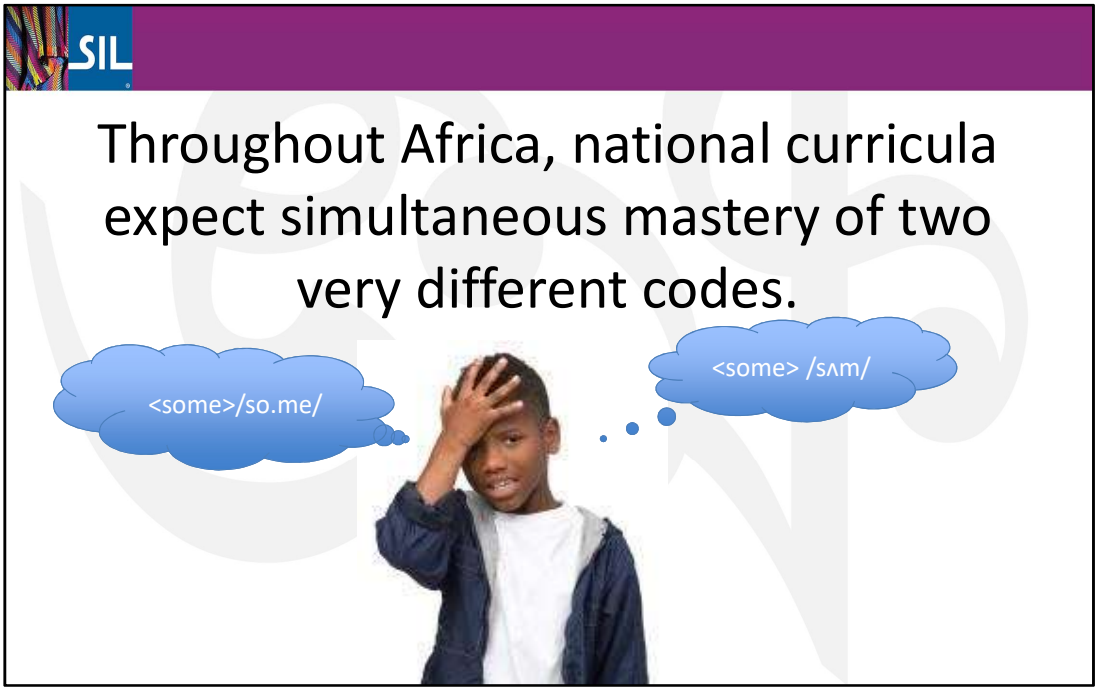
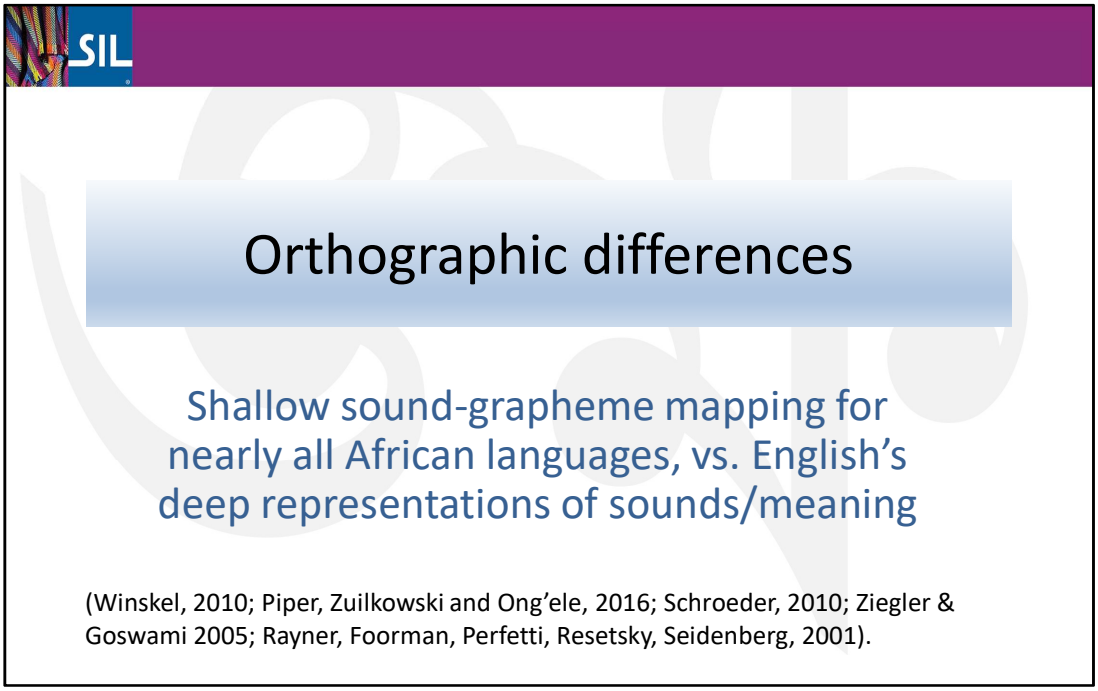
Bridging an Orthography…

Leila Schroeder

Why am I saying that the linguistic and orthographic distance between English and African languages is so great that it's hard to build an academic bridge between them? Consider the following…



The context: For most African orthographies, there is a fairly close matching of symbols and sounds. But across Africa, where the colonial languages are highly prized, children are often confronted with English reading **as well**, as early as grade 1. For readers of African languages to bridge to a very deep orthography with completely different sound-mapping associations for its twelve vowel phonemes, necessitates major changes in their decoding and word recognition strategies….even if they *have* heard English spoken before!



One significant barrier to true L2 reading success, aside from vocabulary, is orthographic. Transfer from a shallow, consistent L1 orthography to a deeper orthography with completely different sound-mapping associations for its twelve vowel phonemes, necessitates major changes in learners' decoding and word recognition strategies. What pedagogical strategies can narrow the chasm for learners? I will refer to alphabetic scripts only, though some of these strategies apply to transfer from alpha-syllabic scripts. There is so much evidence to support the notion that engaging the English orthography has negative effects on processing of L1 shallow orthographies for young children—I've only cited a few.

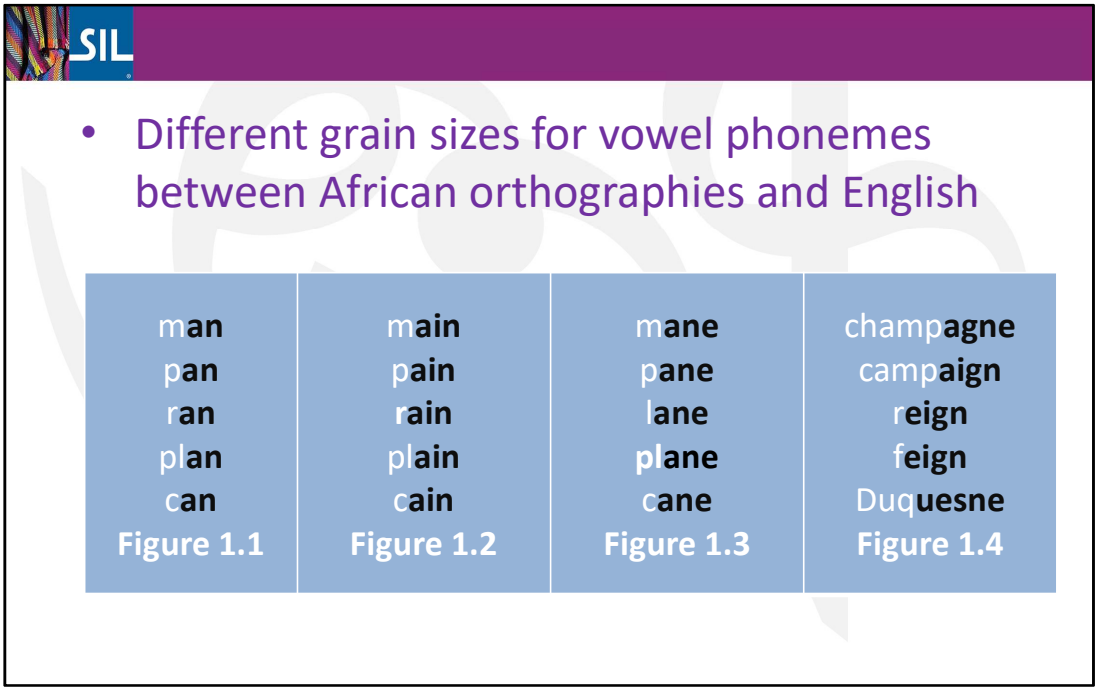
Virtually **none** of English's vowel-sound/graphemes match those of any African language.

English vowel	Maasai vowel
I sound in *bike*	ai
A sound in *cake*	ei
O sound in *boat*	ou
U sound in *cute*	iu
E sound in *see*	ii

Maa languages (such as Purko Maasai) have 9 vowel phonemes, so they can auditorily distinguish most of *our* vowel sounds. That's helpful, but this chart shows just a few of the complete mismatches between letters and their sounds for the Maa reader. This time we'll look at our vowel glides/ long vowels.

If they tried to decode these aloud when first confronted with them, they'd say …..

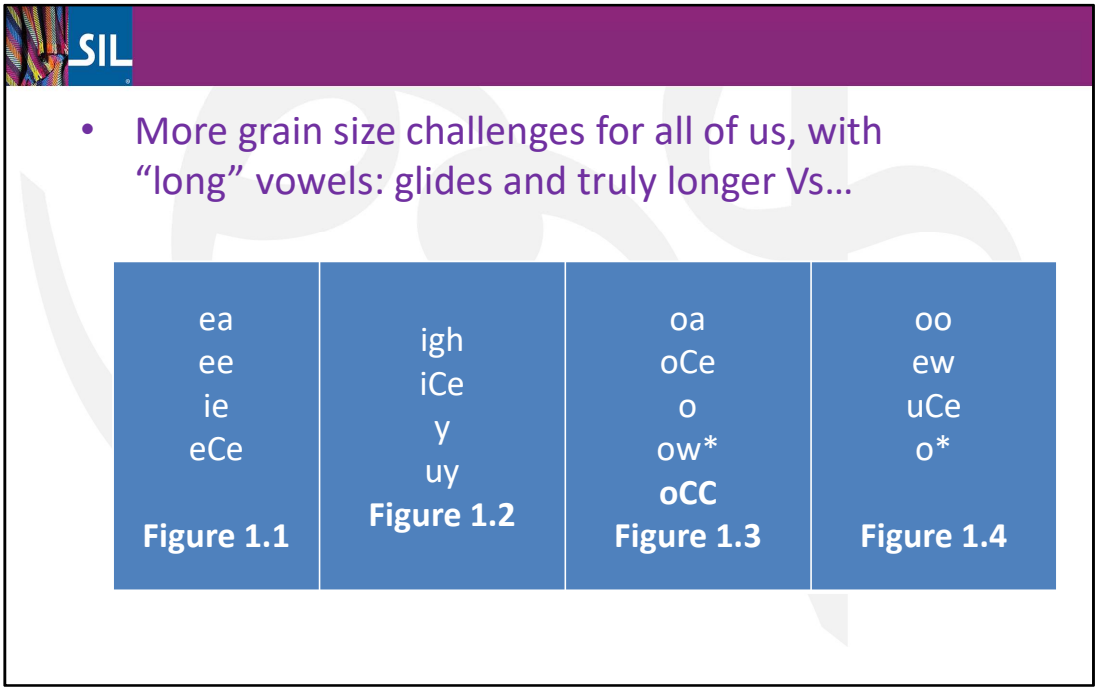
When they heard them, on the other hand, and tried to spell them, they'd write what you see in the right column.



I've come across a few consonantal digraphs and trigraphs in Africa (not counting consonant clusters), but for the most part, we can generalize that the grain size of African orthographies, the number of graphemes needed to represent a phoneme, is usually a one-to-one correspondence, unless we are talking about vowel diphthongs for a language like Maasai.)

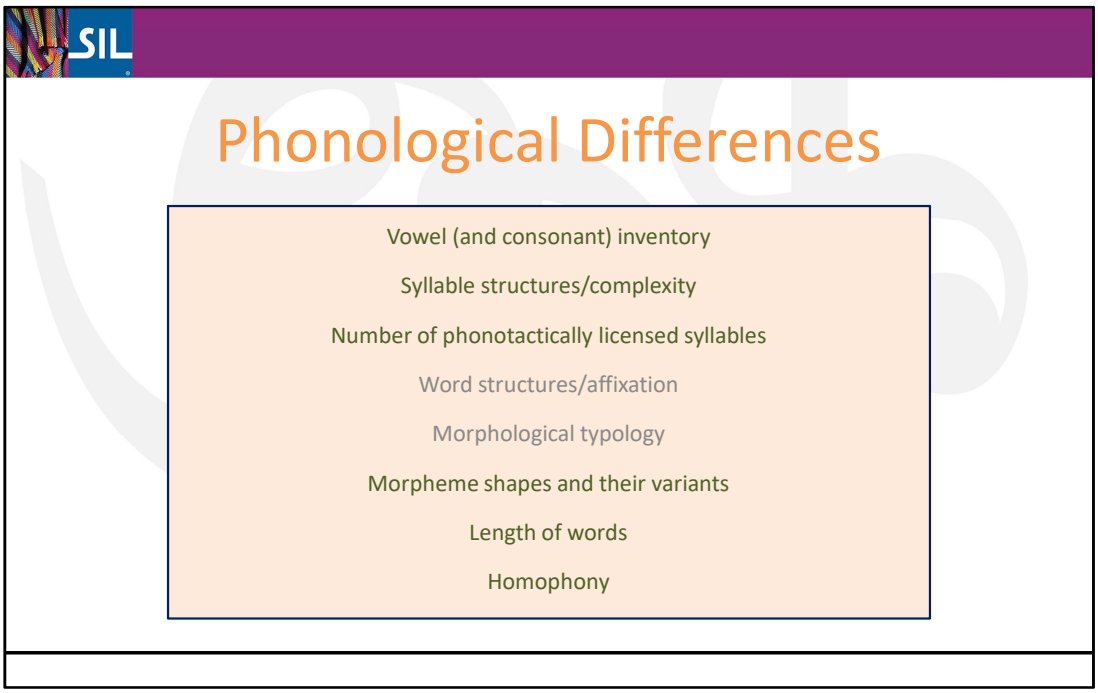
Since English has 12 vowel phonemes (plus diphthongs), with only 5 vowel symbols, they must be distinguished visually by the reader processing a **series** of letters.

In **Figure 1.1**., the /æ/ sound cannot be recognized or pronounced without a closed syllable, so the reader must look beyond the letter <A> to the VC **coda**!
In **Figure 1.2**, the reader must distinguish a series of 3 letters to recognize the vowel glide /ɛi/ in main, pain, etc. **Figure 1.3:** for the same glide sound in these words, a series of 3 graphemes is also necessary. African orthographies seldom or never use a silent <e>! and in column **1.4** the grain size is either 4 or 5!

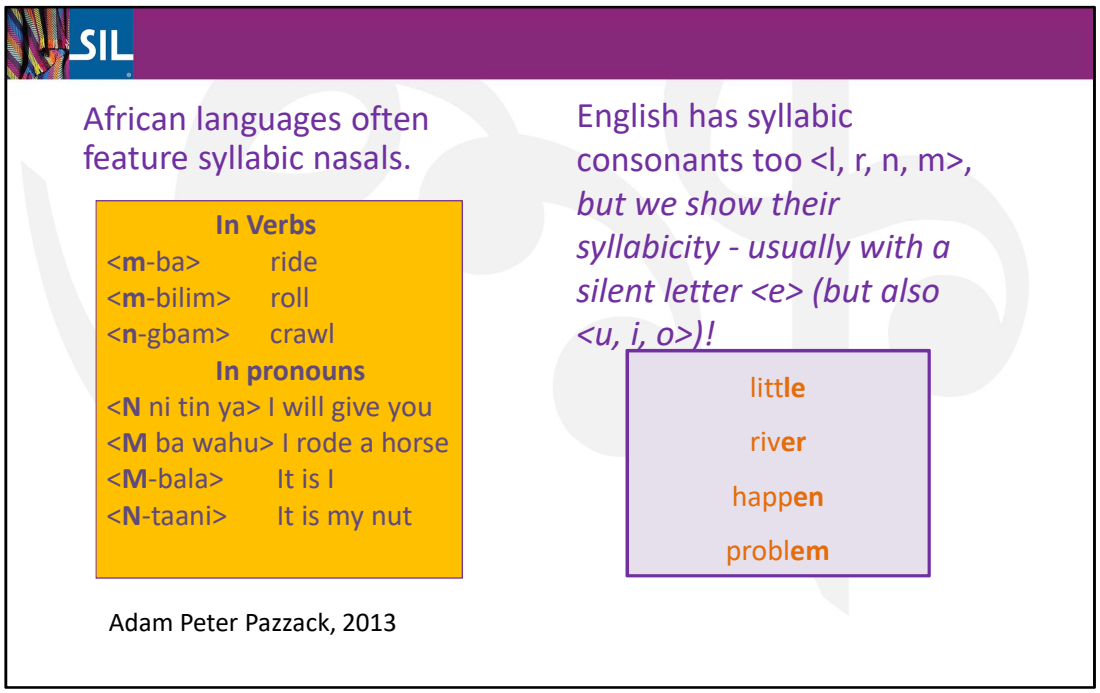


Altogether, there are also 4 ways to spell the "long e" sound; 3 main ways to spell "long I", 3 main ways to spell long o, and four ways to spell "long u"; two to spell the u glide, plus eleven oddballs which must be memorized.

Let's now consider what the African young child faces, when confronted with English textbooks. What happens to their fledgling decoding prowess, when confronted with our amazing vowel grain sizes, and their frequently ambiguous representations? No wonder one Ethiopian teacher, demonstrating the English names for parts of the body, said "Everyone point to your feet. Now, point to your twos!" (After all, T O E must rhyme with shoe, he assumed!)



All of these features affect development of an effective transfer curriculum. We'll go into more detail, for the earliest grades with little time for polysyllabic word structures, etc. See Meletis, on the nature of writing, 2020.



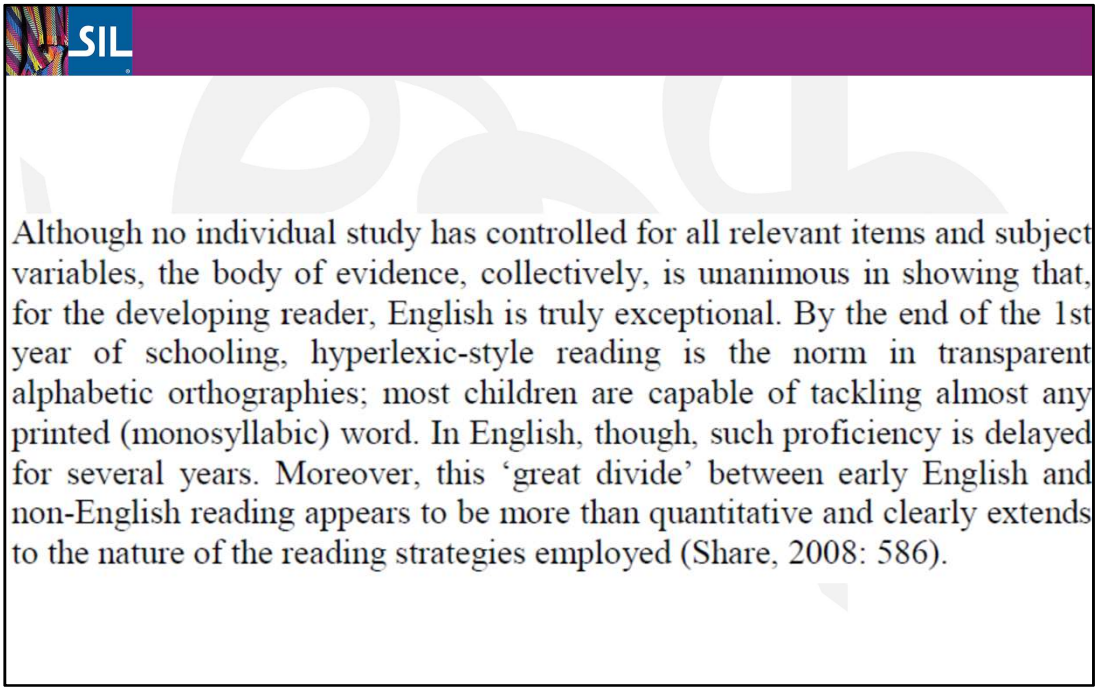
These examples are taken from a book on Dagbani, by Pazzack, 2013. (For some syllabic nasals, which always mark morphology, hyphens are used to highlight their meaning, and also to break up what looks like a consonant cluster. The Dagbani language allows only "open" syllables, but its frequent syllabic nasals are treated like vowels, since they are continuants, and of course syllable nuclei. To deal with a multiplicity of these grammatical homonyms, they use hyphens for certain classes of words or affixes.)

English has many consonant clusters, word-initially and especially syllable or word-finally.

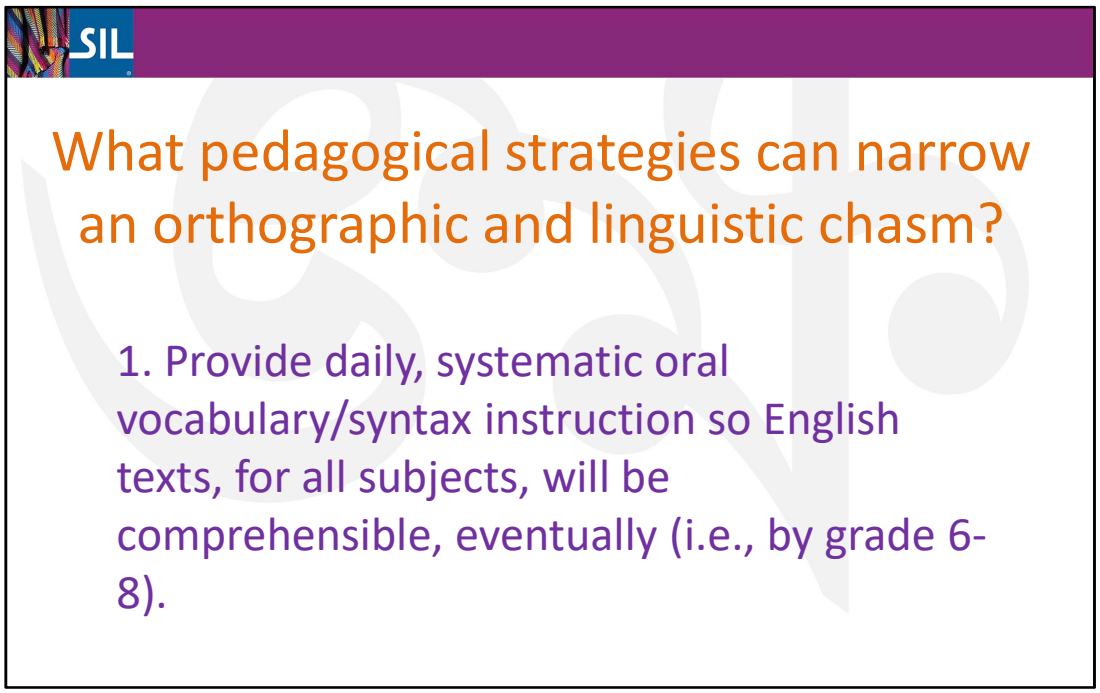
Syllable onset	Syllable coda
fl, sl, cl, bl, gl,	nd, rk, mp, mb, nk, lk
st, sm, sn, sp, sk	tch, dge,
gr, pr, dr, fr….	rn, rk, rc, rb, rm, rd, rth, rt, rp
scr, str, sch, spl, squ, spr	rst
thr, kn, wr, gn	Cs, CCs

These consonantal syllable onsets and codas, must be recognized for their importance in developing a transitional reading pedagogy which fits the phonotactics of English and its spelling rules – to maximize the "linguistic fit for the writing system, in terms of a pedagogical approach which will help readers (and speakers) of African languages read English most efficiently..

If you give them practice recognizing consonant cluster patterns, you don't have to explicitly teach every single one.

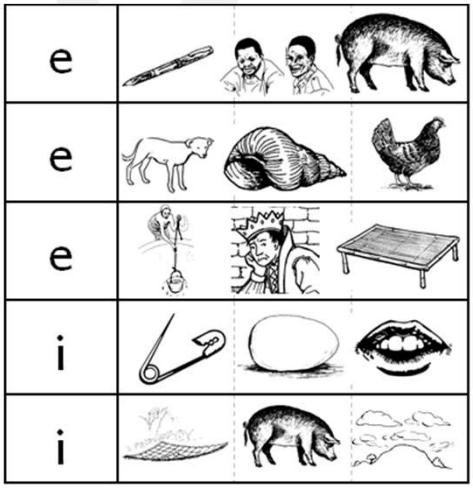


The chasm between African and Indo-European languages and orthographies is probably widest with English. What can be done? Now we talk about the reading strategies which I think are valuable.



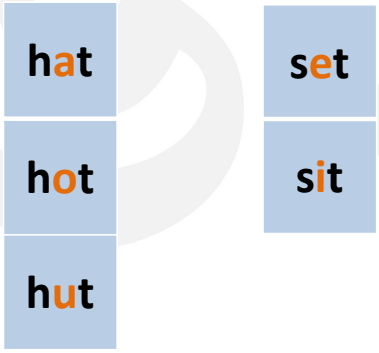
The chasm between African and Indo-European languages and orthographies is probably widest with English. What can be done? Here we go onto reading strategies! #1, oral ESL. **Start this long before they are exposed to English text!**

2. Ensure that learners can auditorily distinguish the 12 vowel phonemes of English, helping immeasurably with their comprehension of texts. Make pedagogy auditory and visual, making the orthography work for them.

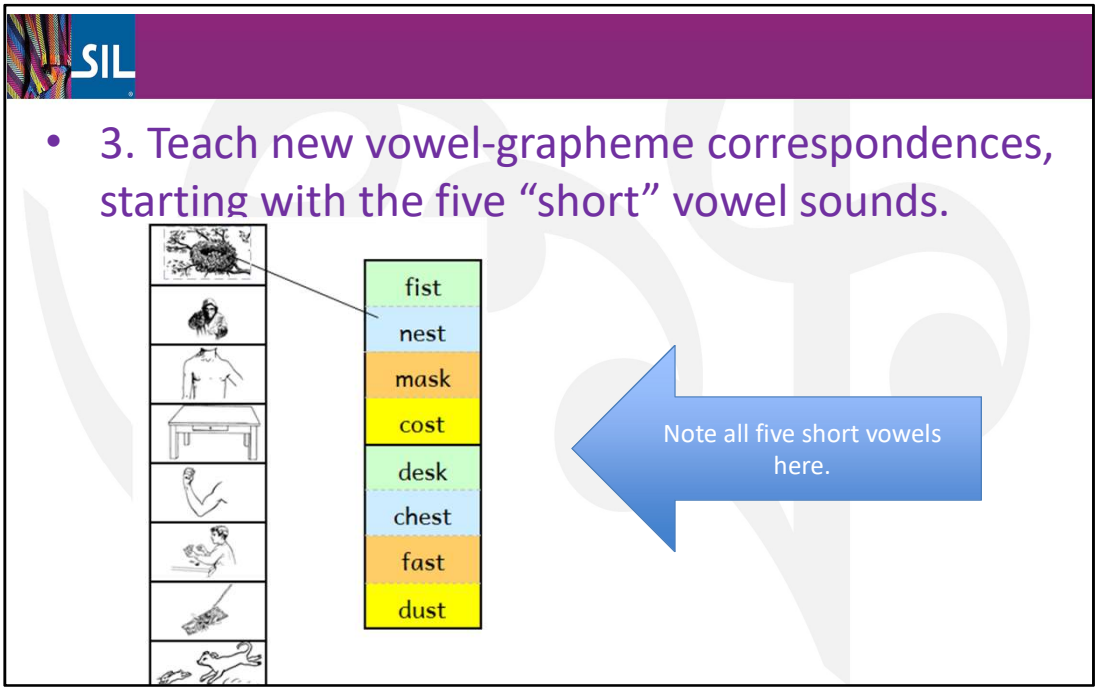


Either with ESL instruction for phonemic awareness, or with pre-literacy for L2…

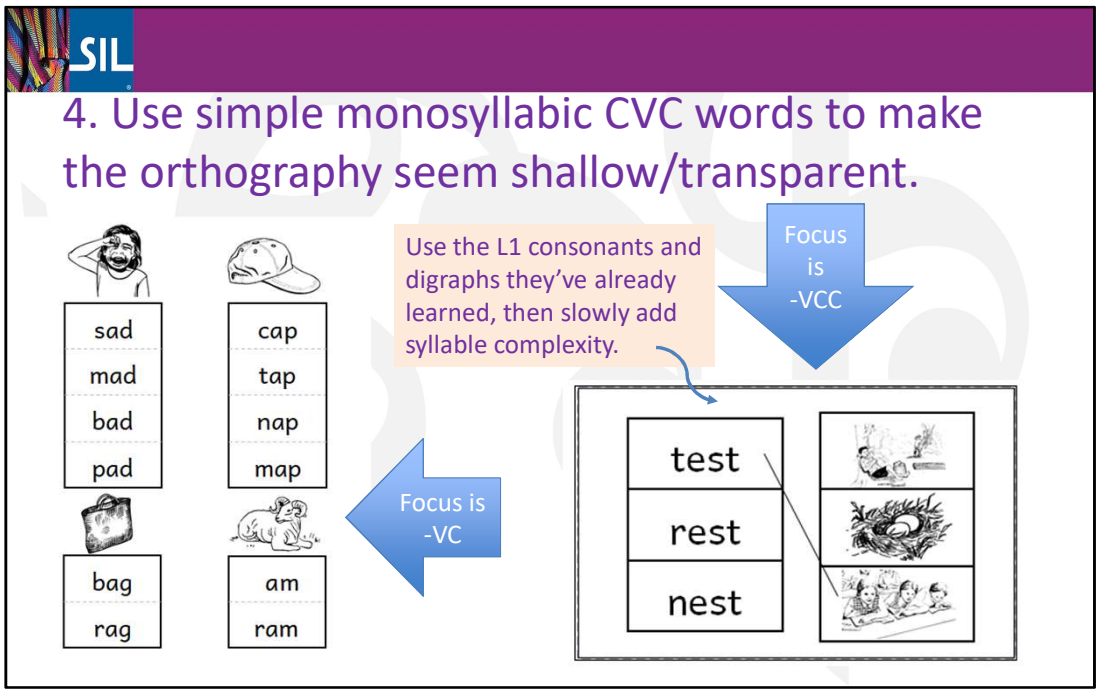
- Phonemic awareness is a significant predictor of reading success in the early grades. But we can't assume that PA will automatically transfer over for young rural L2 learners, unless they've had a *well-designed* ESL curriculum first!



The following phonemic contrasts are often confused by Africans, orally.



So, what can be done to remove ambiguity for readers, hindering their comprehension when they fail to hear an important vowel contrast?– we need to promote comprehension, while encouraging readers that they really can learn to read this language! Pictures scaffold comprehension and strengthen vocabulary development. This review is from two weeks of word-final consonant clusters, but readers must may attention the segments preceding them, and recognize the meanings of each word….with all five short vowels



Research substantiates the intuitive use of rhyming, even for pre-literate children, epilinguistically, as well as those who are beginning to read English, using metalinguistic skills. Both groups "hear" the consonant onset, followed by the vowel and consonant: the coda. Elinor Saiegh-Haddad, Bar-Ilan University, Israel 2007. Epilinguistic and metalinguistic phonological awareness may be subject to different constraints: Evidence from Hebrew. Sage Publications.

Arrange them in rimes, making the syllable structures easy to compare, so that our commonest syllable pattern, CVC, is regular and manageable, before moving on to consonant clusters and vowel letter combinations.

Start with simple Cs and the new vowel sounds for several weeks. Then add the consonant clusters, especially helping them with **closed syllables.**

- Use our huge lexicon of monosyllabic words for decoding, using the consonants learners can already recognize from grade 1/2
- Line up these monosyllabic words in sets, giving practice with the visual patterns.
- Use vowel substitution
- Use consonant substitution

Segmenting without phonics!

lap

lip

peck

neck

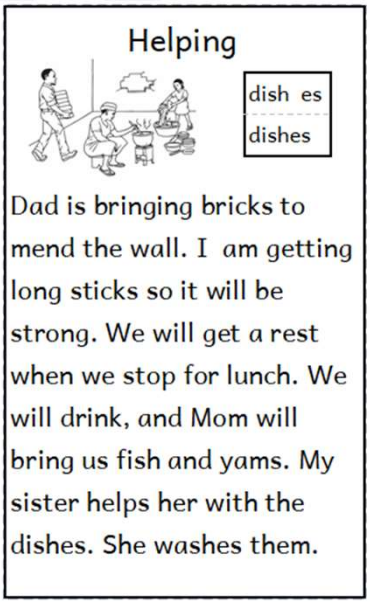
deck

Many of these CVC words contain 5 short vowel sounds, so its 5 short vowel graphemes are a great place to start. Many of them are either verbs or nouns, contentive and picturable. No memorization of phonics rules – recognition of common patterns.

- Add the harder aspects of the orthography/phonology

  - Syllable-initial C clusters
  - Syllable-final C clusters
  - Use “word-building” on the syllable level to help with decoding longer words: -ing, -ed. sing ing
    singing
  - Introduce the plural suffix <-s>, <-es>), as part of word-final consonant clusters
  - In the 2nd year, introduce the larger grain size of English “long” vowels (glides), vowel diphthongs, etc.

- Leverage Africans' syllable awareness (auditory and visual) to help them recognize English syllables in longer words.



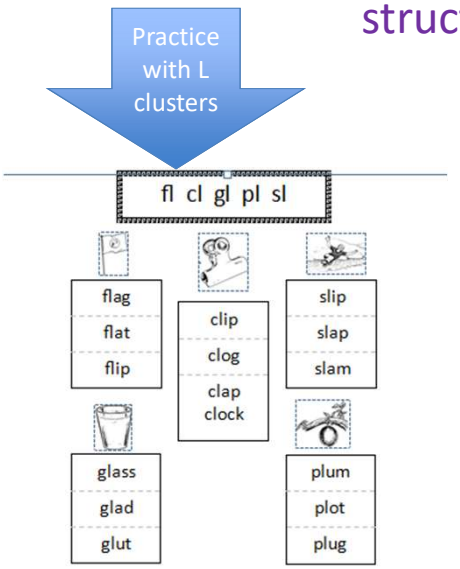
Helping

dish es
dishes

Dad is bringing bricks to mend the wall. I am getting long sticks so it will be strong. We will get a rest when we stop for lunch. We will drink, and Mom will bring us fish and yams. My sister helps her with the dishes. She washes them.

Before they read a text, break some disyllabic words into parts.

- Give practice recognizing complex syllable structure patterns



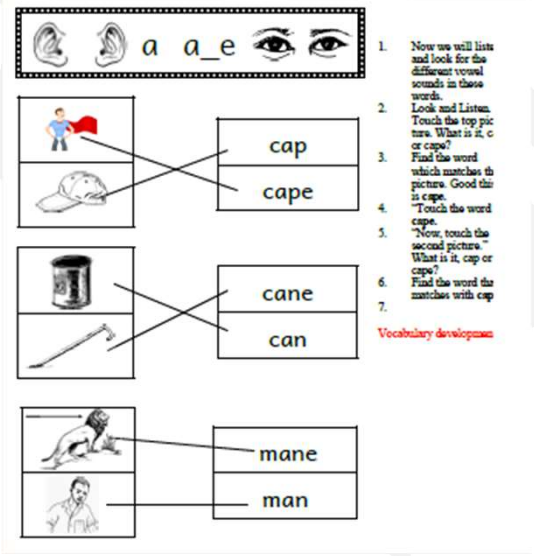
Use them strategically in texts, as well.

Stan can Swim!

Yesterday Stan went fishing. His dog, Spot, went fishing too. Spot and Sam sat in the sand. Then they slept on a big nest of ants! Ants can sting! Stan ran fast, but Spot ran fastest!

Of course, vocabulary development for everything in a decodable text cannot be assumed: it must be planned for.

5. Promote recognition of the large grain sizes which represent all 12 vowel sounds



It's all about recognizing complex visual/auditory patterns. For the CVC words, the reader must always look beyond the vowel grapheme to the consonant following it. For the vowel glides here, the reader must recognize **vowel-consonant- silent e**. I think the visual comparisons can build decoding confidence. This type of activity comes much later in the progression of the curriculum.

It comes down to distinguishing **meaning**, again.

- Systematically introduce (a huge variety of) larger grain sizes for English's 12 vowel sounds, introducing patterns systematically.

Short a(C)	Long <ai>	Long <ee>	Long <oCe>
Short e(C)	Long <ay>	Long <eCe>	Long <oa>
Short i(C)	Long <aCe>	Long <ea>	Long <ow>
Short o(C)	Long <ei>	Long <ie>	
Short u (C)		Long <iCe	
		Long <igh>	

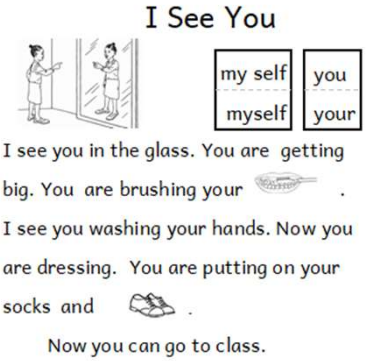
There are twenty more? Some of it depends upon stress at the word level?!

African learners and their teachers seem to love and prefer syllable drills such as these. They are really helped by "blending" of syllables, as part of decoding. I'm only listing the "regular" patterns here, and eaving off vowel diphthongs and R-influenced vowels!

6. Help learners deal with a deeper orthography.

This includes homophones, irregular spellings and frequent grammatical words

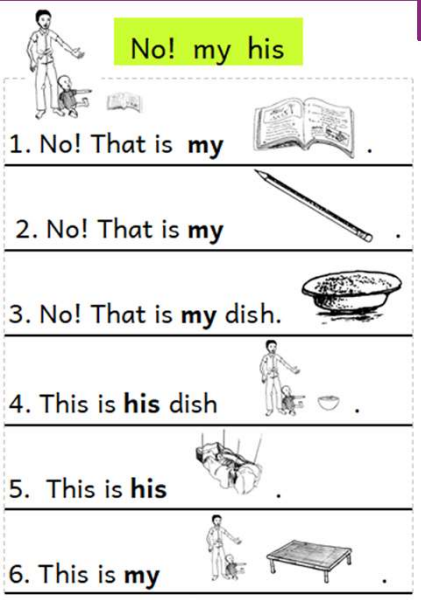
Teach them as sight words, using read-alouds with the teacher and games



Dolch wordlist contains 220 of our most frequently used words, and many are not contentives but functors. They're not very isolatable or picturable. Teach them in a context, always. The frequent, non-decodable grammatical words here: **are, you**, **your, our** and **my.** They are already part of the readers' syntax and vocabulary, but they are visually unfamiliar.

- Promote use of the lexical route to reading for essential non-decodable sight words or functors

Use read-along activities scaffolded significantly by the teacher.



Context gives meaning and predictability to functors.

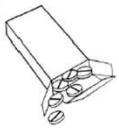
- Enable learners to leverage the predictability of English's syntax and grammar to make educated guesses about words they can't yet decode.

On this bike are nine_____.

lime limes

On this bike are five _____.

mick mice



In this box are ten _____ .

pill pills

They CAN decode all of these, but we're building their confidence with the predictability of certain plurals, here.

- Promote context use so they can self-assess their comprehension. This facilitates use of a less decodable orthography.

sis ter	broth er	moth er	fath er
sister	brother	mother	father

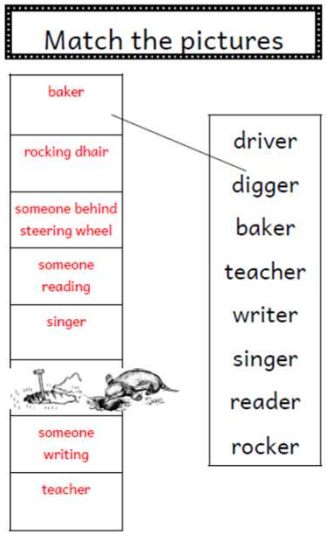
A Family of Workers

My big brother drives a truck, carrying milk to town. He is a _____. My sister likes to write stories. Father says she will be a _____ one day. I help father plant beans, and some day I will be a farmer. My mother teaches at the school. She is a _____. My little brother just eats! I call him Bean _____.

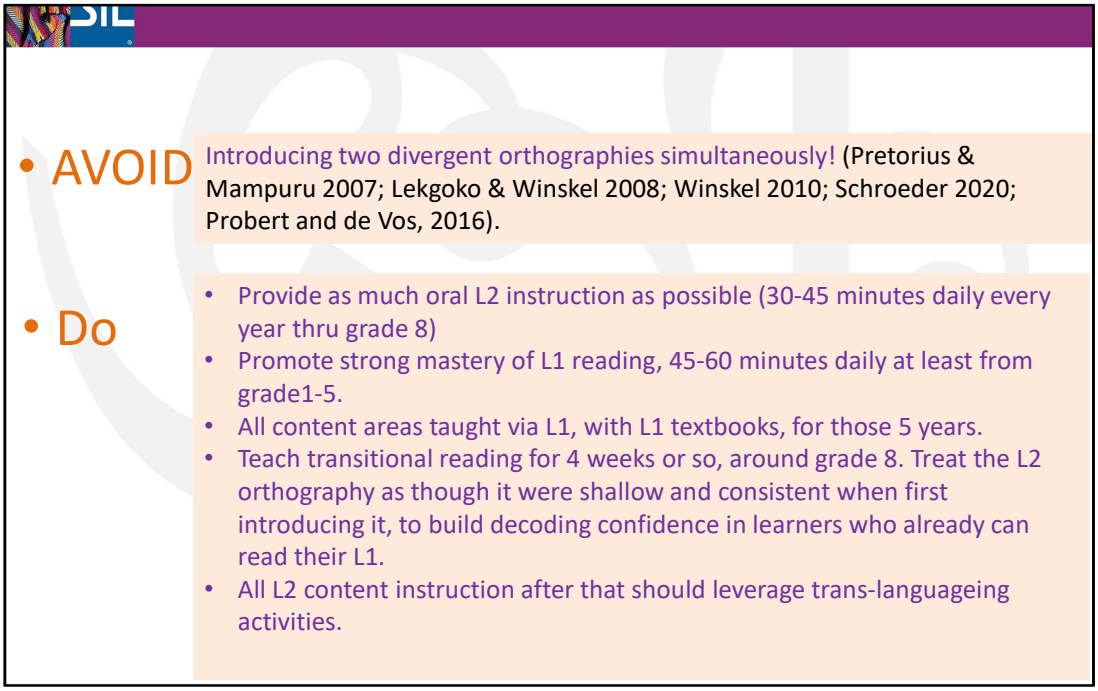
Eater, teacher, truck driver, farmer, writer,

Examine the words along the bottom of the slide. Readers must choose which word makes sense in each blank.

- Provide morpheme recognition activities which leverage English's deeper orthography (plural nouns and pronouns, <-ed> suffixes, -er suffixes, <-ing>, etc.)



For polysyllabic polymorphemic (PSPM) words, the morphophonemic nature of English means elementary-age children may focus on roots and affixes. Does developing readers' PSPM word reading accuracy relate to the morphological units, the nonmorphological, or both? In this study, 3rd and 4th graders (N = 202) read PSPM words (N = 45), and models were constructed to answer this question. A nonmorphological polysyllabic model showed a main effect of phonological awareness; a Vocabulary Size × Word Frequency interaction, with larger vocabularies improving accuracy for low-frequency words; and a GPC Knowledge × Word Frequency interaction, with a slight negative GPC knowledge effect for all but low-frequency words. A polymorphemic model showed main effects of word-specific root word knowledge, general root word reading, vocabulary, and word frequency. A Morphological Awareness × Morphological Transparency interaction showed morphological awareness affected accuracy for shift words more than transparent ones.



Research ("reading" tests) repeatedly indicates the current situation is disastrous. 1) 30-45 minutes of ESL per day, starting with oral only (but textbooks); 2) 45-60 minutes per day of L1 reading in the early grades, at least grades 1-4. 3) All content areas taught in L1 for those years; 4)Transitional reading in grade 5 (though grade 8 has been proven to be much stronger. 4) Content area instruction in L2 (with trans-languageing activities used for vocabulary development thereafter). 5) Local level mandated exams in the L1 from grades 1-4 or 5.