

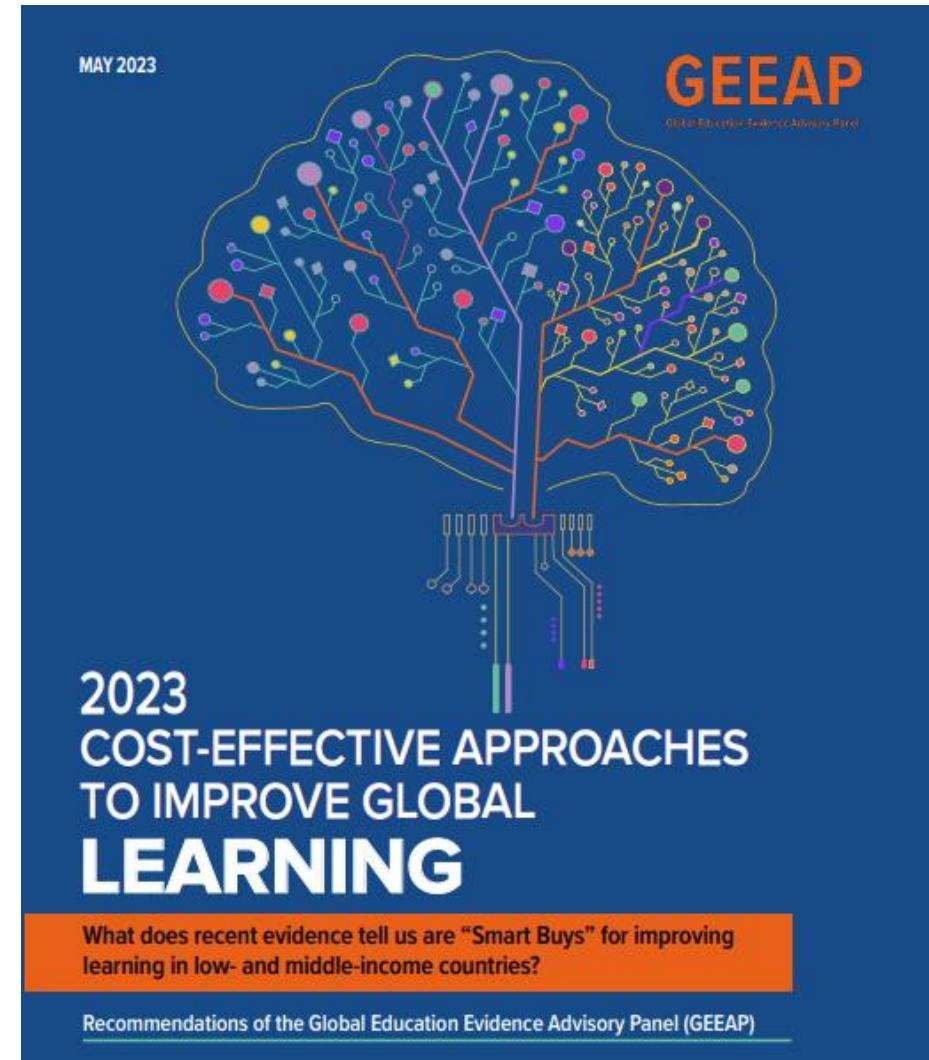
Smart Buys in Foundational Learning

Cost-effective approaches to improve learning in LICs and MICs

Halsey Rogers

WB Foundational Teaching and Learning Event
Accra, May 2024

The Panel is convened by the Foreign, Commonwealth & Development Office (FCDO), The World Bank, the United Nations International Children's Emergency Fund (UNICEF), and the United States Agency for International Development (USAID)



How to tackle the global crisis in foundational learning?

Learning poverty in LICs and MICs before the pandemic (in 2019):

- Global: 57 percent
- Sub-Saharan Africa: 86 percent

After Covid, it's even higher

Global Education Evidence Advisory Panel convened by WB and FCDO in response (in 2020), with USAID and UNICEF soon joining

- Independent interdisciplinary panel of global experts to synthesize evidence on most effective strategies for improving foundational learning





Kwame Akyeampong
*Co-chair of the panel
 Professor of International
 Education and Development,
 The Open University*
 Expert in education systems in Africa, including on political economy of reform, teacher training and complementary basic education.



Tahir Andrabi
Inaugural Dean, LUMS School of Education, and Professor of Economics, Pomona College
 Researcher on education and advisor to Government in Pakistan. Co-founder of the Centre for Economic Research in Pakistan CERP.



Benjamin Piper
Director, Global Education, Bill & Melinda Gates Foundation
 Education expert who supports grantees that work to improve foundational literacy and numeracy outcomes in low-income countries. Previously supported large-scale education programs across Sub-Saharan Africa, the Middle East, and Asia.



Sara Ruto
Former Chief Administrative Secretary for Education, Kenya
 Experienced researcher; served as director/CEO of the PAL Network since its inception in 2015; former Regional Manager of Uwezo East Africa using evidence to draw public attention to children's learning.



Abhijit Banerjee
*Co-chair of the panel
 Professor of Economics, MIT*
 Nobel prize-winning economist celebrated for experimental approach to alleviating global poverty.



Rukmini Banerji
CEO, Pratham Education Foundation. Award winner of the Yidan Prize for Educational Development
 Innovator in new pedagogical approaches and assessment, leader of large movement to transform education in India and beyond.



Jaime Saavedra
Regional Director for Human Development, Latin America and the Caribbean, the World Bank, former Minister of Education of Peru
 Researcher and policymaker with extensive expertise on education, inequality and poverty reduction.



Sylvia Schmelkes
Professor and Researcher, Research Institute for the Development of Education, Universidad Iberoamericana, Mexico City.
 Sociologist and education researcher who headed Mexico's National Institute for the Evaluation of Education; also has expertise in intercultural bilingual education, values, and adult learning.



Susan Dynarski
Professor of Education, Harvard Graduate School of Education
 Researcher at the forefront of understanding and reducing inequalities in education, including for college access, financial aid design, labour market outcomes, and high school reforms.



Rachel Glennerster
Associate Professor, Division of the Social Sciences and the College, University of Chicago; former Chief Economist at FCDO
 Expert on assessing cost-effectiveness of alternative interventions to reduce poverty, including in education. Researcher and policy advisor.



Hirokazu Yoshikawa
Professor of Globalization and Education, NYU Steinhardt
 Community and developmental psychologist; has done extensive research across the US, LICs and MICs, with a particular focus on early childhood and inequality.



Sally Grantham-McGregor
Emeritus Professor of Child Health and Nutrition, UCL GOS Institute of Global Health
 Pioneer in the rigorous study of Early Childhood Development in developing countries with a focus on parental engagement. An Officer of the Most Excellent Order of the British Empire (OBE).



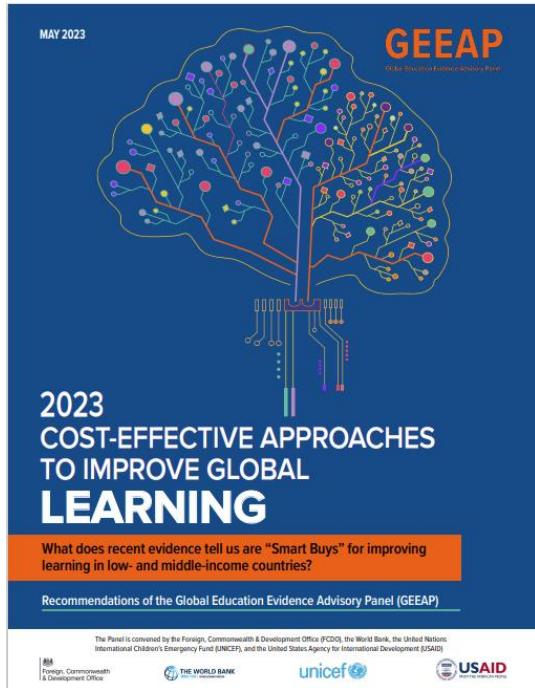
Karthik Muralidharan
Professor of Economics, University of California San Diego
 Global co-chair of education at JPAL. Lead PI in India for the Research on Improving Systems of Education (RISE) program.



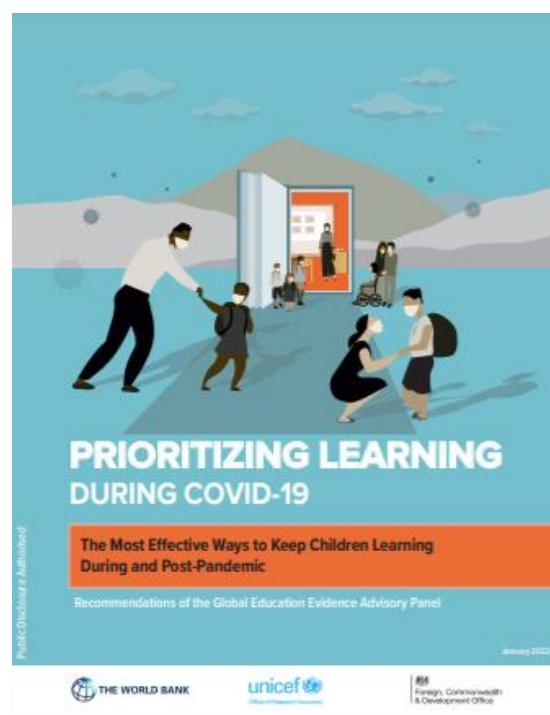
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GEEAP Products

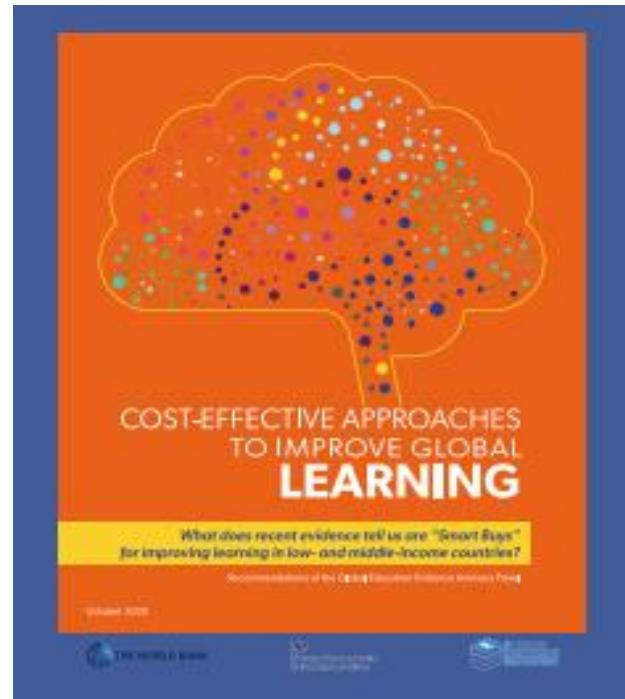
Most recent:



**2023 Cost-effective
Approaches to Improve
Global Learning**



**Prioritizing Learning During
Covid-19**

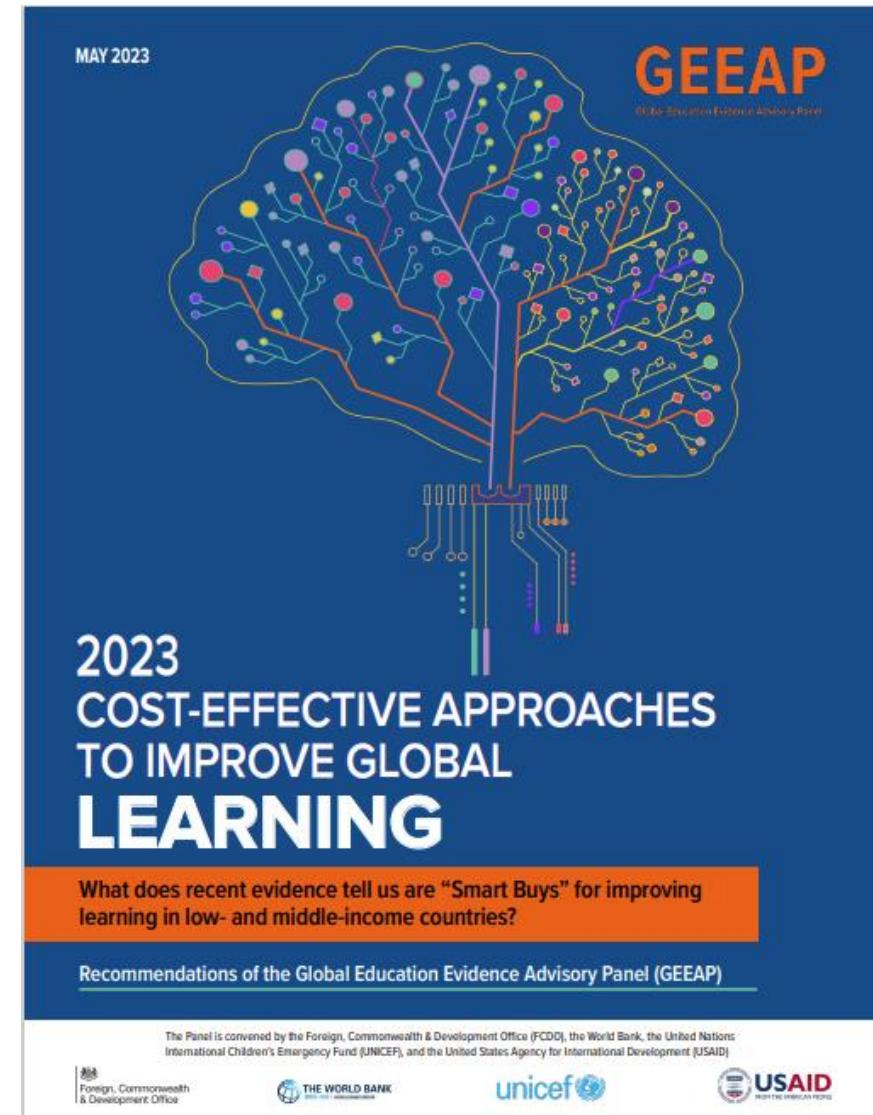


**Cost-Effective Approaches to
Improve Global Learning
(2020)**

Previous GEEAP publications:

2023 “Smart Buys” Report

- “What works” in a **cost-effective way at scale in low- and middle-income countries**
- Recommendations for policymakers, based on high-quality evidence
- Update from 2020 Smart Buys report:
 - Based on systematic search of over 13,000 additional studies → 400 studies selected to inform the Panel’s recommendations
 - New areas: health interventions; gender; socioemotional; expanded ECD/ECE



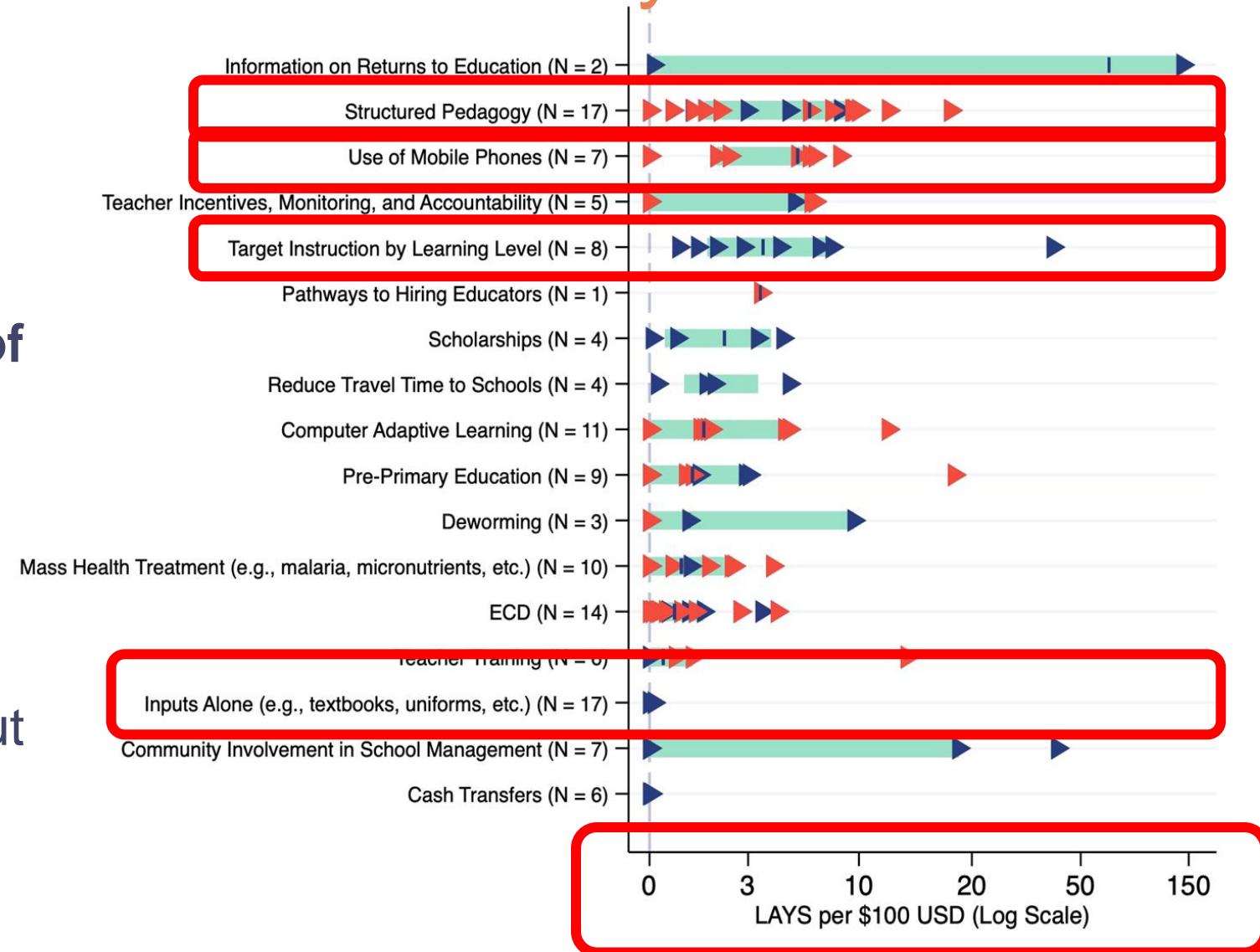
“Smart Buys” Report Groupings

The Panel groups different interventions and classes of education interventions into the following **tiers of cost-effectiveness**, reflecting both size of impact and strength of evidence:

And there are areas where governments need to make decisions or take action but evidence on how to do it effectively is low.

Systematic Search and Cost Analysis

- Use insights from systematic search to identify differences in **effectiveness** and **cost-effectiveness** by orders of magnitude.
- Results in terms of **Learning-Adjusted Years of Schooling (LAYS)**
- Analyzing cost-effectiveness was one input of many into decision process for categorizing interventions



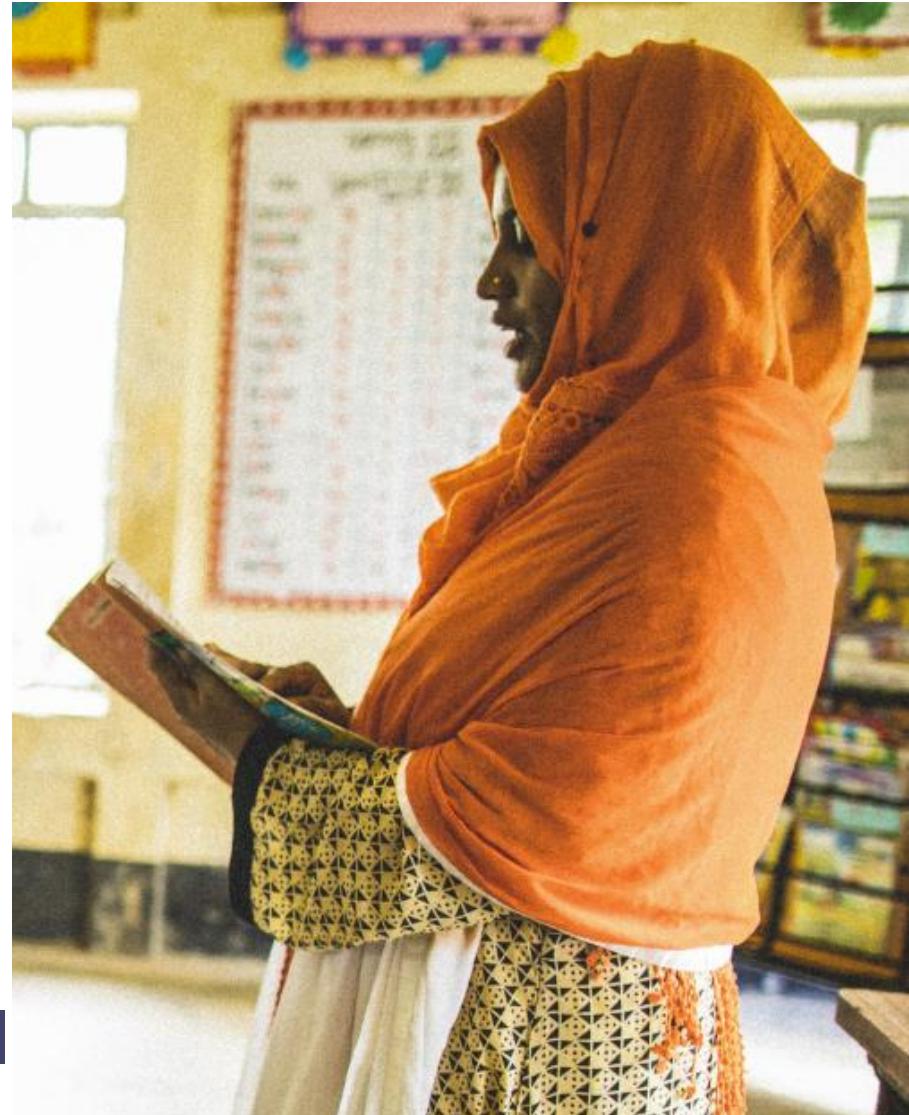
Notes: Data from Angrist et al (2020) in blue. Categories are ordered by median impact. Rectangle delineates 25th and 75th percentiles.

Context is crucial ...

- **Context, political economy, and implementation details** are critical. Complementarity may play crucial role in cost effectiveness.
- Outcome depends on the quality of implementation.

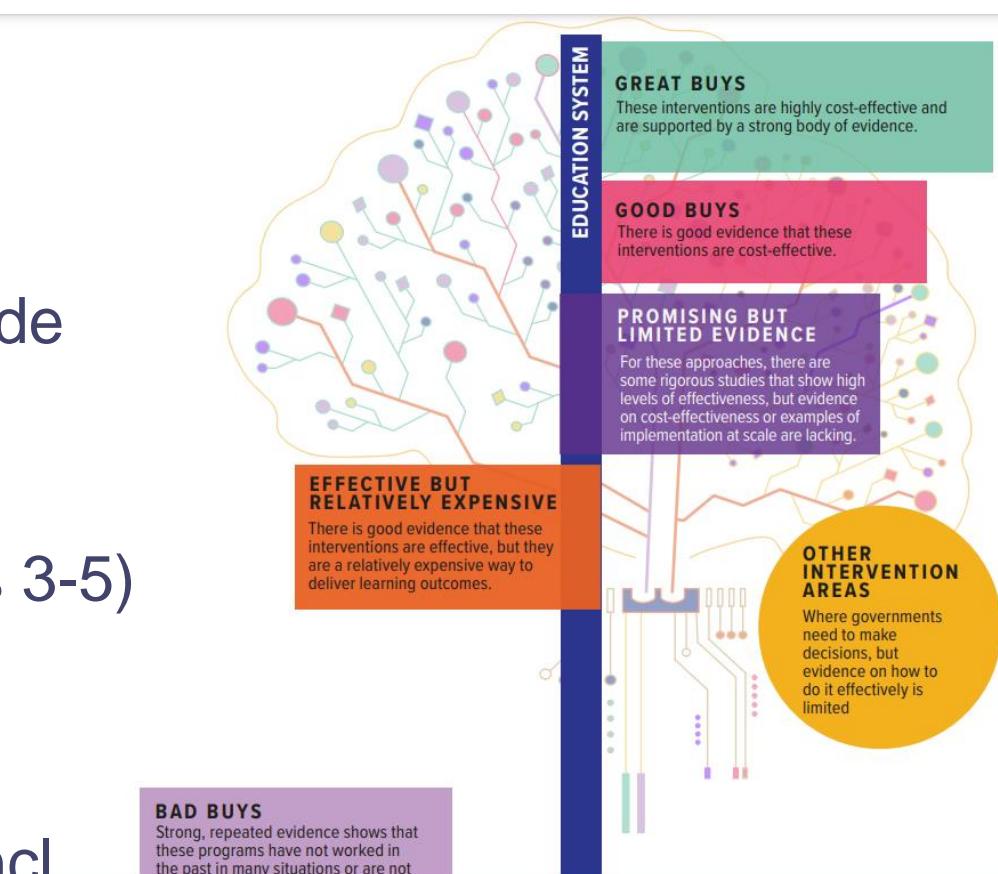
... and systems need to be aligned

- Ensuring learning for all children and youth requires **an education system that is coherent and aligned** toward learning for all



Highlights

- Great Buy: Supporting teachers with **structured pedagogy**
- Great Buy: **Targeting teaching instruction** by learning level, not grade
- Good Buys: Parent-directed **early childhood** stimulation programs and quality **pre-primary education** (ages 3-5)
- Promising but with limited evidence: **technology** investments
- Bad Buys: Providing **inputs alone** (incl. tech hardware)



Supporting teachers with structured pedagogy

- Consists of a **coherent package** of materials and appropriate training emphasizing sequential and clear delivery of learning; a package that includes structured lesson plans, learning materials, and ongoing teacher support
- Typically, **lesson plans** and/or **teaching guides** can illustrate step-by-step learning activities, important lesson routines, concepts, and sometimes common mistakes students make, and ways to remedy them.
- *Examples:* Has increased learning at relatively low cost in **Kenya**, **Liberia**, and **South Africa**, especially improving foundational literacy and numeracy.



Great Buy

Context:

- Can be effectively implemented even by teachers with limited training or poor outcomes.
- Could be less structured with teachers with high-quality pedagogical knowledge.

Targeting teaching instruction by learning level, not grade (in or out of school)

- Includes: providing **targeted help for students who are falling behind**, and **grouping children** for all or part of the day based on their learning level rather than their age.
- Can be implemented by **government teachers, volunteers, or teaching assistants**
 - **Multiple modes of delivery** - Delivery in-school by tracking in groups without changing curriculum, after-school remediation, during holiday camps.
- *Examples:*
 - Targeted instruction programs like Teaching at the Right Level (TaRL) have been implemented in a variety of settings and evaluated rigorously (**India**).
 - A version of this approach that includes an interactive pedagogy has been tested in thousands of schools in **Ghana** and implemented at scale in **Cote d'Ivoire** and **Zambia**.



Great Buy

Context:

Effective with wide variety of learning levels within a class, and where student learning levels are below grade-level curriculum expectations.

Providing information on the benefits, costs, and quality of education

- **This has increased attendance and learning at a low cost. Examples:**
 - Information to parents and children - through text messages or videos (e.g., Chile and Peru), parents' meetings (e.g., Madagascar, Chile, and the Dominican Republic), or school report cards (e.g., Pakistan).
 - Providing information on student learning to educators (e.g., cost-effective in Argentina, but not some other countries).
- Impact example: In **Mexico**, information on the income benefits of education improved learning outcomes; larger impacts for girls.

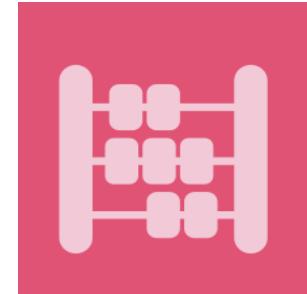


Great Buy

Context

- Can be delivered at scale at a **low cost per child**
- Delivery method must be **tailored to the country's specific needs**
- Recipients need to have **access to decision making and the means to act on the information**

Providing parent-directed early childhood stimulation programs (for ages 0 to 36 months)



Good Buy

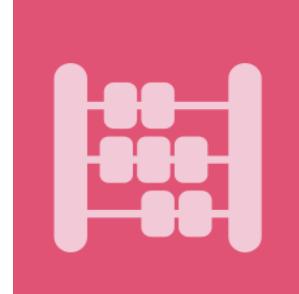
- **Programs that train parents** to provide more stimulation to their children **can generate benefits that last into adulthood**
- Home visiting program focused on early stimulation found gains in educational attainment, IQ, mental health, and earnings in adulthood (**Jamaica**).
- Most parenting studies have shown initial benefits in child development (e.g. **Bangladesh, China, Colombia, India, and Pakistan**) and a few have been effective at scale (**Peru**).
- **Cost-effective strategies for program delivery:**
Group sessions, integrate into existing platforms, use local people, non-professionals

Context

- Most countries do not have established infrastructure for **large-scale** programs
- Leverage **existing platforms** – e.g., **healthcare or cash transfer programs**
- **Quality is important:** requires on-going mentoring /monitoring with feedback

Providing quality pre-primary education (for ages 3 to 5)

- Poor early development in disadvantaged children a massive problem
- Multiple reviews demonstrate the **positive impact of pre-primary on learning and cognitive development** in children aged 3-5 in LMIC.
- Several studies found **improved learning at scale**, including teacher training or hiring in India and Kenya, or expanding infrastructure in Uruguay
- Constructing **new facilities increased** school participation in Argentina and cognition in Mozambique but **reduced** cognition in Cambodia.
- **Gains** made in pre-primary education **may fade over time if children transition to poorly integrated primary education programs and vice-versa**



Good Buy

Context

Cost-effective interventions need to provide better experience than children's homes.

Promising but with limited evidence: technology investments

- Using software that allows personalized learning and adapts to the learning level of the child (where hardware is already in schools)
 - Studies from Cambodia, China, India, and other countries – after school
 - Using computer-assisted learning during school: evidence is less robust
 - Very limited evidence at scale or with governments implementing
- Leveraging mobile phones to support learning
 - Short text messages via mobile phones to nudge engagement with content: reduced dropout rates (Brazil); improved learning (Costa Rica).
 - Informing parents about their pupil's performance via text message: improved learning outcomes (Chile).
 - However, in Botswana, text messages alone to deliver numeracy questions did not improve test scores; effective only when accompanied by live tutoring calls.



Promising



Promising

“Bad Buys” if investing in hardware or additional education inputs (incl. hardware) alone

- Interventions where the evidence has repeatedly shown that the approaches—as typically implemented—are either not effective or not cost-effective.
 - Investing in hardware like laptops, tablets and computers alone
 - Providing additional inputs alone, when other issues are not addressed, including: textbooks, additional teachers to reduce class size, school buildings, grants, salary, libraries



Bad Buys

→ School systems should strongly consider prioritizing the much more cost-effective interventions.

Intervention categories in GEEAP report

Great Buys

These interventions are highly cost-effective and are supported by a strong body of evidence.

- Supporting teachers with **structured pedagogy** (a package that includes structured lesson plans, learning materials, and ongoing teacher support)
- **Targeting teaching instruction by learning level**, not grade (in or out of school)
- Providing **information on the benefits, costs, and quality** of education

Good Buys

There is good evidence that these interventions are cost-effective

- Providing **parent-directed early childhood stimulation** programs (for ages 0 to 36 months)
- Providing **quality pre-primary** education (for ages 3 to 5)
- **Reducing travel times** to schools
- Giving **merit-based scholarships** to disadvantaged children and youth
- ❖ Administering **school-based mass deworming** where worm-load is high

❖ Means new addition in the report

Intervention categories in GEEAP report *(continued)*

Promising but limited evidence

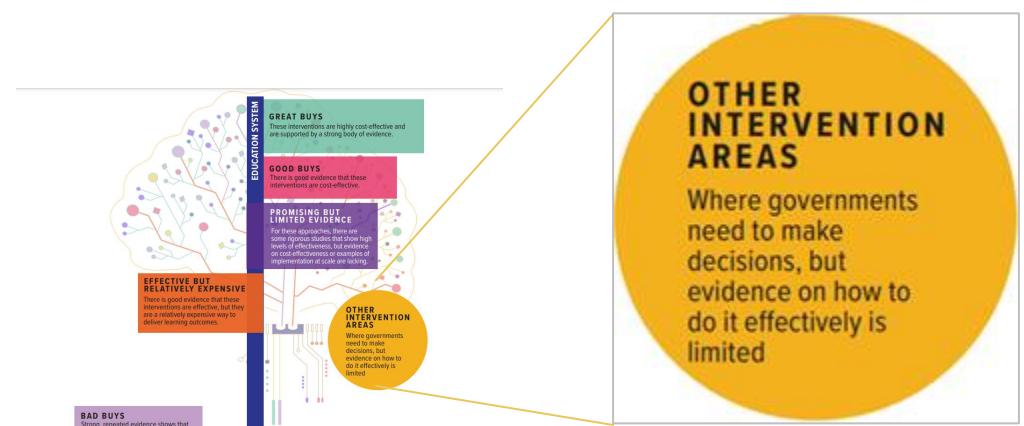
For these approaches, there are some rigorous studies that show high levels of effectiveness, but evidence on cost-effectiveness or examples of implementation at scale are lacking.

- Using **software** that allows personalized learning and adapts to the learning level of the child (where hardware is already in schools)
- Leveraging **mobile phones** to support learning
- ❖ Augmenting teaching teams with **community-hired staff**
- **Involving communities** in school management
- Targeting **interventions towards girls**
- ❖ **Safeguarding** students from violence
- ❖ Teaching **socio-emotional and life skills**
- ❖ Providing **mass treatment for common health conditions** including free eyeglasses, multi micronutrients, and preventative malaria treatment

Effective but relatively expensive

There is good evidence that these interventions are effective, but they are a relatively expensive way to deliver learning outcomes. They might be appropriate for school systems with larger budgets or to achieve non-education objectives.

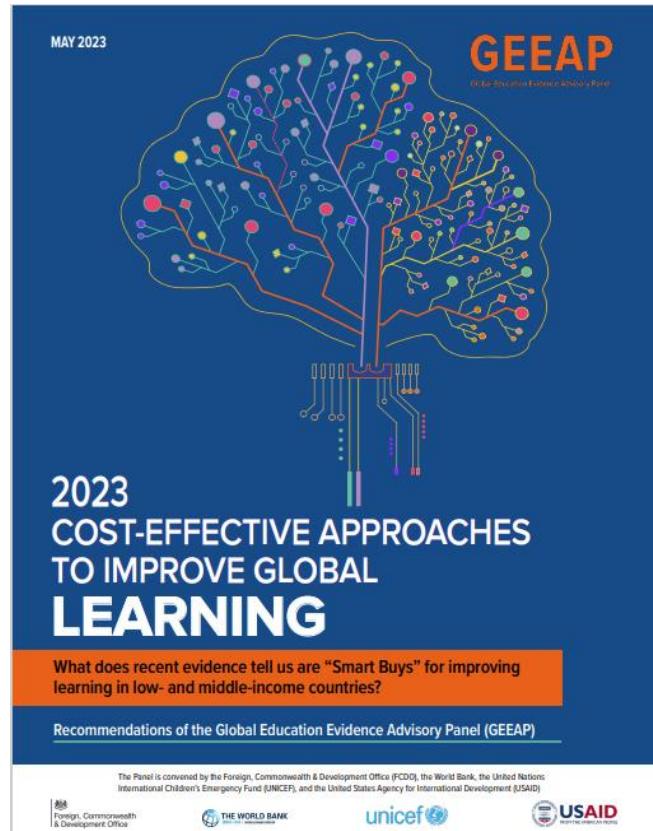
- **Transferring cash** (as a tool for improving learning)
- ❖ **Feeding in Primary Schools**



❖ Means new addition in the report

Thank you

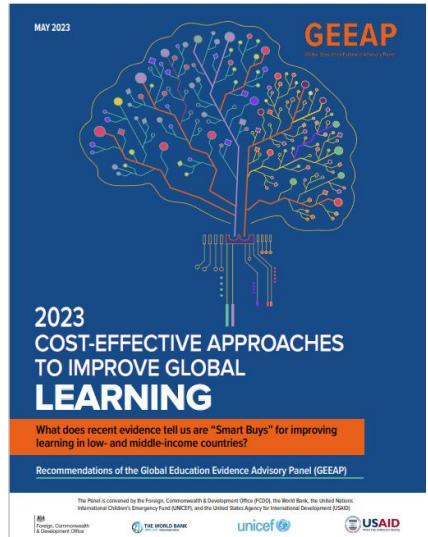
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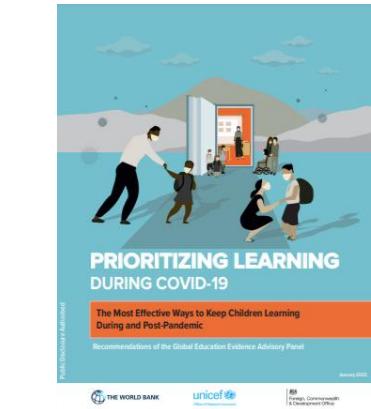
<https://tinyurl.com/yx327b65>



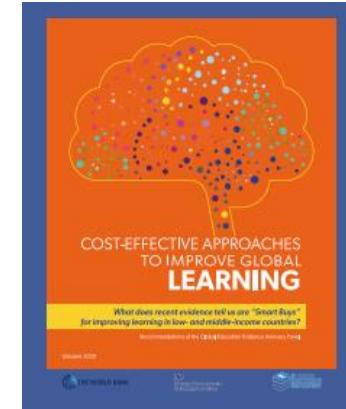
Thank you!



2023 Cost-effective Approaches to Improve Global Learning
Link:
<https://tinyurl.com/yx327b65>



Prioritizing Learning During Covid-19
Publication link:
<https://bit.ly/3rWrAkW>
 and
<https://bit.ly/3u3EHmP>



Cost-Effective Approaches to Improve Global Learning (2020)
Publication Link
<https://bit.ly/3nHwzEu>

Disclaimer:

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