

Quantitative research on early grade reading in African languages



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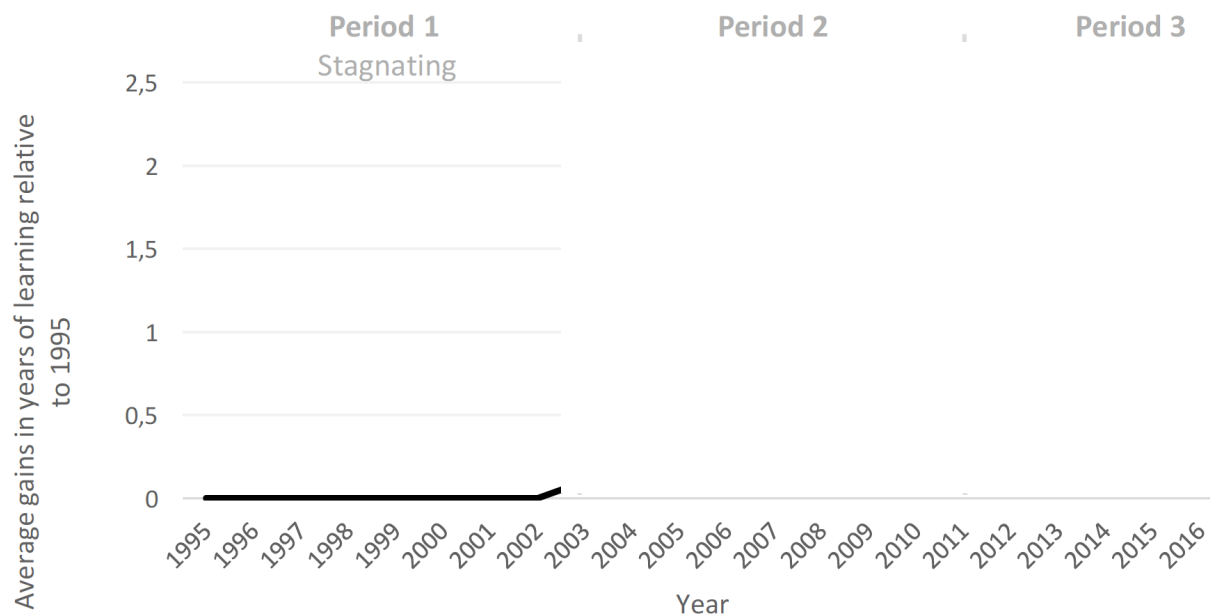


Why this panel?

Learning outcomes



Figure 2: Gains in learning outcomes in South Africa (1995 – 2016) expressed as average gains in years of learning relative to 1995.

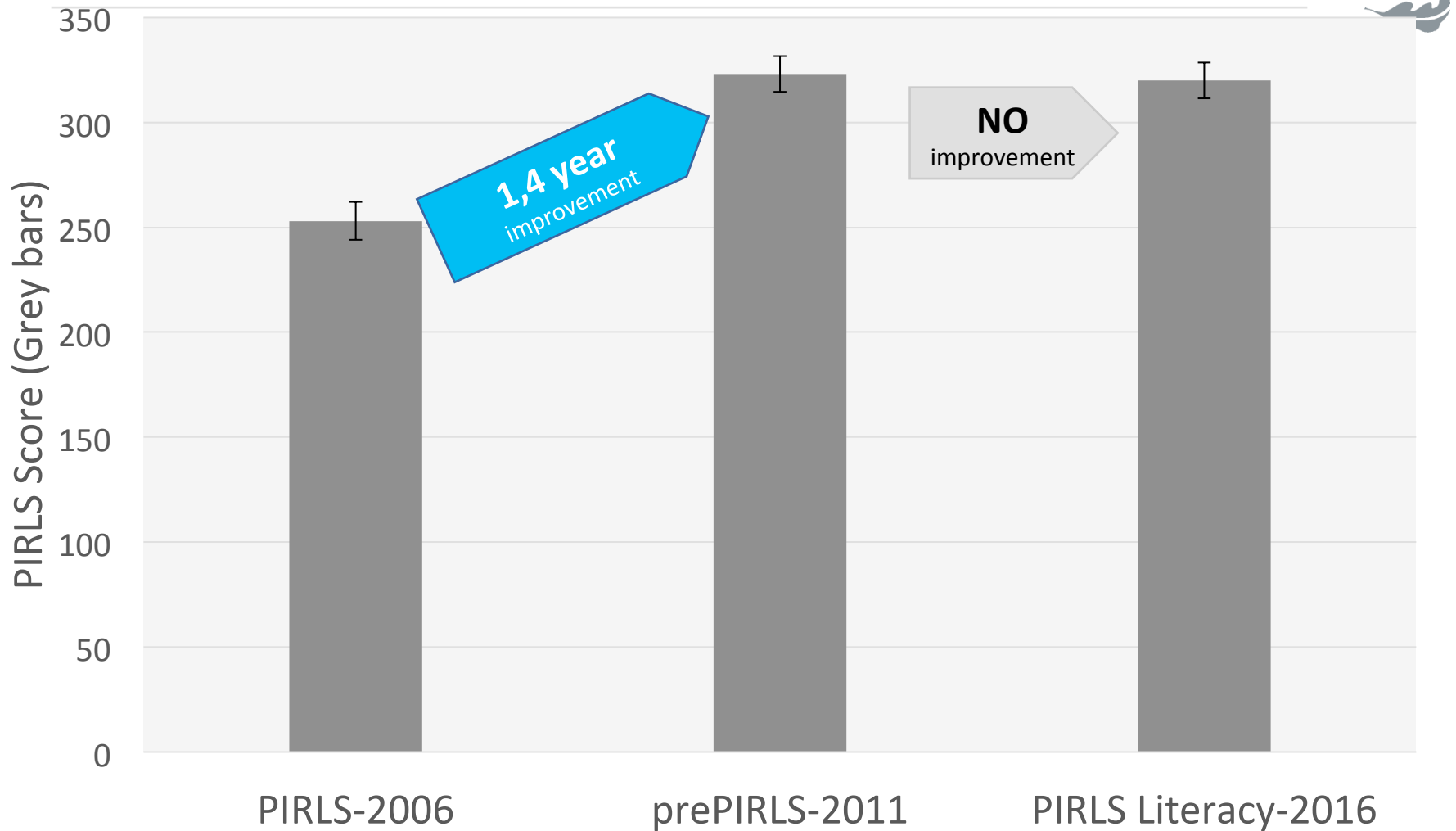


PIRLS Gr4	
SACMEQ Gr6	
TIMSS Gr9	0

Note: This uses comparable scores for TIMSS 1995-1999, 1999-2003, 2003-2011, 2011-2015; SACMEQ 2000-2007; PIRLS 2006-2011, 2011-2016.

A Decade of PIRLS scores in SA 2006-2016

(Note these use the rescaled PIRLS scores and are comparable over time)



Can be difficult to interpret what these scores mean

Mullis et al. 2017

Oral Reading Fluency norms

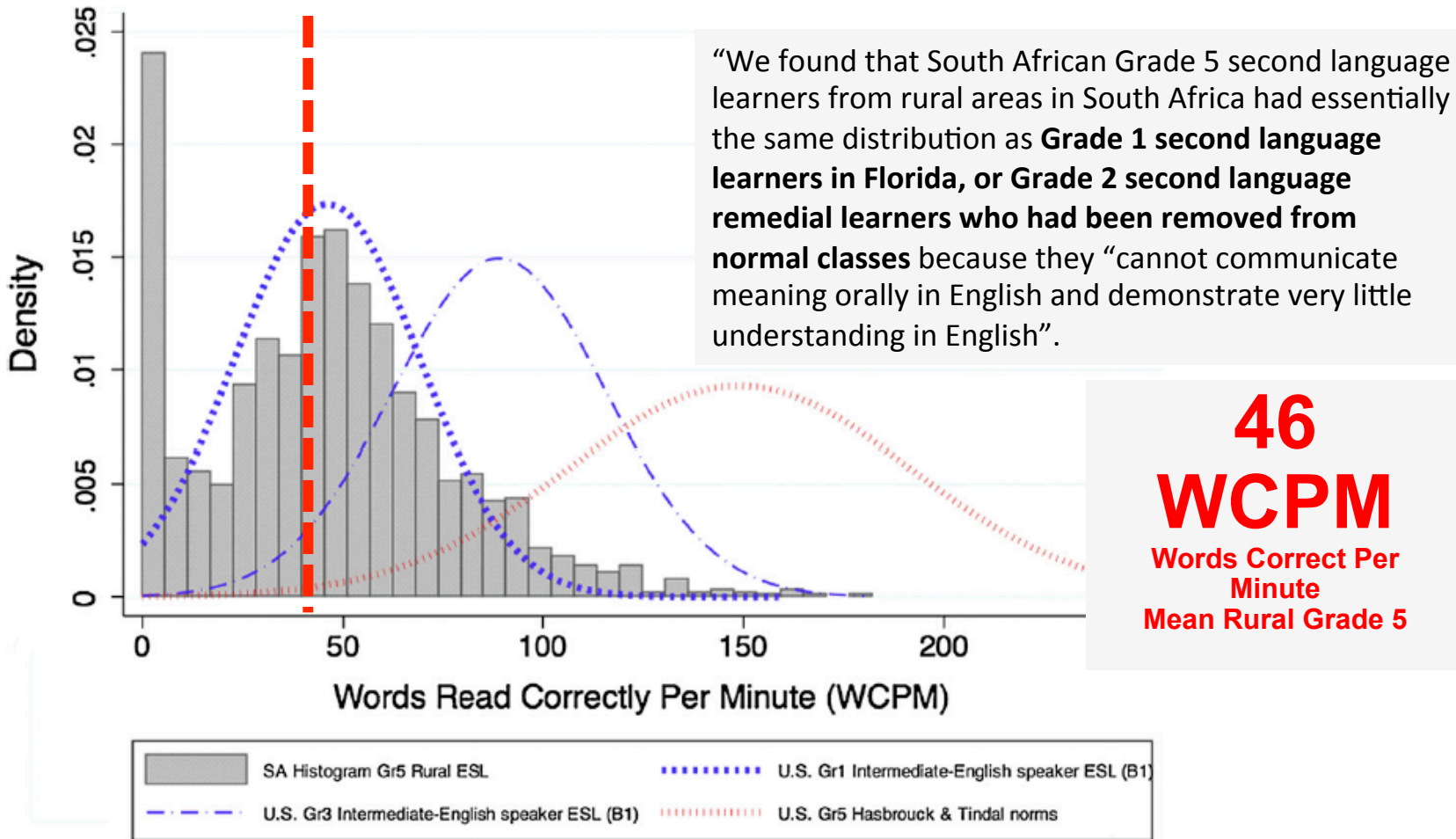
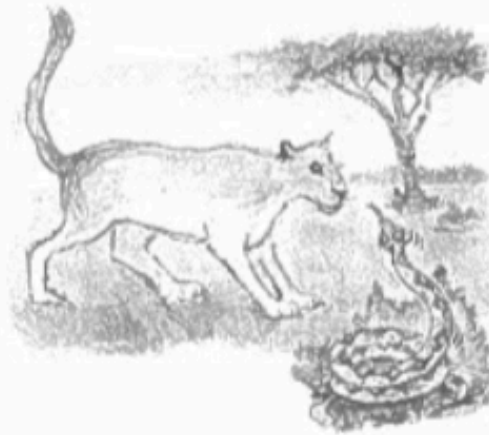


Fig. 3 Distribution of oral reading fluency scores (WCPM) for rural South African ESL learners relative to Broward County ESL learners, Florida (Broward County, 2012) (Source: Draper & Spaul, 2015)

STORY 1

A traditional story - How Leopard got his spots



Many years ago Leopard was a creature with no spots. His fur was an ordinary brown colour. One day, he was relaxing in the shade of a thorn tree when Zebra walked past. Leopard looked longingly at Zebra's black and white stripes. "I wish I had interesting patterns in my coat," he said wishfully to Zebra.

Suddenly they heard a noise in the bushes nearby. They found Snake slithering under some dry leaves. Surprised, they asked why she was hiding away. "I am sad and lonely because I have no friends," she said.

What does this look like in reality?



Many years ago Leopard was a creature with no spots.
One day, he was relaxing in the shade of a thorn
tree when Zebra walked past.

Recommended
rate at Gr5
(Hasbrouck & Tyndal, 2006)
~130 WCPM)

Many years ago Leopard was a creature with no spots.
One day, he was relaxing in the shade of a thorn
tree when Zebra walked past.

40% of SA rural
Gr5 learners
(<40WCPM)
WCPM

Table 3 Letter-sounds and oral reading fluency

Study	Language	Total letters read correctly per minute			# Learners	# Schools	Reference and notes
		End Gr1	End Gr2	End Gr3			
EGRS 1	Setswana	22	39		1200	80	
EGRS 2 (DBE, forthcoming)	EFAL	18			1459	80	Q1-3 schools in Mpumalanga. Mostly remote rural.
Spaull et al (2018)	Northern Sotho		31	43	113	9	End of Grade 2 is actually start of Grade 3 (Spaull et al., forthcoming)
	Xitsonga		35	47	89	10	
	isiZulu		27	36	414	42	
Zenex (2018)	isiZulu	6	11	16	60	4	Rural
	isiXhosa	24	41	47	60	4	Urban
E-LIT	isiXhosa	29			63	7	Q1-3 WC

		Oral Reading Fluency (wcpm)					
		End Gr1	End Gr2	End Gr3	# Learners	# Schools	
EGRS 1	Setswana	7	24		1200	80	
EGRS 2 (DBE, forthcoming)	EFAL	5			1459	80	Decodable words
	EFAL	5.3			1459	80	Sight words
	isiZulu	6.1			427	22	CVCV words
	Siswati	5.3			1032	58	CVCV words
Spaull et al (2018)	Northern Sotho		39	55	113	9	End of Grade 2 is actually start of Grade 3
	Xitsonga		41	59	89	10	
	isiZulu		21	31	414	42	
Zenex (2018)	isiZulu	1	12	21	60	4	Rural
	isiXhosa	7	16	21	60	4	Urban
E-LIT	isiXhosa	12			63	7	Q1-3 WC



Reading benchmarks in African languages



Creating reading fluency benchmarks in African languages¹

Nic Spaull, Elizabeth Pretorius &
Nompumelelo Mohohlwane²

RESEP Policy Brief

SEPTEMBER
2018

1. Why should we focus on reading?

Learning to read for meaning is the most important skill that children learn in primary school. If a child cannot read well, then they will not be able to do well in any subject at school; they will not be able to pass matric or get a well-paying job. Reading is the skill that all other skills depend on. In South Africa, more than 70% of children learn to read in an African language (usually their home language) in Grades 1–3 before switching to English in Grade 4 until matric. Local and

international research shows that it is best if a child first learns to read in their home language and then learns to read in another language, rather than trying to learn in a language they do not speak or understand.

Learning to read for meaning is the most important skill that children learn in primary school.

So the most important thing is to ensure all children learn to read in their home language in Grades 1–3. New research that was published in 2017 reported on



Funded by:



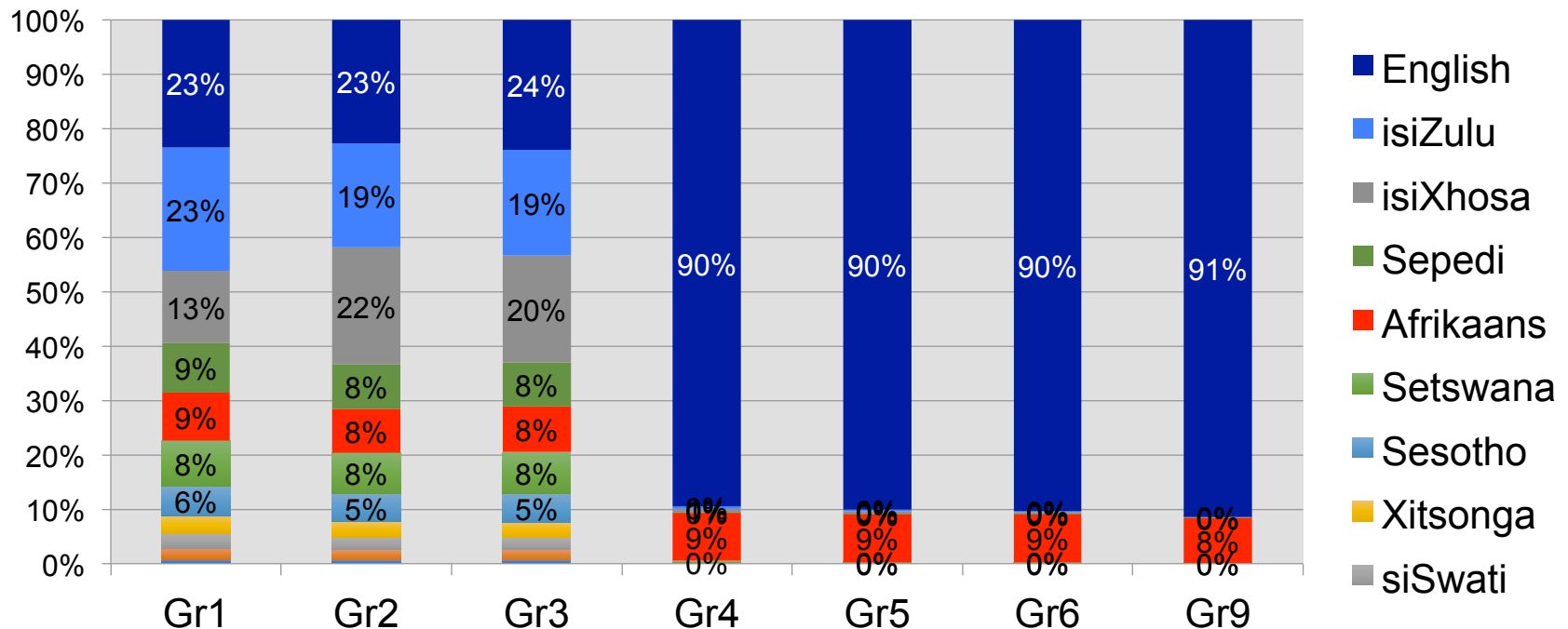
Research jointly supported by the ESRC and DFID

¹ This policy brief is based on research funded by the Economic and Social Research Council (grant ES/N01023X/1).

² Nic Spaull is based at the Research on Socioeconomic Policy (RESEP) group at Stellenbosch University, Elizabeth Pretorius is based in the Linguistics Department at UNISA, Nompumelelo Mohohlwane is based in the Department of Basic Education (DBE).

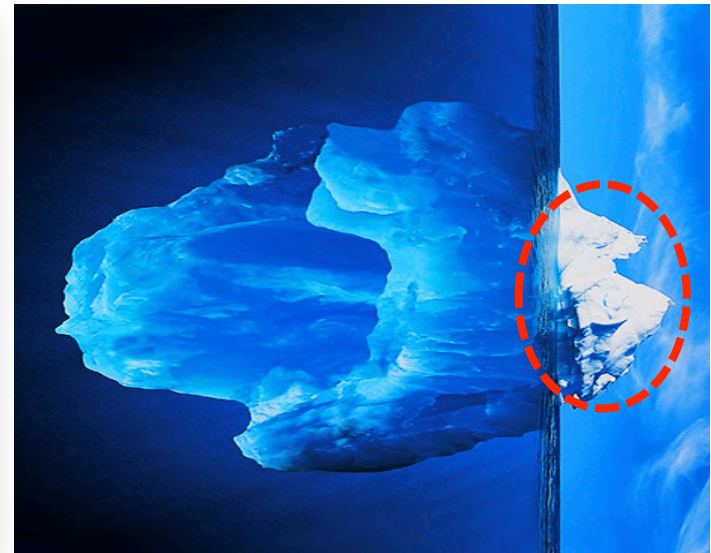
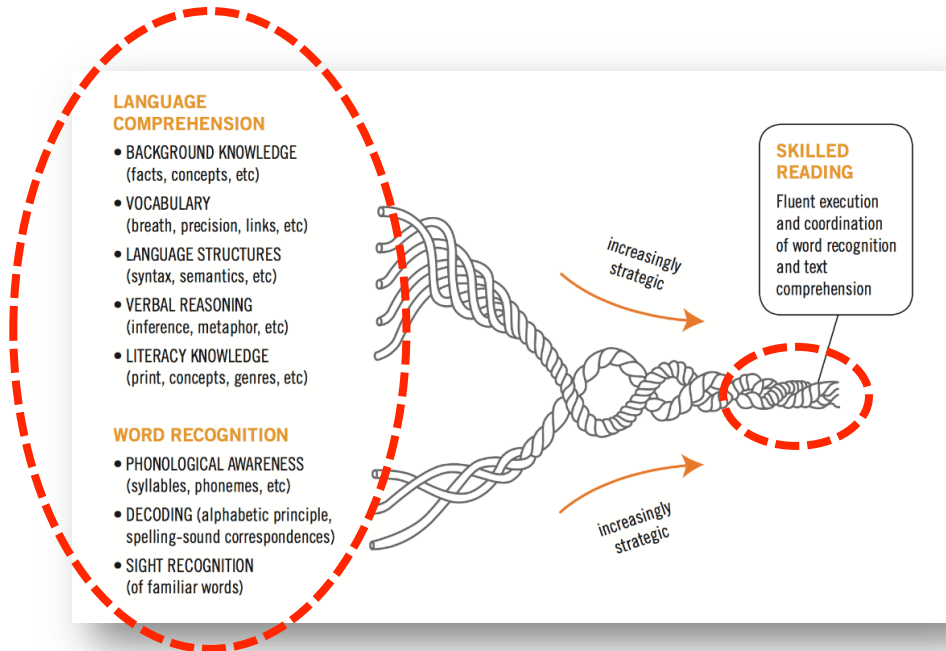
Policy brief

Language in SA



Why should we focus on benchmarks by language and grade?

Why are benchmarks important for African language?



ISHADI 1

Isibonelo: b M s f

S	v	n	g	L	y	Z	h
W	m	k	th	G	b	c	hl
q	d	z	a	p	nd	z	U
ng	sh	l	kh	X	u	g	sw
B	qh	i	f	e	Z	R	l
S	n	lw	ndl	t	Y	ts	bh
nc	E	y	tsh	Q	ph	M	v
O	t	ny	P	dl	A	e	mp
f	ph	h	u	A	r	W	dw
H	b	nz	g	dl	m	hl	i
L	o	lw	a	X	ntl	E	ny
p	x	N	kw	nc	D	ndl	y
mb	J	C	mv	V	ncw	W	q
V	nhl	h	g	tsh	y		

How are African languages different?

Language	Text		
Sepedi	<i>Ka le lengwe la matšatši mosepedi yo a bego a na le tlala.</i>		
Xitsonga	<i>Siku rin'wana mufambi loyi a ri na ndlala.</i>		
isiZulu	<i>Kunesihambi esasilambile kakhulu.</i>		
English	There was a stranger who was very hungry.		
	Words in Sentence 1	Letters per word	Total single syllable words:
Sepedi	13	3.5	8
Xitsonga	8	4.1	3
isiZulu	3	10	0

Table 6. Mean oral reading fluency (ORF) words attempted and percentage correct by decile of ORF words correct per minute

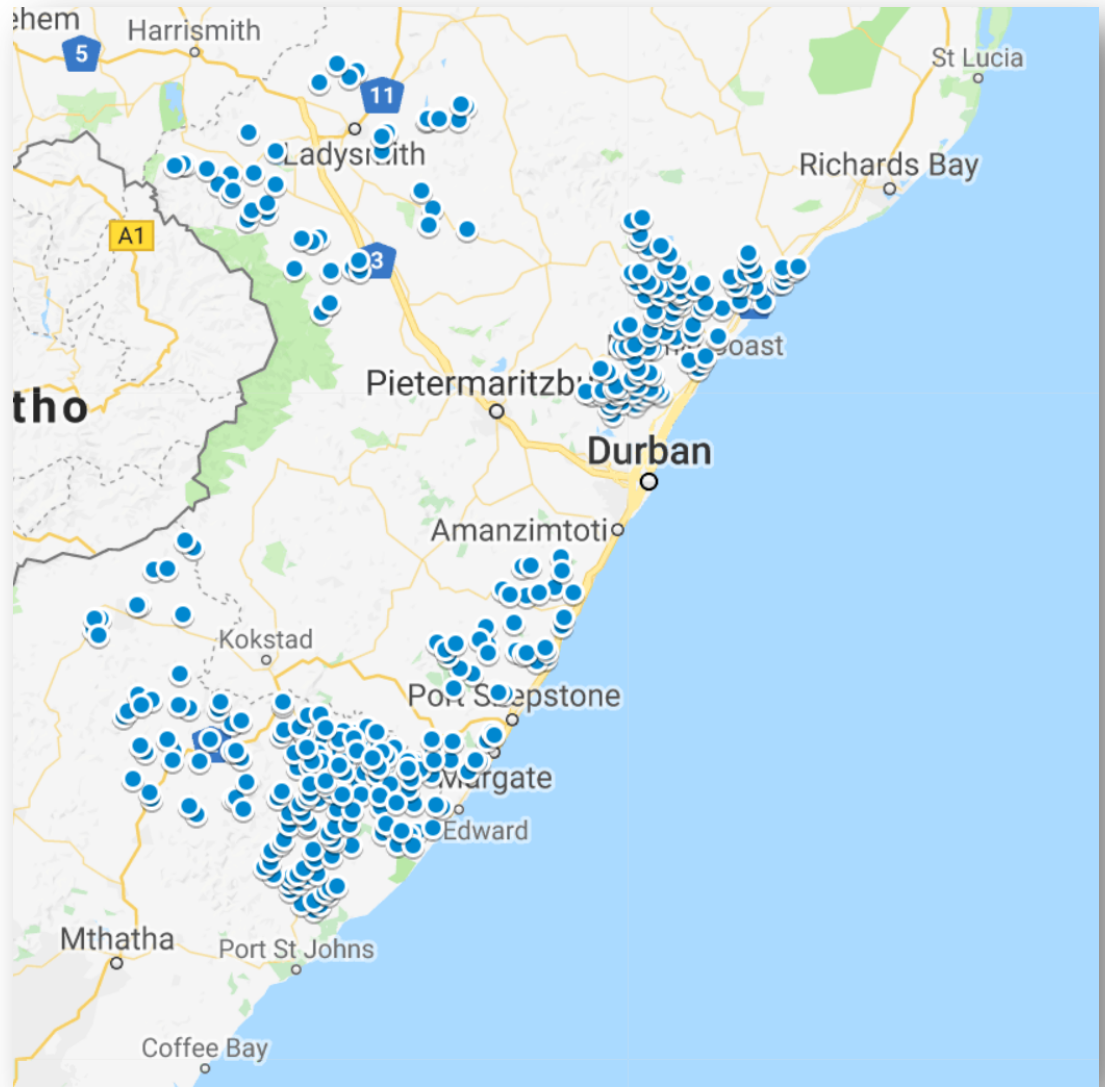


	Northern Sotho			Xitsonga			isiZulu		
Words Correct Per Minute	Words attempted	% incorrect	Sample	Words attempted	% incorrect	Sample	Words attempted	% incorrect	Sample
Decile 1 (0→10)	16	52%	9	6	39%	3	9	36%	43
Decile 2 (11→20)	21	26%	11	19	24%	4	18	10%	95
Decile 3 (21→30)	34	24%	9	29	7%	4	26	4%	104
Decile 4 (31→40)	40	8%	13	36	2%	10	36	3%	97
Decile 5 (41→50)	49	7%	26	47	2%	26	46	2%	46
Decile 6 (51→60)	57	4%	18	55	0%	21	53	1%	6
Decile 7 (61→70)	67	3%	17	63	1%	9	68	3%	2
Decile 8 (71→80)	75	2%	4	76	0%	7			
Decile 9 (81→90)	86	3%	2	87	1%	4			
Decile 10 (91→100)	107	0%	2	91	0%	1			

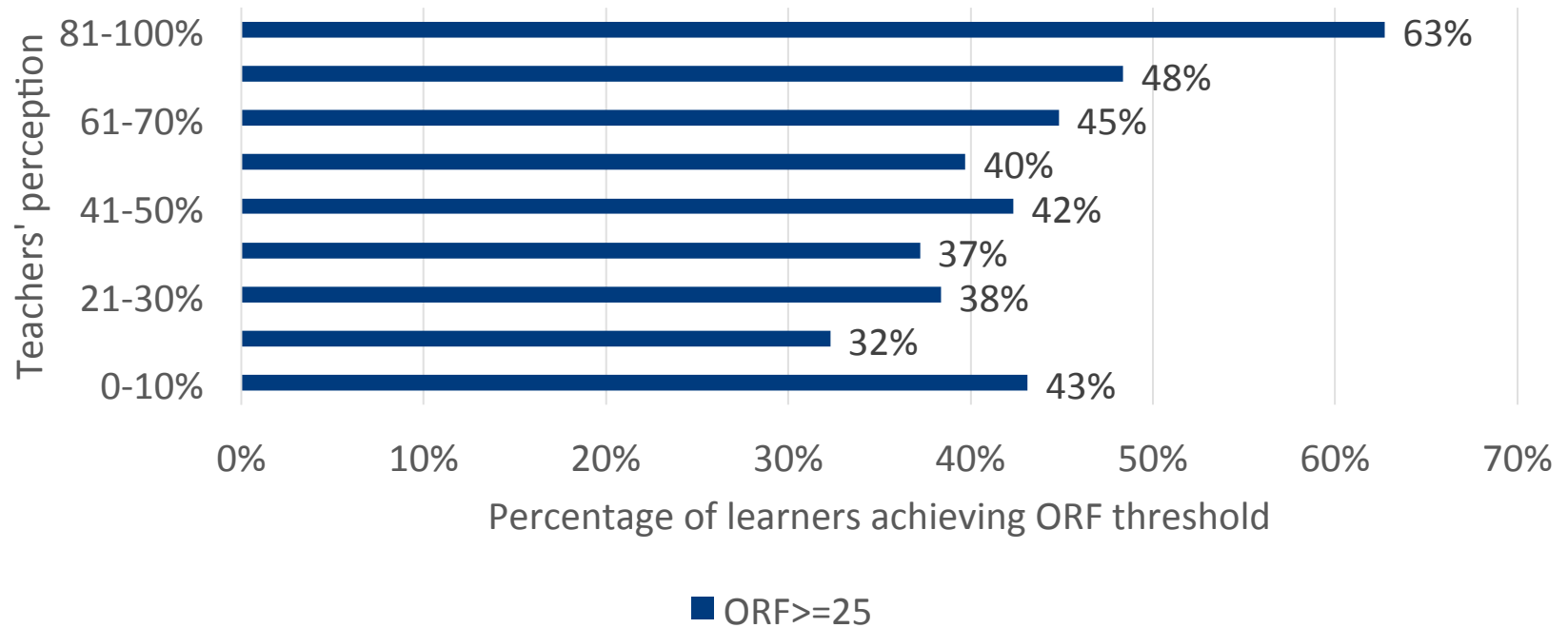


Nal'ibali's Story Powered Schools

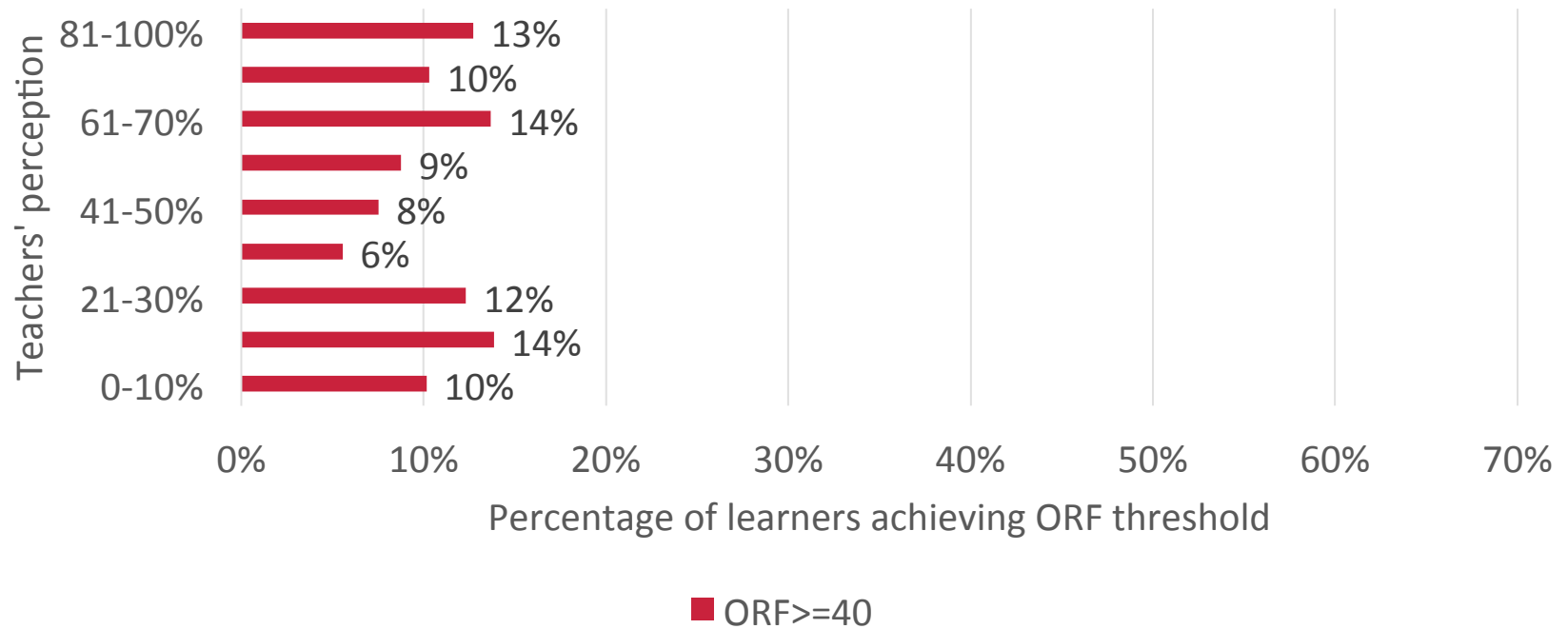
- RCT impact evaluation of Nal'ibali's Story Powered Schools
- 360 schools in KwaZulu-Natal and Eastern Cape



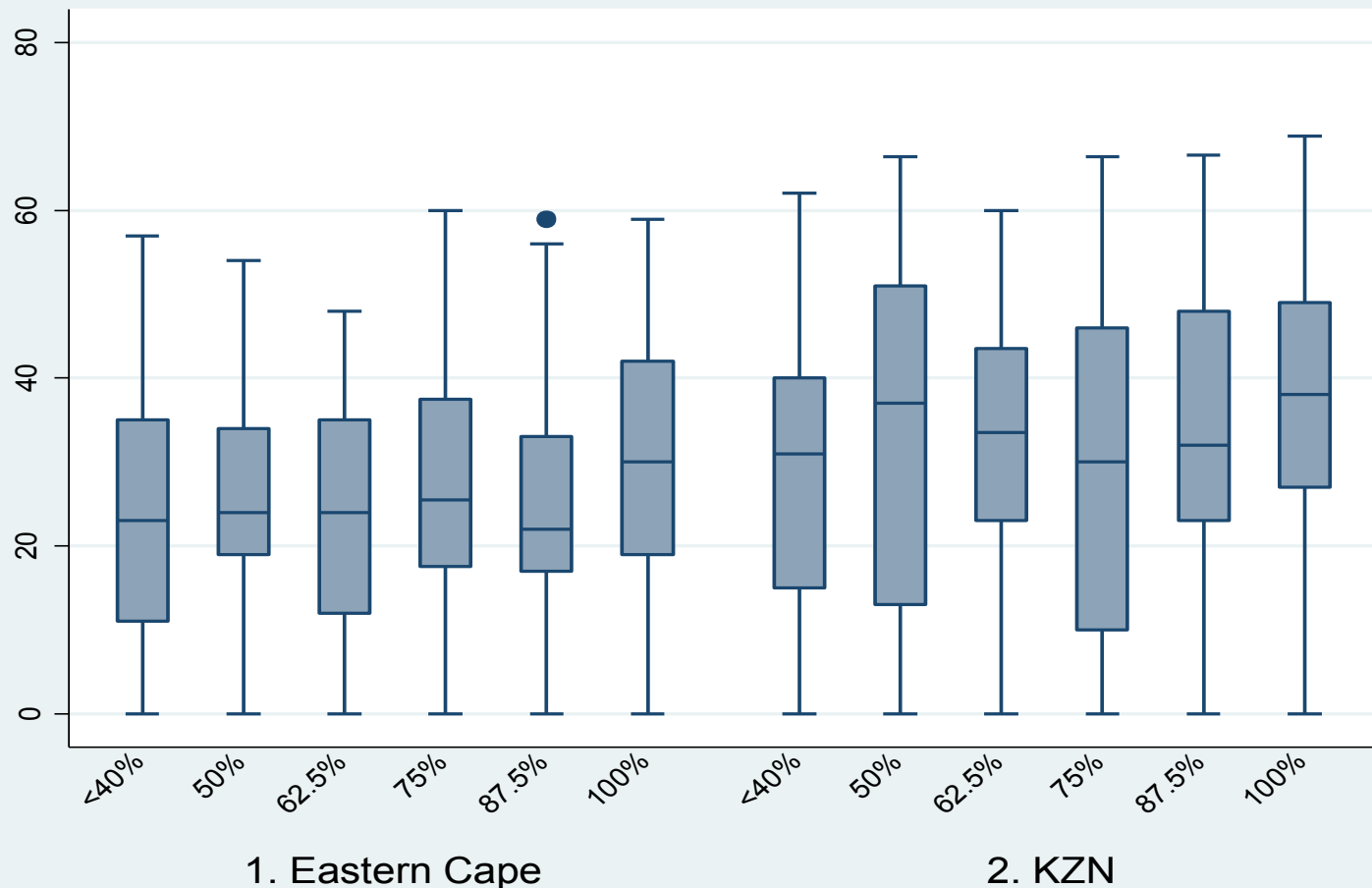
Teacher perception and learner performance – Grade 4 (Term 1) HL



Teacher perception and learner performance – Grade 4 (Term 1) HL



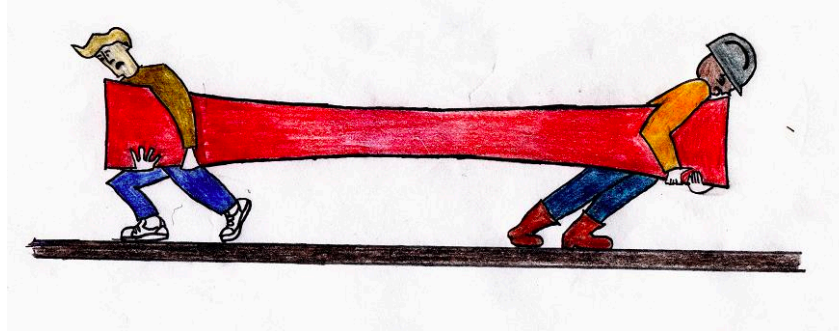
Oral reading fluency distribution by score on productive listening comprehension – Grade 4 HL (Term 3)





Tension between research and M&E

Tension between reading research needs and literacy intervention M&E needs



“To be useful, tests have to be reasonably **accurate**. But to be accurate, tests have to be fairly **complex**, and complex assessment procedures contradict the fundamental notion that assessment should be **simple and easy to deliver**” (Singleton 1997 Screening early literacy)

Early literacy is **best assessed one-on-one**. This is time consuming, and fieldworkers have to be well trained to administer the tests correctly and rigorously.

Budgets usually accommodate 2 fieldworkers per school, per morning.

At most, about 15-20 Grade 1-3s can be tested in a morning, using various items on EGRA. Many of these are timed decoding tests, where performance is measured within a minute to determine automaticity in processing.

NOT EVERYTHING CAN BE TESTED SIMPLY OR QUICKLY



Phonological/phonemic processing - it is developmental; some skills emerge before others and are easier than others. There need to be enough items of each aspect of phonological processing included in the assessment

Vocabulary – do frequency levels need to be factored in? (Wawire & Kim 2018 = Kiswahili 25 items)

noun classes in African languages

Morphology – prefixes/suffixes; nominal/verbal

Reading comprehension - a few items based on an ORF passage

Listening comprehension – instructions vs story recall

Quantitative work on reading in African languages



ASSESSMENTS

- **Quality of assessments?**
 - Which grades/texts/languages/types?
 - What are we testing?
 - (Oral) Language comprehension (vocab, listening C, verbal reasoning, syntax)
 - (Print) Decoding / word recognition (alphabetic principle, ORF,
- **Quality/impact of translations?**
 - Evaluated how? DIF?
 - Impact of dialects?
- **Cost & frequency of assessments**

ANALYSIS

- **Relationships between inputs/outputs?**
 - Fluency&/Vocabulary and comprehension?
 - Impact of morphology?
- Language-specific **norms and 'standards'** for reading?
- Relationships between **HL and EFAL** – testing hypotheses. Transfer? Which grades?