(Abstract)

Optimising instruction: Randomised evaluations of pedagogical approaches to targeted teaching and learning in NewGlobe schools in Kenya, Liberia, Nigeria, and Uganda.

Students in developing countries trail far behind their peers in wealthier contexts; an average student in low income countries performs worse than 95% of students in high-income countries (EFA Global Monitoring Report, 2014). A pattern of instructional incoherence in developing countries, whereby misalignment between classroom instruction, curriculum standards, and high-stakes assessments, reduces the likelihood that students will achieve mastery across a range of core competency areas (Atuhurra and Kaffenberger, 2020). Large within-class heterogeneity further complicates efforts to address low overall learning levels. Within a single classroom, teachers are asked to teach to a wide range of ability levels, including classrooms with non-readers, emerging readers, and proficient/fluent readers. This pattern increases with each successive grade, as some pupils progress but others are left behind. What's more, preliminary evidence suggests that the COVID-19 shock will exacerbate these trends (Kaffenberger, 2021).

Personalised learning, either computer aided or ability grouping, presents a promising opportunity to address instructional incoherence and within-class heterogeneity (e.g. Banerjee et al., 2007; Banerjee et al., 2017; Duflo et al., 2011; Muralidharan et al., 2018) However, technological infrastructure in schools is often limited, and ability grouping is frequently challenging in practice. We must therefore actively continue to explore alternative, low-tech ways to improve curriculum coverage and target instruction to diverse ability levels.

This panel presents findings from 6 recent randomised control trials exploring strategies to optimise instruction and target a wide range of ability levels within a single classroom. These evaluations were conducted in collaboration with NewGlobe, which supports over 750,000 pupils attending 2,100 private and public schools across 5 countries in Africa and Asia. Evaluations were conducted as part of an ongoing programme of A/B testing in NewGlobe's community school programmes (Bridge Kenya; Bridge Nigeria; Bridge Uganda) and also in NewGlobe-supported free government schools (Bridge LEAP, Liberia). The six studies each lasted for a single academic year, ranged from 45 to 225 classrooms, and included performance data from between 1,125 to 16,725 pupils. The research team includes Michael Kremer, Guthrie Grey-Lobe, Joost de Laat, Karlijn Morsink, Noam Angrist, and graduate students from Harvard University, University of Chicago, and Utrecht University, along with NewGlobe staff.

The panel will draw on findings from these evaluations to better understand challenges and potential solutions associated with instructional incoherence and within-class heterogeneity.

Improving **Instructional Coherence**

(a) Do interleaved problem sets, which integrate past concepts into daily practice, improve teacher coverage of curriculum competencies and improve pupil learning? Are there heterogeneous effects on different groups within the classroom?

(b) Does a goal-setting curriculum, in which pupils receive lessons on goal setting and time for self-directed practice, increase alignment between classroom practice and exam competencies, and improve performance on high-stakes tests?

Addressing **Within-Class Heterogeneity**

(a) What are the comparative effects of cross-grade ability grouping on foundational literacy and numeracy skills across evaluations in three countries?
(b) Can within-class ability grouping, in which a teacher assigns levelled problem sets to different ability groups, meaningfully improve maths performance on curriculum-aligned assessments?

The presentation will include a discussion of results across the studies, and also highlight how these results have informed ongoing iterations of each programme. In this way, we demonstrate not only learnings from individual studies exploring low-cost solutions to more effectively optimise and target instruction, but also the benefits of a collaborative and iterative model between academics and education providers. The opportunity to discuss these with RISE participants can also inform the design of future iterations of A/B testing within NewGlobe supported schools.

References

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