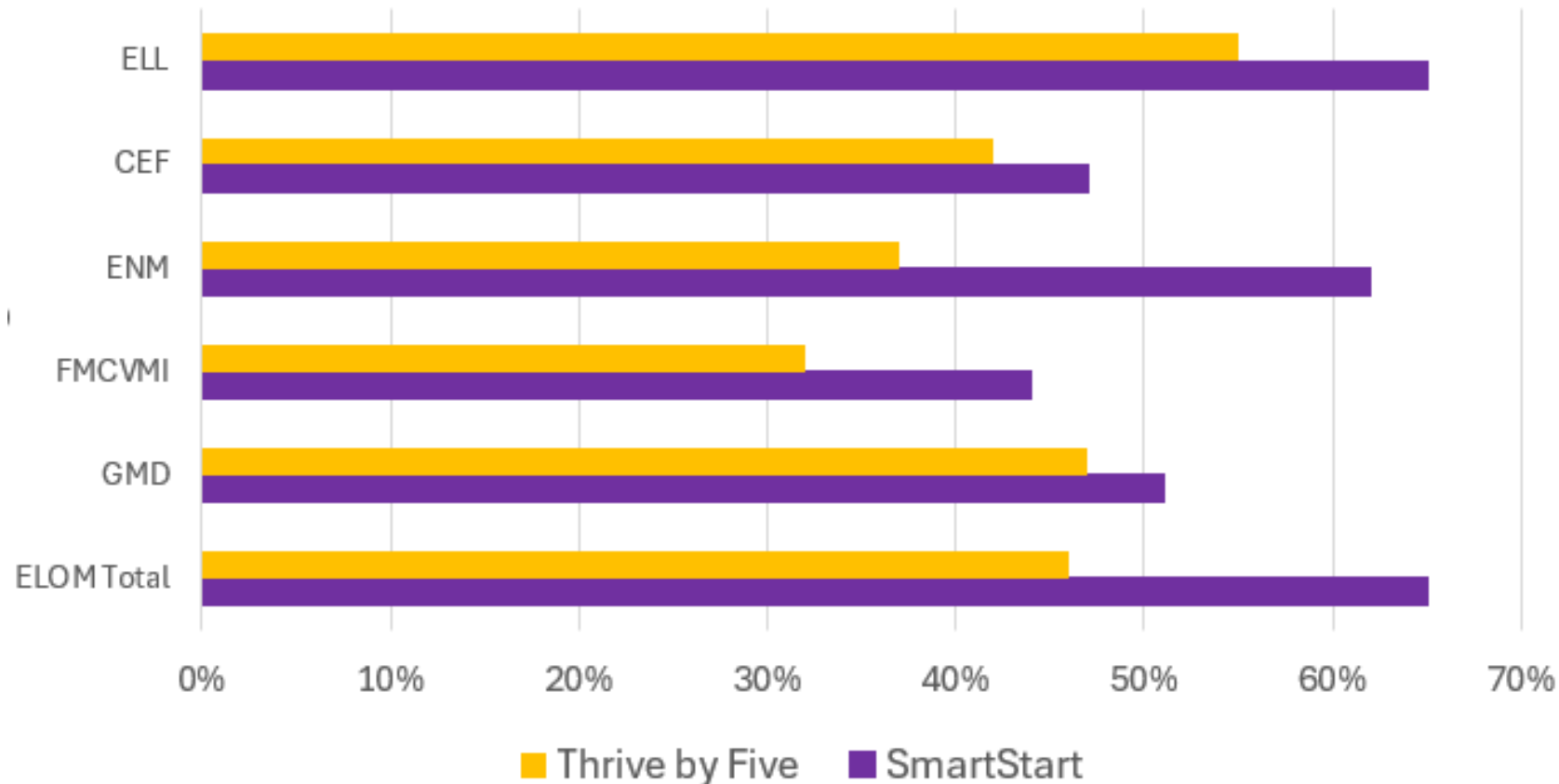
Children's performance improved in all domains, with the largest increase in early maths, followed by fine motor skills and early literacy.

Proportion of children 'On track' at baseline and endline by domain

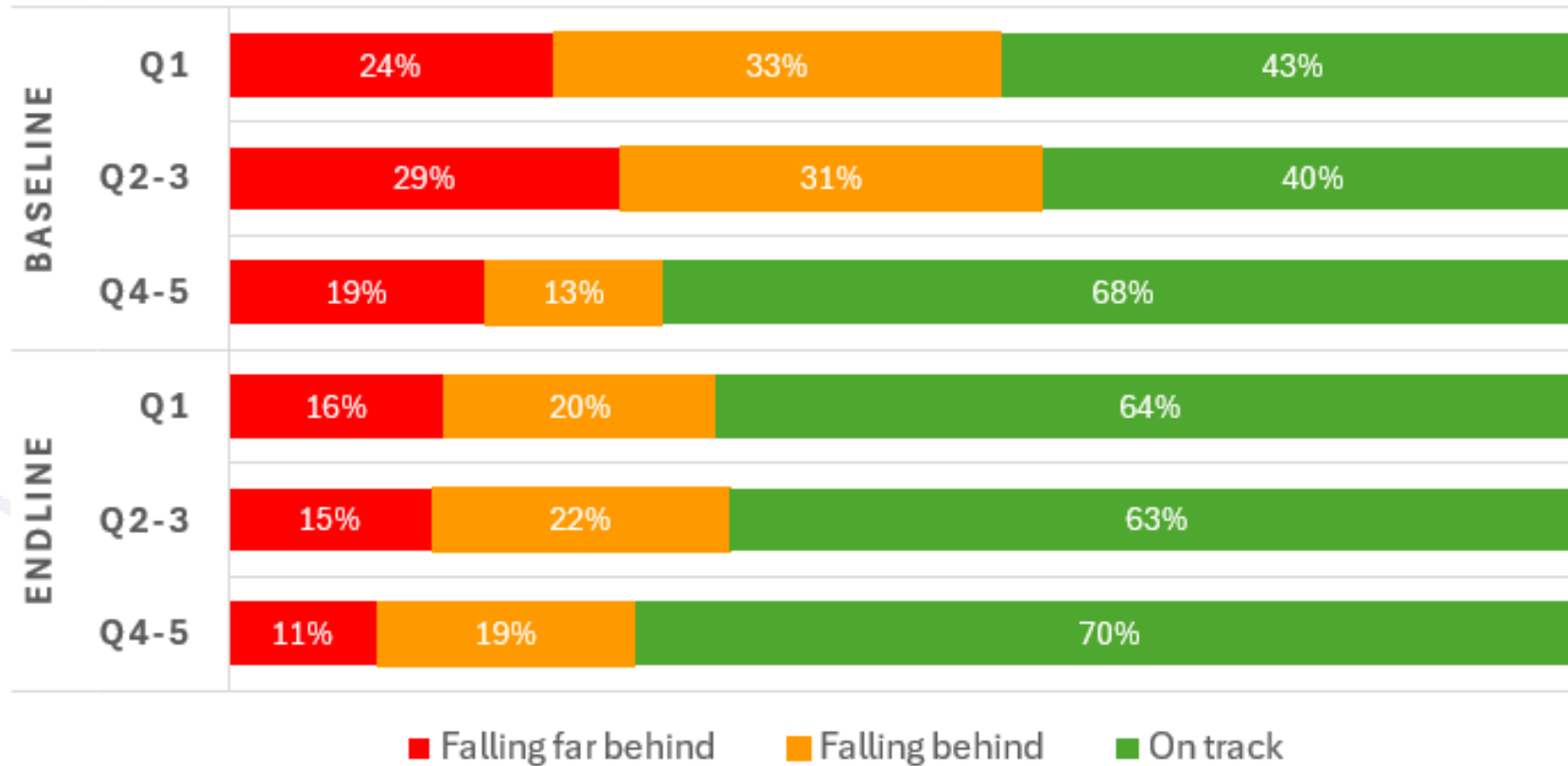


KEY FINDING: SmartStart sample outperformed South Africa's 2021 Thrive by Five index across all domains, even after controlling for differences

Proportion of children 'On track':
Comparison of SmartStart and the 2021 Thrive by Five Index



KEY FINDING: The performance gap* between children from the highest and lowest income quintiles decreased from 25 points to 6 points



* The performance gap refers to the difference in the proportion of children 'Achieving the standard' between the highest and lowest income quintiles

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

KEY FINDING:

There was a notable likelihood of improved child outcomes in ELPs that adopted specific practices.

Some of the practices positively associated with improvements in ELOM scores were:

- ✦ Faithful use of the SmartStart Daily Routine
- ✦ Supporting children to play and learn at a level that is appropriate to them
- ✦ Building children's language and involving them in solving conflicts
- ✦ Acknowledging and encouraging children's efforts

Crucially, these practices can be supported in a wide range of formal and informal settings.

THE WIDER IMPLICATIONS...

This study has shown that early learning programmes run in homes and community venues can significantly shift outcomes for children, even at scale.

And importantly... we know that these types of programmes can be effective because **the practices and approaches that count do not depend on costly facilities and equipment, but on empowering practitioners with the right skills and tools to implement simple routines and practices.**

New paths to quality scale

- ★ Basically trained paraprofessionals can move the dial for young children when using a carefully designed daily programme and held in a system of support.
- ★ This signposts new strategies to unlock access for currently excluded children, and the need to re-think understandings of 'quality'.
- ★ Far from being considered a second-tier form of provision, home and community-based ELPs should be elevated as a first-tier, pragmatic and affordable solution to close the quality access gap in low-income communities.
- ★ This should also inform more inclusive and enabling approaches to regulation and funding.





THANK YOU

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smart
start

A DECADE OF SCALING
EARLY LEARNING.



ROCKET[™] LEARNING

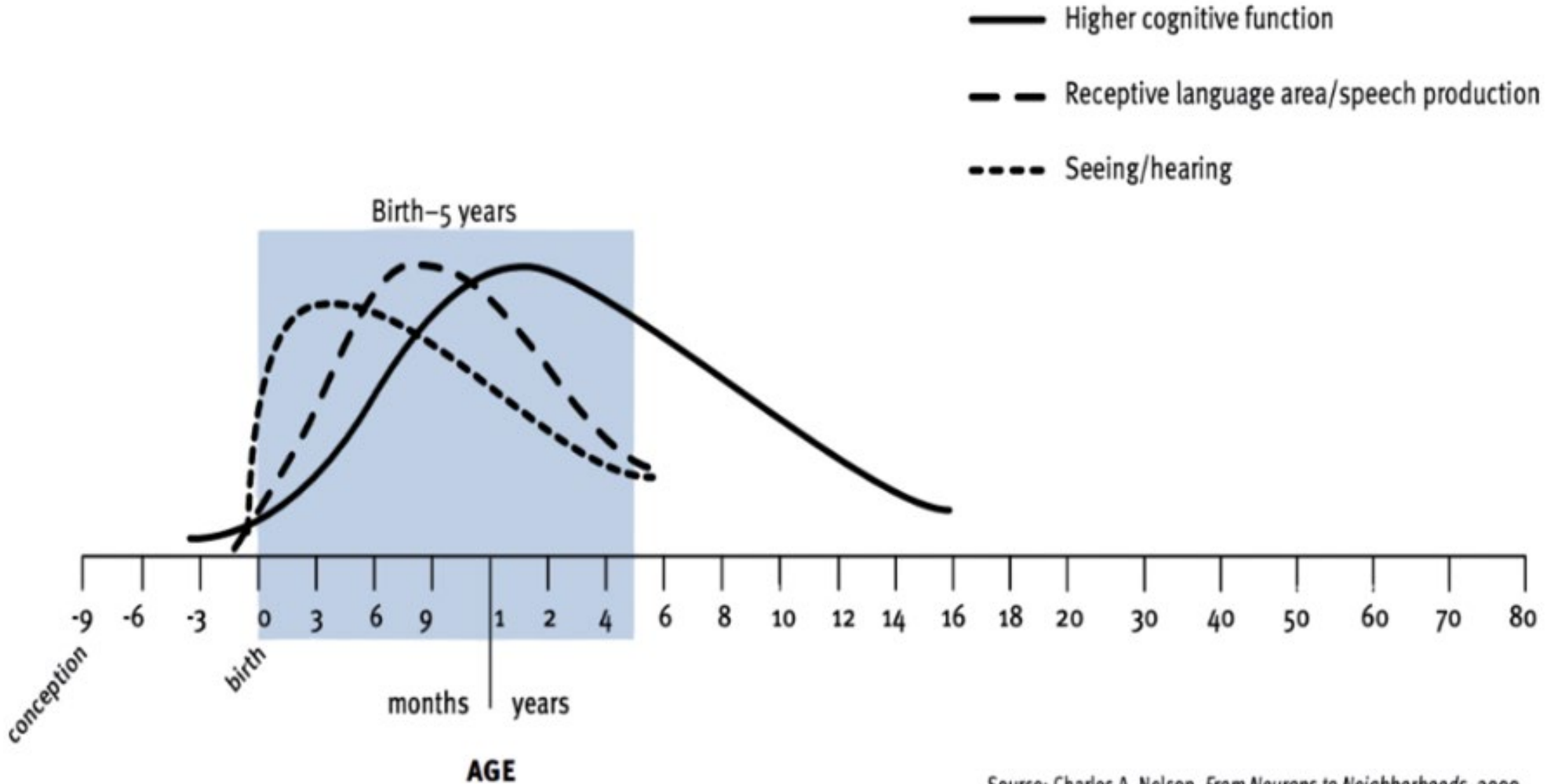
A world where all children reach their full potential





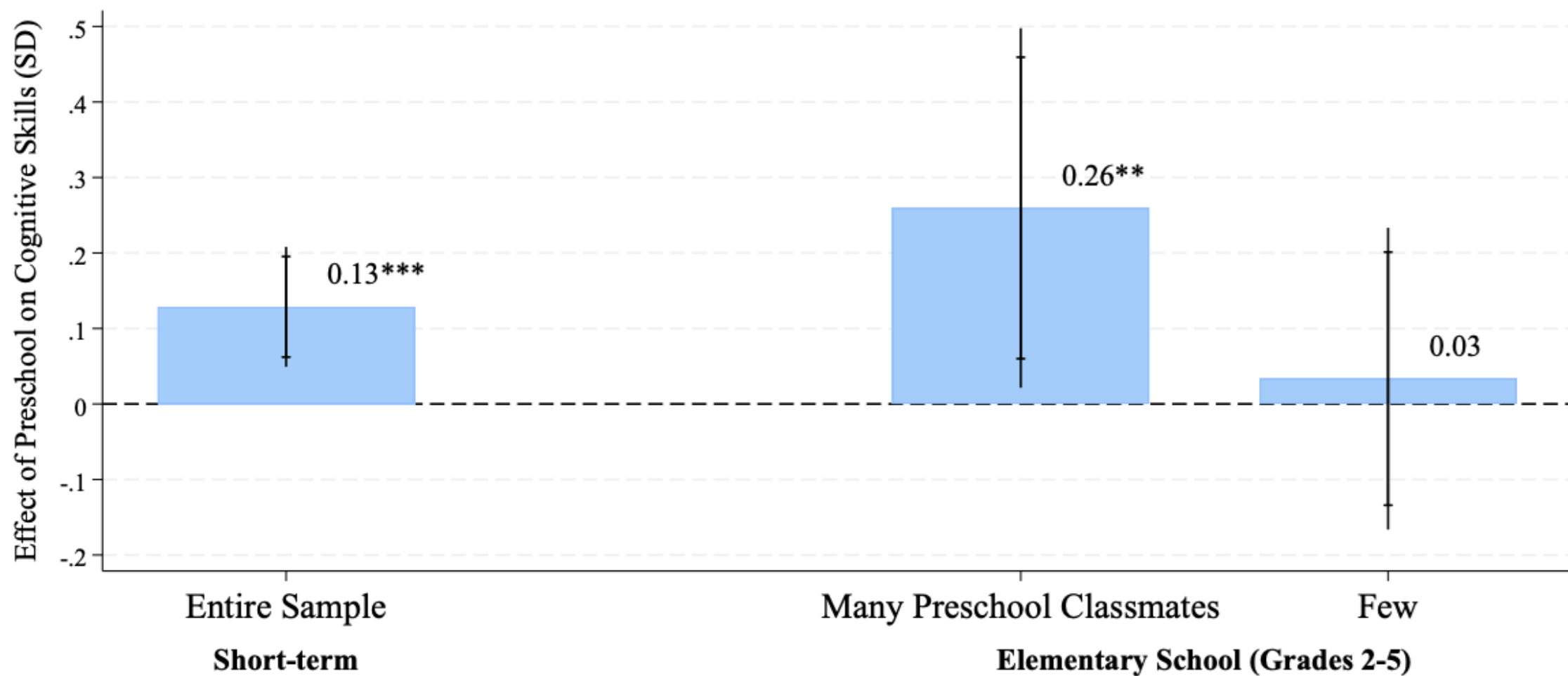
**1 million
neuronal
connections per
second**

Early childhood is a time of critical periods in cognitive development



Source: Charles A. Nelson, *From Neurons to Neighborhoods*, 2000.

Impact compounds if early learning is universal



Source: List et al, 2024



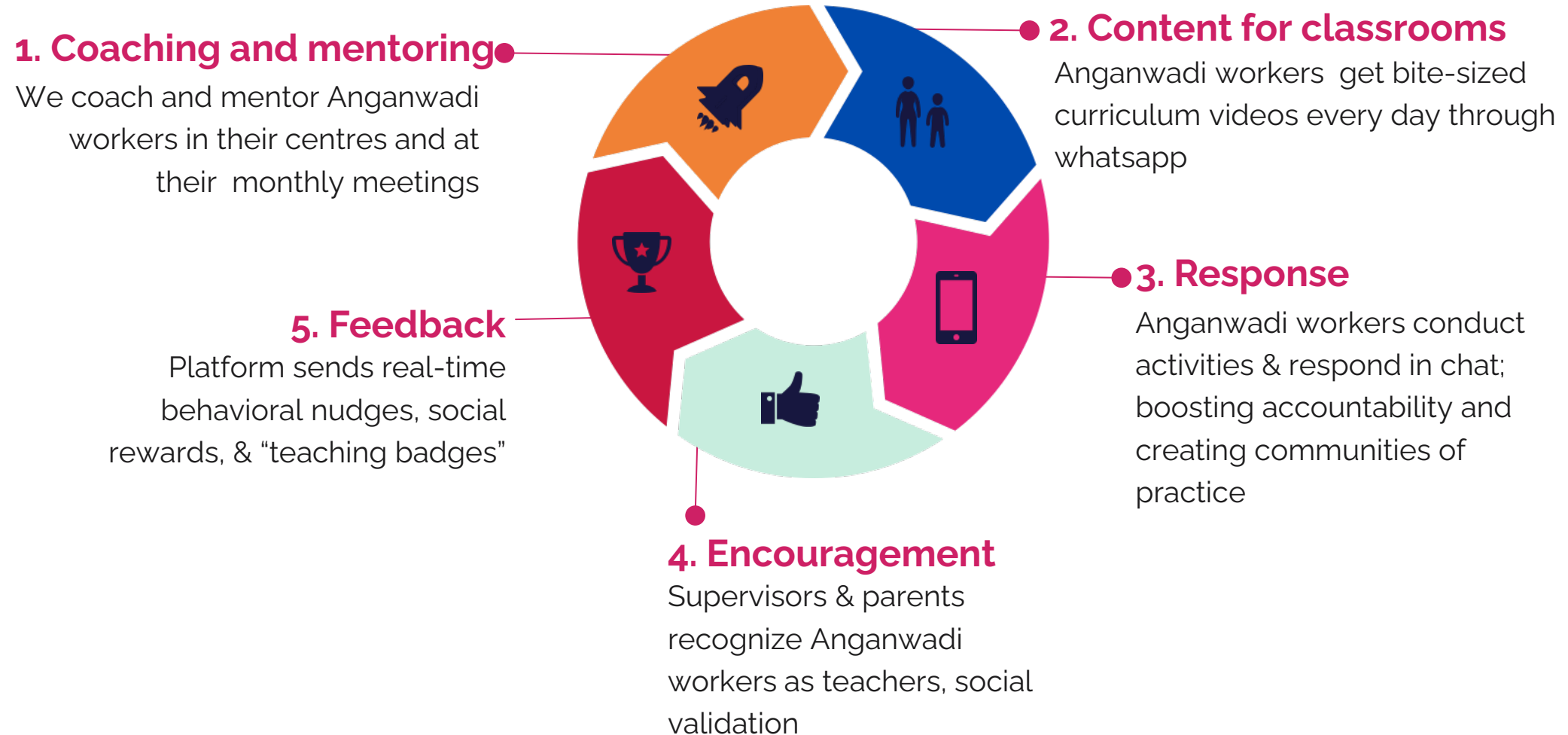


**The world's
largest network
of frontline
community
health workers**

80 million



Our Solution





RCT on the impact of the Rocket Learning intervention on child learning and engagement of parents and Anganwadi workers

Karthik Muralidharan, Education Chair, J-PAL

Study Design



Amravati district

Geography - Amravati district, Maharashtra
Sample size - 345 Anganwadi Centers
Control sample - 120 Anganwadi Centers
Treatment sample - 90 Anganwadi Centres
Intensive treatment Sample - 135 Anganwadi Centers

What we found: Significant impact

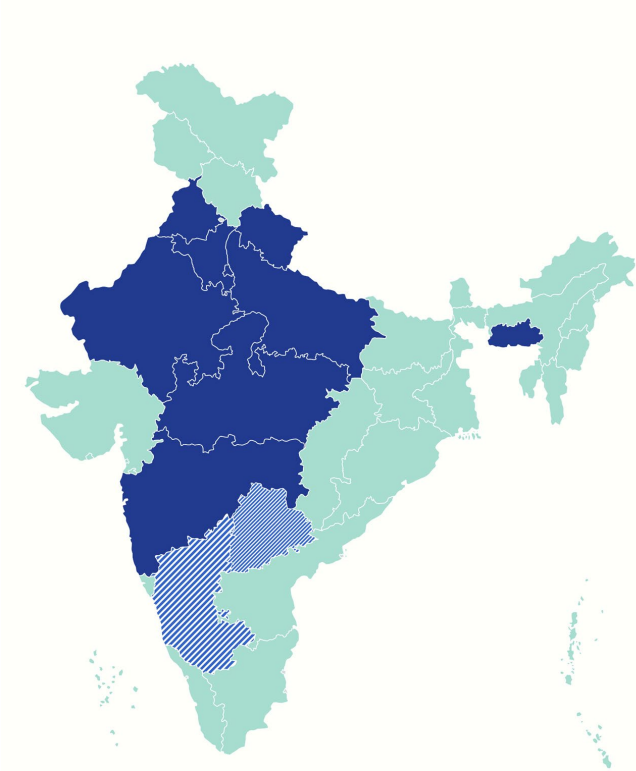
	Parental engagem ent	Teacher engagem ent	Overall developm ent	Math	Language
Control	18.1%	10.1%	Mean set to 0	Mean set to 0	Mean set to 0
Impact on Intensive	47.1%	40.4%	0.2 σ (p<0.01)	0.217 σ (p<0.01)	0.154 σ (p<0.01)

At less than 2 dollars per child per year

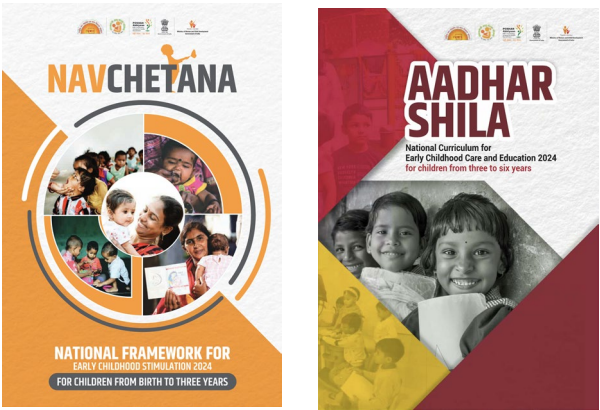


Where are we now?

Scale



Systems change



Constitution of the Internal Committee to finalize the National Early Childhood Care and Education (ECCE) Curriculum Framework, 2024, MWCD		
Sl. No.	Name	Designation
9.	Ms. Namya Mahajan, Co-Founder, Rocket Learning	Member
10.	Ms. Jyotika, Deputy Secretary, MWCD	Member
11.	Dr. Geeta Chopra, Professor, Institute of Home Economics, University of Delhi	Member
12.	Dr. Rita Patnaik, Joint Director, NIPCCD	Member Secretary

In order to synthesize the document, based on the valuable recommendations of the Internal Committee Members, a Working Group was constituted comprising of Dr. Rita Patnaik from NIPCCD, and Ms. Vibha Iyer, Ms. Sanjana Manaktala, and Ms. Sukhna Sawhney from Rocket Learning.

Coalition



50 million by 2030



THANK YOU!

Appendix

What happened in the RCT? | RCT: Results

What was evaluated

- ❖ Learning outcome change for children attending Anganwadi

	(1) Overall IRT	(2) Math IRT	(3) Language IRT	(4) EF IRT	(5) Math %	(6) Reading %	(7) Cognitive Ability %	(8) Overall %
Regular	-0.019 (0.072)	-0.056 (0.063)	0.029 (0.074)	0.002 (0.070)	-2.069 (2.106)	-1.576 (1.604)	-0.371 (1.472)	-1.339 (1.603)
Intensive	0.189** (0.083)	0.176** (0.071)	0.177** (0.084)	0.053 (0.076)	5.672** (2.372)	4.322** (1.807)	0.852 (1.593)	3.615** (1.792)
Observations	955	955	955	955	955	955	955	955
Control Mean	-0.833	-0.822	-0.825	-0.426	42.944	32.719	76.613	50.758
Intensive - Regular (Estimate)	0.209	0.232	0.148	0.051	7.741	5.898	1.223	4.954
Intensive - Regular (p-value)	0.007	0.001	0.075	0.478	0.001	0.001	0.414	0.003

Type of Assessment

- ❖ Pre-numeracy
- ❖ Pre-literacy
- ❖ Executive function (working memory, inhibitory control, cognitive flexibility)

What was different in intensive?

- ❖ Best version of product: All A/B tested new features e.g., real time nudges, goal setting, etc were brought to the intensive version first
- ❖ Teacher product: Anganwadi workers were sent activities and reported conducted these in the classroom, leading to children learning more both at home and in centre

RL product leads to almost 0.2 standard deviations of change in learning outcomes across math and language - one of the highest in any education evaluation

Context and Problem we are solving

85% of brain development happens before age 6. Yet, **40 million children** in India lack access to pre-primary education. Half of them can't identify a single letter of the alphabet by first grade. This developmental deficit is nearly impossible to make up.



Parents care deeply about their child's success, but don't know how to be involved in their child's education.



Anganwadi Centres, which cater primarily to girl child as parents send boys to private schools, today focus majorly on nutrition.



The system needs drive and guidance towards delivering early childhood education.



But there is momentum brewing to change this in India...

Our Solution | What we do

We enable equitable access to **quality early childhood education** by developing simple and effective solutions for the Anganwadi Center Network and Public Pre-Schools.

For Government

For central and state governments, we assist via policy formulation and support them in strengthening ECE



With Central Government

- Assisting in policy creation.
- Defining & creating budgets.
- Pushing structural reform & operational priorities.

With State Governments

- Turning policy into action through state-specific initiatives
- Ensuring long-term continuity and institutionalization

With District-level Government

- Implementation of state initiatives
- Ground insights to feed into policy

For Anganwadi Daycare workers and Parents

For parents, we deliver bite-sized play-based learning content to engage children in learning and use personalized nudges to encourage engagement. For Anganwadi workers, we also provide in-person training & share ready-to-teach content videos, layered with nudges and rewards.

1. Bite-sized Content

We deliver learning activities and content to caregiver groups via Whatsapp

5. Building Habit

Our tech platform sends real-time behavioral nudges, rewards, and incentives



2. Engaging Children

Caregiver & child complete simple, fun learning activity together at home

3. Response

Caregivers shares in chat; boosting accountability and leveraging peer effects.

4. Encouragement

Daycare worker and Supervisors provide feedback & encouragement to caregivers



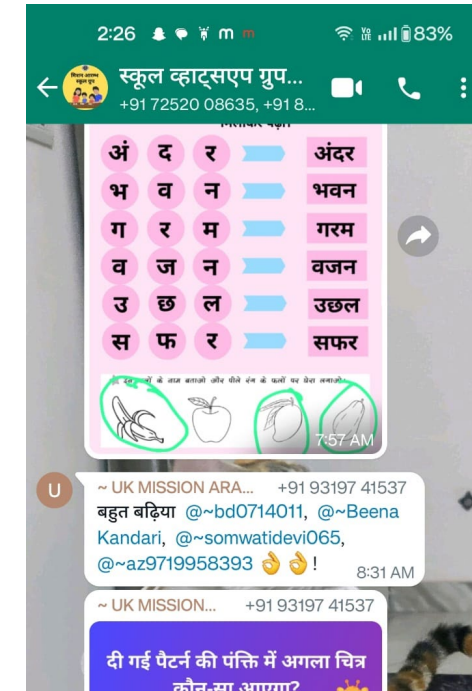
Our product is never "done"

Real-Time Appreciation of Users

Testing whether acknowledging/appreciating users instantly after they respond on the group improves engagement and participation

Real-time personalized 1-on-1 messaging

Testing whether sending 1:1 onboarding information to parents and teachers when they joined the program works



Drove up our power users from 30% to 50% over 2023.
Sending personalized, relevant information at the right time works.
Assigning specific tasks helps.

Our product is never "done" | A/B testing to see what works



Peer comparison vs self comparison

Added different elements such as self-agency, peer comparison. Peer comparison worked for some, while goal setting worked for others.



1-on-1 messaging vs calling

Tried testing generic messages, personalised messages, and calling. Personalized messaging works better than generic but calling works better than both.



Saw a 20% increase in daily active users.

We built user archetypes, engaging each user by using techniques that they responded the best to.



Our product is never “done”



Lively Minds

Harnessing the combined power of governments and parents to improve rural ECCE

24th September 2025



There's no debate: the early childhood years are critical for a child's lifelong success and well-being.

A staggering 250 million children globally miss out, the majority are in rural communities in the Global South.

Current solutions don't offer the quality, affordability, urgency or scale needed to reach children at the last-mile.

lively  **minds** It's time for a paradigm shift.



Our big idea...

Parents are the sleeping giant of ECCE.

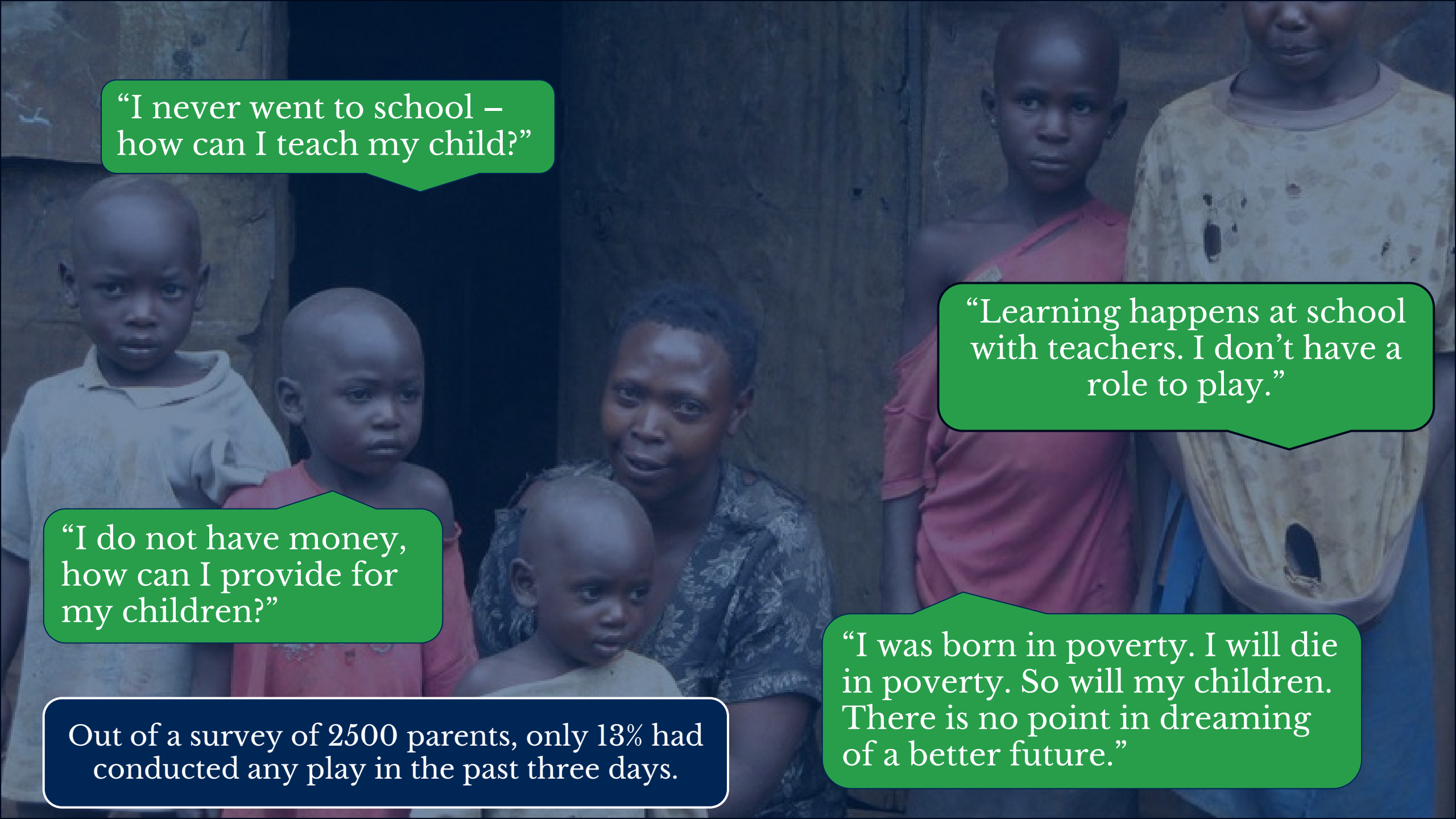
A rural child spends 75% at home.

Parents everywhere can drive child development and transform their children's futures.

No matter their education or socio-economic level.

We awaken this potential.



A photograph of a woman and her children in a rural setting. The woman is in the center, holding a young child. To her left are two more children, and to her right are two more. They are standing in front of a wooden wall. The image is overlaid with a semi-transparent blue filter and several text boxes.

“I never went to school –
how can I teach my child?”

“Learning happens at school
with teachers. I don’t have a
role to play.”

“I do not have money,
how can I provide for
my children?”

“I was born in poverty. I will die
in poverty. So will my children.
There is no point in dreaming
of a better future.”

Out of a survey of 2500 parents, only 13% had
conducted any play in the past three days.

Parenting workshops & radio programme

- Use behaviour change methodology to build confidence.
- Challenge gender & social norms around parenting.
- Teach practical and cost-free parenting activities.



So that parents...

- See themselves as capable & valued caregivers.
- Provide nurturing learning & care at home to support child development and learning.



Parent-run Play Schemes

- Mothers run free educational Play Schemes for all 3-6 years olds.
- These take place in Kindergarten class in Ghana, informally in Uganda.



So that children...

- Get exposure to games that develop different skillsets.
- Benefit from small-group work, patient and caring teaching, discovery and child-centred learning.
- Develop creativity, numeracy, problem-solving, executive function & socio-emotional skills.

Government delivery

Lively Minds trains & coaches local government



Local government train & coach trainers in each community (Kindergarten teachers Ghana, VHTs in Uganda)



Community trainers train Mothers & broadcast radio



Parents run Play Schemes and provide better care at home

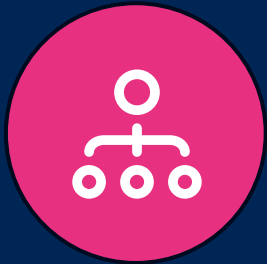


Children get quality care and learning at the Play Scheme & at home

So that the programme is sustainable, scalable & affordable....

- The programme supports pre-primary where it exists, or provides a community resource where no there is other ECD provision.
- No additional staffing.
- Minimal additional transport.

Successfully operating at scale in Ghana & Uganda



3,843

Communities
running the
programme



14,097

Trainers trained



124,533

Mothers
trained and
running PS



321,897

Children
benefitting this
year alone



\$3

Cost per child
in sustain
phase



24 September 2025

ECDAN Seminar

@TheIFS

Lively Minds: Improving Health and Development Through Play

An RCT evaluation of a comprehensive ECCE program at scale in Ghana

Preliminary – please do not cite yet



Economic
and Social
Research Council

Early childhood interventions

- ECD interventions can be effective at mitigating adverse impacts of poverty [Gertler et al., 2014; Heckman, 2006; Engle et al., 2007]
 - Big push for pre-school education in LMICs
 - Models that have been evaluated tend to focus on:
 - Parenting (e.g. home-visiting)
 - Pre-school effectiveness (e.g. teacher training)
 - No clear consensus which type of intervention best to improve different skills...
- ...and how to do so **at scale**.
- Scaled interventions often fail to deliver impacts, especially in rural sub-Saharan Africa [Tomlinson et al., 2018]

Evidence on LM effectiveness

Two randomized controlled trials:

- 1. Efficacy trial:** LM main implementer, through government infrastructure
- 2. Scale-up trial:** GES main implementer, with support from LM

Evidence on LM effectiveness

Two randomized controlled trials:

1. **Efficacy trial:** LM main implementer, through government infrastructure

- Funded by Jacobs Foundation and Global Innovation Fund (GIF)
- Collaboration between the IFS, LM, IPA
- Led by Sonya Krutikova (IFS/Manchester)

2. **Scale-up trial:** GES main implementer, with support from LM

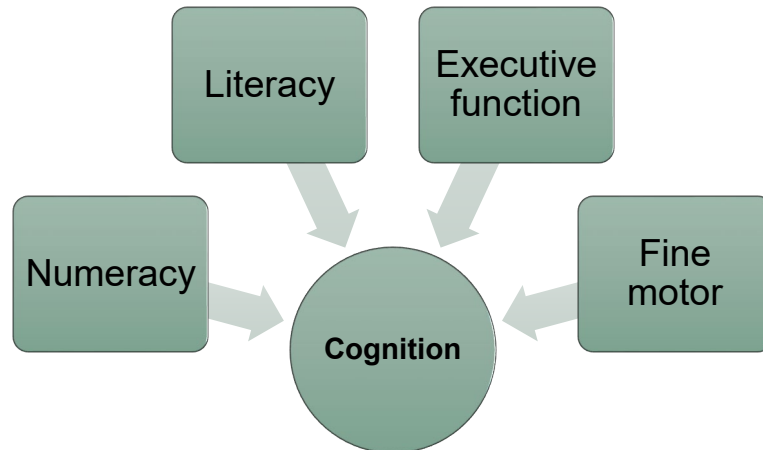
Main research question

- What is the impact of the LM intervention on child development?

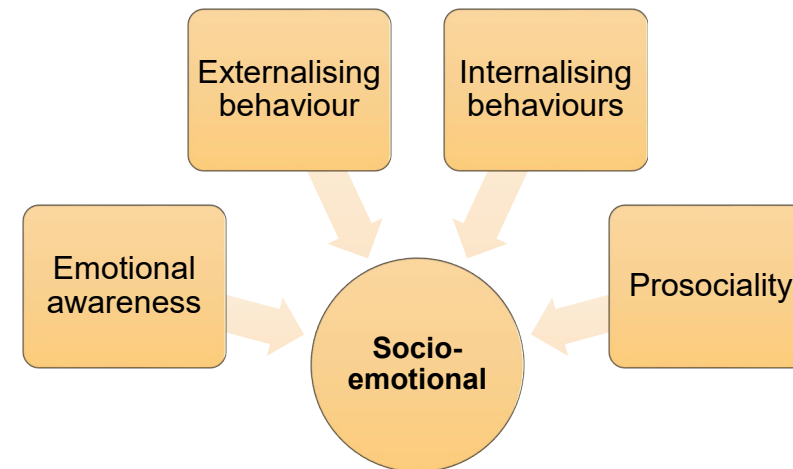
Measuring child development

- Multi-dimensional construct

Cognition: the processes or capacities by which knowledge is acquired and manipulated (includes what and how children learn, what they know, and how that guides their behaviour).



Socio-emotional: children's ability to react to and interact with their social environment.



Measuring child development

- Enrich ‘off the shelf’ tools (IDELA, SDQ) with additional task-based measures developed in Prof E. Spelke’s Lab, Harvard
 - IDELA (Save the Children): 25 tasks, “easy” to administer, done in Ghana
 - SDQ: well-established maternal report instrument to measure SE development [Goodman & Goodman, 2009]
 - Spelke’s Lab tasks: deepen measurement in key domains with strong theoretical grounding

■ Examples of IDELA

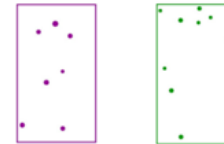
Emergent Numeracy

- One-to-one correspondence
 - Give me 3 counters
 - Give me 8 counters
 - Give me 15 counters
- Comparison by size and length
- Number identification

2	4	10	5	7
9	6	8	3	1
13	17	14	19	16
15	18	11	12	20
- “Which number comes after 6?”

Example Spelke’s tasks

Which of these two boxes has more dots



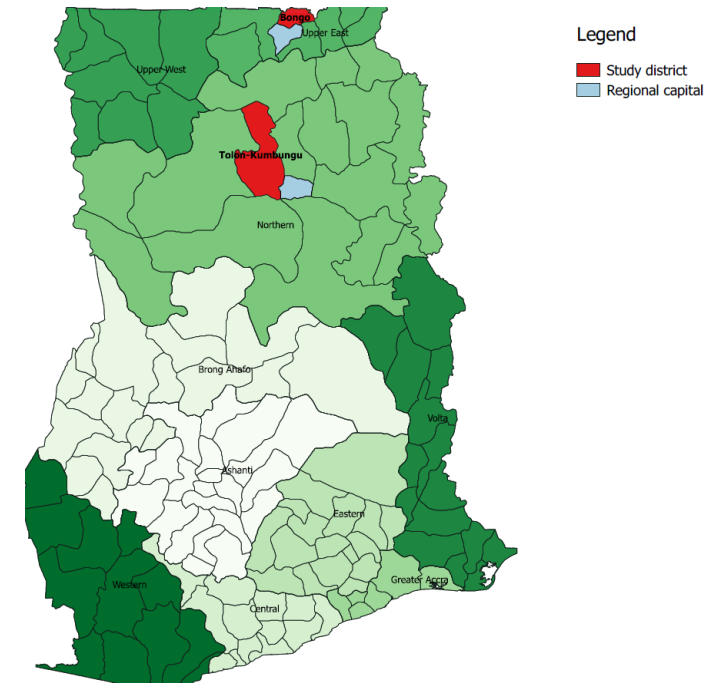
‘Geometric intruder’
Point to shape which is different



Evidence on LM effectiveness

The efficacy trial:

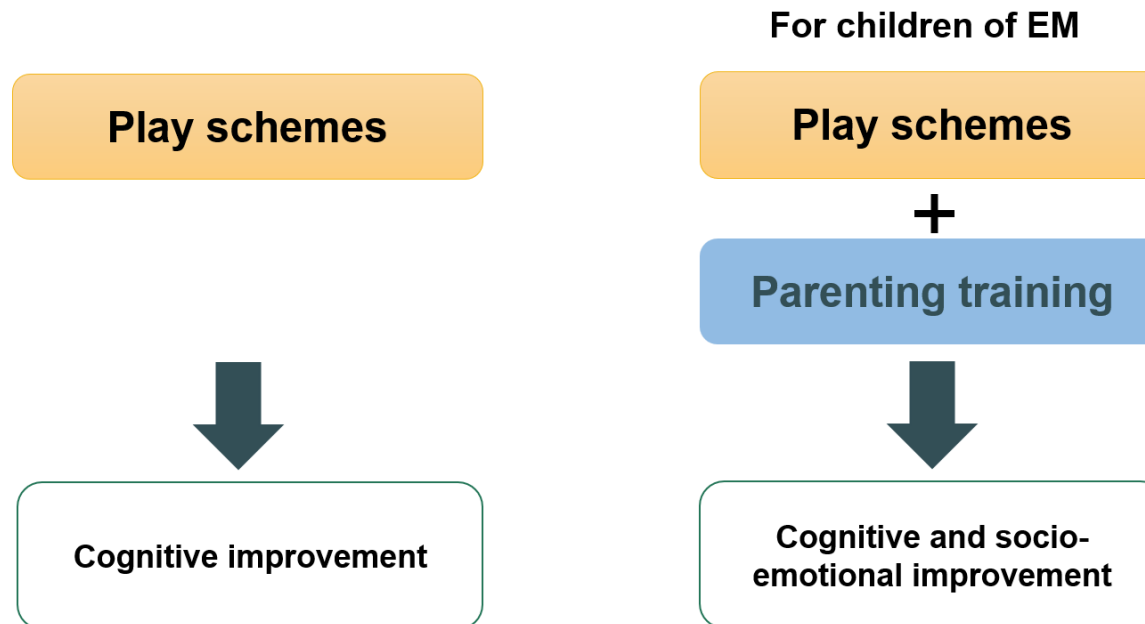
- RCT in 2017/18
- Randomisation at the school level (80 schools in 2 districts), stratified by circuit and school sizes
 - 38 schools in Bongo (North)
 - 42 schools in Tolon (Upper East)
- Data on 2,407 PCG-child dyads
 - BL Sept/Oct 2017
 - EL Sept/Oct 2018 (6% attrition)



Evidence on LM effectiveness

The efficacy trial → results in a nutshell

1. Playschemes led to improvements in cognitive development
2. Improved parental knowledge and parent-child interactions increased socio-emotional development



The efficacy trial → results in a nutshell

1. Playschemes led to improvements in cognitive development
2. Improved parental knowledge and parent-child interactions increased socio-emotional development

→ Result supported decision by Government of Ghana to adopt and scale the intervention:

- MoE announced commitment to the programme → GES-Lively Minds
- Developed plan to scale it to 1/3 of rural KGs in Ghana (reaching 1.3 million children)...
- **...and agreed to integrate an RCT evaluation.**

Evidence on GES-LM effectiveness



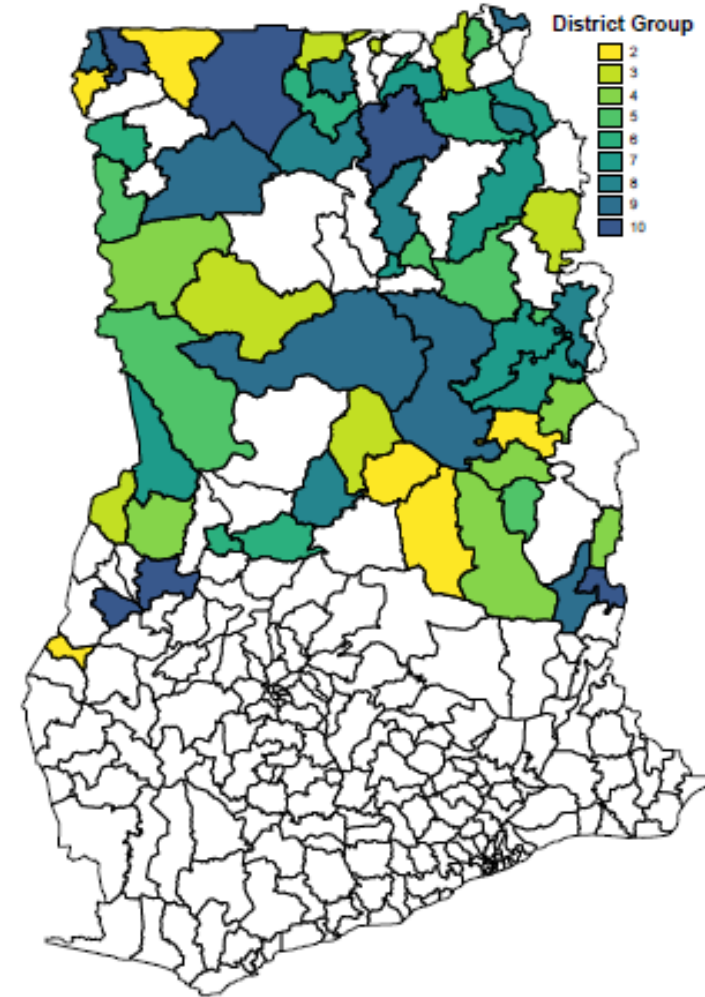
Two randomized controlled trials:

1. **Efficacy trial:** LM main implementer, through government infrastructure
2. **Scale-up trial:** GES main implementer, with support from LM
 - Funded by UK Medical Research Council (MRC) and USAID (additional funding from FCDO)
 - Collaboration between the IFS, LM, IPA, UoG, UoP, Yale
 - Led by Britta Augsborg (IF) and Sonya Krutikova (IFS/Manchester)

Evidence on GES-LM effectiveness

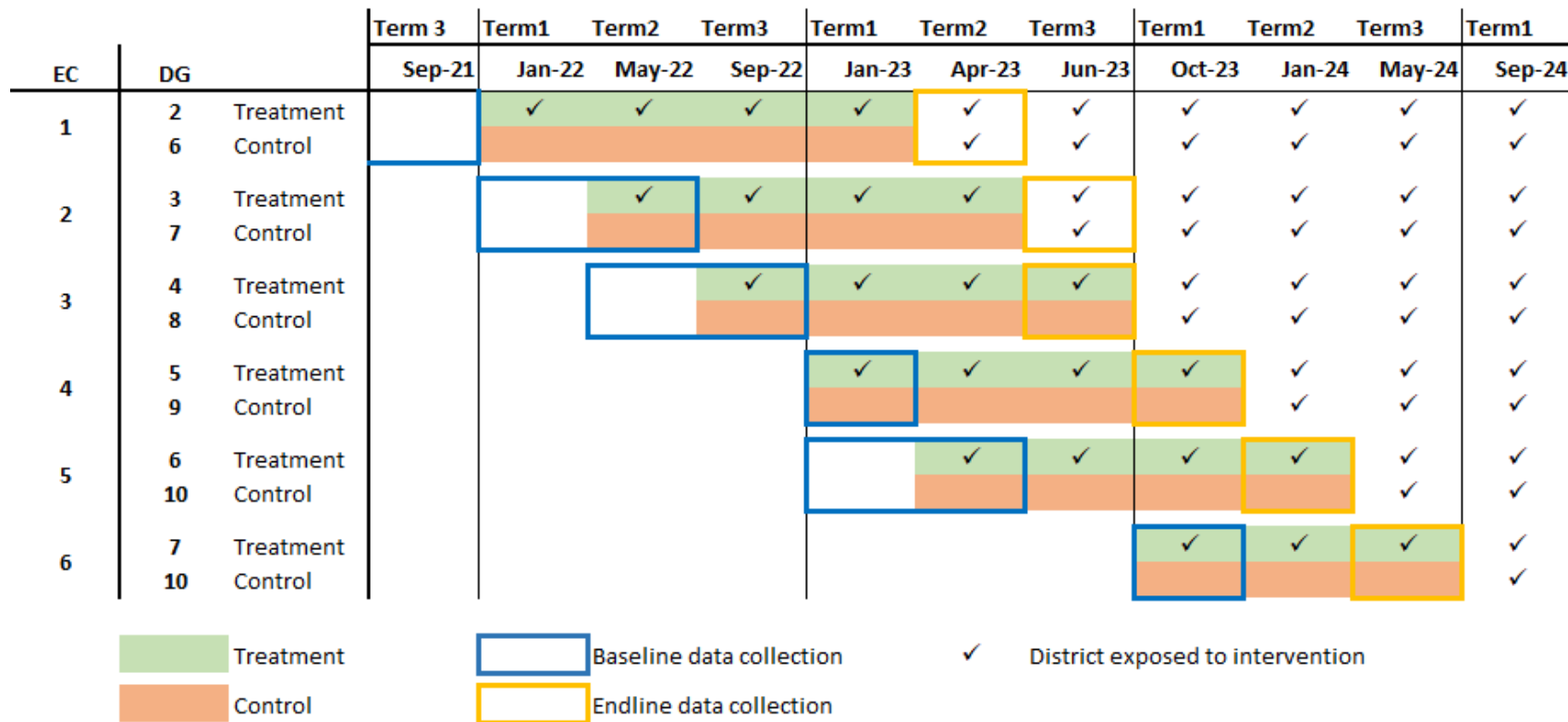
Evaluation design:

- Intervention implemented in 60 districts
- Each term, 6 new districts receive the programme
- Evaluation starts with second set of districts, creating “mini-RCTs”:
 - We randomized which 6 districts get the intervention when
 - Used later treated as control for earlier treated
 - 6 Evaluation Cohorts (ECs)



Evidence on GES-LM effectiveness

Evaluation design:



Evidence on GES-LM effectiveness

Sample:

- **Districts:** 54 (some both T and C)
- **Schools:** 360 (5 per district in each DG), randomly selected:
 - GES public schools, mixed gender
 - >12 children enrolled in KG
 - rural (semi-urban)
- **KG classrooms:** 360 (randomly selected if >1 per school)
- **Child-caregiver dyads:** 2,880
 - 8 From attendance list
 - +4 among mothers who expressed interest in running playschemes (EMs)
- **Communities:** 480 (1-2 per school)

Communities

- less than 1,000 household
- ~1 in 2 villages has no paved road access, 1+ months a year inaccessible,
- more than half experience water disruptions



Schools

- On average 40+ children
- Almost half no books, 2 in 10 only outdoor classroom



Teachers

- 70% female, 36 yrs, Half from community.
- Just under 1/3 burnt out
- 1/3 threaten to use cane in classroom
- 65% cite low parental involvement as a big problem for their school

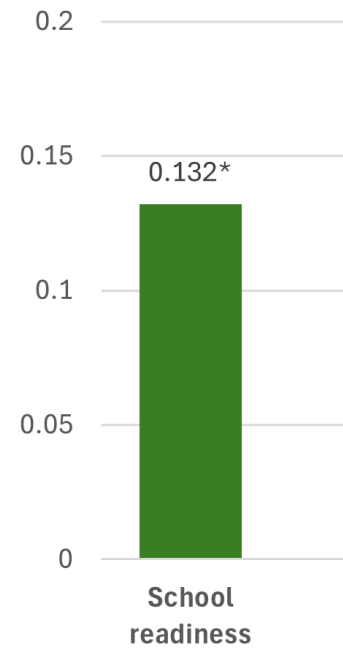
KG students and their primary caregivers:

- 4-5 years on average
- 21% stunted (7% severely so), 12% wasted (5% severely so)
- 92% of PCG female
- >50% never attended school, 72% cannot read
- 31% did any activities with the child in past 3 days
- Household of 6-7 members
- 55% income from agriculture (40% wage work)
- 56% open defecation, 27% drinking water source >500m away
- 28% HH skipped meal in last 7 days
- <1/4th have playmaterials at home (bought or homemade)

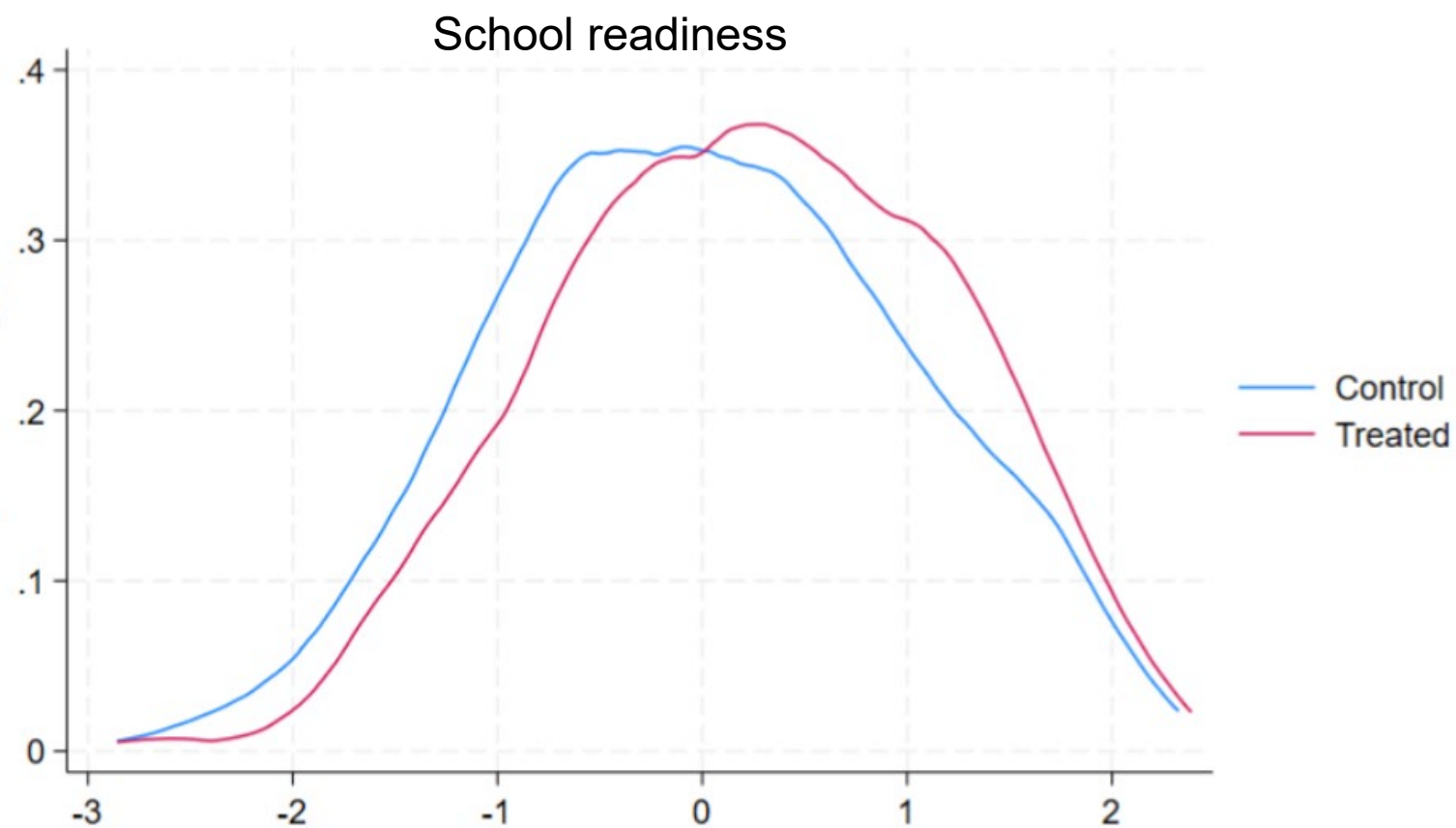


**RQ: What is the
programme's impact on child
development?**

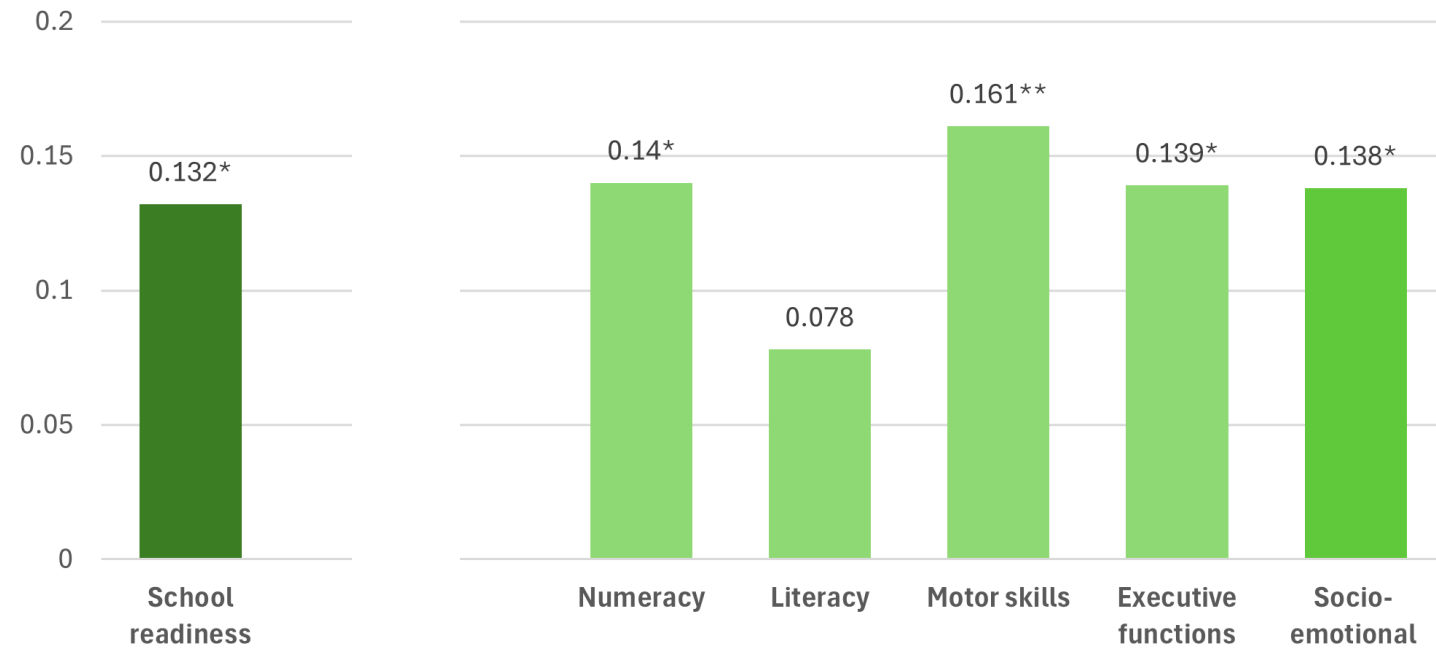
Impacts



Impacts



Impacts



Impacts – efficacy and at-scale



1. Engaging marginalized low educated parents in ECCE in LMICs can be an effective approach to improving both of the key environments where children spend most of their time – home & pre-school.
2. Changes in school environment affect child cognitive development, children of EMs also improve socio-emotional dev
 - Bringing in TAs to implement play-schemes instead of parents may generate the cognitive improvements (at a much higher cost) but not the improvements in the home environment that seem especially important for boosting children's socio-emotional skills.
3. GES has managed to sustainably embedded the LM approach within an LMIC public education system.

Change is achievable now

Parents everywhere can drive child development and transform their children's futures.

No matter their education or socio-economic level.

It doesn't need huge funding or resourcing.

Let's awaken this potential.



Thank You

Email: eleanor@livelyminds.org

Key supporters



Ghana Education
Service (GES)

AKO Foundation

COMC
FOUNDATION



The LEGO Foundation





Appendix

Communities:

	Control			Treatment			
	n	mean	sd	n	mean	sd	Diff
Population	234	2813	304	240	2653	410	-230
Households	234	977.63	155	240	815	136	-176
Main access paved road (%)	235	55.74	4.56	240	45.83	4.93	-9.44
Months inaccessible road	235	1.29	0.16	240	1.22	0.17	-0.08
Electricity connection (%)	235	77.02	4.20	239	72.80	3.83	-4.55
Electrical/solar energy (%)	235	81.70	3.64	240	78.75	3.71	-3.19
Any public toilet in use (%)	235	35.32	5.11	240	28.75	4.10	-7.19
Open defecation is common (%)	235	65.96	4.90	240	74.17	4.55	8.60
Main water source is borehole (%)	235	53.19	5.86	240	61.25	5.43	7.70
Main water source is surface water (%)	235	17.02	3.79	240	19.58	3.77	3.07
Some piped water access (%)	235	31.06	5.09	240	27.50	3.84	-4.13
Water disruption last 12m (%)	235	51.91	3.75	240	57.92	4.45	5.72

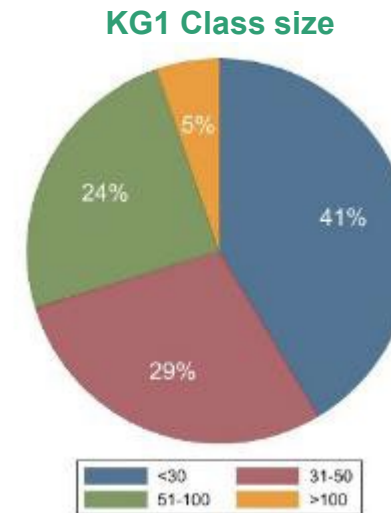
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$



Context

Schools:

- 14% outdoor classroom
- Class size: 43 children
- 47% classrooms with no books
- 22% lack adequate lighting
- 44% lack adequate seating



KG teachers and teaching:

- 36 yrs old, 72% female, 70% with tertiary education
- 50% from community, 69% feel respect from community
- 75% trained on ECD, 88% with permanent contract
- 29% feel burnt out

Classroom observation (1 hour)

- 33% of teachers threaten to use cane
- 28% lessons consist of a game
- 54% ask two open-ended questions

Measuring “child development”

- Enrich ‘off the shelf’ tools (IDELA, SDQ) with more sophisticated task-based measures developed in Prof E. Spelke’s Lab, Harvard
 - IDELA (Save the Children): 25 tasks, “easy” to administer, done in Ghana
 - SDQ: well-established maternal report instrument to measure SE development (Goodman & Goodman, 2009)
 - Spelke’s Lab tasks: deepen measurement in key domains with strong theoretical grounding
- Combining the two yields richer set of measures within constraints
 - Reduces risk of picking up ‘teaching to the test’ effects
 - Increase variability we are able to pick up

Measuring “cognition”

■ Examples of IDELA

Emergent Numeracy

- One-to-one correspondence
 - Give me 3 counters
 - Give me 8 counters
 - Give me 15 counters
- Comparison by size and length
- Number identification

2	4	10	5	7
9	6	8	3	1
13	17	14	19	16
15	18	11	12	20

- “Which number comes after 6?”

Executive Functioning

- “Remember these three words: cat, tree, car. Now, can you repeat them?”
- “Touch the opposite of what I say: when I say day, point to night.”

Emergent Literacy

- The word ‘Sun’ starts with /s/. Now listen to the words I say and tell me which one starts with the same sound /s/ Bird Doll Soup
- “Can you identify this letter?” (e.g., letter A)

E	T	A	N	I
O	S	H	R	D
L	C	U	M	F
G	W	B	Y	P

Fine Motor Skills

- “Draw a circle on the paper.”
- “Copy this simple shape (square/triangle).”

Measuring “cognition”

■ Examples of IDELA

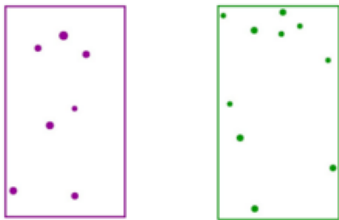
Example Spelke’s tasks

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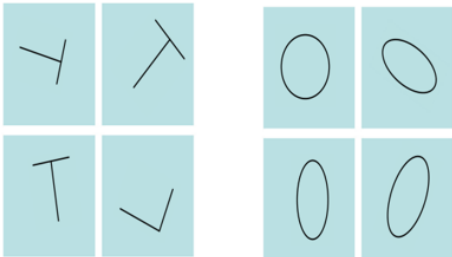
2	4	10	5	7
9	6	8	3	1
13	17	14	19	16
15	18	11	12	20

Which of these two boxes has more dots



‘Geometric intruder’

Point to shape which is different



Measuring “socio-emotional”

- Examples of IDELA

Empathy/perspective taking (IDELA)

Show the picture card and say, **Now let's look at this picture. How do you think this child is feeling right now?**
If child cannot identify that the girl is sad, skip questions b and c.

Then ask, **What would you do to help her feel better?**
Wait for the child to respond and if answer is unclear ask, **“How/why does this make her feel better?”**

If child cannot identify one way to make the girl feel better, skip question c.

Prompt ONCE by asking, **Is there anything else you would do to make her feel better?**



Measuring “socio-emotional”

■ Examples of IDELA

Example Spelke’s tasks

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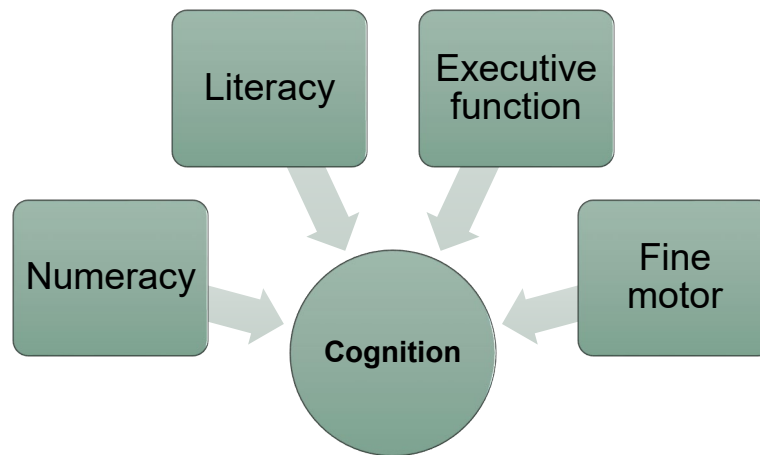
Point to emotion (Spelke task)



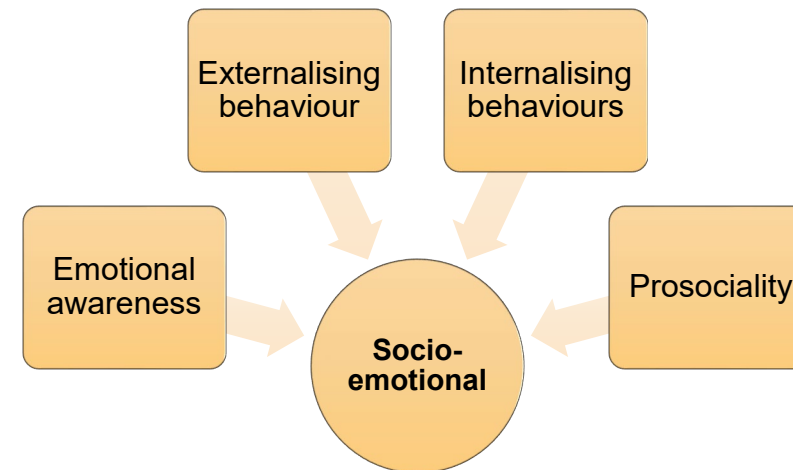
“Child development”

- Multi-dimensional construct

Cognition: the processes or capacities by which knowledge is acquired and manipulated (includes what and how children learn, what they know, and how that guides their behaviour).



Socio-emotional: children’s ability to react to and interact with their social environment.



Econometric specification

$$y_{is1} = \alpha_0 + \beta treat_{is} + \delta y_{is0} + X'_{is0}\gamma + strata_{is}'\sigma + \epsilon_{ist}$$

- y_{ist} is outcome for child i in school s at endline, standardised in control group
- $treat_s$: indicator for whether the child's school is a treatment school
- y_{is0} : the same outcome at baseline
- X_{is0} : age, gender, imbalanced variable
- $strata_{is}$: Randomization (school size)
- **Inference**
 - Standard errors clustered at the level of the school
 - Correct for MHT using Roman Wolf algorithm for ITT on subdomains

Impacts: Cognitive dev

	Coefficient	Standard error	P-value
	(1)	(2)	(3)
Cognitive score	.123*	(.067)	.079
<i>Numeracy</i>	.142*	(.069)	.051
<i>Literacy</i>	.076	(.064)	.248
<i>Fine Motor</i>	.156**	(.073)	.042
<i>Executive function</i>	.131*	(.069)	.068

Impacts: Socio-emotional dev

	Coefficient	Standard error	P-value
	(1)	(2)	(3)
Cognitive score	.123*	(.067)	.079
<i>Numeracy</i>	.142*	(.069)	.051
<i>Literacy</i>	.076	(.064)	.248
<i>Fine Motor</i>	.156**	(.073)	.042
<i>Executive function</i>	.131*	(.069)	.068
Socio-emotional score	.140*	(.073)	.067

Impacts: Child development

	Coefficient	Standard error	P-value
	(1)	(2)	(3)
Overall score	.132*	(.064)	.052
Cognitive score	.123*	(.067)	.079
<i>Numeracy</i>	.142*	(.069)	.051
<i>Literacy</i>	.076	(.064)	.248
<i>Fine Motor</i>	.156**	(.073)	.042
<i>Executive function</i>	.131*	(.069)	.068
Socio-emotional score	.140*	(.073)	.067

Mechanisms sum up

Efficacy trial

- Playschemes ran with high compliance
- Improvements in parental knowledge, especially in VM
- Improvements in observed positive parenting among VM
- Improvements in self-reported positive and negative parenting among all, but especially among VM

➔ Which inputs are driving the observed impacts on cognitive and socio-emotional development?

Initial results suggest that...

1. ...GES has managed to sustainably embedded the LM approach within an LMIC public education system.

→ What are **drivers and barriers for at-scale delivery** within local government education services (practices and culture)?

- Exploit **significant geographic coverage** (54 districts)
- Analyze the role of bureaucrats and local government officials in delivering quality public services
- We fielded an adapted **World Management Survey** (D- WMS) [Lemos and Scur \(2016\)](#), building on adaptations to use in the public sector by [Walter \(2018\)](#) and [Cilliers et al. \(2022\)](#).

→ Initial findings: Significant variation in management across districts.

Takeaways

Initial results suggest that...

1. ...GES has managed to sustainably embedded the LM approach within an LMIC public education system.
2. ...Changes in school environment affect child cognitive development, children of EMs also improve socio-emotional dev

→ Are different impacts an intervention or a heterogeneity story?

1. **[Intervention story]** Training and parenting workshops
2. **[Heterogeneity story]** Ems/their children are different and/or respond differently to LM play schemes

→ Policy implications would be different depending on mechanisms

1. **[Intervention story]** → Parenting workshop for all parents should complement play schemes
2. **[Heterogeneity story]** → More should be done to adapt program to non-EM kids (and their caregivers)

Initial results suggest that...

1. ...GES has managed to sustainably embedded the LM approach within an LMIC public education system.
2. ...Changes in school environment affect child cognitive development, children of EMs also improve socio-emotional dev

→ Are different impacts an intervention or a heterogeneity story?

- Experimental variation does not allow to cleanly disentangle one from another but suggestive evidence *against* heterogeneity story.

→ Bringing in TAs to implement play-schemes instead of parents may generate the cognitive improvements (at a much higher cost) but not the improvements in the home environment that seem especially important for boosting children's socio-emotional skills.

Initial results suggest that...

1. ...GES has managed to sustainably embedded the LM approach within an LMIC public education system.
2. ...Changes in school environment affect child cognitive development, children of EMs also improve socio-emotional dev.
3. ...PCGs (primarily mothers) change knowledge/behavior etc, home environment changes?

→How about fathers?

- Additional survey with spouses/fathers fielded
- Covering: wellbeing, depression, time use, etc

→Yet to be analyzed

ECCE Solutions from the Global Majority - Insights from South Africa



24 September 2025
UNGA80

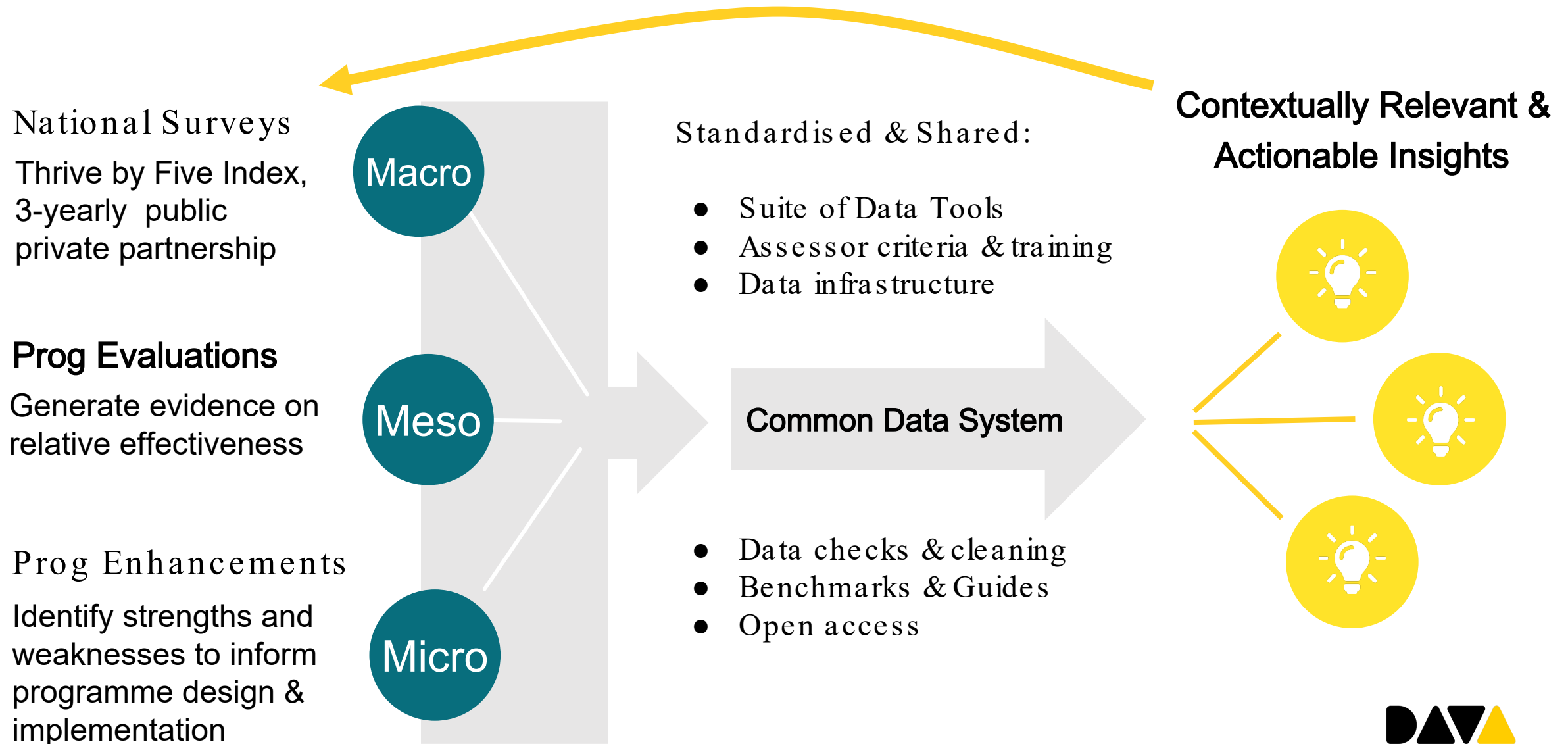
Sonja Giese
Executive Director

DataDrive2030 is an independent, child -focused Data Hub & Think Tank.

We generate and mobilise high -quality evidence to improve decision -making for South Africa's youngest children.



SA's Journey: Building a Data-Rich ECD Ecosystem



1

Social -Emotional Functioning is Central to Learning

● Positive Deviance Study:

- > 10,000+ children
- Multiple studies, 2016–2022
- Characteristics of ELPs in **low -resource settings**, with **exceptional outcomes**.

● Thrive by Five Index 2024:

- Nationally representative - 5,000 children
- Structural Equation Modelling - **emotional readiness ranked among top predictors** of learning outcomes.

Common characteristic of
'outlier' programmes in low
resource contexts - embed
**social -emotional
learning into daily
routines**

2

Good Everyday Practices & Materials Build Focus & Engagement

- Predictable routines
- Mindful transitions between activities
- Play-based learning with mix of group sizes
- Specific and appropriate praise and affirmation
- Variety of quality learning materials linked to developmental domains, appropriately used

**Better Task
Orientation**

Attention, Focus, Diligence,
Curiosity



**Significantly
Better Learning
Outcomes**

3

In-Service Training & Support are Key for Good Teaching Strategies

- Studies use a combination of **Child Outcomes Assessment** (ELOM 4&5) and **Learning Programme Quality Assessment** (LPQA) - identify which aspects of programme quality best predict good child outcomes



- Ongoing in -service support is essential** - continued professional development, peer to peer learning, and coaching help practitioners strengthen responsive teaching practices.

4

Principals' Roles Matter - as Pedagogical Leaders and Managers

- Principals play a critical role in early learning access and quality in South Africa
- Across studies, strong leadership is a key characteristic of high performing programmes -
 - Good management practices
 - A culture of continuous learning
 - Community embeddedness

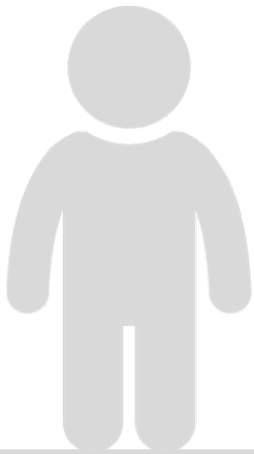
85% of early learning programmes in SA are **founded by the principal**

5

Programmes Go Beyond Learning: Tackling Stunting

Early health and nutrition
shape children's learning
outcomes.

~ 5 months
Behind their peers



STUNTED CHILD



NON-STUNTED CHILD

Quality programmes can be protective, providing vital health and nutrition support.

6

Engaging Caregivers Can Unlock Learning Gains

Thrive by Five Index 2024:

58%

of 4-year-old children attending an ELP in South Africa are **NOT On Track for early learning** .

Only 4% of caregivers believe their child is falling behind

Across various studies, we see better outcomes when:

- Children have more access to books in the home
- Caregivers spend more time in learning activities
- Fathers are involved in their child's learning

7

High Quality Programmes Help Close Poverty Gap

Using ELP fees as a proxy for socio-economic circumstances:

Poorer children are **half as likely** to start school **On Track** compared to their wealthier peers.

Low Fee

34% On
Track



High Fee

69% On
Track

Evidence from SA that quality programmes can help children to bridge this gap

Summary of Key Insights from Multiple Studies in SA

1. Social-emotional functioning is central to learning
2. Good everyday practices & materials build children's focus & engagement
3. In-service training & support are key for effective teaching strategies
4. Principals' roles matter - as pedagogical leaders and managers
5. Beyond learning: tackling stunting is key to protecting children
6. Engaging caregivers can unlock learning gains
7. High quality programmes help close poverty gap



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data to drive
change!**

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Join Us for the Launch of Our Childcare4All Phase Two Campaign!

We'll unveil the **Childcare Systems Map**, a tool co-created by seven global leaders to drive equitable, effective childcare solutions.

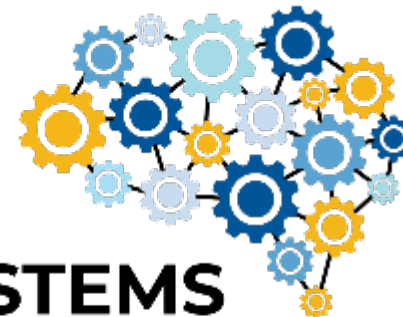
Meet partners from ECDAN's Childcare Advocacy, Research, and Engagement (CARE) Initiative, as they launch advocacy campaigns in **Bangladesh, South Africa & Tanzania** to strengthen childcare systems.



 Wednesday, October 1

 8:00-9:30 AM EDT

REGISTER NOW



SYSTEMS
THINKING **FOR ECD**
COLLABORATIVE

