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for Global Education



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Implementation measurement at scale

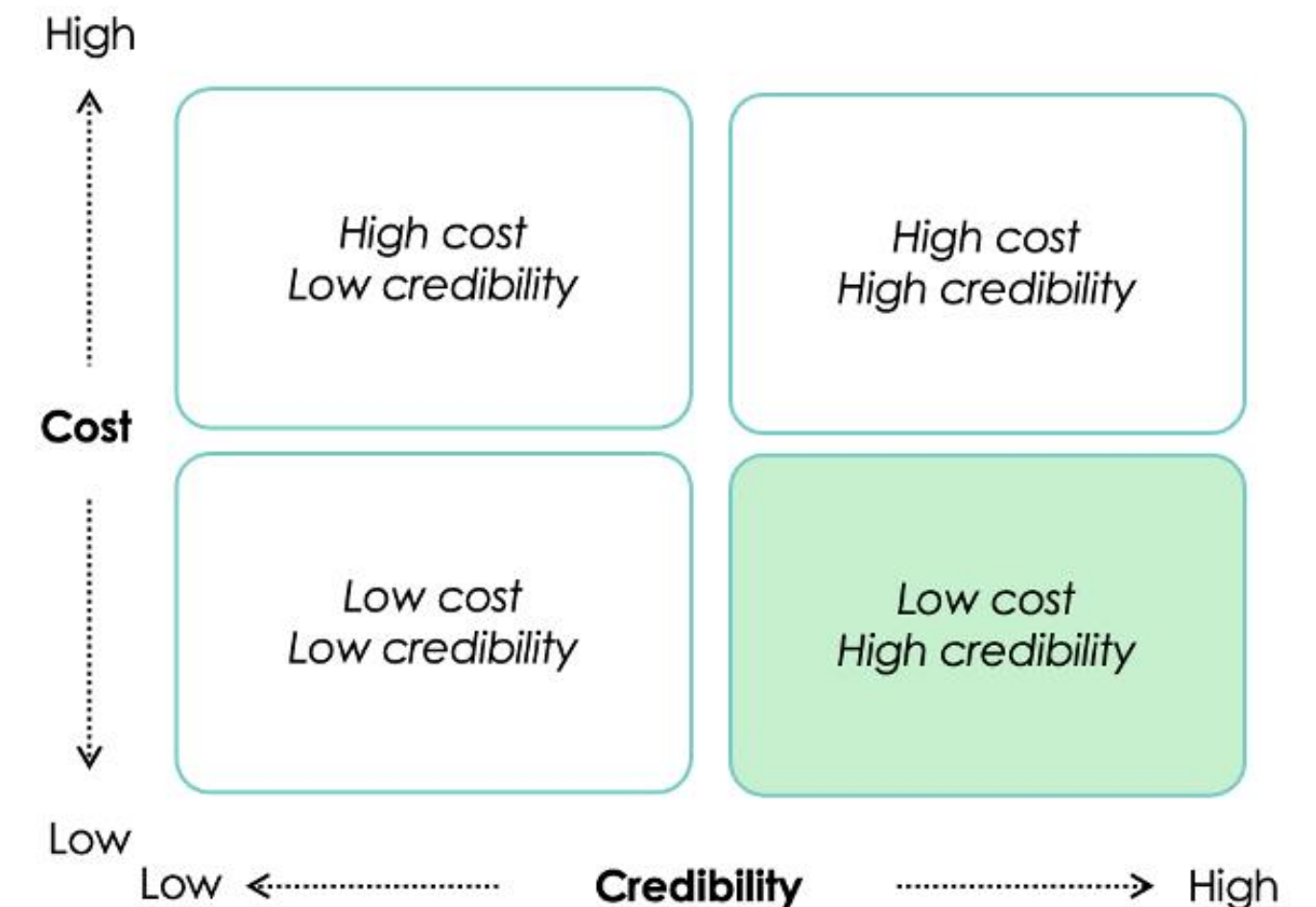
Evidence from LLF's structured pedagogy program

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What Works Hub for Global Education

The measurement challenge at scale

- Implementation monitoring at scale requires measures that are both **credible** and **practical**.
- Some indicators are rich but too costly for routine use; others are cheap but not informative enough to guide action.
- The challenge is to find the **low-cost, high-credibility** sweet spot.
- We use **LLF's large-scale structured pedagogy programme** as a real-world case to study that measurement problem.

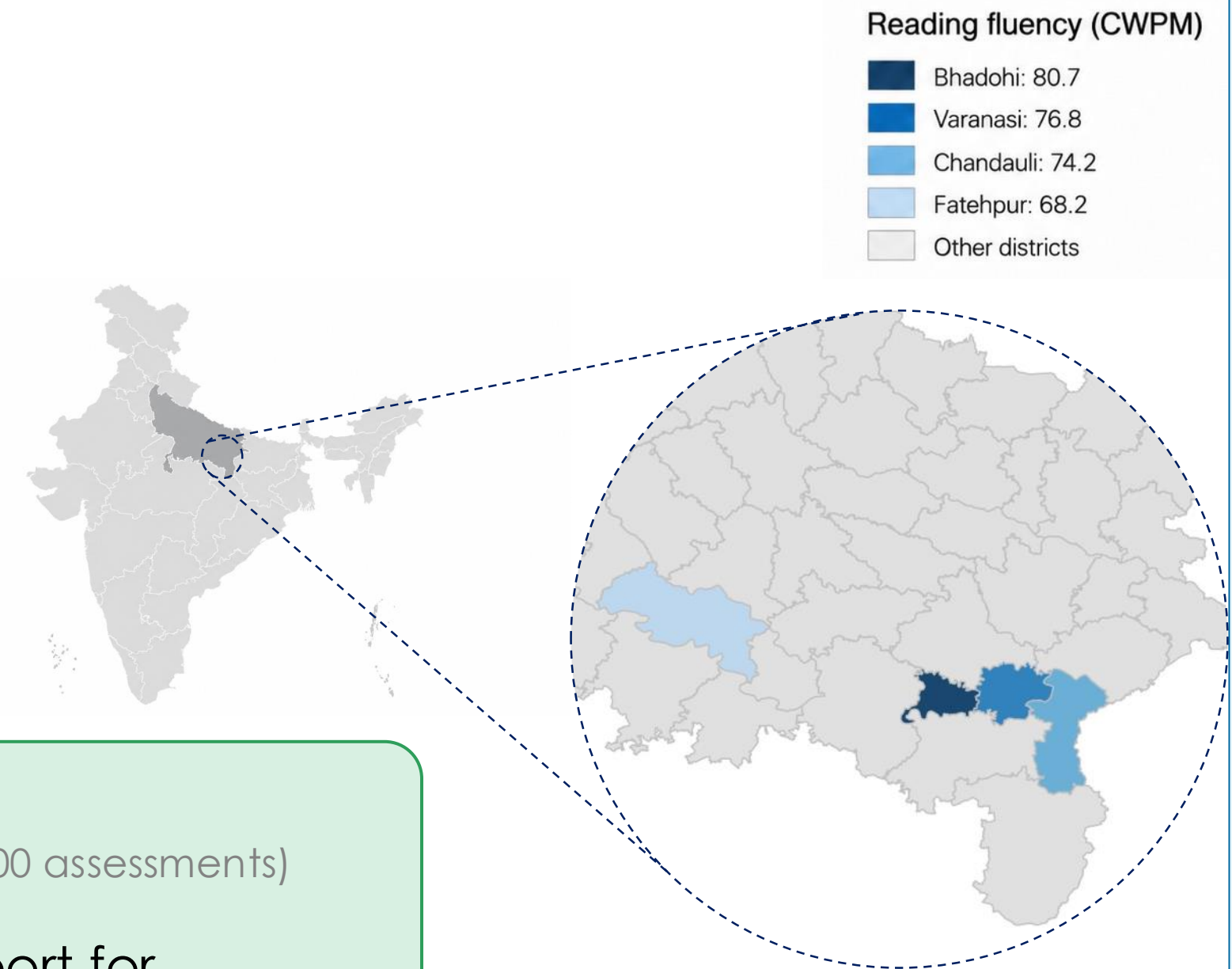


The measurement task is to identify which indicators are both **rigorous + practical** and give the clearest signal of implementation fidelity at scale.

Structured pedagogy at scale: the LLF model

The Language and Learning Foundation (LLF) works **with government systems** to strengthen FLN through a structured package of classroom support.

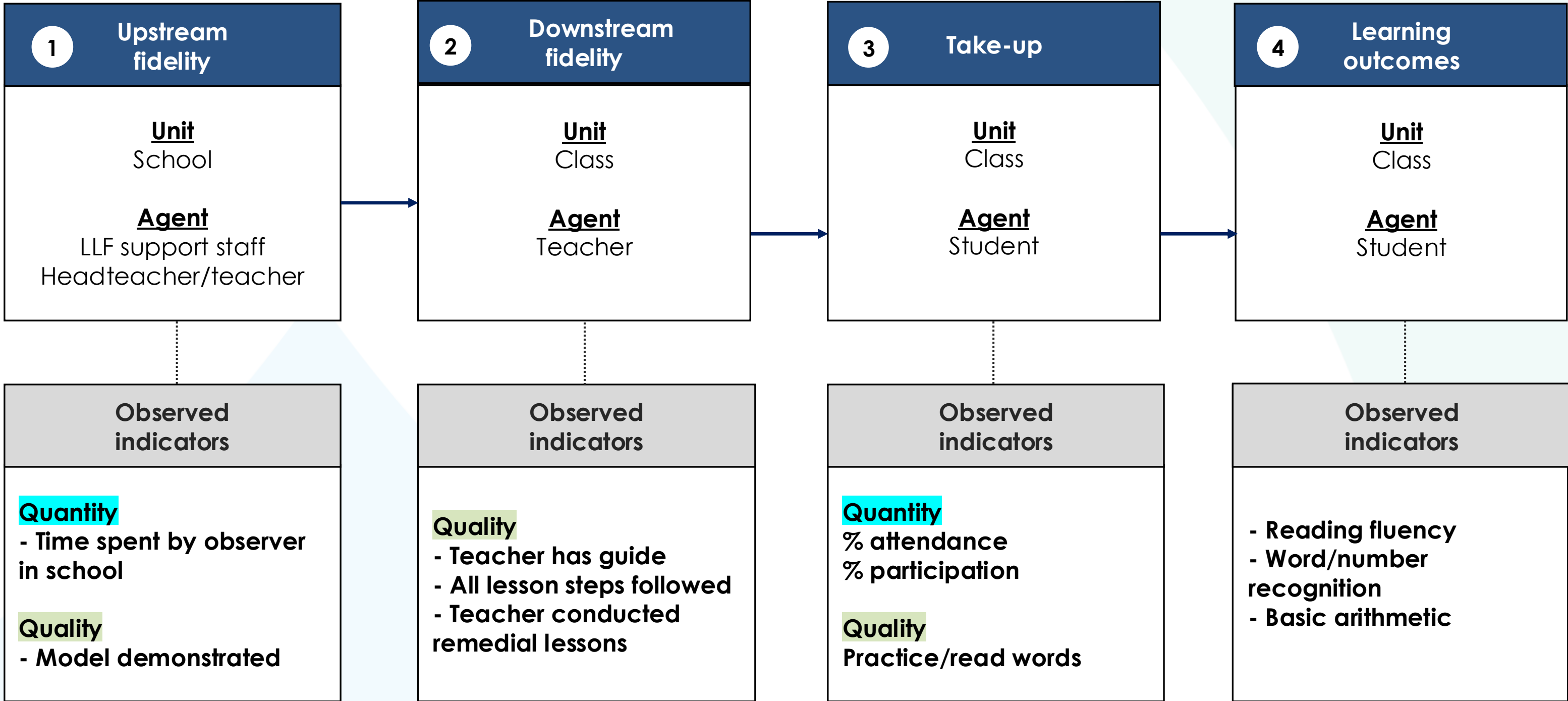
- **Structured teaching and learning materials, ongoing support to teachers:** teacher guides with daily lesson plans, student workbooks and classroom learning materials, training, mentoring, +classroom observation, coaching and feedback.
- **Assessment:** regular assessment, with remediation and lesson plans adjusted to students' needs.



476 schools, 3,266 students (matched from 3,536 observations and 6,000 assessments)

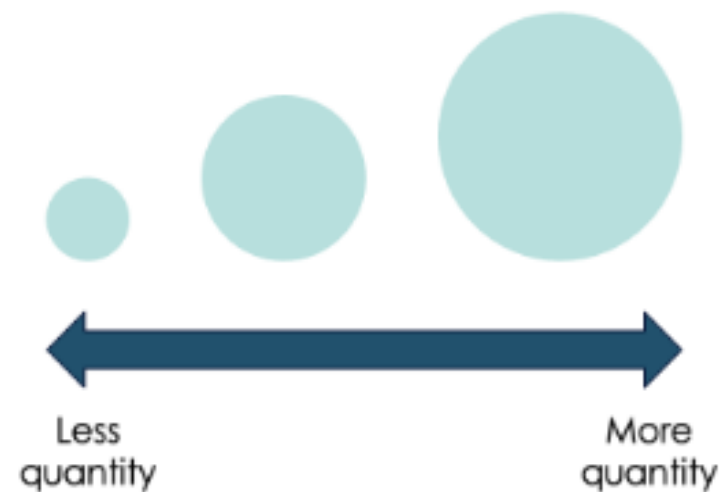
This gives us rich **implementation data** to observe — from support for teachers, to classroom practice, to what students actually receive.

Monitoring system on the implementation chain



Measuring Quantity vs. Quality

How much happened — and how well?



Measures of **quantity** capture how *much* of something was delivered (e.g., how many hours of instruction, how many textbooks)



Measures of **quality** capture how *well* something was delivered (e.g., were children grouped by level correctly, did the teacher stick to the lesson plan)

- **Both dimensions matter:** but you cannot have quality without quantity.
- For routine monitoring, measures need to be **rigorous, rapid and regular** — meaningful for decisions, responsive to change, and practical to collect repeatedly at scale.

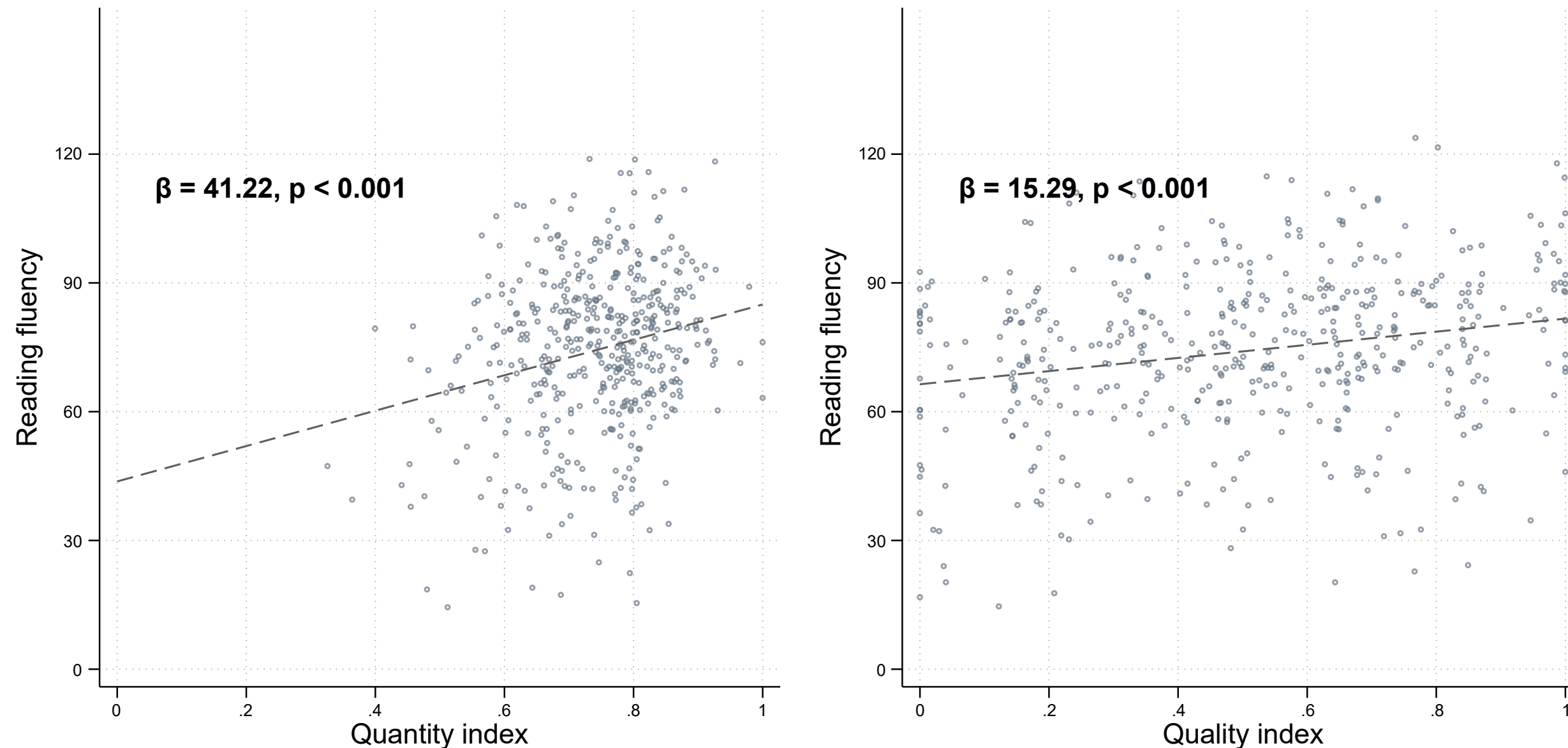
Vital signs: some measures work better than others

Robust indicators have **low missingness**, **enough variation**, and **limited floor/ceiling effects**:

Category	Indicator	N	Missing	Mean	SD	Floor	Ceiling
Most robust indicators	Class participation of children	424	11%	.86	.33	n/a	n/a
	Attendance compared to enrolment	476	0%	.68	.42	n/a	n/a
	Teacher worked on all steps of the teaching plan	476	0%	.51	.29	13%	12%
	Teacher worked on remedial teaching	476	0%	.46	.35	25%	17%
Moderately informative indicators	Who demonstrated model teaching-learning process	315	34%	.69	.43	25%	62%
	Teacher has lesson guide available	476	0%	.71	.38	17%	56%
	Teacher took help from guide	476	0%	.66	.41	22%	53%
	Checked children's understanding	465	2%	.69	.41	22%	58%
Low-information indicators	Used concrete materials for maths	166	65%	.98	.12	1%	98%
	Wrote target vowel and pronounced it	23	95%	.96	.21	4%	96%
	Read some words as a unit	79	83%	.98	.25	6%	92%
	Model reading phrases/sentences	47	90%	.88	.32	11%	97%

Quantity shows stronger association with learning

Both indices are positively associated with reading fluency, but the **quantity index** shows a stronger relationship.



Note: The two scatter plots show the relationships between the **school-level quantity and quality indices comprising the three strongest implementation indicators**, respectively, and average reading fluency, measured in correct words per minute (CWPM). Dashed lines represent linear fitted values. Reading fluency scores above 120 CWPM are excluded.

Quantity is as predictive of learning as quality

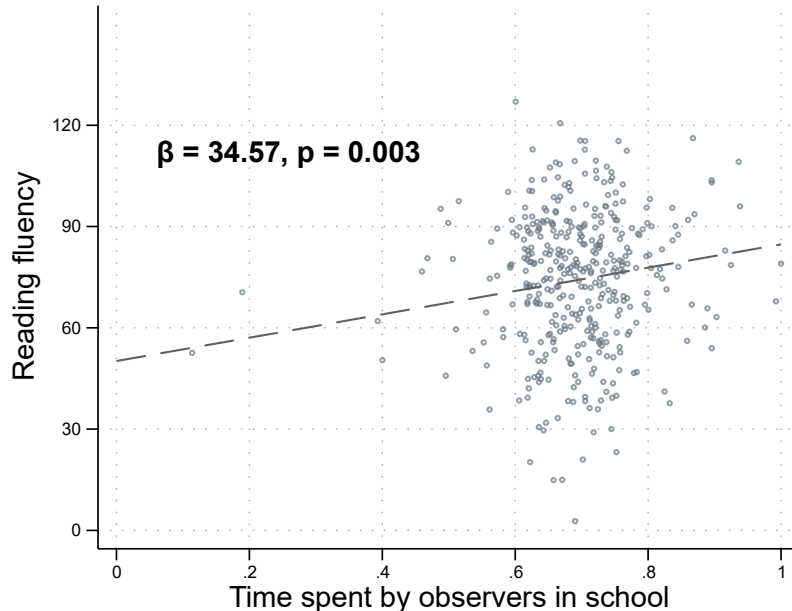
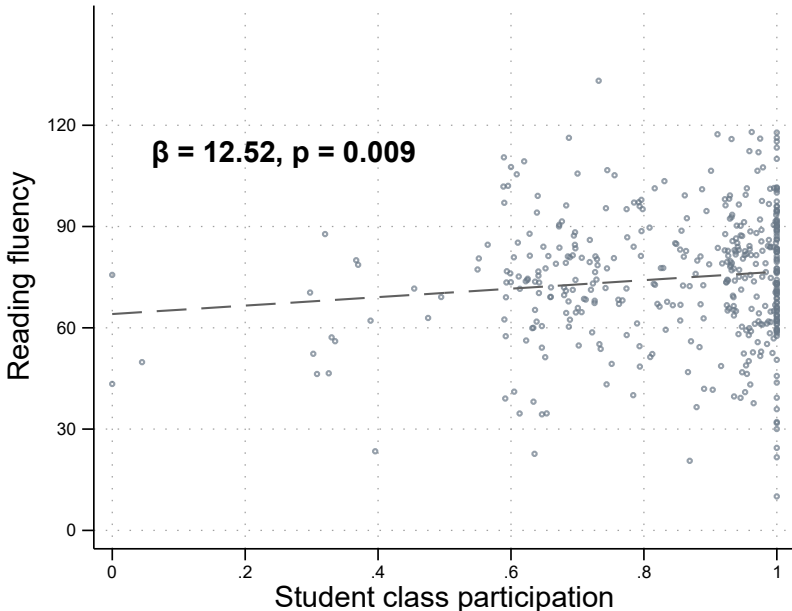
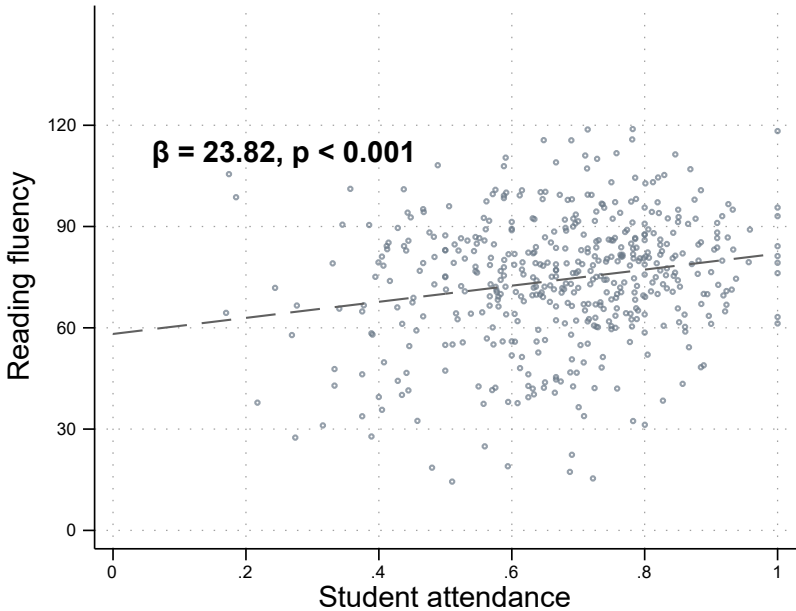
	Reading fluency (Standardised)		
	1	2	3
Quality index			
Regression coefficient	0.134***		0.089**
Standard error	(0.028)		(0.029)
P value	[0.000]		[0.002]
Quantity index			
Regression coefficient		0.140***	0.099***
Standard error		(0.026)	(0.027)
P value		[0.000]	[0.000]
Observations	476	476	476
R ²	0.050	0.055	0.072
F test (Quality index = Quantity index)			0.810

Note: Columns (1) – (3) use the same dependent variable, student reading fluency, originally measured in correct words per minute (CWPM) and standardised to have a mean of 0 and a standard deviation of 1. Regression coefficients are expressed in standard deviation units. The columns differ according to the independent variables included, as indicated by the non-empty rows. **The quality index is constructed from the top three quality items, selected as comparatively robust measures of implementation based on low missingness, limited floor and ceiling effects, and adequate variation. The quantity index is constructed from the three quantity items.** All indicators are derived from classroom observation data. Results are reported at the school level. The table reports regression coefficients, standard errors, and associated *P* values. *p* < 0.10, ** *p* < 0.05, *** *p* < 0.01.

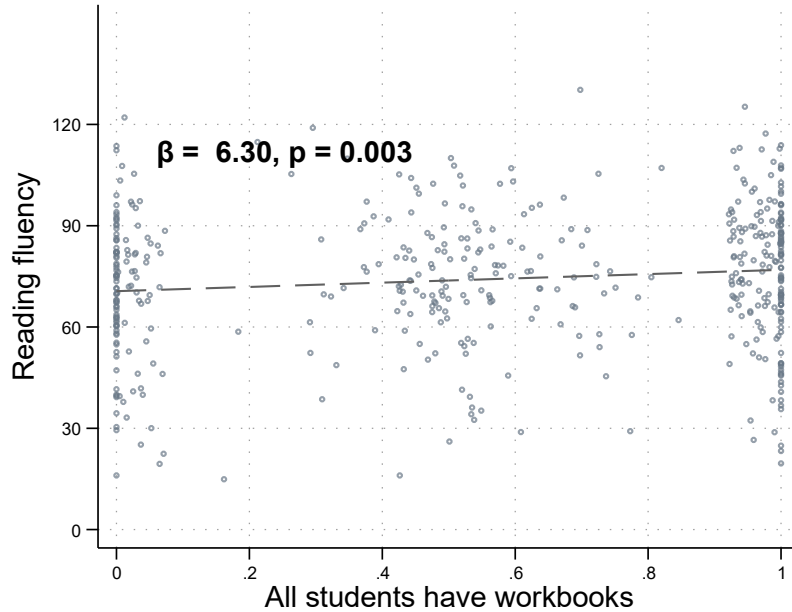
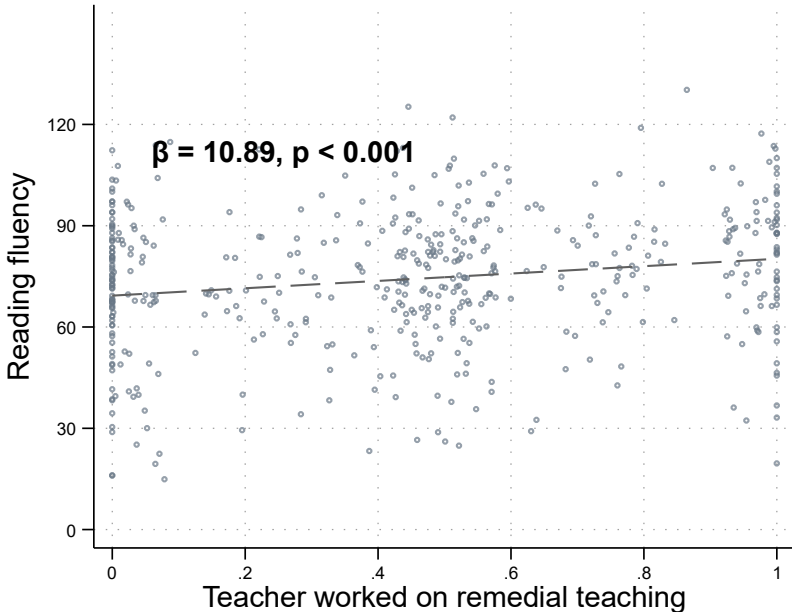
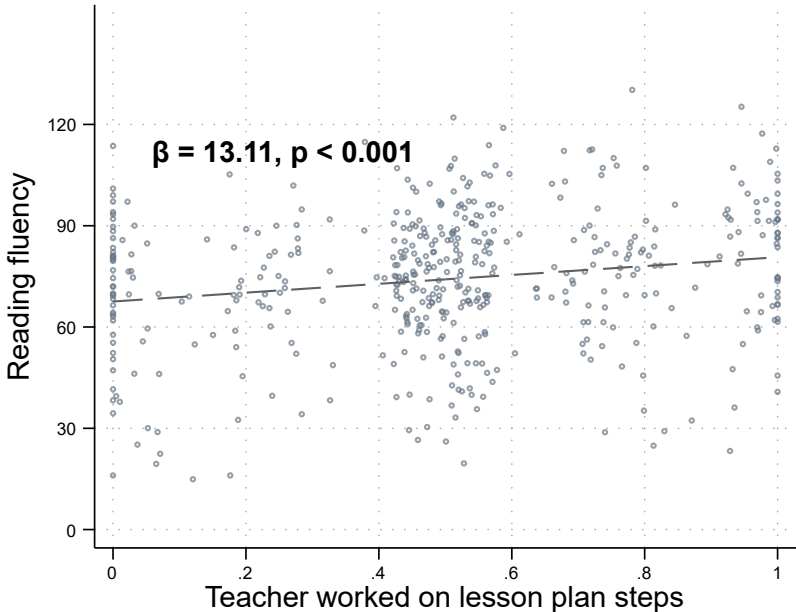


Quantity and quality indicators and links to learning

Panel A: Quantity indicators

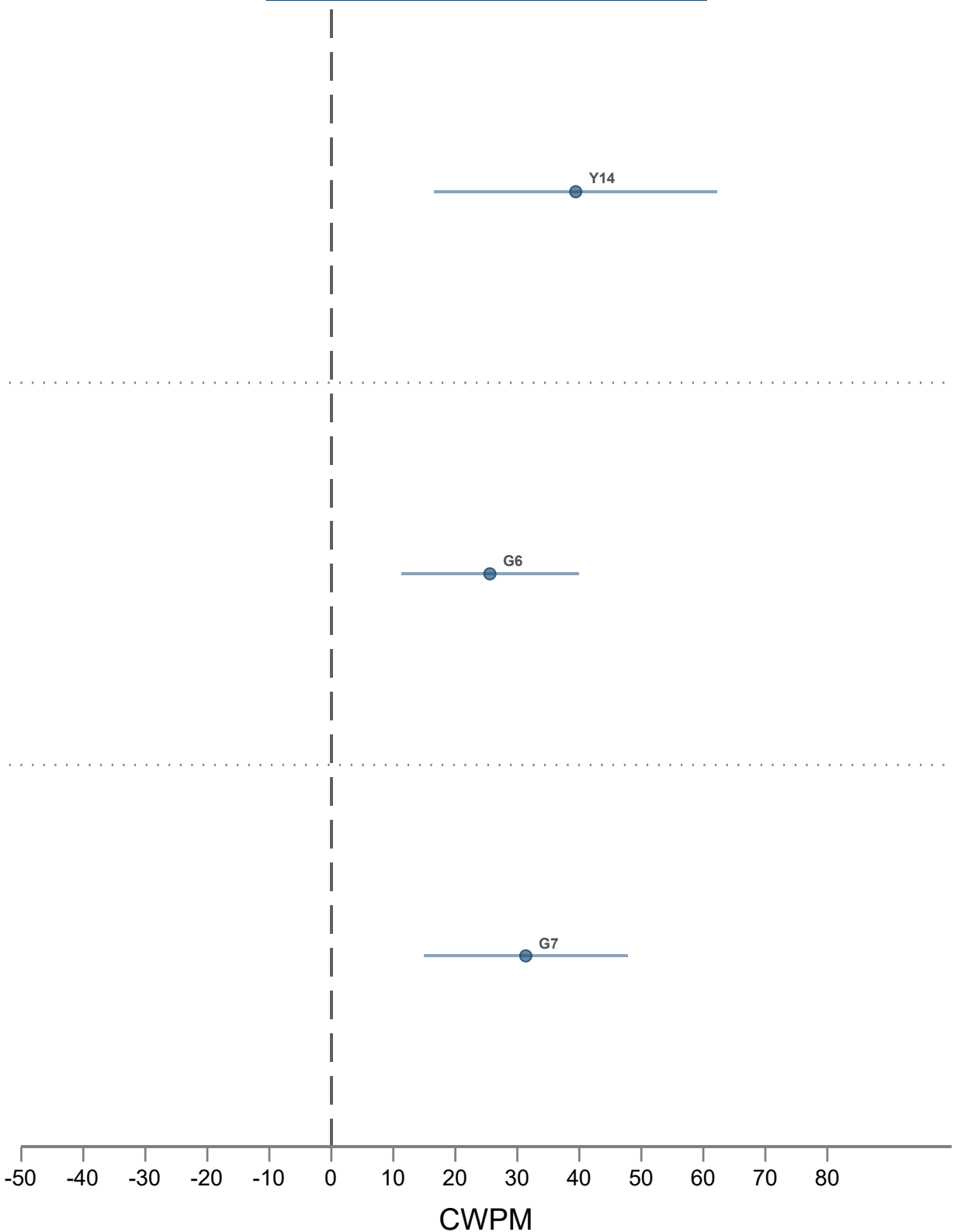


Panel B: Quality indicators

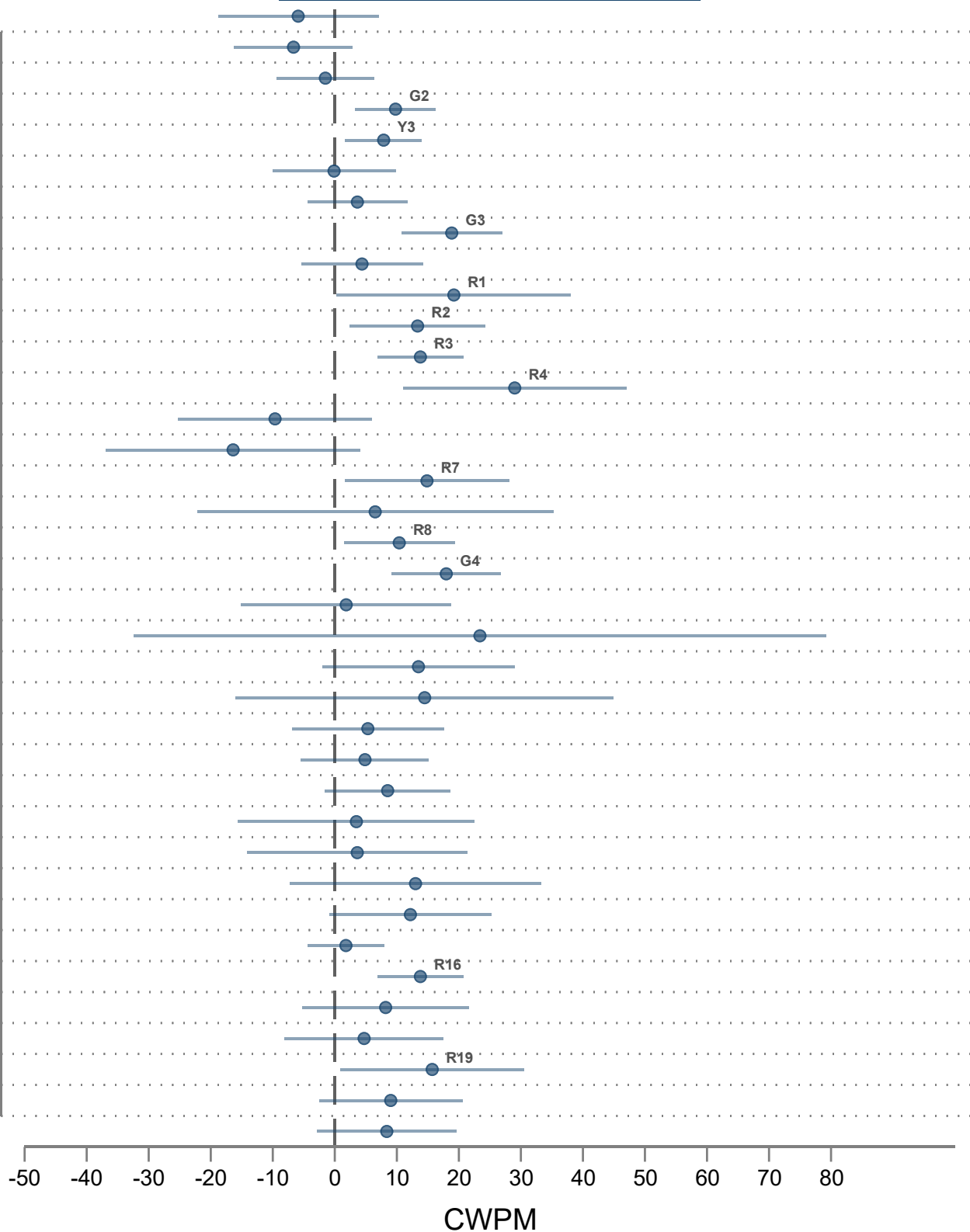


More quality indicators, but noisier

Panel A: Quantity indicators



Panel B: Quality indicators



37 quality indicators
only a few provide a
clear signal

3 quantity indicators
show a stronger
relationship with
reading fluency

At scale, measurement needs to be selective



Quality is important — but can be hard to measure well and often. Rich measures of instructional practice can require intensive observation, be costly to collect repeatedly.



Quantity gives implementers a concrete margin to move that can be low-cost to collect: reach more children, increase participation, do it more often.



Keep testing the signal against learning. Implementation indicators should earn their place in routine monitoring by being feasible to collect and meaningfully related to student outcomes.

Quality vs. Quantity? Use quantity for frequent monitoring; use quality strategically for diagnosis and improvement.