What Works Hub for Global Education

Improving implementation while scaling: Differentiated Learning in Ghana

Insight Note

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1 Introduction

Abstract:

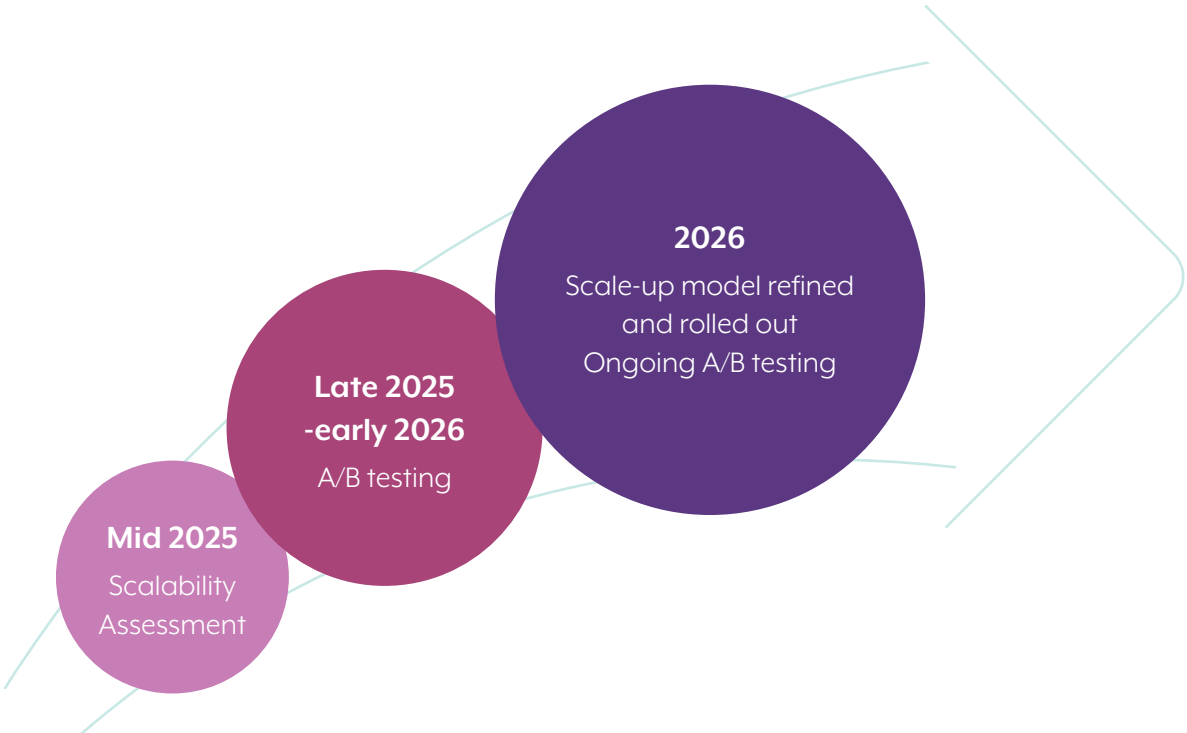
This note shares early implementation science insights from scaling Differentiated Learning (DL) to 16,000+ schools. We identify several frictions to sustaining high implementation fidelity at scale. In Ghana, teachers reported strong adherence to DL, but classroom observations revealed gaps in the critical but high-effort practice of grouping students by ability. To address this gap, the team developed a low-cost coaching checklist and ran an A/B test on the new tool. We find real-time improvements during the school term, with the checklist increasing the frequency of student grouping within DL lessons by 15 percentage points. This cost-effective implementation tweak, identified and deployed via rapid measurement and iterative adaptation within government systems, offers a clear example of using implementation science to achieve higher fidelity and effective scaling.

2 The Government of Ghana is scaling up Differentiated Learning to 16,000+ schools

The Ghanaian **government is scaling up Differentiated Learning** (DL) to over 16,000 schools with additional financing of US$117.13 million in 2024 (total of US$336 million committed from 2019 to date). The World Bank's Implementation Science for Scaling in Education (ISSE) program is partnering with the government to deploy implementation science approaches to improve fidelity and impact as the program is scaled up. Quick measurement and real-time responses are already improving implementation in the context of a large-scale and complex national program (see Figure 1).

DL targets instruction to students' actual learning level rather than grade. This approach has been shown **to be one of the most cost-effective in global education** and is now scaling across over a dozen countries worldwide. When implemented with high fidelity, this reform can deliver transformative returns, but **implementation fidelity at scale remains varied across contexts**. Supporting governments to achieve high fidelity consistently, and at scale, is the next frontier.

Figure 1: Implementation science approaches can provide rapid, real-time support at scale

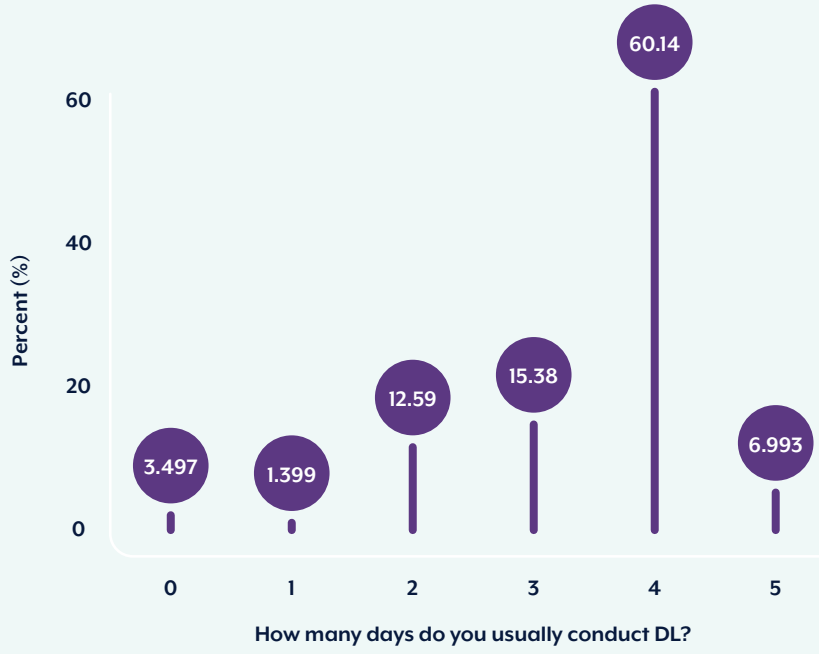


3 Scaling frictions: DL adoption is high, but implementation fidelity of student grouping by level within a DL lesson is lagging

The ISSE partnership with Ghana launched with a real-time implementation survey in the 2024–25 academic year and classroom observations across 150 schools to capture teacher and headteacher experiences and practices. By measuring implementation fidelity with a focus on both the *quantity* and *quality* of implementation, the team found that while most teachers implement the DL programme, many overlook critical yet high-effort elements, such as student grouping and lesson preparation.

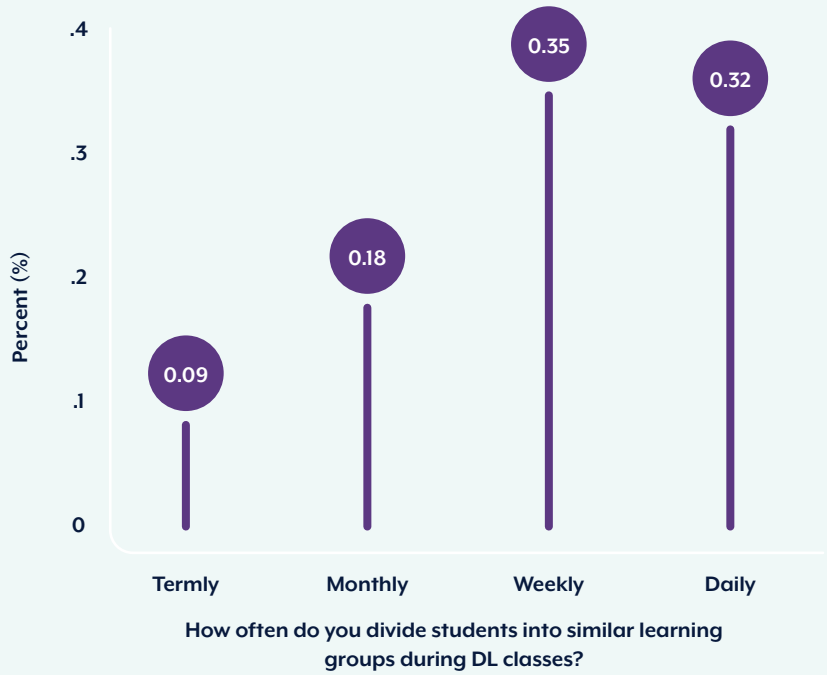
Figure 2 shows that DL adoption is high, with over 95% of teachers reporting implementing DL multiple times per week (Figure 2). This suggests DL is being delivered in high quantity.

Figure 2: Over 95% of teachers conduct DL lessons at least twice per week



However, when it comes to the quality of implementation, such as creating smaller groups within a DL classroom, only about 30% of teachers group students by learning level daily, with the plurality of teachers opting for levelled grouping weekly, and about a third of teachers grouping less frequently: monthly or termly (Figure 3). Grouping is ideally meant to happen both termly when grouping *across classes* and also on a more regular basis in the classroom *within classes*.

Figure 3: Implementation quality – how often do teachers in the classroom divide students in similar learning groups during DL lessons?



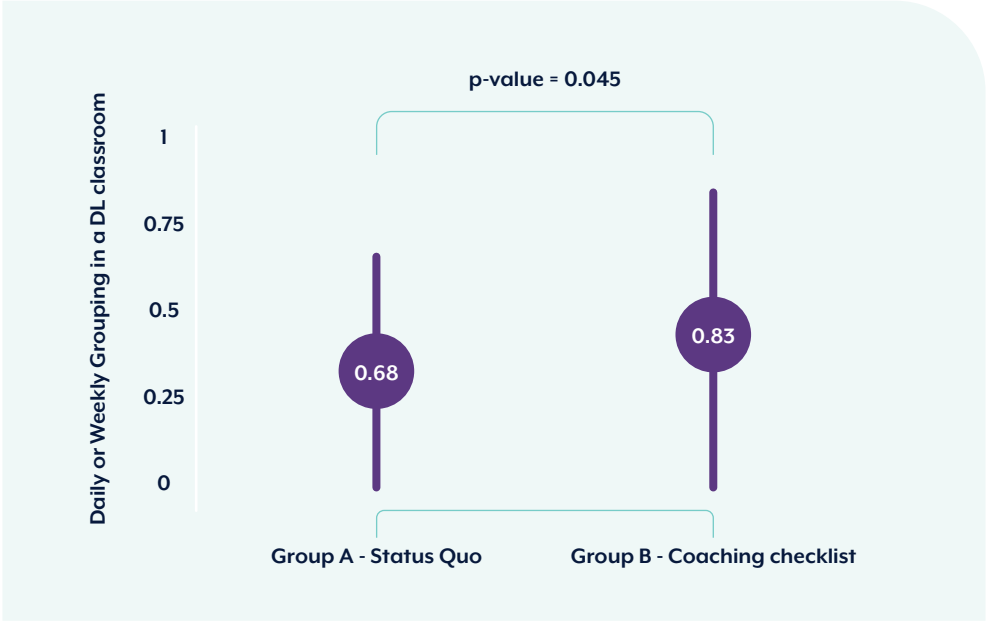
These data reveal the value of careful measurement of both implementation quantity and, crucially, quality, identifying a key scaling friction: grouping by learning level. Since this dimension is **a core component of effective targeted instruction programmes**, the government decided it was important to further optimise grouping support and protocols.

4 Rapid A/B testing of a low-cost implementation tweak – a coaching checklist – quickly improved implementation quality

Based on these results, the ISSE team, Ghana Education Service, and National Teaching Council worked together to develop adjustments to improve implementation quality. These adjustments, including a coaching checklist and low-cost virtual monitoring, are being tested through rapid, low-cost A/B tests during the 2025–26 academic year.

The results from the first A/B test of the coaching checklist show a dramatic uptick in implementation quality. Regular grouping within a DL classroom (daily or weekly) increases by 15 percentage points, at very low marginal cost (Figure 4).

Figure 4: A low-cost coaching checklist boosts implementation quality in the classroom



These results provide an early snapshot of how implementation science is generating insights that substantially improve the delivery of large-scale government programmes. A 15-percentage-point gain in implementation quality when scaled across 10,000 schools could yield large returns for teachers and students.

5 Stepping back and looking ahead: what's next for Implementation Science in Ghana and beyond

Successfully scaling up education reforms is challenging and requires strong implementation, **with high implementation fidelity** at every level, and especially in the classroom. The **Implementation Science for Scaling in Education (ISSE) programme**, a partnership between the World Bank and the **What Works Hub for Global Education**, is addressing this challenge by embedding rigorous implementation research in government-led, World Bank-financed operations.

As described **in an earlier piece**, the programme leverages real-time evidence, technical assistance, and iterative adaptation to 1) measure gaps and constraints in how interventions are working at the school and classroom levels; 2) strengthen government data systems; and 3) support governments to adjust implementation to close gaps, pressure-testing adjustments using nimble approaches **such as iterative A/B testing**. In all cases, a focus on implementation is accompanied by a laser focus on regular tracking of learning outcomes, establishing tight feedback loops between implementation and impact.

Implementation is an iterative process, and we are just getting started. Further rounds of data collection are planned in Ghana to better understand the effectiveness of the coaching checklist and virtual monitoring, and to look at other implementation frictions, such as how students are assessed and leveled. The ISSE programme is also supporting government-led scale-ups in several countries, including Cambodia, Ghana, Morocco, Nigeria, and Sierra Leone. Stay tuned for more results, insights, and tools based on this ongoing work.

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