# Cost-effective Approaches to Improve Global Learning

What does recent evidence tell us are ‘Smart Buys’ for improving learning in low- and middle-income countries?

Inaugural report from the new Global Education Evidence Advisory Panel

28 October 2020

# Smart Buys: Principles

***Global Education Evidence Advisory Panel***

*Smart Buys launch, 28 October 2020*

BUILDING EVIDENCE IN EDUCATION

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# Objective

Identify evidence-based and cost-effective practices and disseminate recommendations to support policymakers' decision making to improve learning outcomes

# To address learning gaps, we need both local context knowledge and global lessons on Smart Buys

Panel hopes to provide clear recommendations based on rigorous research. These are generalized lessons on what are the Smart Buys in education for LICs and MICs.

Governments and donor organisations develop deep understanding of context, and diagnose needs and priorities

Locally decide which of these Smart Buys address local need and can be implemented well locally.

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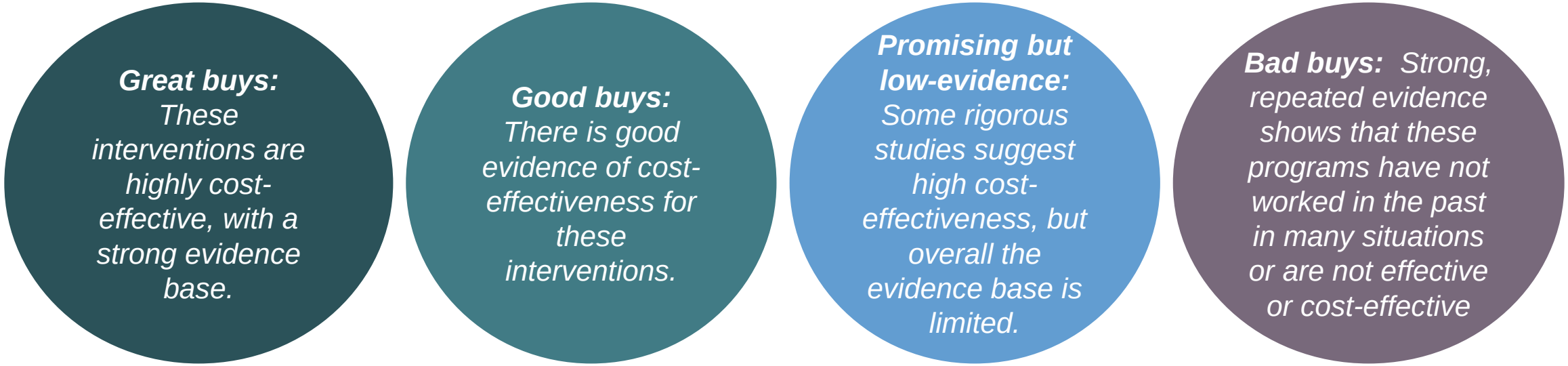
# Principles in determining Smart Buys

Classification decisions consider the following:

- Key outcome is foundational learning in **basic education**
- Novel approach of the report is the focus on **cost effectiveness**, recognising the need to get the most out of education investments
- Conclusions focus on where there is a strong **evidence** base, with weight given to research conducted at scale with impacts that lasted a long time
- Panelists have brought their diverse expertise to **interpret** the evidence, as this could not just be a counting exercise
- **Equity** matters – looking at learning for all, not just the privileged few

# Tiers of Smart Buys

We group different interventions and classes of education interventions into the following tiers of cost-effectiveness, reflecting both size of impact and strength of evidence:




Despite the rapid growth of the evidence base, there are also many important interventions for which rigorous, actionable evidence is still in short supply. These interventions that are grouped below as “areas where governments nevertheless need to make decisions or take action but evidence on how to do it effectively is low.” This and the “promising but low-evidence” category should help in setting future research priorities.

# Overall implications for systemic reform

- Individual interventions are not all that matters - **systemic reform** is crucial for sustainable systemwide improvements in learning
- Ensuring learning for all children and youth requires an education system that is **coherent and aligned toward learning**, and alignment should encompass the key system actors, policies, incentives, pedagogy, and capacity
- This in turn requires **political commitment** from the top to help systems escape low-learning traps (e.g., Brazilian state of Ceará, which has made remarkable gains over a decade)
- Smart Buys interventions should be **embedded** in and support systemic reform, not substitutes for it.

# Smart Buys: Findings

# Great Buy

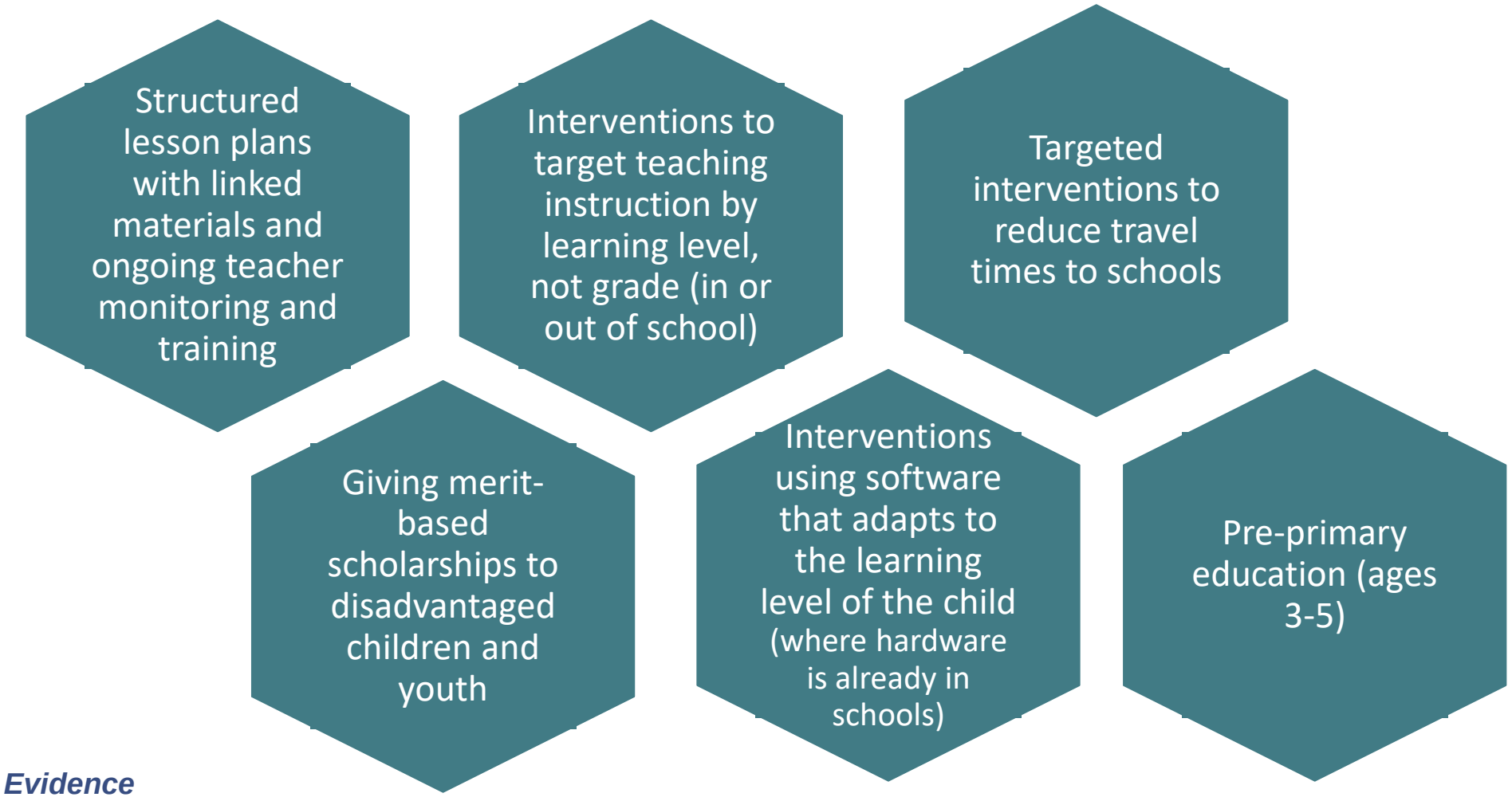
*Highly cost-effective with strong evidence*

Giving information on education benefits, costs, and quality

- **How it works**: Providing information to parents and children on the income benefits of education, sources of funding available, or choice of school quality, has increased attendance and learning at low cost.
- **Smart examples**: In Mexico, information improved learning outcomes and had larger impacts on girls (although didn't impact dropout rates). Information can be shared through texts or videos (Chile, Peru), parents' meetings (Madagascar, Chile, and the Dominican Republic), school report cards (Pakistan), and reminders.
- **Strength of evidence**: Tested at large scale, low cost per child if delivered at scale.
- **Context**: Relevant where information is available and that information has to be good quality, specific, locally relevant, and not well known. But, recipients must have the means to act on the information; for example, there must be schools nearby so that families who are inspired to keep their girls in school are able to do so safely, safely, and communities who receive information need to have enough access to decision-making structures to spur action.

# Good Buys

*Good evidence of cost-effectiveness. Here we consistently find evidence from across contexts that these interventions have produced good value for money outcomes in learning. These have been proven to work at significant scale - at least thousands of students, and in some cases system-wide*

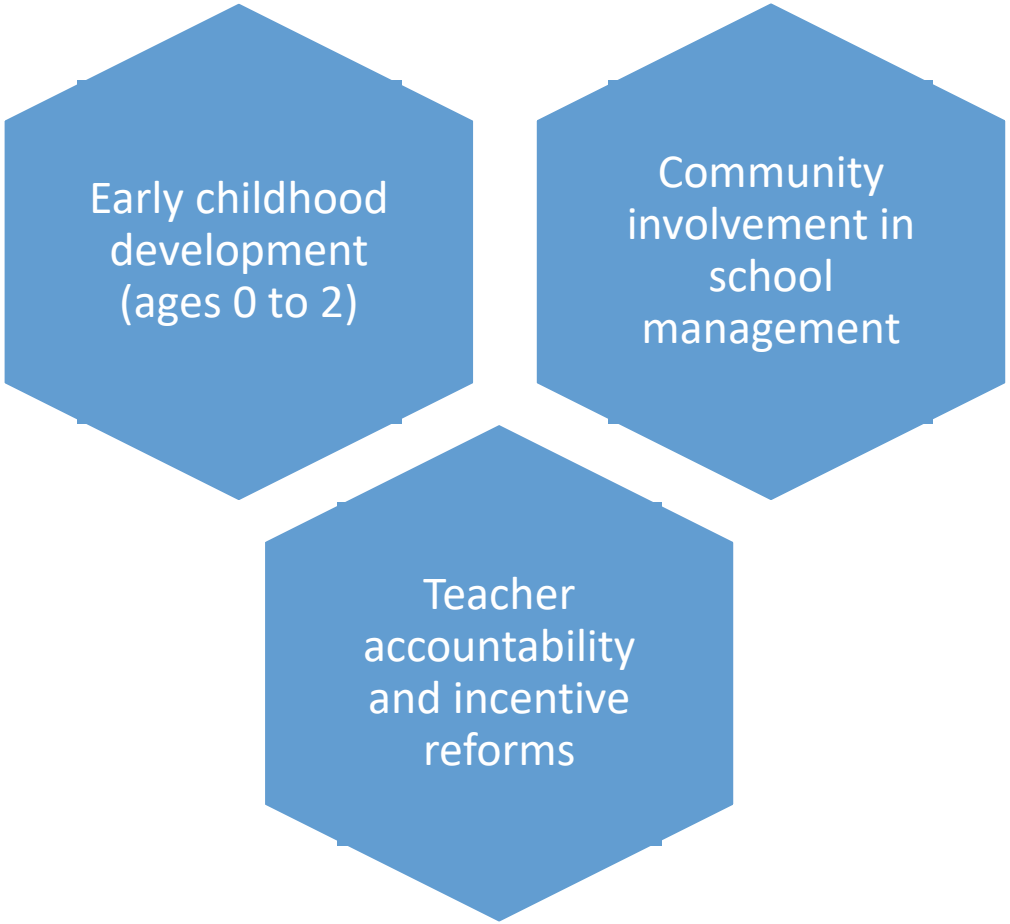


# Good Buys: Example

- **Problem:** Millions of poor children show lower levels of language and cognitive development than their better-off peers over their first 5 years of life, affecting their ability to benefit from basic education.
- **How it works:** Pre-primary improve basic learning if children attend regularly and if the classroom experience is better than what children already experience in the home.
- **Smart examples:** Across contexts (Argentina, Brazil, Ghana, India, Mozambique, and Uruguay) pre-primary education for ages 3-5 has positive impacts on learning and/or cognitive development. Several of these studies have tested low-cost models at large scale (e.g., India) and using national systems (Uruguay). Some studies have found short impacts (India, Brazil, and Indonesia), other studies found long term effects too (Uruguay, US), as well as more rapid cognitive development and learning in primary school (Argentina, Ghana, and Mozambique).
- **Evidence base:** Strong evidence in HICs, growing in MICs, and less in LICs.
- **Context:** Gains made in pre-primary education may disappear quickly if children have to transition to low-quality primary education, so in these contexts, investments in improving preschool and primary would ideally go together.

# Promising but Low-Evidence

*Evidence is limited: there are fewer studies than for good buys and no studies that show the approach delivers improved learning at large scale. However, there are rigorous studies including at smaller scale that show high levels of cost-effectiveness. More testing to develop scalable models is recommended.*



# Promising but Low-Evidence: Example

- **Problem**: Providing feedback to schools through community involvement (India, Indonesia, Gambia) or better data on teachers and students (Indonesia) has often had little impact. Where involving community members in school management has worked (Indonesia, Uganda, Kenya), however, it is very cost-effective.
- **Smart examples**: A feature of successful interventions (Indonesia, Kenya) has been explicitly linking school committees that involve community members with higher levels of authority.
- **More research needed**: More work testing different designs needed to understand when and why it works, including composition, government structures, and complementary mechanisms, all of which appear to be important for effectiveness.
- **Context**: May be most promising where power asymmetries between school authorities and parents is not too great, and where there are potential complementary sources of accountability for schools (such as well-functioning local governments to which community members have good access); unfortunately these are also the settings where the need for these interventions might be less.

# Bad Buys

*Strong, repeated evidence that these programs have not worked in the past in many situations or are not effective or cost-effective. We should stop doing them unless there is a carefully thought-out rationale*

Additional inputs alone, whether:

• textbooks • additional teachers to reduce class size • grants • salary • libraries

Investments in laptops, tablets, and other computer hardware alone

Cash transfers (as a tool for improving learning)

# Bad Buys: Example

Investments in laptops, tablets, and other computer hardware alone

- **Problem with inputs alone:** A mistake that many systems make is to assume that just investing more in inputs on the margin, without improving how they are used or for whom, will improve learning. This approach can be tempting for politicians who want to show that they are “doing something about education,” because new materials and infrastructure are more visible than some of the cost-effective approaches to pedagogy and classroom organization.
- **Problem with laptops:** Computers/educational technology are just another type of input, but they deserve special mention, because they are often especially enticing and especially expensive. As with other inputs, investing in hardware alone is a bad buy.
- **Examples**: When not accompanied by well-thought-out complementary measures—including personalized adaptive software and training of teachers on how to use the software—adding computers has no impact. Implementation issues are a recurring challenge in hardware programs; an example is the lack of a coordinated approach in the One Laptop per Child scheme in Brazil.
- **What to do instead:** Using technology that is already available.

# Areas where governments nevertheless need to make decisions or take action but evidence on how to do it effectively is low

*Aspects of schooling and learning where government needs to act but where there is relatively little robust evidence of ways to do so successfully. Here we include areas of intervention where there is a lot of work, but the limited evidence we've seen to date is inconclusive or even discouraging. This and the high potential category could help to inform future research priorities.*

- General-skills teacher training (in-service)
- Selection and allocation of teachers
- Differentiating support by gender (if falling behind on access or learning)
- Targeted support for children living with disabilities
- Interventions to safeguard students from violence

*Not a comprehensive list*

# With thanks to the members of the Global Education Evidence Advisory Panel

### Professor Kwame Akyeampong

- 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.

### Professor Susan Dynarski

- Professor of Public Policy, Education and Economics, University of Michigan (Joining Harvard in 2021)
- 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.

### Dr Benjamin Piper

- Senior Director, Africa Education, RTI International
- Education expert who has done transformative work on the Tusome national scale literacy program in Kenya (link) and the PRIMR Initiative, which tested low-cost and scalable approaches to improving reading and mathematics outcomes in Kenya.

### Professor 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 Center for Economic Research in Pakistan (CERP).

### Dr Rachel Glennerster

- Chief Economist, Foreign, Commonwealth and Development Office (FCDO)
- Expert on assessing cost-effectiveness of alternative interventions to reduce poverty, including in education. Researcher and policy advisor

### Jaime Saavedra

- Former Minister of Education of Peru, currently head of the Education global practice at the World Bank;
- Researcher and policymaker with extensive expertise on education, inequality and poverty reduction.

### Professor Abhijit Banerjee

- Professor of Economics, MIT
- Nobel prize-winning economist celebrated for experimental approach to alleviating global poverty.

### Emeritus Professor 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. Recently made an Officer of the Most Excellent Order of the British Empire (OBE)

### Sylvia Schmelkes

- Provost of Universidad Iberoamericana, Mexico City
- Sociologist and education researcher who headed Mexico's National Institute for the Evaluation of Education; has expertise in intercultural bilingual education, values, and adult learning

### Dr Rukmini Banerji

- CEO, Pratham Education Foundation
- Innovator in new pedagogical approaches and assessment, leader of large movement to transform education in India and beyond

### Professor Karthik Muralidharan

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

### Professor Hirokazu Yoshikawa

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