LONG-TERM IMPACTS OF AN EFFECTIVE EARLY GRADE READING INTERVENTION IN SOUTH AFRICA

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Motivation

- Foundational literacy has become a major development priority

  - Reading is considered an essential building block for learning

- Yet by some estimates more than half of 10-year-olds in low and middle-income countries cannot read for meaning (World Bank, 2019).

  - South Africa: 81% of children not reaching low PIRLS benchmark

- But the ultimate cost-effectiveness of early learning programmes depends on persistence of impacts on learning and later outcomes;

  - Theoretical reasons to expect compounding or fadeout

  - Very few studies measure long run impacts or track evolution of skills

Study design

| Research Contribution:	Program Components:	Intervention Timeline:	Previous Findings:	Current Study:

• Presents findings from a long-term follow-up of a randomized evaluation (EGRS)	• SLP targeting HL Reading & Literacy, providing teachers with:
	  • Lesson plans
	  • Teaching materials
	  • On-site coaching
		• Spanned 3 years:
		  • Grade 1 in 2015
		  • Grade 2 in 2016
		  • Grade 3 in 2017
			• 0.24 SD increase in HL Literacy (Cilliers et al., 2021)
			• Sustained impacts on teaching and learning 1 year later (Cilliers et al., 2022a)
				• Assesses the same group of students after 7 years
				• 5 waves of data (start of grade 1 in 2015 to grade 7 in 2021)

Attrition and grade progression
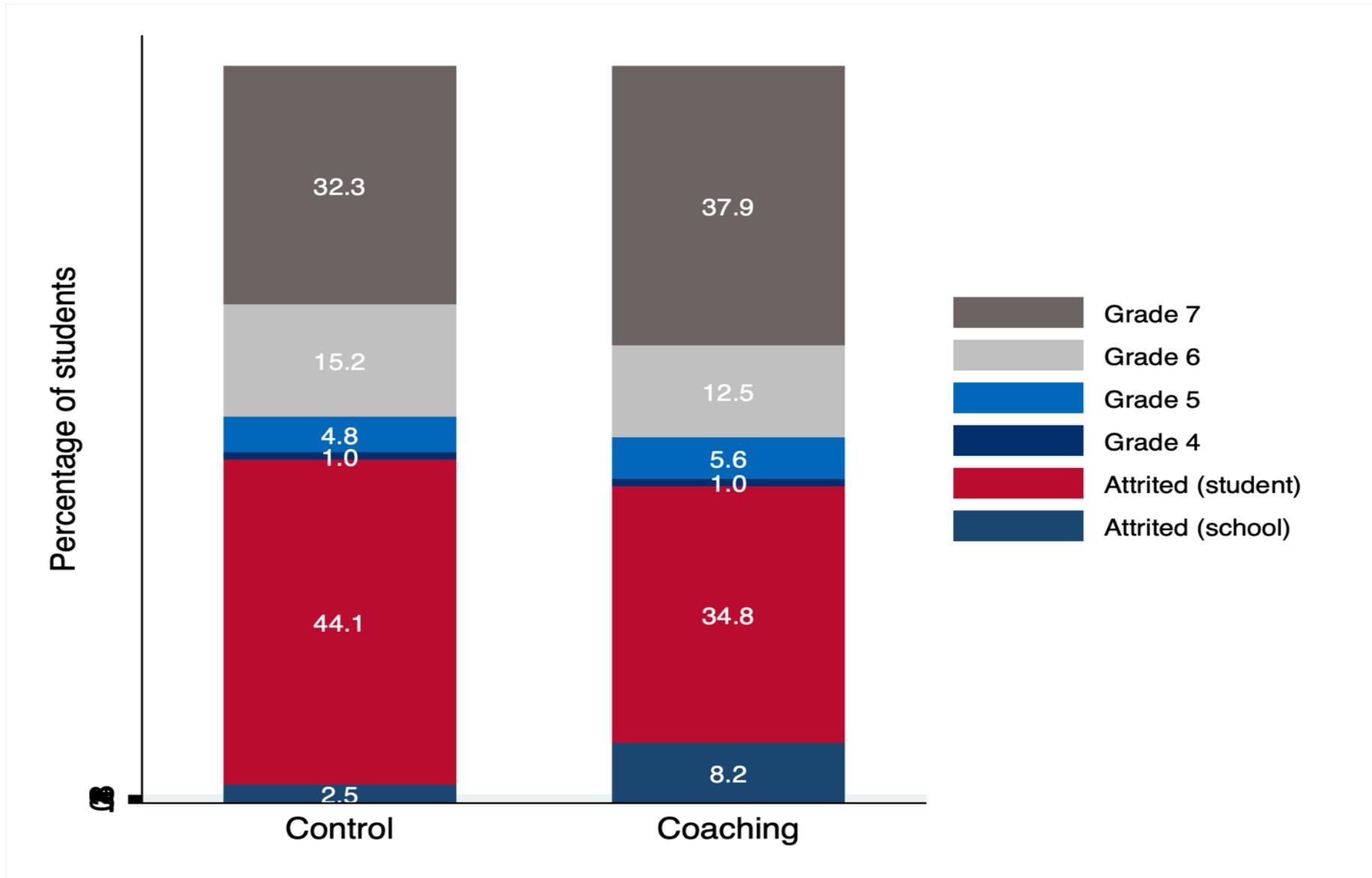
Results: Differences in means

	Control	Coaching	Number of observations
Setswana Text 1 Reading Fluency	56.9	59.0	1,370
Setswana Text 2 Reading Fluency	75.6	80.4	1,368
Setswana Text 1 Comprehension (% correct)	29.7	31.9	1,370
Setswana Text 2 Comprehension (% correct)	41.2	44.3	1,369
Setswana Written Comprehension (% correct)	49.2	51.6	1,308
Setswana Vocabulary (% correct)	62.0	65.8	1,309
English Text Reading Fluency	77.9	79.5	1,366
English Text Comprehension (% correct)	52.2	53.7	1,366
English Written Comprehension (% correct)	40.3	42.1	1,288
English Vocabulary (A)[10] (% correct)	25.7	25.0	1,287

Impact of coaching on a sample of students who were assessed in both Wave 4 and Wave 5

|	(5)	(6)	(7)	(8)	(9)	(10)
	Setswana Text 2 Reading		Setswana Written Comprehension		English Written Comprehension	
	Wave 4	Wave 5	Wave 4	Wave 5	Wave 4	Wave 5
Coaching	6.038**	5.929**	4.309***	4.654**	0.423	4.552***
	(2.826)	(2.843)	(1.536)	(1.948)	(1.480)	(1.634)
Observations	1,200	1,200	1,166	1,166	1,147	1,147
R-squared	0.158	0.153	0.061	0.187	0.048	0.205
Control mean	59.56	77.70	22.78	49.67	20.17	40.77
Effect Size	0.153***	0.152**	0.191***	0.173**	0.0191	0.171***

Notes. ***$p < .01$; **$p < .05$; *$p < .1$.

The sample is restricted to students who were assessed in both Wave 4 and Wave 5
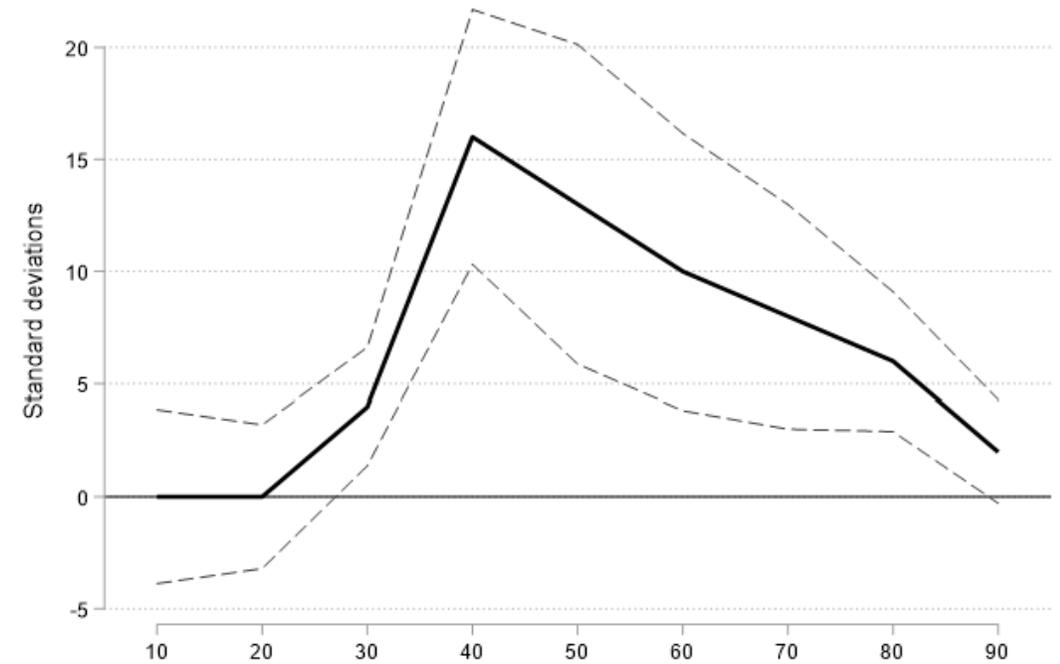
Impacts across the performance distribution
Quantile regressions in **Grade 2**
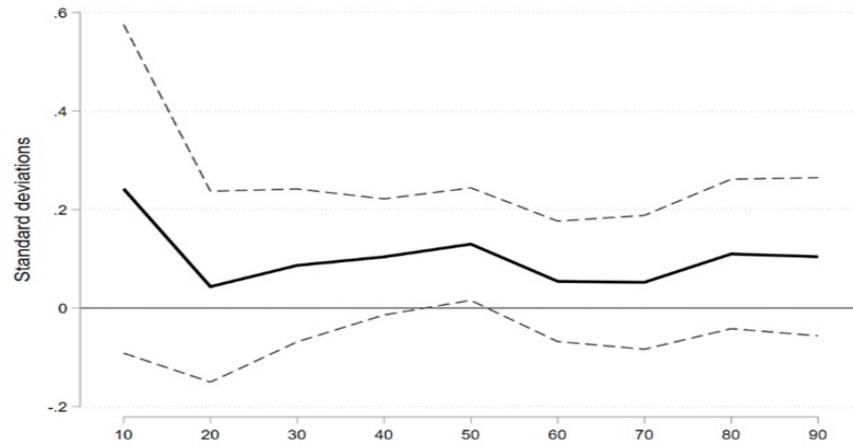

Setswana Letter Sound Recognition
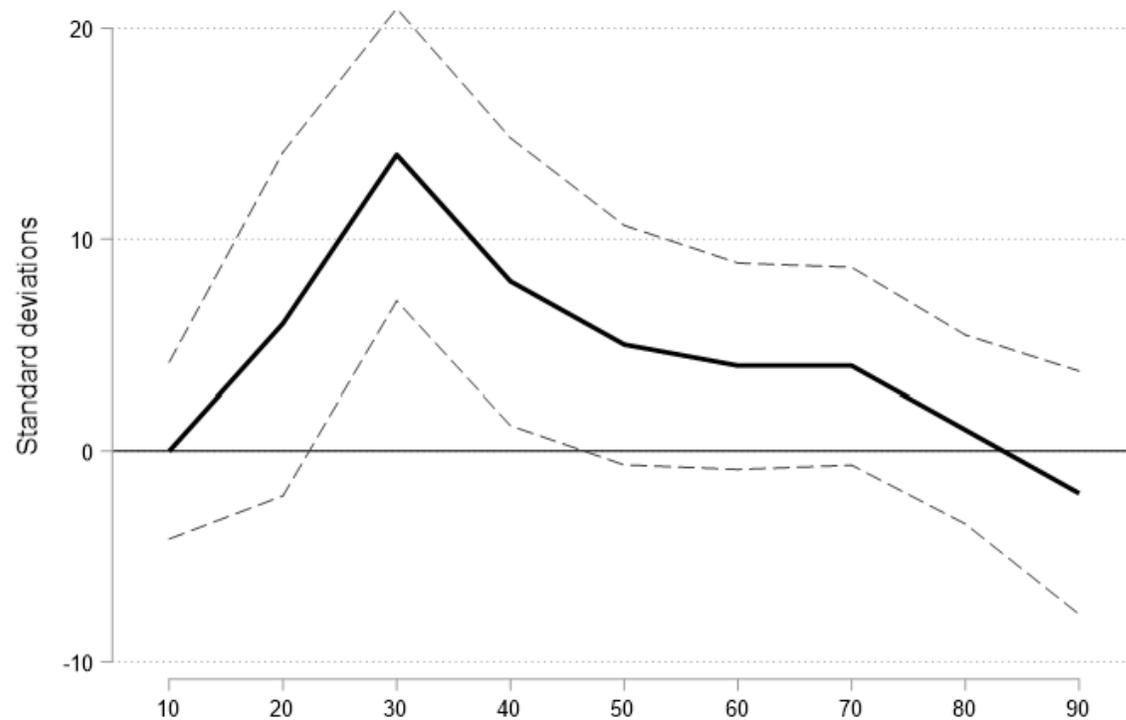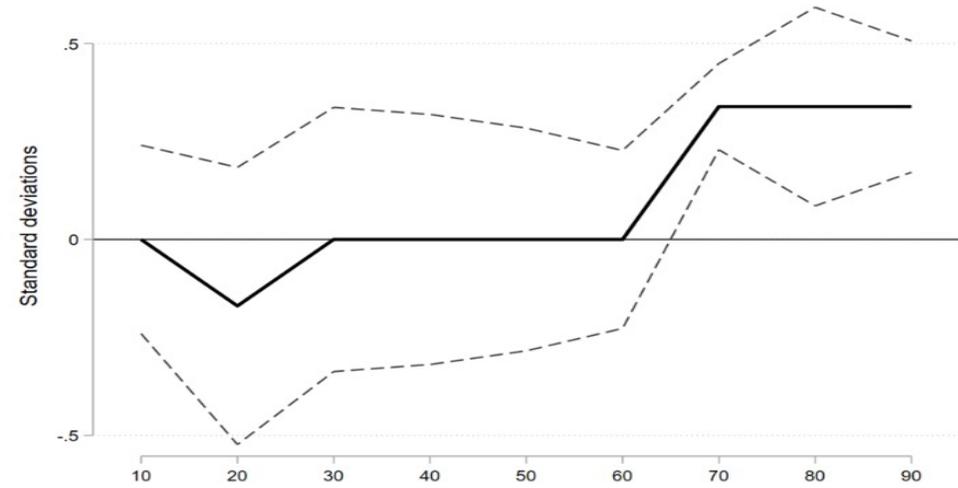
Setswana Oral Reading Fluency

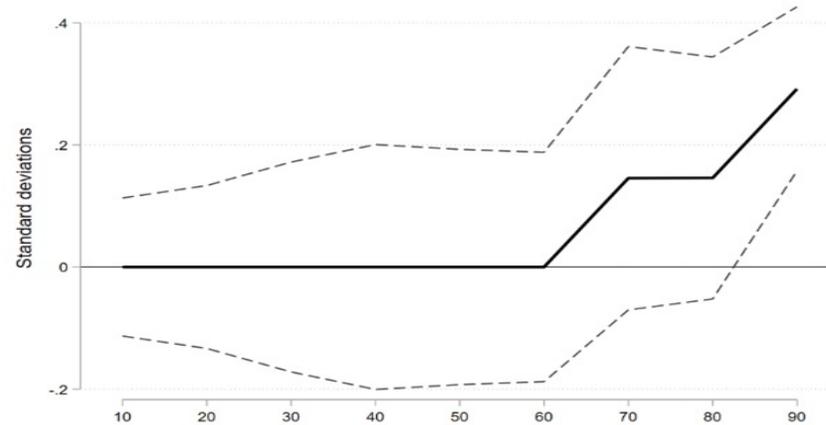# Impacts across the performance distribution

A. Setswana Oral Reading Fluency

B. Setswana Written Comprehension

C. English Written Comprehension

Discussion: Main findings

Sustained impact to Year 7:

- Treated students had better progression to Grade 7
- Sustained Impact on Literacy
  - Setswana Oral Reading Fluency (ORF)
  - Setswana Written Comprehension
  - English Written Comprehension Skills (Larger than in Year 4)
- Impacts across the distribution
  - On zero scores
  - Though different impacts depending on the skill and time

These results are promising for the potential long-term impacts of well-implemented early grade reading SLPs

Discussion: Implications

- Long term impact not as simple as fadeout or growth
  - *Depends on what skill you look at, and when*

- Thresholds in earlier skills like ORF for impact on higher order skills that comprehension?

- Raises questions for future long-term follow-up studies: which early skills beget the most important later skills and educational outcomes?
  - *E.g. Target HL Literacy skills for later L2 acquisition*

Future Plans

- We plan to track EGRS cohort through to secondary school leaving exams
  - *Impact on school attainment*
  - *Impact on key subjects (mathematics, languages, sciences)*