RESEP
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Creating reading fluency benchmarks in African languages[1]

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RESEP Policy Brief

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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.

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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

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the reading outcomes of learners in a nationally representative sample of primary schools (293 schools)[3]. They assessed the reading competencies of children in whatever language their school used in Grades 1–3, i.e. they assessed all 11 South African languages. They found that 78% of Grade 4 children could not read for meaning in any language (PIRLS 2016).

2. What are reading 'benchmarks'?

Children should be able to read for meaning in their home language and in English by the end of Grade 3.

Reading benchmarks measure important components of reading and report on them at different ages, grades or 'milestones'. One important benchmark or milestone is that children should be able to read for meaning in their home language and in English by the end of Grade 3. The South African curriculum (CAPS) prescribes that Grades 1–3 is the '*learning to read*' phase, but it is from Grade 4 onwards – a '*reading to learn*' phase – where children use the skill of reading to acquire new information.

3. Why are benchmarks important?

- **Assessing if a learner is 'on track':** Reading benchmarks are important because they can tell us if a child is 'on track' when they are learning to read. Knowing that 78% of Grade 4 children cannot read for meaning is important but it would be more helpful to know which of the 'reading stages' or benchmarks in Grades 1, 2 and 3 they did not meet. For example, one benchmark is that children need to know all of their letter-sounds before the end of Grade 1. If they do not pass this benchmark they will not be able to go to the next stage (blending letters together to create words).
- **Measuring progress over time:** By measuring how many children reach each of the different benchmarks it is possible to see if things are improving over time. For example, – if we tracked every three years the percentage of learners who knew their letter-sounds by the end of Grade 1, we could see if this was improving or deteriorating over time.

4. Do benchmarks exist in African languages?

Most benchmarks that exist internationally are for English, French or Spanish.

There are almost no benchmarks that exist specifically for African languages. Most benchmarks that exist internationally are for English, French or Spanish. Some benchmarks are comparable across languages – like learning letter sounds. But others are different between different languages.

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3 Howie, S., Van Staden, S., Tshele, M., Dowse, C., Zimmerman, L. (2017). Progress in International Reading Literacy Study (PIRLS) 2016 Summary Report. Centre for Evaluation and Assessment

5. Developing a benchmark for reading fluency/speed

One important benchmark for reading is reading *fluency* or reading speed. Children need to be able to read quickly enough to understand what they are reading. If children battle to read and spend 2 or 3 seconds on every word, they are reading too slowly to understand what they are reading. One way of measuring reading fluency is called "*words read correctly per minute*" (WCPM). To calculate this, children are asked to read a standard story out loud while someone follows along on their own copy of the story and silently monitors how many errors they make while reading, and where they get up to in the story after one minute. If a child reads 34 words and makes 3 mistakes then their 'score' for this would be 31 words-correct-per-minute. In English there are already benchmarks

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that have been developed for how many words-correct-per-minute (WCPM) children should be reading at different grades. For example, in America children are expected to read about 50 WCPM by the end of Grade 1, and 90 WCPM by the end of Grade 2, increasing to 110 WCPM by the end of Grade 3[4]. Unfortunately, we cannot just use these English benchmarks for our African languages because the language structure is very different.

6. Why are benchmarks different for African languages?

Different languages have different language structures which means that they put together sounds, words and meanings in different ways. This has implications for writing systems (called 'orthographies'). For example, in Nguni languages like isiZulu or isiXhosa units are added to the beginning of the word (prefixes) or to the end of the word (suffixes) and they change the meaning of the word. Languages that write these units together have what are called a 'conjunctive' orthography. This results in some very long words that have a lot of information included in a single word (like who is doing what, and even when they are doing it). Other languages don't do this. For example, the Sotho languages (like Setswana or Sepedi) represent these units as separate, smaller words rather than very long words. They have a 'disjunctive' orthography. It is easiest to see this by using an example comparing languages. Table 1 reports the number of words in Sepedi, Xitsonga and isiZulu for the English sentence "*There was a stranger who was very hungry.*" Exhibit 1 also shows two pages of a graded-reader story book from Grade 1.

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4   Hasbrouck, J. & Tindal, G.A. 2006. Oral reading fluency norms: A valuable assessment tool for reading teachers. The Reading Teacher, 5:636-644.

Table 1: Comparing number of words to convey the same meaning across four languages

Language	Text
Sepedi	*Ka le lengwe la matšatši mosepedi yo a bego a na le tlala.*
Xitsonga	*Siku rin'wana mufambi loyi a ri na ndlala.*
isiZulu	*Kunesihambi esasilambile kakhulu.*
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

There is a need for language-specific benchmarks in South Africa.

Clearly there are large differences between the three different languages. What takes three words in isiZulu (an Nguni language) takes 13 words in Sepedi (a Sotho language). This is the reason why there is a need for language-specific benchmarks in South Africa. We cannot expect a child learning in isiZulu to read the same number of words per minute at the end of Grade 2 (in isiZulu) as a Sepedi child learning in Sepedi should read by the end of Grade 2.

EXHIBIT 1: **Extract from a Grade 1 reader (Vula Bula series: "*Go sebelana*" Sepedi and "*Sebeza*" in isiXhosa)**

isiXhosa: 10 words

Sepedi: 20 words

O-o-o-h! Ndiyabona kutheni benje namhlanje! Nalo! Lavela ihlebo! Ndiyabulela! Andisavuyi!

Oo! Se ke sephiri sa lena.
Ke bona lebaka la go sebelana ga lena.
Ke a leboga bana ba ka!

7. How do you develop reading fluency benchmarks in African languages?

The most important outcome of reading is *comprehension or understanding*. All other components of reading (speed, accuracy, vocabulary etc.) are important because they lead to comprehension. Because of this, the way we develop reading fluency benchmarks is by linking reading speed to reading comprehension in each language. We essentially need to ask the question "*How many words do children need to read correctly per minute in _____ language in*

order to understand what they are reading?" The way we assess reading comprehension is by asking children questions about a text after they have read the text. Using information on both reading speed (words-read-correctly-per-minute) and reading comprehension (percentage of questions answered correctly) we can look at the learners who are reading with comprehension and see how quickly they were reading on average.

8. What do the benchmarks look like in African languages?[5]

In this study researchers went to 61 schools across three provinces (Gauteng, Limpopo and KwaZulu-Natal) and assessed 785 Grade 3 learners across four languages (Sepedi, Xitsonga, isiZulu, and English) in February 2017. They assessed not only how many words learners could read correctly but also

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1. how many **letter-sounds** children could 'read' correctly in a minute;
2. how many **isolated words** (single words) they could read correctly per minute;
3. how many **words in a story** (connected text) they could read correctly in a minute.

Using learner scores on the comprehension questions we could classify them into four groups: (1) Non-readers (those who could not read the title of the story properly), (2) Pre-readers (<25% on comprehension), (3) Emergent-readers (26–50% on comprehension), and (4) Basic readers (63%+ on comprehension). We can then see for each of these groups how many letters, single-words and connected-text-words they could read correctly in a minute. This is reported in Table 2 below.

TABLE 2: Letters, single-words and connected-text-words read correctly per minute by comprehension group in Sepedi, Xitsonga and isiZulu at the start of Grade 3.

		Letters	Single words	Connected text	Sample	
Sepedi	*Non-readers*	**24** (17–31)	**8** (3–11)	**14** (7–25)	15	*11%*
	Pre-readers	**25** (28–41)	**23** (18–28)	**43** (34–48)	48	*36%*
	Emergent	**42** (29–49)	**30** (27–35)	**58** (52–62)	27	*20%*
	Basic	**43** (39–46)	**33** (27–36)	**70** (66–84)	12	*9%*
Xitsonga	*Non-readers*	**16** (10–25)	**6** (3–11)	**12** (7–18)	4	*4%*
	Pre-readers	**33** (18–41)	**16** (13–20)	**40** (32–50)	16	*14%*
	Emergent	**39** (34–48)	**19** (15–23)	**48** (39–51)	30	*27%*
	Basic	**46** (38–55)	**28** (21–31)	**57** (48–71)	43	*39%*
isiZulu	*Non-readers*	**19** (9–23)	**6** (3–13)	**4** (1–15)	37	*7%*
	Pre-readers	**26** (15–38)	**15** (10–20)	**13** (9–22)	83	*17%*
	Emergent	**34** (20–43)	**23** (18–29)	**28** (20–35)	145	*29%*
	Basic	**34** (24–48)	**30** (26–33)	**37** (32–43)	102	*21%*

5 Details of the full study: Spaull, N., Pretorius, E., & Mohohlwane, N. (2018) *Investigating the Comprehension Iceberg: Developing Empirical Benchmarks for Early Grade Reading in Agglutinating African Languages.* RESEP Working Paper01/2018. Stellenbosch University.

From Table 2 we can see that ***Basic*** readers (those who had comprehension scores of at least 63% or higher) have different reading speeds in the different languages. Basic Sepedi readers are reading about <u>70 Sepedi words correct per minute</u> while Basic isiZulu readers are reading about <u>37 isiZulu words correct per minute</u>. This is why it is important to develop reading benchmarks that are specific to each language, and why we cannot just use the benchmarks for English for the African languages.

9. What are the researcher's recommendations?

1. **Reading benchmarks in African languages:** Without benchmarks that are specific to African languages it will not be possible to assess who needs additional support and whether we are progressing as a country. This will require assessing a large sample of learners in each of the official South African languages. The current study only looked at three languages (isiZulu, Sepedi and Xitsonga) and at one grade (Grade 3). Future studies should include other languages and other grades.

2. **Benchmarks at different grades:** There are key reading benchmarks at every grade, not only Grade 3. Future studies should assess other areas of reading like vocabulary and learner's understanding of the sound-structure-of-language (phonological awareness), particularly in earlier grades (Grade 1 and 2).

3. **Training teachers on using benchmarks:** In order for benchmarks to be helpful to teachers they need to understand (1) what they are measuring, (2) how to conduct these assessments themselves, (3) what to do when learners are not at the benchmark. If the Department of Basic Education just distributes an assessment like the Early Grade Reading Assessment (EGRA) without proper training on how to conduct the assessment and how to use the results, teachers and learners will not experience the benefits of assessment and targeted teaching.