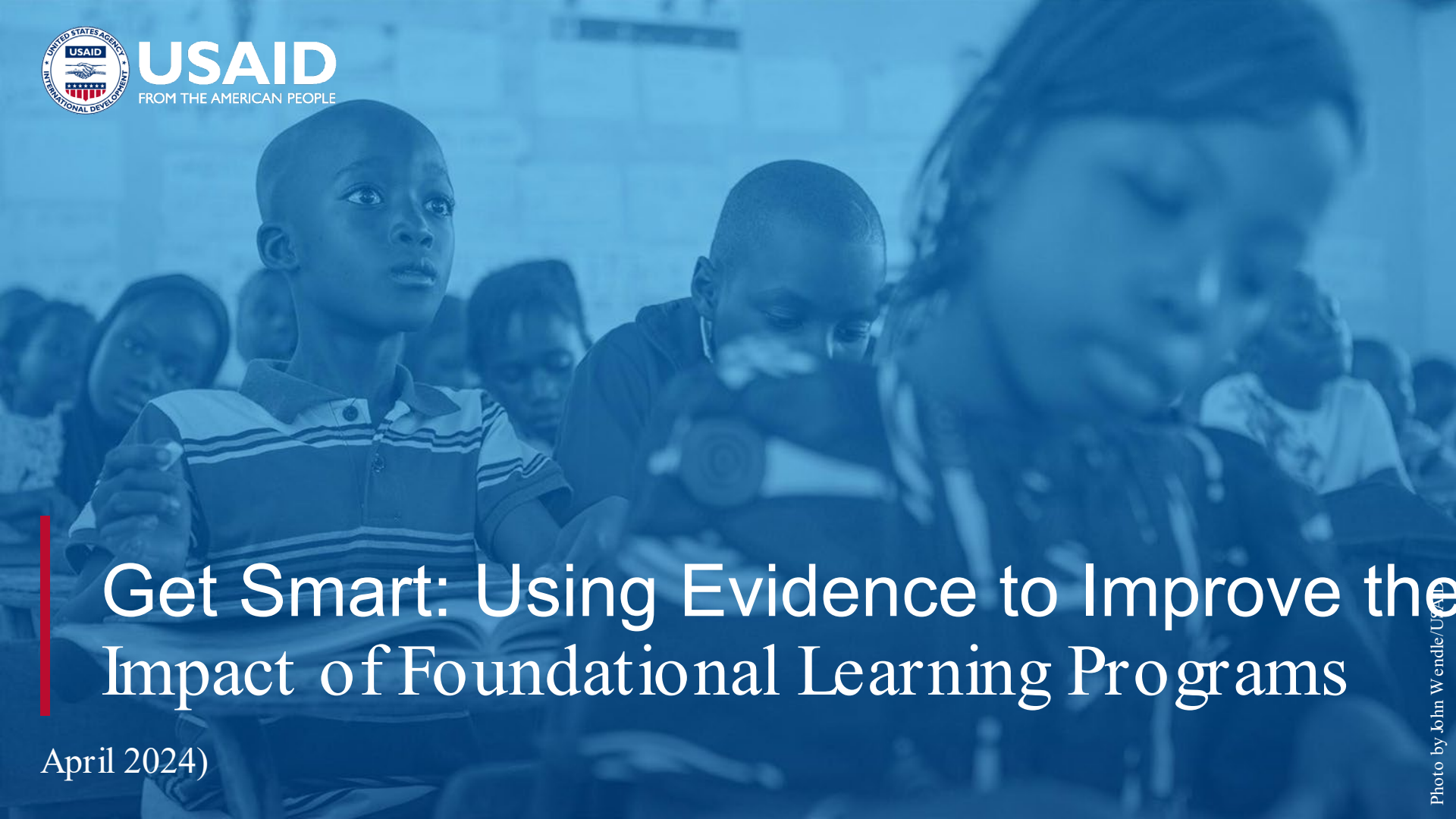

USAID
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Get Smart: Using Evidence to Improve the Impact of Foundational Learning Programs

April 2024)

Photo by John Wendle/USAID

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Introductions

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02

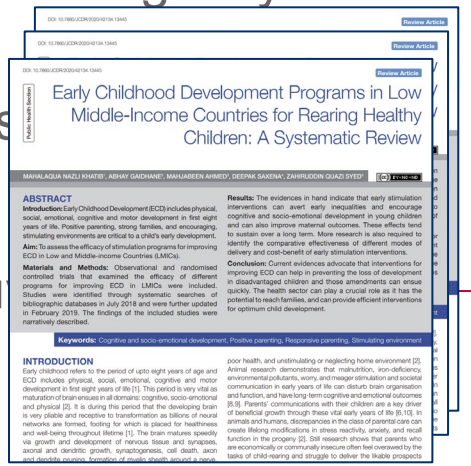
The ImpAct Review

What is an “Improved Activity Cost-Effectiveness Review”?

Photo by USAID

What is an ImpAct Review?

- Using evidence from impact evaluations helps us identify approaches that are likely to make the greatest progress improving foundational literacy & numeracy skills
- “Improved Activity Cost-Effectiveness” (ImpAct) Reviews are co-created by OCE and counterparts across the Agency to identify the best bets
  - Gaps for certain interventions & contexts
  - Evidence: Use it, or produce it!
- Builds on work of GEEAP, FCDO “Smart Bu



Review Article

Public Health Section

Early Childhood Development Programs in Low Middle-Income Countries for Rearing Healthy Children: A Systematic Review

MAHALAQUA NAZLI KHATIB[1], ABHAY GAIDHANE[1], MAHJABEEN AHMED[2], DEEPAK SAXENA[3], ZAHIRUDDIN QUAZI SYED[1]

ABSTRACT

Introduction: Early Childhood Development (ECD) includes physical, social, emotional, cognitive and motor development in first eight years of life. Positive parenting, strong families, and encouraging, stimulating environments are critical to a child's early development.

Aim: To assess the efficacy of stimulation programs for improving ECD in Low and Middle-income Countries (LMICs).

Materials and Methods: Observational and randomised controlled trials that examined the efficacy of different programs for improving ECD in LMICs were included. Studies were identified through systematic searches of bibliographic databases in July 2018 and were further updated in February 2019. The findings of the included studies were narratively described.

Results: The evidences in hand indicate that early stimulation interventions can avert early inequalities and encourage cognitive and socio-emotional development in young children and can also improve maternal outcomes. These effects tend to sustain over a long term. More research is also required to identify the comparative effectiveness of different modes of delivery and cost-benefit of early stimulation interventions.

Conclusion: Current evidences advocate that interventions for improving ECD can help in preventing the loss of development in disadvantaged children and those amendments can ensue quickly. The health sector can play a crucial role as it has the potential to reach families, and can provide efficient interventions for optimum child development.

Keywords: Cognitive and socio-emotional development, Positive parenting, Responsive parenting, Stimulating environment

INTRODUCTION

Early childhood refers to the period of upto eight years of age and ECD includes physical, social, emotional, cognitive and motor development in first eight years of life [1]. This period is very vital as maturation of brain ensues in all domains: cognitive, socio-emotional and physical [2]. It is during this period that the developing brain is very pliable and receptive to transformation as billions of neural networks are formed, footing for which is placed for healthiness and well-being throughout lifetime [1]. The brain matures speedily via growth and development of nervous tissue and synapses, axonal and dendritic growth, synaptogenesis, cell death, axon and dendrite pruning, formation of myelin sheath around a nerve, poor health, and unstimulating or neglecting home environment [2]. Animal research demonstrates that malnutrition, iron-deficiency, environmental pollutants, worry, and meager stimulation and societal communication in early years of life can disturb brain organisation and function, and have long-term cognitive and emotional outcomes [8,9]. Parents' communications with their children are a key driver of beneficial growth through these vital early years of life [8,10]. In animals and humans, discrepancies in the class of parental care can create lifelong modifications in stress reactivity, anxiety, and recall function in the progeny [2]. Still research shows that parents who are economically or communally insecure often feel overawed by the tasks of child-rearing and struggle to deliver the likable prospects

Why research evidence?

More evidence is not a guarantee of better interventions, but without evidence there is little likelihood of better interventions.

New evidence should be continuously needed to reflect changing aspirations, needs, barriers and gaps, and strategies for navigating these.

Why focus on foundational learning?

- Basic education investment priority since 2011
- Explicit mandate of the READ Act
- Substantial amount of research evidence
- Relative homogeneity of outcome measurement
  - Reading: EGRA
  - Math: EGMA

Inclusion Criteria & Data Extraction

Started with the bibliography from 2023 GEEAP study:

- Narrowed down to studies focusing on interventions which USAID could legally fund from Basic Ed earmark
- Narrowed down to studies which used a randomized control trial, keeping with OCE priorities
- Potential next step: Add RCTs omitted by GEEAP?

From each study, we extracted key information:

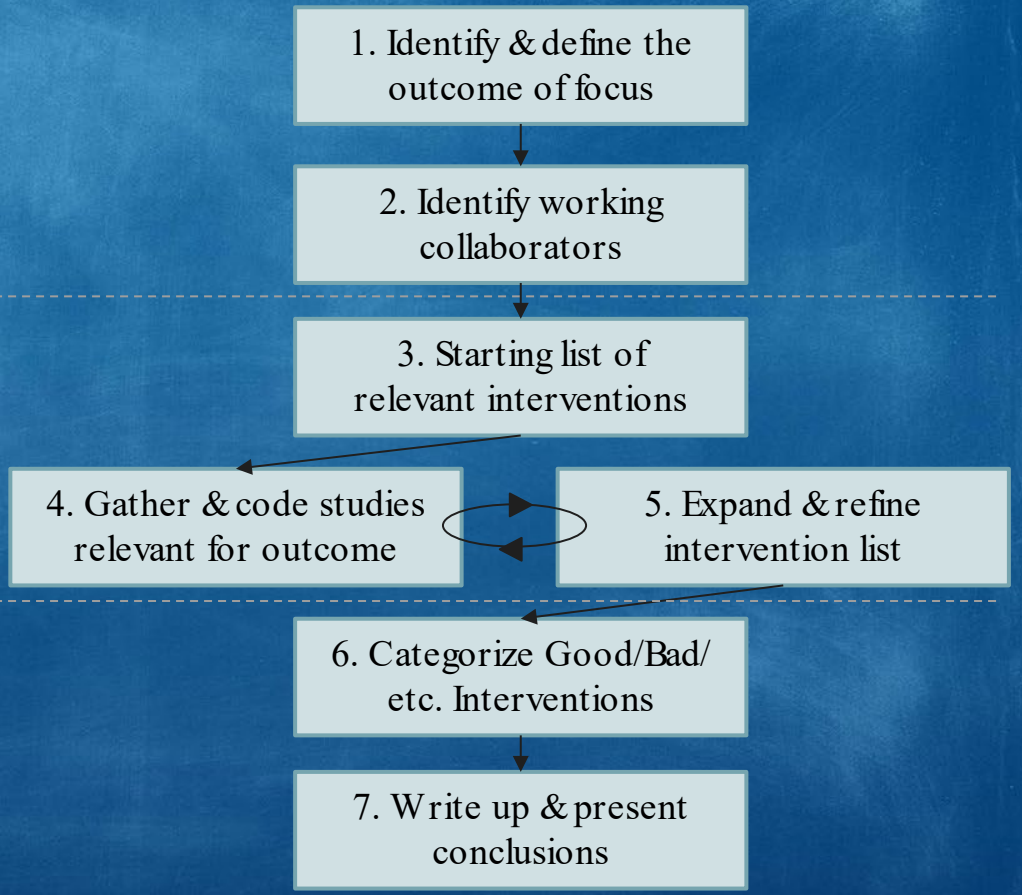
- What intervention? What exactly was delivered? Cost?
- What age range and subject matter? Any target populations?
- How were effect sizes measured? How effective was program?

Review Process

ALIGN
Reach shared understanding of objectives and process, identify in-depth collaborators.

REVIEW
Define interventions iteratively, gather and code studies, and categorize interventions into Good/Bad/etc.

CONCLUDE
Write up shared conclusions of Good, Bad, Promising, etc. interventions.

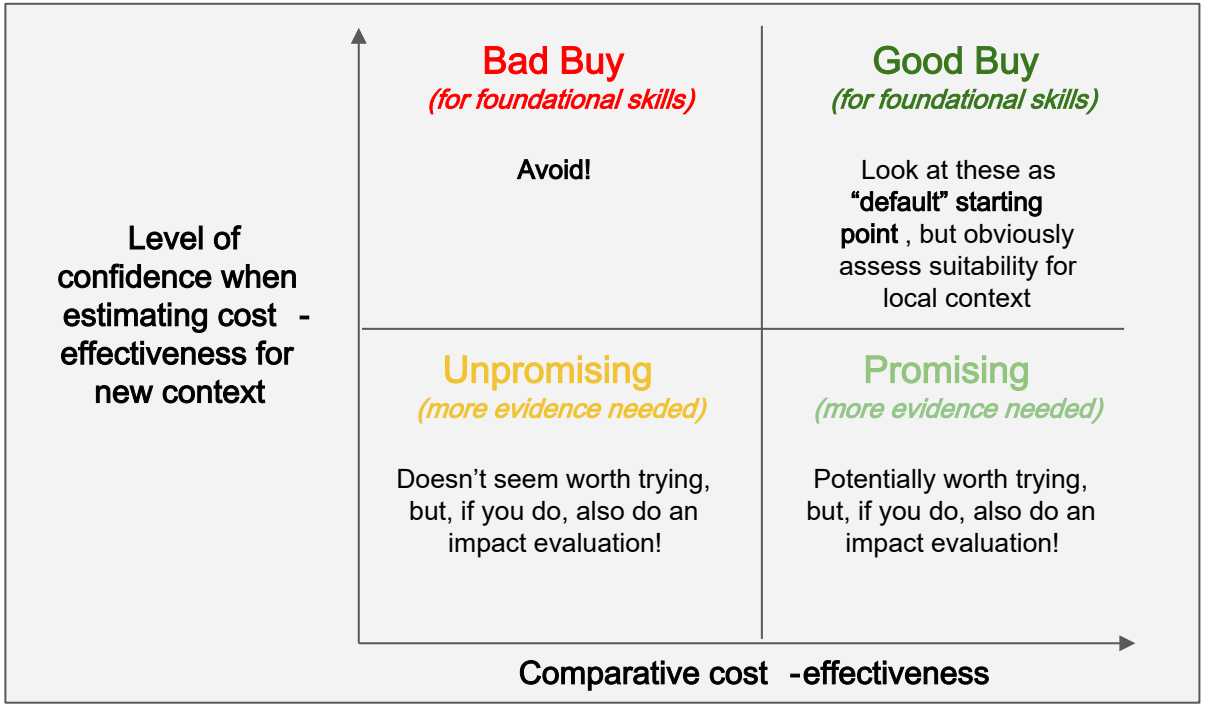


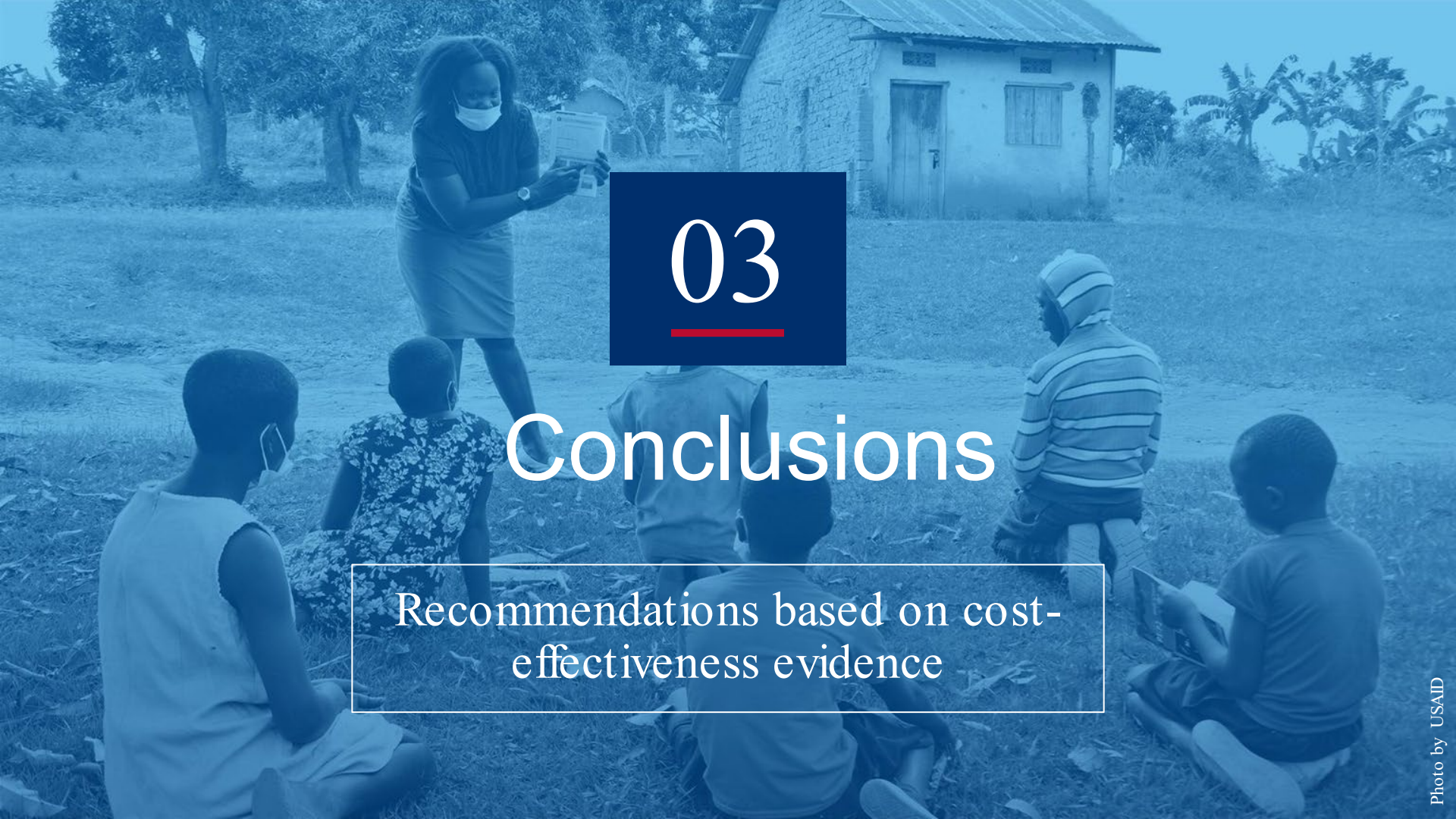
Interventions under consideration

	Investment Areas	GEEAP Interventions	RCT
1	Improving classroom instruction in primary grades	Providing teaching and learning materials alone	tbc
2		Supporting teachers with structured pedagogy	15
3		Supporting teachers with targeted Instruction by learning level	10
4		Supporting teachers with teaching SEL and life skills	4
5		Personalized, adaptive software	13
6		Investing in tech hardware alone	4
7	Improving quality of pre-primary	Varied	12
8	Improving access to primary education	Reducing travel times to schools (school building & transport)	(3)
10		Transferring cash, as tool to improve learning (CCTs)	4
11	Mitigating health barriers	Primary school feeding	5
14	Strengthening community- level support for primary education	Community-hired teaching support	6
15		Leveraging mobile phones to support teaching	5
16		Involving communities in school management	8
18		Providing info on benefits, costs, quality	6
19	Other	Targeting interventions towards girls	3
20		Distance education	5

Using this body of evidence, we can form recommendations on which interventions are **likely to be more cost -effective** at achieving a certain outcome, for a particular population

GEEAP Interventions
Providing teaching and learning materials alone
Supporting teachers with structured pedagogy
Supporting teachers with targeted Instruction by learning level
Supporting teachers with teaching SEL and life skills
Personalized, adaptive software
Investing in tech hardware alone
Varied
Reducing travel times to schools (school building & transport)
Transferring cash, as tool to improve learning (CCTs)
Primary school feeding
Community-hired teaching support
Leveraging mobile phones to support teaching
Involving communities in school management
Providing info on benefits, costs, quality
Targeting interventions towards girls
Distance education





03

Conclusions

Recommendations based on cost-effectiveness evidence

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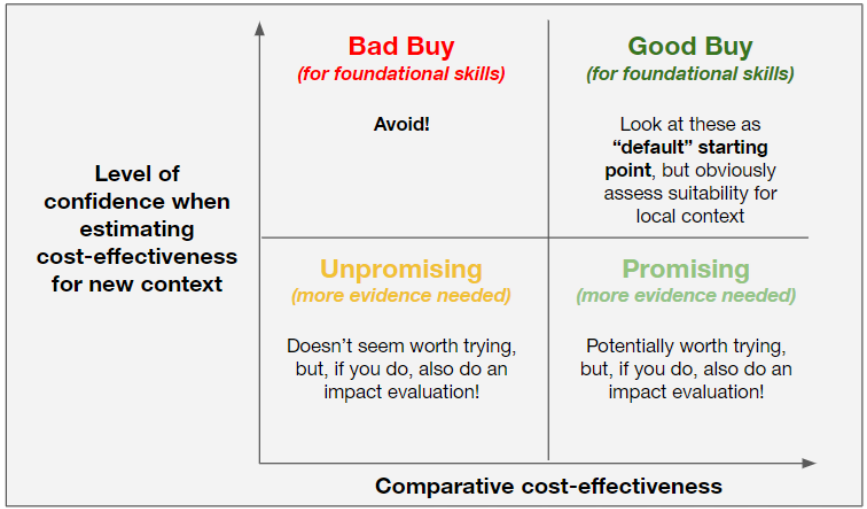
CT: Snapshot of Results



CT to add snapshot of conclusions about interventions

So…what next?

Do you know what helps you make your point clear? Lists like this one:

- Quisque pulvinar mi sit amet mi elementum ullamcorper sit amet nec lorem
- Praesent hendrerit lorem id augue dignissim finibus
- Curabitur non interdum elit
- Quisque pulvinar mi sit amet mi elementum ullamcorper sit amet nec lorem

04

Ruling Out “Bad Buys”

EdTech Case Studies

Photo by USAID

Three options in EdTech

Personalized, Adaptive Software

Using software that allows personalized learning and adapts to the learning level of the child

Tech Hardware Alone

Investing in hardware like laptops, tablets and computers alone

Mobiles to Support Learning

Leveraging existing mobile phones to support learning at home

Three options in EdTech - Findings

1. Personalized, Adaptive Software

Effectiveness: 0.1 - 0.8 ES

Cost: $15 - 50 per learner

Examples:

- Computer-assisted learning (CAL) as part of instructional approach
- CAL-based remedial tutoring program
- After-school computer games linked to curriculum

Good Buy (if there is existing tech)

Three options in EdTech – Findings

2. Tech Hardware Alone

Effectiveness: -0.3 - 0.0 ES

Cost: HIGH

Examples:

- Installation of computers in schools
- Provision of laptops to students
- Provision of tablets to teachers

Bad buy
(even if it's free)

Three options in EdTech - Findings

3. Mobiles to Support Learning

Effectiveness: 0.1 - 0.7 ES

Cost: $.1 - $27 per student

Examples:

- Interactive voice response intervention to complement an IRI program
- Tablets for coaches as part of an integrated literacy program
- SMS to parents to support learning at home
- Mentoring services by phone on supporting learning at home

Promising but limited evidence

Three options in EdTech Findings

Personalized, Adaptive Software	Tech Hardware Alone	Mobiles to Support Learning
Good Buy (if there is existing tech)	Bad Buy (even if it's free)	Promising but limited evidence

05

Unexpected “Good Buys”

School Feeding Programs

Photo by USAID

Unexpected Good Buy: School Feeding

Feeding in Primary Schools

Effectiveness: 0.1 - 1.8 ES

Cost per learner per year:

$30 in SSA

$60 in Asia

$105 in MENA

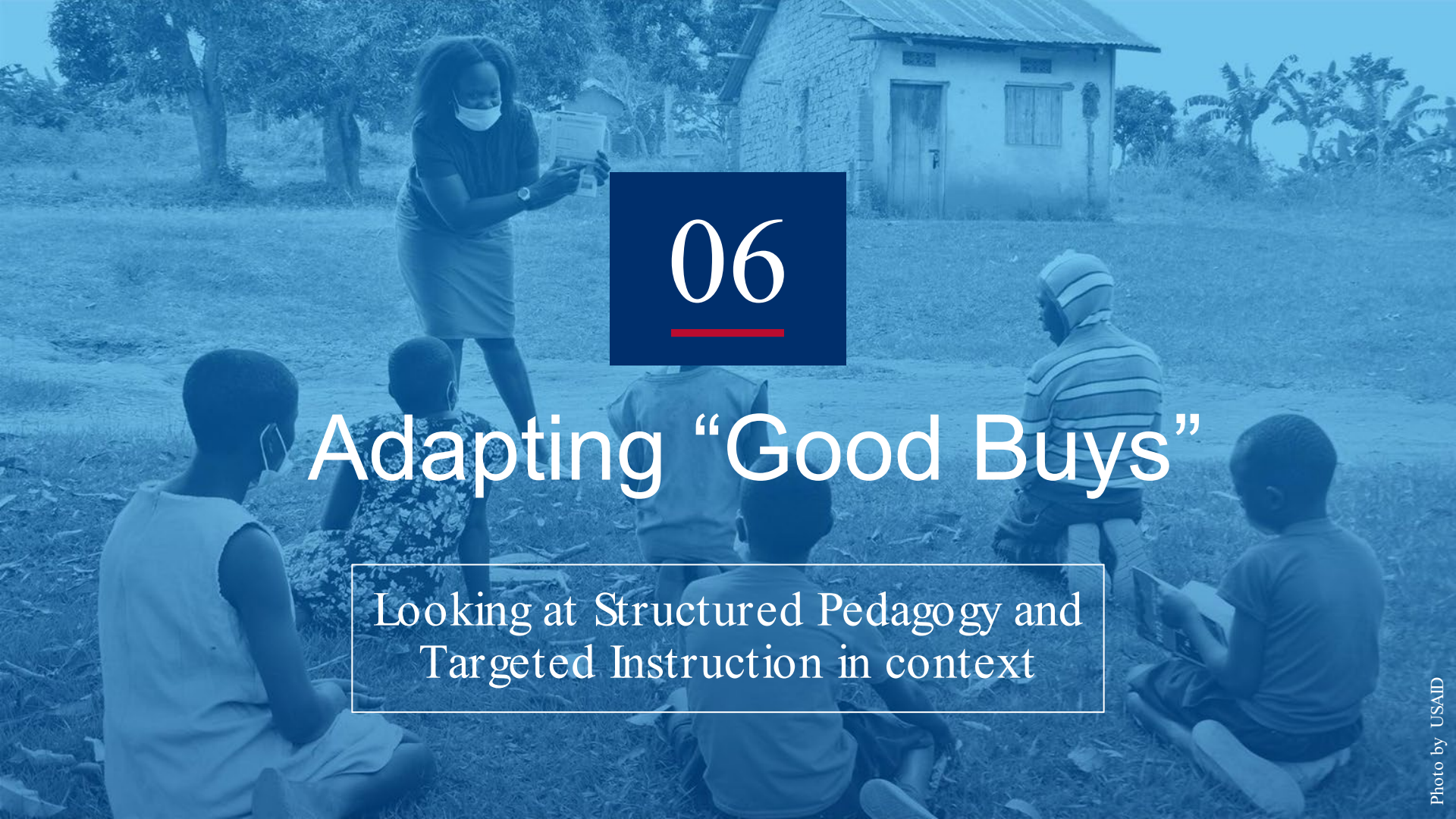
$55 in LAC

Source: Global report on school meals around the world, 2021

Examples:

- Snacks containing animal source food
- Meals at school
- School canteen program

Good Buy (especially in areas with food insecurity)



06

Adapting “Good Buys”

Looking at Structured Pedagogy and Targeted Instruction in context

Photo by USAID

Choosing Among Good Buys: SP and TI

Targeted Instruction

Targeting instruction by learning level, not grade (in or out of school), based on diagnostic and continuous assessments, during dedicated time for foundational skills, with ongoing support for educators

Structured Pedagogy

Supporting teachers with structured pedagogy including lesson plans, teaching and learning materials, ongoing teacher training and mentoring, (if feasible) formative assessment and caregiver engagement

Choosing Among Good Buys - Findings

1. Targeted Instruction

Effectiveness: 0.07 to 1.1 ES

Cost: $3 - $53 per student

Examples:

- Daily, one-hour sessions during school day; P1-P3 students grouped based on learning levels (measured at start of term)
- Four, 10-day "bursts" within the school year + one summer "booster camp" during which P3-P5 students were grouped based on learning levels (ASER) for 3 hours/day focused on math and reading
- Daily, two-hour sessions for P2-P4 students, delivered after school by local volunteer; content delivered based on

Good Buy

if many students are behind grade-level curriculum; sufficient political will to focus on foundational skills; capable/trainable instructors and mentors

Choosing Among Good Buys - Findings

1. Structured Pedagogy

Effectiveness: 0.14 - 1.2 ES

Cost: $8 - 63 per student

Examples:

- Lecture pour Tous (Senegal) (ES
- READ Liberia (ES
- Ghana Partnership for Learning (ES
- All include the following SP components:
  - Structured and explicit daily lessons based upon the science of reading;
  - Teacher PD sessions (2-3 per year) and continuous coaching support;
  - Formative classroom assessment;
  - High-quality TLMs

Good Buy

with sufficient political will and resources

TI and SP are not mutually exclusive, but they are not always implemented in lockstep

- ManySP programs include support f**ocontinuous assessment**, and train teachers to adapt lesson plans to students' needs
- However, no SP programs in our dataset included **grouping and regrouping** students based on continuous assessment
- Theoretically, **SP interventions can incorporate TI** by including training, materials, and support that enable teachers to incorporate (re)grouping by learning level their lesson plans
- In a context where SP is being implemented in schools, **TI can be used in supplementary sessions** outside of school hours

Contextual features can guide us to the right Good Buy(s)

1. Who is the student population?
   - If the intervention **only** targets P1-P2 students in schools, prioritize SP
   - If the intervention targets **out-of-school** children, TI might work; SP will not
   - If baseline learning levels are **heterogeneous** , prioritize TI, possibly with SP
2. Would it be feasible (buy-in, funding amount, qualified IPs) for USAID funding to be used to reorient the entire system toward SP?
   - Yes → Explore possibility to incorporate a **combined** program
   - No → Shift focus to designing a **supplementary TI** program
3. Do teachers have the capacity and motivation to adjust their practice in the classroom (or could they with training and support)?
   - Yes → Explore possibility of TI, possibly in combination with SP
   - No → Prioritize SP

Thank You

Do you have any questions?

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