



## UNICEF Education

### Education Case study

# GHANA

## Improving Foundational Learning at Scale: Evidence from Ghana's Differentiated Learning + Programme

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Ghana has made strong progress in expanding access to education, with enrolment exceeding 90 per cent and improving completion rates. However, gains in access have not yet translated into improved foundational learning outcomes. National Standardized Test results show that [nearly half of Grade 4 students](#) do not reach minimum proficiency in English, while around six in ten fall below basic numeracy benchmarks. One key contributing factor is the wide variation in learning levels within classrooms. While instruction follows grade-level curricula, many learners have not mastered prerequisite skills, making it difficult to keep pace without more targeted support.

In response, the Government of Ghana introduced Differentiated Learning (DL) in 2018, which has since evolved into Differentiated Learning Plus (DL+), with support from UNICEF and the Gates Foundation. This strengthened model was introduced during the scale-up phase from 2023. DL+ combines targeted instruction with structured lesson guides, play-based learning approaches, and real-time tracking of learner progression through a digital dashboard. Teachers are supported with sustained coaching, mentoring and monitoring through district support structures. This case study focuses on the implementation and results of DL+, drawing on an independent evaluation of 320 primary schools (160 DL+ and 160 comparison schools), selected as part of a randomized design and tracked over three years.

### RESULTS

#### Strengthened teaching practices

Teaching practices were assessed through structured classroom observations, comparing the share of teachers applying key instructional practices in DL+ and control schools throughout the three-year programme.

- Around 95–98 per cent of the nearly 3,500 DL+ trained teachers followed lesson plans and adhered to structured procedures, compared with roughly 50–65 per cent in control schools. Lesson completion rates showed a similar gap (around 95 per cent versus less than 80 per cent), indicating more consistent instructional pacing and delivery among DL+ teachers.
- By endline, most DL+ **classrooms were highly interactive**, with around 85–95 per cent of lessons rated as very or extremely interactive. Teacher confidence also increased over time, with the share of teachers reporting they were 'extremely confident' rising from around 28 per cent at midline to 47 per cent at endline.
- **Adherence to DL+ lesson procedures strengthened over time**, increasing from just over half of observed classrooms at midline to more than 90 per cent at endline. Similar gains were observed in lesson completion and teachers' use of structured Teachers' Guides.

## Gains in student learning

The clearest evidence of improved teaching practices is the progress seen in student learning outcomes.

- Average English scores in DL+ schools increased from 53 per cent at baseline to 60 per cent at endline, a 7 percentage point improvement. In comparison schools, scores rose by 4 percentage points. While the difference may appear modest, **learning gains in DL+ schools were about 60 per cent larger than those in comparison schools over the same period.**
- In DL+ schools, the proportion of students performing below basic in English decreased from 49 per cent at baseline to 36 per cent at endline, **representing roughly a one-quarter reduction in the lowest-performing group.**
- At the same time, the proportion of learners reaching proficient or advanced levels in English increased from 37 per cent to more than 51 per cent in DL+ schools.

## The gains were even more pronounced in math

Average math scores in DL schools increased by nearly 20 percentage points, compared with less than 12 percentage points in comparison schools, **representing gains that were roughly 70 per cent higher among DL+ students.**

- As with reading, the largest improvements occurred among lower-performing students. The proportion of students performing below basic in math declined from 68 per cent at baseline to 31 per cent at endline, meaning more than half of the original low-performing group moved out of the lowest proficiency category.
- The share of students reaching advanced proficiency increased from 9 per cent to 29 per cent, more than tripling the proportion of high-performing students.

## LESSONS LEARNED

This programme adds to the growing global evidence on what works to improve foundational learning: strong government ownership, targeted instruction, structured pedagogy, and sustained teacher support.

The evaluation highlights several lessons for strengthening large-scale foundational learning reforms.

- **Access to real-time data strengthens implementation and supports scale.** The introduction of the DL+ dashboard The [DL+ dashboard](#), a government-managed national data platform, enabled teachers, school leaders, district officials and national stakeholders to track learner progression in real time. By consolidating assessment data across levels of the system, the dashboard helped identify where students were falling behind and target support to the schools and classrooms that needed it most.
- **Changes in classroom pedagogy require sustained support over time.** While initial training improved teachers' understanding of differentiated learning pedagogies, adherence to DL+ lesson procedures strengthened significantly between midline and endline, indicating that refresher training, along with continuous coaching and monitoring, was critical to translating training into consistent classroom practice.
- **Instructional practices can spread beyond programme schools.** Spillover into comparison schools indicates strong demand among teachers for practical, classroom-based approaches.
- **Training is most effective when grounded in classroom realities.** Hands-on training, such as mock lessons and peer observation, helped teachers adapt DL+ to large, resource-constrained classrooms, including strategies for teaching with limited textbooks and workbooks.

## NEXT STEPS

DL+ will be scaled up nationwide across more than 16,000 primary schools, reaching over 2.5 million students in Ghana.

Priorities include strengthening coaching and mentoring systems through district support structures, ensuring that both new and existing teachers receive ongoing support. Improving the availability and distribution of teaching and learning materials will also be critical.

Further attention is needed to strengthen systems for regular assessment and use of data to inform instruction. At the same time, the observed spread of DL+ practices beyond programme schools suggests an opportunity to leverage existing teacher networks and district structures to support wider adoption.

**Cost effectiveness:** With a total budget of US\$1.4 million over three years, the DL+ model was implemented across 501 schools, reaching 69,491 learners and 3,393 teachers—equivalent to approximately US\$20 per child over the programme period.

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