



What Works Hub
for Global Education

What Works Hub for Global Education

Approach and key resources



What Works Hub for Global Education: approach and key resources

Summary

The What Works Hub for Global Education is an international partnership focused on implementation of effective education reforms by governments at scale. Its ultimate goal is to increase foundational literacy and numeracy skills in low- and middle-income countries.

Finding out what works through controlled studies has been a critical first step for improving learning outcomes. Now the challenge is putting effective approaches into practice at scale, when theory meets all the messiness of implementation, politics and contextualisation.

Supporting governments to put evidence-based approaches into widespread practice, to ensure millions of children benefit, is the next frontier. The What Works Hub for Global Education is undertaking world-leading research and supporting real-world reform simultaneously. The Hub's consortium of partners is studying how to implement education reforms at scale, while supporting governments in real time to do it. By working alongside governments as they put in place reforms, the Hub is generating evidence about the ingredients of successful implementation. The Hub currently works in 11 countries: India, Pakistan, Rwanda, Tanzania, Botswana, Bangladesh, Ghana, Kenya, Nigeria, Sierra Leone and South Africa.

The What Works Hub for Global Education aims to ensure that evidence on improving learning travels from research, into government discussion, on to policy adoption, through to large-scale implementation of reforms, and right into day-to-day implementation in the classroom by schools and teachers. If this can be achieved, millions of children will have better outcomes.

The Hub is structured around three pillars, as set out below. This document contains summaries of some of the Hub's key resources to support governments.



1. EVIDENCE TRANSLATION	2. EVIDENCE USE	3. IMPLEMENTATION SCIENCE
Making best existing evidence clear and available to governments so they can use it effectively (evidence synthesis, curation and translation.)	Supporting evidence generation and use by governments for policy design and implementation (education labs, strengthening individual and institutional capacity).	Research supporting governments in real time to implement evidence-based reforms at scale (catalyse new focus on implementation within education research).
Resources: <u>The benefits of foundational learning to individuals and society: a review of the evidence</u> <u>Implementing structured pedagogy programmes effectively at scale</u> <u>Implementing teaching at the right level effectively at scale</u>	Resources: <u>Education evidence labs: embedding an evidence-based approach within governments</u>	Resources: <u>Using A/B testing to improve education programmes at scale</u>



What Works Hub for Global Education

What Works Hub for Global Education Overview

The What Works Hub for Global Education is a multi-year collaborative research initiative between the UK government's Foreign, Commonwealth & Development Office (FCDO), the Gates Foundation, the World Bank, UNICEF Innocenti, UNESCO-IIEP, Building Evidence in Education (BE2), the Global Education Evidence Advisory Panel (GEEAP), the Learning Generation Initiative, the Jacobs Foundation, the British Council and the Blavatnik School of Government, University of Oxford. The Blavatnik School is convening a consortium of more than 40 partners that is generating evidence about effective implementation of education reforms, by working alongside governments undertaking such reforms in low- and middle-income countries (LMICs). The 40 consortium partners are a unique mix of world-leading academics, grassroots organisations, and governments themselves, with the majority of partners based in LMICs.



The benefits of foundational learning to individuals and society: a review of the evidence

Summary

Research synthesis from the What Works Hub for Global Education¹ shows **positive links between learning and economic growth, individual earnings, child mortality, and school progression**. This brief summarises this evidence, making the case for investment in foundational learning.

Economic development

- A one standard deviation improvement in student test scores is associated with a **2-percentage point increase in a country's per capita growth rate per year**.²
- In 39 low- and middle-income countries, similar learning improvements are associated with a **5-6 percentage point reduction in the youth unemployment ratio**.³

Return on investment

- Learning gains can yield **USD 1,000 in lifetime benefits** per student with an average USD 34 investment for USAID foundational education programmes – **a 30:1 return**.⁴

Educational progression

- Higher learning means children stay in school longer – a one standard deviation learning increase is associated with **up to two additional years of schooling**.⁵

Gender outcomes

- Improved foundational learning is linked to **lower fertility and teenage childbearing**, as well as **stronger financial behaviours among women**. Completing primary school and acquiring literacy is associated with a 37% decrease in births per woman and a 0.9 SD increase in financial behaviours such as savings and money management.⁶

To realise these substantial returns, governments need to prioritise cost-effective, scalable policies and programmes that ensure that schooling leads to learning. These include innovative approaches such as:

- **Teaching at the Right Level** and similar differentiated instruction approaches that meet students at their current learning level;

- **Structured pedagogy programmes** that include high quality, integrated lesson plans, student materials, teacher training and support, and monitoring; and
- **Measuring learning and the implementation** of policies and programmes that aim to improve learning.

Table 1: Summary of the evidence on learning and select life outcomes

Outcome	Effect size	Countries
Earnings	One standard deviation increase in test scores → 2–48% increase in earnings	Pakistan, Mexico, Indonesia, China, South Africa
School dropout	One standard deviation increase in test scores → 17–51% decrease in the probability of dropping out	Ethiopia, India, Peru, Vietnam, Cambodia, Kenya
School attainment	One standard deviation increase in test scores → 0.2–2 year increase in years of eventual schooling	Ethiopia, India, Pakistan, Peru, Vietnam, China, Senegal, Madagascar
Economic growth	One standard deviation increase in test scores → 1.4–2 percentage point increase in annual per capital GDP growth rate	39-80 countries
	Role of human capital (quality education) in GDP per worker: 20–60%	Global
Child mortality	Completing primary school and acquiring basic literacy → 67% decrease in child mortality	50 low- and middle-income countries
Fertility	Completing primary school and acquiring basic literacy → 37% decrease in births per woman	50 low- and middle-income countries

Note: Effect size ranges are aggregated across multiple studies and countries.

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¹ Kaffenberger, M., Melville, S. & Agarwal, M. (2025). The benefits of foundational learning to individuals and society: a review of the evidence. What Works Hub for Global Education. Synthesis brief, 2025/003. https://doi.org/10.35489/BSG-WhatWorksHubforGlobalEducation-RI_2025/003

² Hanushek, E.A., & Woessmann, L. (2012). Do Better Schools Lead to More Growth? Cognitive Skills, Economic Outcomes, and Causation. *Journal of Economic Growth*, 17(4), 267–321. <https://doi.org/10.1007/s10887-012-9081-x>.

³ Lee, J.N., & Newhouse, D. (2012). Cognitive Skills and Youth Labor Market Outcomes. *World Bank Human Development Network*.



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<https://documents1.worldbank.org/curated/en/662341520411124442/pdf/123973-WP-Cognitive-skills-PUBLIC.pdf>

⁴ Crawford, L. (2025). Why the US Should Keep Funding Global Education (blog). *Center For Global Development*. <https://www.cgdev.org/blog/why-the-us-should-keep-funding-global-education>

⁵ Das, J., Singh, A., & Yi Chang, A. (2022). 'Test Scores and Educational Opportunities: Panel Evidence from Five Low- and Middle-Income Countries'. *Journal of Public Economics* 206 (February):104570. <https://doi.org/10.1016/j.jpubeco.2021.104570>.

⁶ Kaffenberger, M., & Pritchett, L. (2021). 'Effective Investment in Women's Futures: Schooling with Learning'. *International Journal of Educational Development* 86 (October):102464. <https://doi.org/10.1016/j.ijedudev.2021.102464>.

Education evidence labs

Summary

Education Evidence Labs or Ed Labs are institutions, processes or relationships that bring evidence generation, uptake and use into or close to governments. What Works Hub for Global Education supports multiple types of existing and new Ed Labs across Rwanda, Tanzania, Ghana, South Africa, Pakistan and India, providing demand driven technical advisory support, capacity strengthening and knowledge exchange. A key principle for Ed Labs has been to follow *function over form*, such that the Hub supports and learns from different forms of Ed Labs that perform a range of functions towards institutionalisation of evidence use by governments.

What Works Hub for Global Education aims to advance global knowledge on Ed Labs, by convening and collaborating with partners including Jacobs Foundation, Innovations for Poverty Action, J-PAL, Education Endowment Foundation. The Hub will create a shared learning agenda on Ed Labs, informing research, evaluation and technical engagements across different countries, as well as joint knowledge outputs around evidence use by governments.

What Works Hub for Global Education will facilitate shared learning and peer support among Ed Lab teams, through communities of practice working on capacity strengthening, knowledge exchange and mentorship.

What Works Hub for Global Education also offers bespoke technical and capacity support to country Ed Lab teams. This includes working with institutional and government partners to identify and assess needs around data and evidence use, conduct research aligned with policy priorities, communicate evidence and strengthen implementation of education reforms. For instance, in South Africa, the Hub is supporting a case study on the Department of Basic Education's Ed Lab; the Karnataka (India) Ed Lab is strengthening government data systems, process monitoring and implementation; the Tanzania Ed Lab is generating evidence and informing implementation of teacher continuous professional development policies.

What Works Hub for Global Education typology of Ed Lab functions

Data use	Research and synthesis	Policy communication	Implementation support
Analysis of administrative/EMIS data	Co-creating research agenda	Drafting presentations, policy briefs and other outputs	Supporting government in design and drafting of policy and programmes based on research and evidence
Supporting data use for planning, budgeting and prioritisation	Commissioning and conducting research	Dissemination of data, evidence and knowledge outputs for uptake and strategic impact	Supporting in roll out/implementation of policies and programmes (including drafting memos, documents, orders, process monitoring, engaging with technical partners, etc.)
Knowledge sharing and capacity strengthening for government officials on data use	Supporting test-learn-adapt approaches for informing and improving implementation	Facilitating meetings and workshops for govt / relevant stakeholders	Supporting government in conducting and preparing for education sector review meetings
Supporting monitoring and evaluation for government programmes	Synthesising and translating evidence based on government needs		
Data visualisation			

What Works Hub for Global Education typology of Ed Lab forms

	Type 1	Type 2	Type 3
Structure	Inside government: embedded staff in ministries, Ed Lab developed, hosted and owned by government.	Close to government: embedded staff/units developed outside and hosted near ministries with links to government.	Outside government: building on existing independent, strategic relationships with government.
Advantages	Easier to choose demand led topics. Higher starting levels of trust among officials.	Proximity facilitates trust among officials. Affiliation can bolster influence over time.	Flexibility in topic focus of engagement. Independence from political dynamics.
Limitations	Political risk to impartiality or survival. Securing finance can be challenging.	Bureaucratic process can lead to delays. Securing financing can be challenging.	Less proximity may lead to missing opportunities. Strong competition for access to senior officials.
Locations	South Africa, Tanzania, Rwanda, Ghana	Pakistan (PIE, PFL Hub) India (Karnataka)	Pakistan (CERP) India (UP)



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Implementing **structured pedagogy** programmes effectively at scale

What is structured pedagogy?

Structured pedagogy is a teaching and learning approach centred on a **well-sequenced and scoped progression of competencies** for children to master and an **aligned package** of detailed lesson plans, student learning materials, introductory teacher training, ongoing coaching and/ or supervision for teachers, and other forms of support.

What is the evidence base for structured pedagogy?

Reviews of research on educational interventions in global south contexts have consistently found structured pedagogy to be **one of the most effective interventions** for raising children's foundational literacy and numeracy levels at scale. For example:

- In Liberia, the Read Liberia structured pedagogy programme increased the proportion of students meeting the Ministry of Education's oral reading fluency benchmark from 13% to 35.5%.
- In Kenya, the Tusome structured pedagogy programme increased the proportion of students meeting the emergent literacy benchmark from 12% to 30% for English, and from 13% to 35% for Kiswahili.

Moreover, structured pedagogy programmes typically achieve these outcomes **cost-effectively**. Accordingly, structured pedagogy is recommended as one of only three 'Great Buys' in the 2023 Global Education Evidence Advisory Panel report.

Academic research also provides evidence for how and why structured pedagogy programmes work. For example, a well-sequenced progression of competencies is important for 'scaffolding' the student learning process. An aligned package of lesson plans, instructional materials, training, and ongoing support helps teachers to master new pedagogical techniques and embed them in daily lessons.

Where has structured pedagogy been implemented?

Structured pedagogy programmes have been implemented at scale in many education systems in Sub-Saharan Africa – **Ghana, Kenya, Liberia, Malawi, Nigeria,**

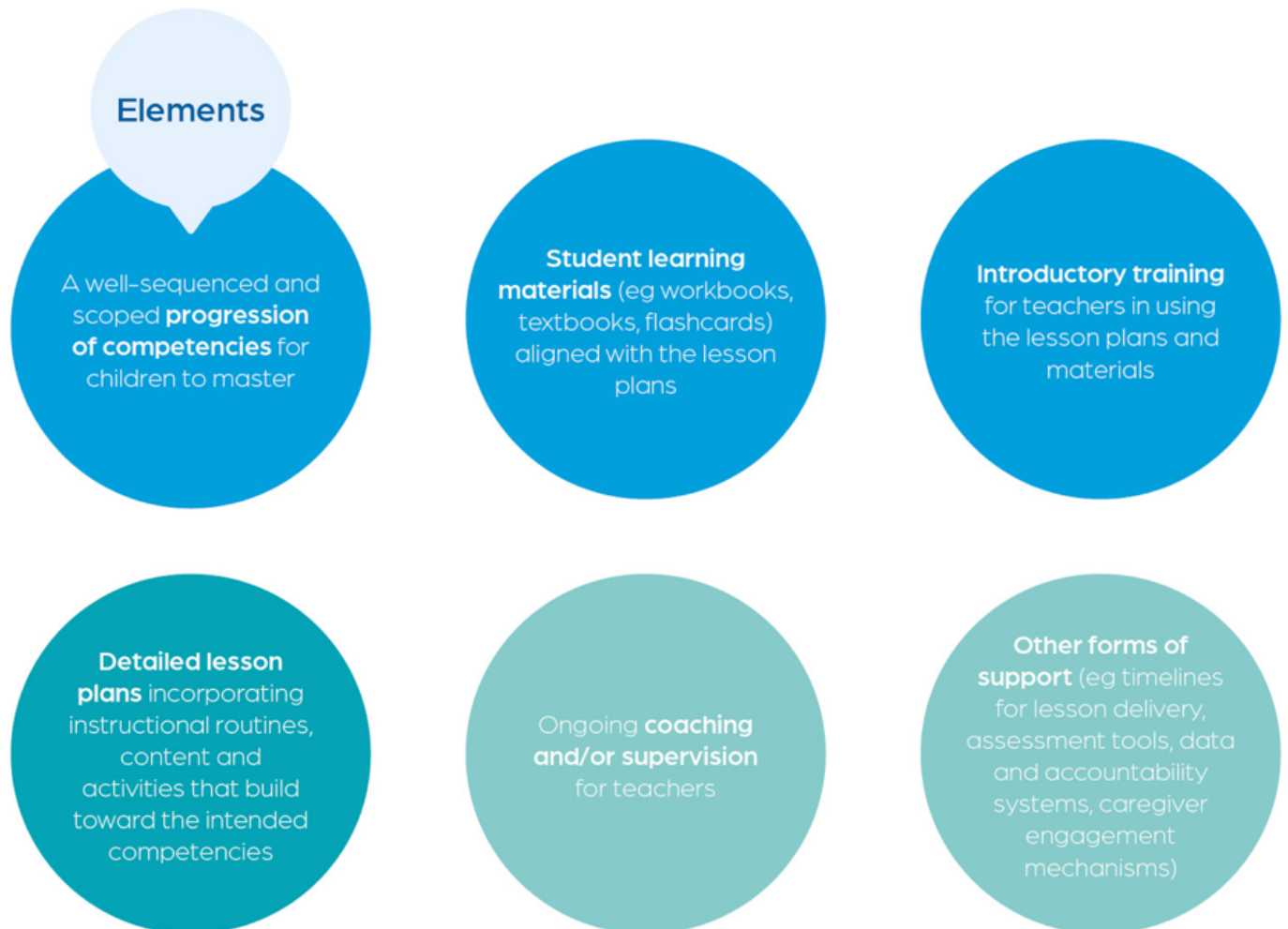


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Senegal, South Africa, and Uganda – and in South Asia – **India and Pakistan**. All of these programmes targeted the lower primary grades (one programme also included kindergarten, another included out-of-school children). All programmes focused on foundational literacy, with some also addressing numeracy.

Theory of change for structured pedagogy programmes

Effective structured pedagogy programmes have **six elements**, as shown in the figure below. Collectively, these elements equip teachers to deliver effective classroom lessons that build toward the targeted competencies, and to continually strengthen and use effective teaching practices. In turn, children will consistently spend time working on the targeted knowledge and skills, aligned to a sequence and pace that meets their needs. Thus, they will master the targeted competencies.





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Key resources

Hwa, YY., Kayton, H. L., & Kaffenberger, M. (2024). Implementing structured pedagogy programmes at scale. What Works Hub for Global Education. Synthesis brief, 2024/002. https://doi.org/10.35489/BSG-WhatWorksHubforGlobalEducation-RI_2024/002

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Teaching at the right level: The core components of an effective approach

What is teaching at the right level?

Teaching at the right level is a pedagogical approach that helps children catch up on foundational literacy and numeracy skills. Children are first assessed on their mastery of foundational skills, and then they are taught in groups of peers at the same learning level using interactive instructional methods and activities that are aligned with their learning levels.

What is the evidence base for teaching at the right level?

Reviews of research on educational interventions in global south contexts have consistently found teaching at the right level to be **one of the most effective interventions** for raising children's foundational literacy and numeracy levels at scale. For example:

- In Uttar Pradesh (India), teaching at the right level 'learning camps' raised the proportion of children (grades 3–5) who could read a paragraph or story from 15% to 49%.
- In Botswana, 30 hours of teaching at the right level lessons raised the proportion of children who demonstrated mastery of all four basic maths operations (addition, subtraction, multiplication, division) from 11% to 40%.

Crucially, teaching at the right level programmes typically achieve these outcomes **cost-effectively**. Accordingly, these programmes are recommended as one of only three 'Great Buys' in the 2023 Global Education Evidence Advisory Panel report (which refers to these programmes as 'targeted instruction').

Where has teaching at the right level been implemented?

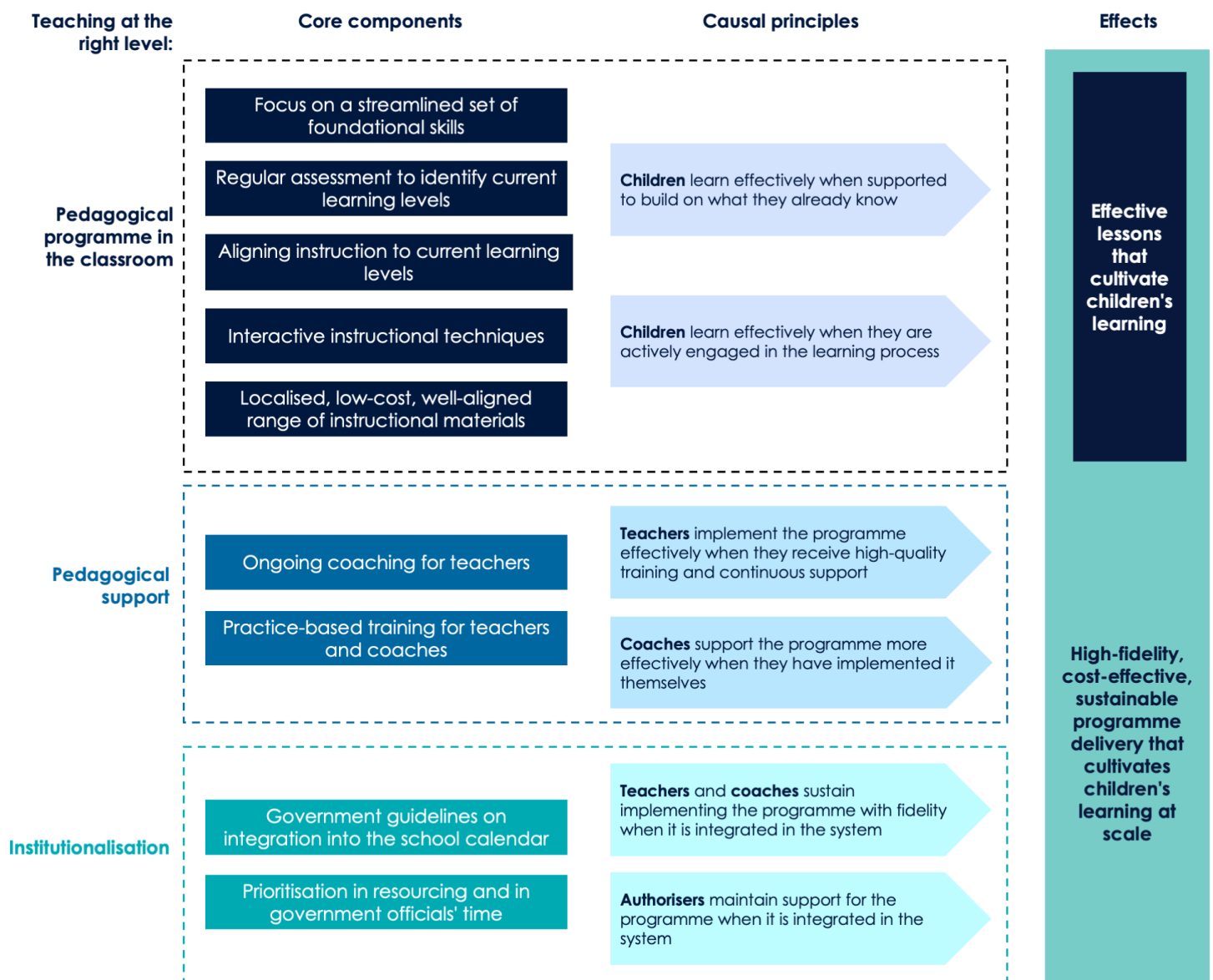
From its origins in **India**, teaching at the right level has now spread elsewhere in South Asia (**Pakistan, Nepal**) to numerous education systems in sub-Saharan Africa, including **Zambia, Côte d'Ivoire, Nigeria, Botswana, Cameroon, Guinea, Ghana, Kenya, Niger, Madagascar, Uganda, Zanzibar, Angola, Somaliland, and Namibia**.



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Core components of teaching at the right level

New research from the What Works Hub for Global Education identifies the 'core components' of teaching at the right level. Each of these core components, shown in the figure below, is essential to effectively implementing and institutionalising a teaching at the right level programme at scale through the government school system.





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Key resources

What Works Hub for Global Education. (forthcoming). Core components of teaching at the right level: Unpacking the “black box” of proven programs by systematically combining multiple sources of rigorous evidence with implementer insights. What Works Hub for Global Education working paper. *Note: If you would like to be notified when this paper is released, please email wwhge@bsg.ox.ac.uk.*

Banerjee, A., Banerji, R., Berry, J., Duflo, E., Kannan, H., Mukerji, S., Shotland, M., & Walton, M. (2017). From proof of concept to scalable policies: Challenges and solutions, with an application. *Journal of Economic Perspectives*, 31(4), 73–102.
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<https://www.brookings.edu/articles/adapting-innovating-and-scaling-foundational-learning/>

Global Education Evidence Advisory Panel. (2023). *2023 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?* FCDO, the World Bank, UNICEF, and USAID. <http://documents.worldbank.org/curated/en/099420106132331608/>

See also:

- TaRL Africa website: <https://teachingattherightlevel.org/>
- Webinar series on implementing teaching at the right level: <https://www.povertyactionlab.org/page/teaching-right-level-tarl-webinar-series>
- FLN Hub resources: <https://www.flnhub.org/focus-area/teaching-at-the-right-level>

Using **A/B testing** to improve education programmes at scale

Summary

The What Works Hub for Global Education is advancing the use of A/B testing as a practical tool to help governments and implementers improve how programmes are delivered at scale.¹

Unlike traditional Randomised Controlled Trials (RCTs) that compare a programme to no programme, A/B testing compares two or more versions of the same programme to determine which works better (see Figure 1). For example, one group of schools might receive a remedial education programme (version A), while another receives the same programme with added teacher mentoring (version B). Comparing results reveals which version delivers greater impact.

Figure 1: The 3Rs – Key principles and attributes of A/B tests



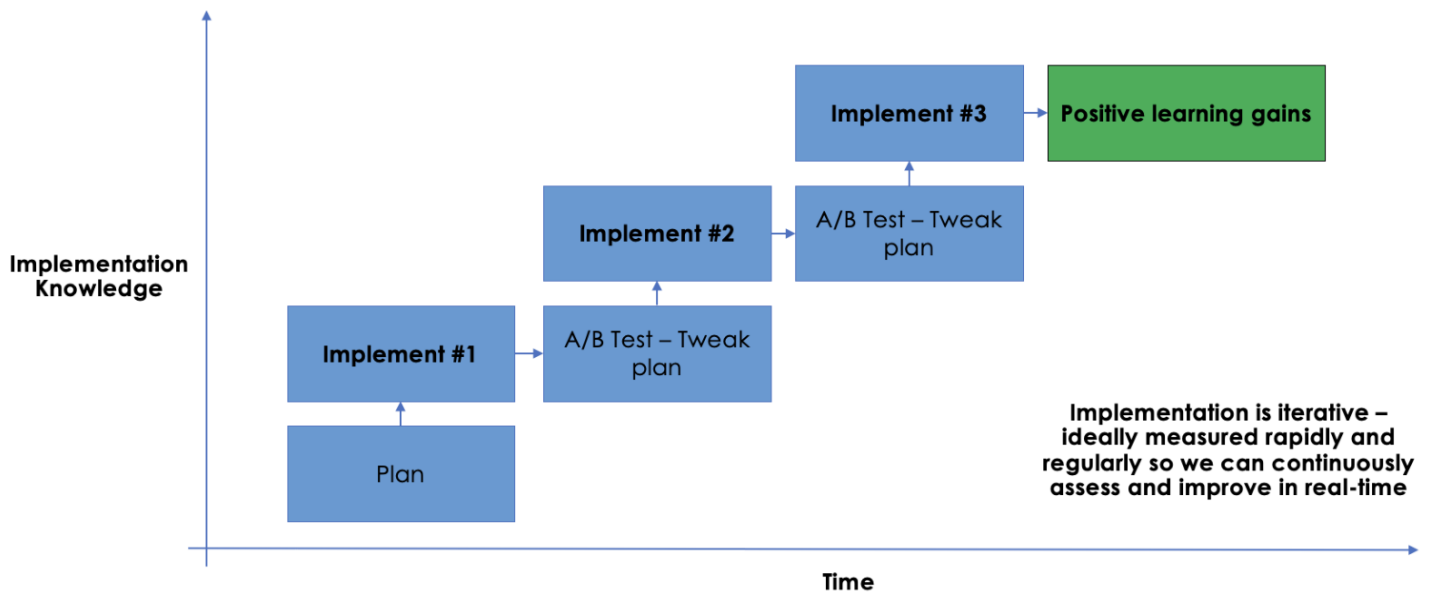


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Why this matters for governments?

A/B testing offers several key advantages for education ministries. For instance, it improves implementation during scaling by enabling rapid, low-cost, continuous improvements as programmes operate. Governments can adapt in real time, fine-tuning what works best in their context without waiting years for results (see Figure 2). A/B testing also eliminates the need for a pure control group – avoiding withholding services from some populations – making it ideal for evaluating and improving programmes already operating at scale. It primarily uses existing monitoring and administrative data, reducing costly and time-consuming primary data collection. This makes A/B testing both practical and efficient for large-scale education policy management.

Figure 2: Importance of using rapid, iterative programme adjustments for proving and improving – tracking multiple rapid & iterative implementation cycles



Why now?

Technology companies like Google and Amazon use A/B testing to continually refine their products, achieving major gains in performance and efficiency.^{2,3} The social sector has adopted this approach more slowly. Today, evaluators robustly assess fewer than 10% of major government programmes, and even fewer consider cost-effectiveness.⁴

The What Works Hub for Global Education is changing that. We are developing frameworks and studies to bring A/B testing and adaptive experimentation into mainstream education policymaking. These tools generate the fast, policy-relevant evidence that ministers and implementers need – not just to ask ‘Does it work?’ but ‘How can it work better, cheaper and more scalably?’

References

¹ Angrist, N., Beatty, A., Cullen, C., & Matsheng, M. (2024). A/B testing in education: rapid experimentation to optimise programme cost-effectiveness. What Works Hub for Global Education. Insight note, 2024/001. https://doi.org/10.35489/BSG-WhatWorksHubforGlobalEducation-RI_2024/001

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