Reading benchmarks for Sesotho-Setswana languages
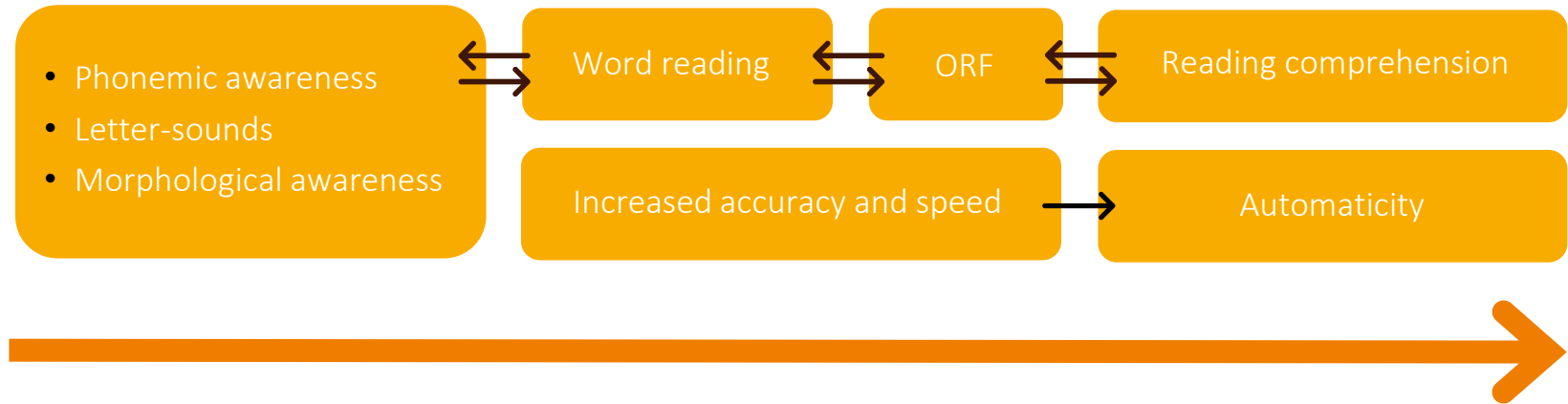
Presentation by: Nompumelelo Mohohlwane (DBE)

What are the early skills?

- Phonemic awareness
- Letter-sounds
- Morphological awareness

Word reading

ORF

Reading comprehension

Increased accuracy and speed → Automaticity

What are benchmarks?

An expression of **what reading success looks like**
Specific competency expressed as a **numerical expression** using a **valid metric**

National and Provincial Administration	School	Classroom
Establishes definition of reading proficiency	Standards and targets that school leaders can aim towards	Standard against which to measure learner skills
Clearly communicates standards and targets	Standardises assessment practices across and within schools	Identify early on learners at risk of not being able to read
Monitor progress	Identify the extent of remedial support required	Adapt instructional focus to meet learners' needs

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Reading Benchmarks for African Languages

Why do we need different benchmarks for African languages?

- Language differences concerning linguistic typography necessitate distinct language-specific benchmarks

  - Orthographic differences – writing conventions, including spelling and grammar

  - Morphological differences - internal structure of words and how relate to each other to make meaning

  - Differences in the relationship between language components, linguistic strategies employed for reading, and appropriate pacing when reading

- Nguni languages have a conjunctive orthography - one word may be a whole sentence

- Sesotho-Setswana languages have a disjunctive orthography - short word segments with prefixes and suffixes written separately

- Tshivenda and Xitsonga - mostly disjunctive orthography but with compounding features
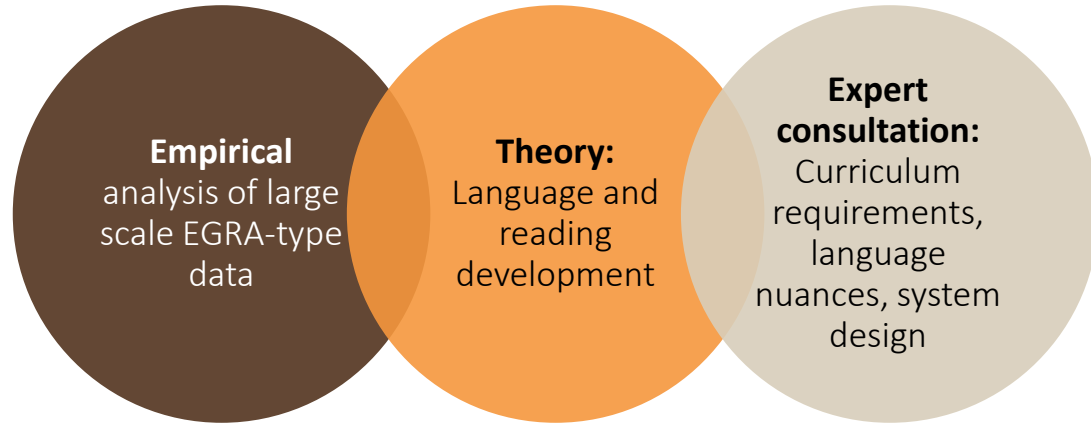
What has led to SA benchmarks?

- Important critique on existing methodology led by RTI/Room to Read
  - One-minute EGRA limits the learners attempting comprehension questions
  - Small percentage of learners used to create benchmarks
  - Very few learners reach the benchmarks
  - Artificial inflation of the relationship between fluency and comprehension through the questions attempted
- Three-minute adaptation currently
- Traditional approaches use fixed levels of comprehension to set benchmarks
- Assumes comprehension is a defined construct with equivalent meaning across passages
  - Concerns about cross-text comparability of passages and comprehension questions
  - Often clear and notable differences in hierarchy of comprehension questions and their difficulty
  - AND differences within the same question type
- **Conclude:** chosen cut-off point (80%) is arbitrary and biased by question difficulty

Data and approach

Three research components intersect to establish early grade reading thresholds and benchmarks

Empirical analysis of large scale EGRA-type data

Theory: Language and reading development

Expert consultation: Curriculum requirements, language nuances, system design

How do we set reading benchmarks?

- The level at which benchmarks are set is determined by data

- Two-stage approach with a minimum threshold and a benchmark
  - Using data to establish this in a non-grade specific way
  - Aligning the threshold and benchmark to a specific grade

- Applying the two-stage approach across each language then across language group

- Makes no assumptions about the accuracy-speed and fluency-comprehension relationships for Setswana or reading in English as a second language

Sensitive to current realities of learning	Cognisant of curriculum requirements	Grounded in theoretical understanding of reading development & language specific features (supported by language experts)

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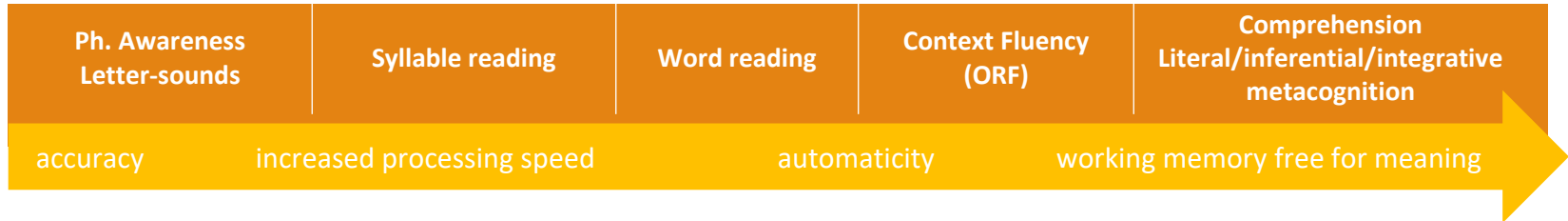**Reading Benchmarks** for African Languages

Data driven by grounded in theory

Reading comprehension is a complex phenomenon with different processes come into play as reading proficiency increases.

- Within each process, accuracy tends to develop first followed by speed.
- We explicitly analyse both accuracy and speed and their interrelationship.

Ph. Awareness Letter-sounds	Syllable reading	Word reading	Context Fluency (ORF)	Comprehension Literal/inferential/integrative metacognition
accuracy	increased processing speed		automaticity	working memory free for meaning

Our analytical approach aligns with the **decoding threshold hypothesis (**Wang et al. 2019)

- Until decoding occurs above a lower bound threshold level, reading comprehension is unlikely to develop/remain stagnant.
- There may also be an upper threshold, beyond which there are no additional gains in comprehension for increased decoding skills.
- Suggests that the relationship between fluency & comprehension will break down at low & high levels of fluency.

Which skills do we benchmark?

Letter-sound knowledge which refers to alphabetic knowledge of the written code

Oral reading fluency (ORF) refers to the ability to read words in context with speed, accuracy and prosody.

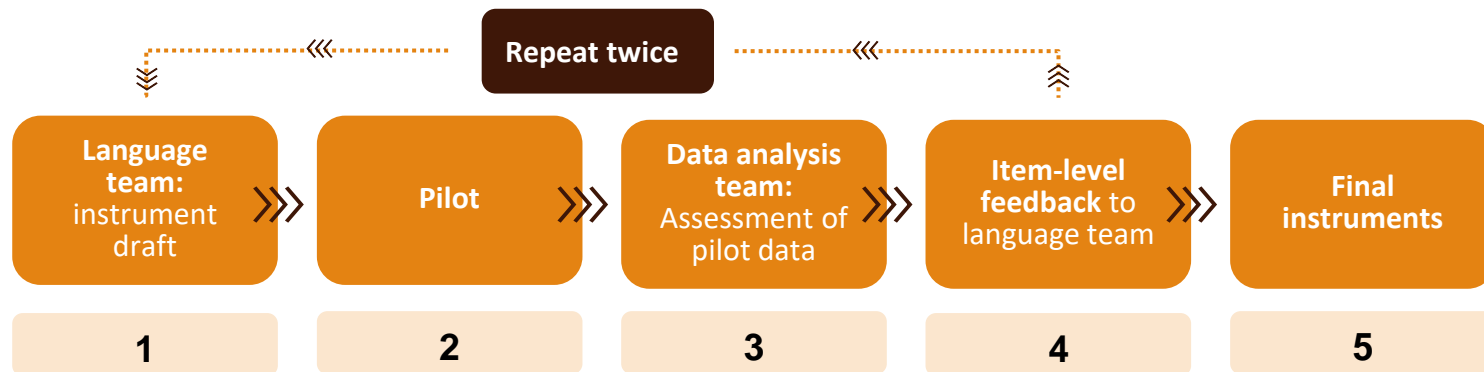| Accuracy*	Speed	Prosody
The percentage of words that are read correctly	The number of words that are attempted in a time period	How natural reading sounds (how it conforms to speech rhythms & intonation patterns & reflects punctuation conventions

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Reading Benchmarks for African Languages
FOOTER GOES HERE

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Benchmarking data process: Instrument Development

Repeat twice

Language team: instrument draft	**Pilot**	**Data analysis team:** Assessment of pilot data	**Item-level feedback** to language team	**Final instruments**
1	2	3	4	5

The key aims of the piloting

1. Assessments are set at the right level. No floor or ceiling effects
2. Appropriate language for the context with comprehension questions asked that are unambiguous
3. Appropriate length of the assessment (and specific reading passages)
   - assess the suitability of the length of the passages of connected text used to measure oral reading fluency (ORF)
     assess the difficulty level of comprehension questions

Assessments were also designed and adjusted to account for poorer reading performance expected during a pandemic period.
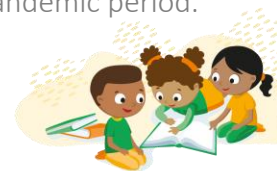
Benchmarking data process: Setswana-Sesotho data

Assessment data from almost 25 000 Setswana, Sepedi and Sesotho home language learners

Assessment data for grades 1, 2, 3, 4, 6 & 7 (including repeaters)

From 429 Quintile 1-3 or no-fee schools in North West, Free State and Limpopo provinces.

New EGRS 1 and Funda Wande , room to Read, 2021 data are highly suited to establishing benchmarks due to rigorous instrument development process.

Reading benchmarks and thresholds for early grade reading in Setswana home language

60

End of Grade 3

All learners should be able to read at least 60 correct WORDS per minute when reading a passage

40

End of Grade 2

All learners should be able to read at least 40 correct WORDS per minute when reading a passage

40

End of Grade 1

All learners should know their LETTER SOUNDS well, sounding at least 40 correct letters

Grade 1 Setswana Benchmark

40

End of Grade 1

All learners should know their LETTER SOUNDS well, sounding at least 40 correct letters

- Beyond reading 40 correct letter-sounds per minute, there are few benefits of improving letter-sound knowledge and speed.
- Although the blending of sounds is integral to phonics instruction, once learners have met this letter-sound knowledge benchmark, decoding instruction should focus on assisting learners in applying word attack strategies and developing fluency.

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Reading Benchmarks for African Languages

Grade 2 Setswana Benchmark

40

End of Grade 2

All learners should be able to read at least 40 correct WORDS per minute when reading a passage

- This is a minimum threshold. Higher order reading skills are very unlikely to develop if learners do not reach this fluency level.
- Pre-pandemic, approximately 42% of non-repeating learners in the EGRS I/RSP schools had reached the fluency threshold of 40 cwpm by the end of grade 2.
- Below 40 words per minute, learners are reading too slowly and inaccurately to comprehend what they are reading.

Grade 3 Setswana Benchmark

60

End of Grade 3

All learners should be able to read at least 60 correct WORDS per minute when reading a passage

- This fluency benchmark is indicative of the point at which reading comprehension becomes increasingly possible when learners read on their own.
- This point signals when teachers' focus should hone in on teaching learners skills and strategies needed to tackle written comprehension while encouraging vocabulary and language development.
- At 60 cwpm, underdeveloped comprehension skills become the main constraint to further literacy development.
- However, most learners are not reaching this benchmark by the end of grade 3 (only a quarter did pre-pandemic)

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Reading Benchmarks for African Languages

Fig 10: Early grade fluency profiles, Setswana samples (exclude repeaters)

Grade	Cannot read	Less than threshold	Reaching threshold	Reaching benchmark
Grade 1 Term 3 (2018)	63	35	1	1
Grade 1 Term 4 (2015)	55	39	5	1
Grade 2 Term 4 (2016)	29	29	27	15
Grade 3 Term 3 (2018)	18	31	27	24
Grade 3 Term 3 (2021)	27	39	21	13
Grade 3 Term 3 (2021)*	25	35	21	20
Grade 4 Term 3 (2018)	6	16	26	51
Grade 4 Term 3 (2018)*	1	10	22	67
Grade 4 Term 3 (2021)	14	32	30	24
Grade 4 Term 3 (2021)*	16	34	31	20
Grade 7 Term 3 (2021)	2	16	30	52
Grade 7 Term 3 (2021)*	2	4	7	87

Percentage of learners

Legend:
- Cannot read
- Less than threshold
- Reaching threshold
- Reaching benchmark

Excludes repeaters, * = second passage
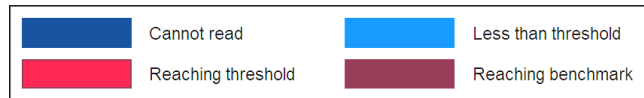
Who meets the threshold (40 cwpm) & benchmark (60 cwpm)?

End of Grade 2 (pre-pandemic):
- Non-readers – 29%
- About 58% (29%+29%) are reading below the minimum threshold of 40 cwpm.
- 42% reach the threshold
- 15% meet the benchmark

End of grade 3 (pre-pandemic):
- Non-readers remains high at 18%
- 51% meet the threshold
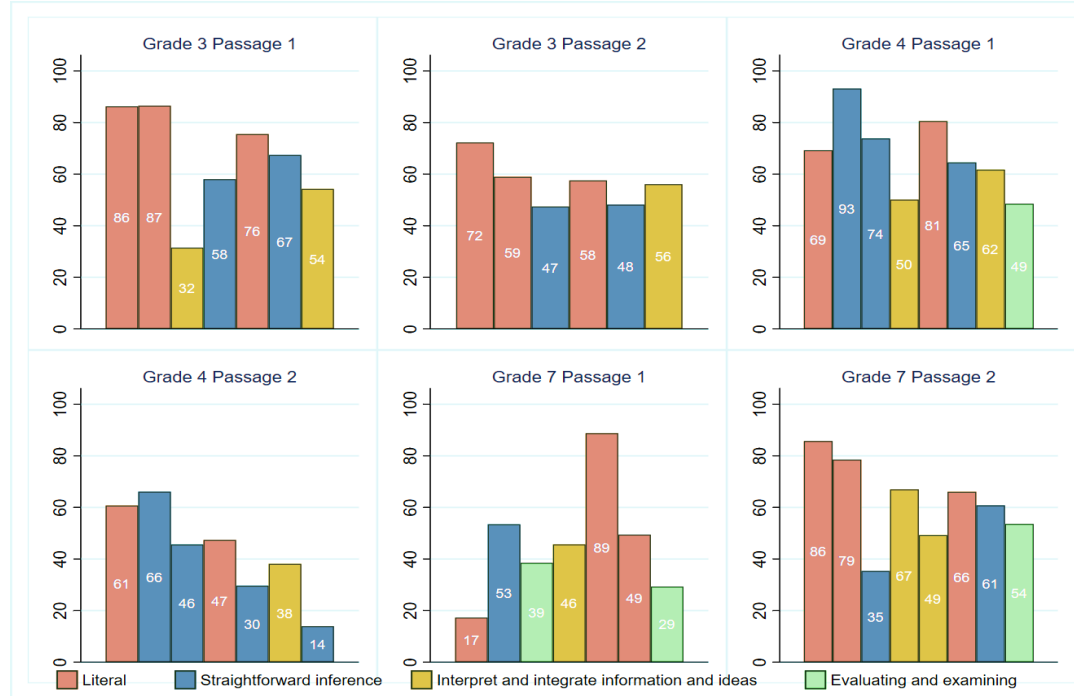- 24% meet the benchmark

End of grade 4 (pre-pandemic):
- 77-89% meet minimum threshold
- 51-67% meet the benchmark

Pandemic profiles much worse

Proportion of Learners Answering Each Comprehension Question Correctly: EGRS | Setswana Data

Grade 3 Passage 1
- Literal: 86, 87
- Interpret and integrate information and ideas: 32
- Straightforward inference: 58
- Literal: 76
- Straightforward inference: 67
- Interpret and integrate information and ideas: 54

Grade 3 Passage 2
- Literal: 72, 59
- Straightforward inference: 47
- Literal: 58
- Straightforward inference: 48
- Interpret and integrate information and ideas: 56

Grade 4 Passage 1
- Literal: 69
- Straightforward inference: 93
- Straightforward inference: 74
- Interpret and integrate information and ideas: 50
- Literal: 81
- Straightforward inference: 65
- Interpret and integrate information and ideas: 62
- Evaluating and examining: 49

Grade 4 Passage 2
- Literal: 61
- Straightforward inference: 66
- Straightforward inference: 46
- Literal: 47
- Straightforward inference: 30
- Interpret and integrate information and ideas: 38
- Evaluating and examining: 14

Grade 7 Passage 1
- Literal: 17
- Straightforward inference: 53
- Evaluating and examining: 39
- Interpret and integrate information and ideas: 46
- Literal: 89
- Straightforward inference: 49
- Evaluating and examining: 29

Grade 7 Passage 2
- Literal: 86, 79
- Straightforward inference: 35
- Interpret and integrate information and ideas: 67
- Evaluating and examining: 49
- Literal: 66
- Straightforward inference: 61
- Evaluating and examining: 54

Legend:
- Literal
- Straightforward inference
- Interpret and integrate information and ideas
- Evaluating and examining

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Reading Benchmarks for African Languages

Conclusion

- Collaboration has supported innovation and excellence in the benchmarking process while promoting capacity building.
- DBE led coordination in efforts and resources were important for efficiency and sector alignment

- Availability of longitudinal data, collected in transparent and replicable ways, has been a significant galvaniser in sustaining interest, building capacity and providing data for reanalysis.
- Sharing of instruments and replication over time enhanced possibilities

- True value of the benchmarks will be in their use – classrooms, national survey and in teacher development

Thank you