



## 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.<sup>1</sup>

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



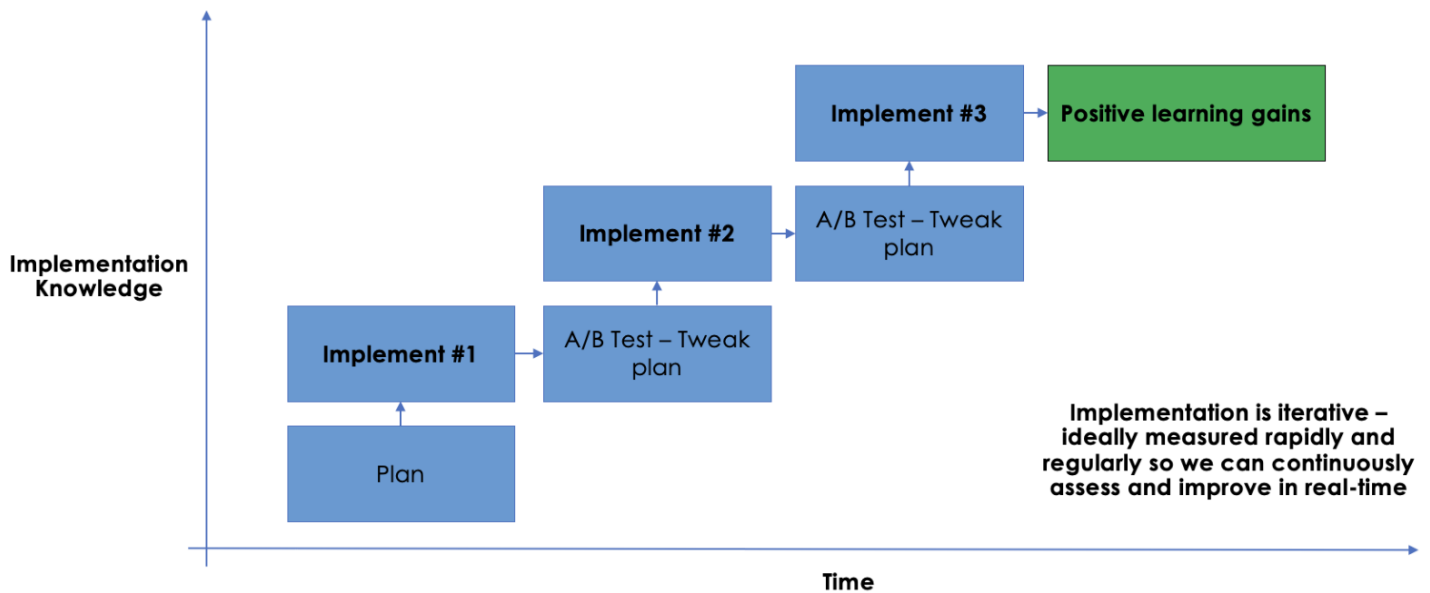


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## Why this matters for governments?

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





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## Why now?

Technology companies like Google and Amazon use A/B testing to continually refine their products, achieving major gains in performance and efficiency.<sup>2,3</sup> 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.<sup>4</sup>

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

<sup>1</sup> 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](https://doi.org/10.35489/BSG-WhatWorksHubforGlobalEducation-RI_2024/001)

<sup>2</sup> Kohavi, R., Tang, D., & Xu, Y. 2020. Trustworthy online controlled experiments: A practical guide to a/b testing. Cambridge University Press.

<sup>3</sup> Siroker, D., & Koomen, P. 2015. A/B testing: The most powerful way to turn clicks into customers. John Wiley & Sons.

<sup>4</sup> National Audit Office. 2021, December 2. Evaluating government spending.



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