

An Introduction to Structured Literacy

Ros Lugg


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What's in a name?

Structured Literacy

or

Science of Reading?




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What is the Science of Reading?

"The science of reading is a vast interdisciplinary body of scientifically-based research about reading and issues related to reading and writing.

This research has been conducted over the last five decades across the world, and it is derived from thousands of studies conducted in multiple languages."



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So what is Structured Literacy?

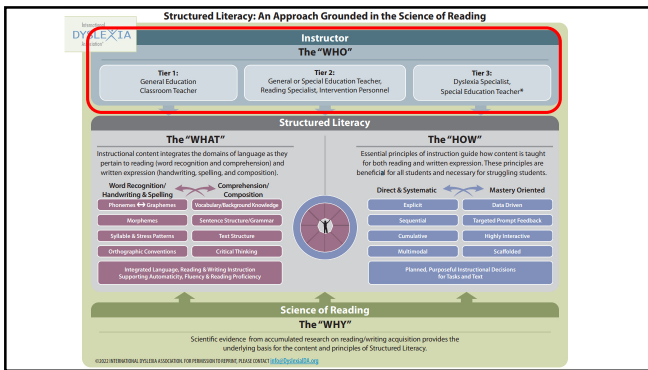
Structured Literacy = a trademarked term owned by the International Dyslexia Association.

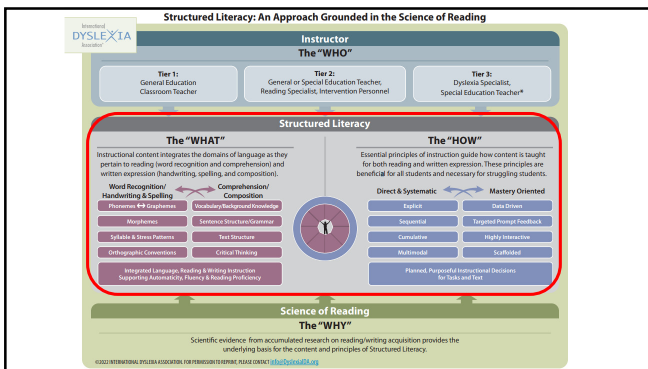
"An approach grounded in the Science of Reading."

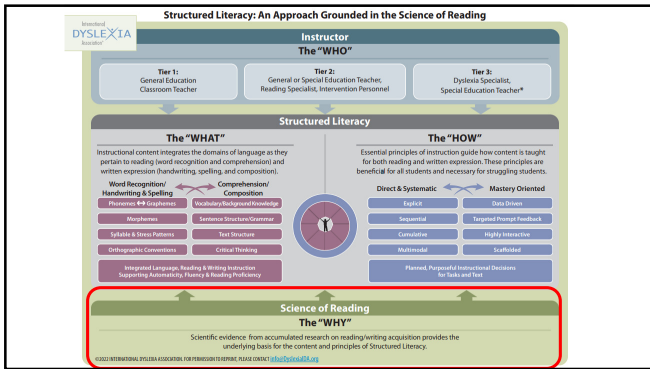
A specific methodology – not the research itself.



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What's in a name?

Structured Literacy - A specific methodology

Science of Reading - Underpinning research

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Core Principles of Structured Literacy

Explicit – the teacher explains and models key skills, with well-chosen examples.

Children are not expected to develop these skills based mainly on exposure and incidental learning opportunities.

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Core Principles of Structured Literacy



Systematic and cumulative – a planned sequence of instruction. Important prerequisite skills taught before more advanced skills.

Example:

Children are not expected to decode or spell complex words before simpler words.



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Core Principles of Structured Literacy



Diagnostic – students are screened and their progress is monitored. Students who need help are promptly identified.

Effective interventions provide opportunities for students to respond and practice what they are learning, with the teacher providing clear, prompt, constructive feedback to students' errors.



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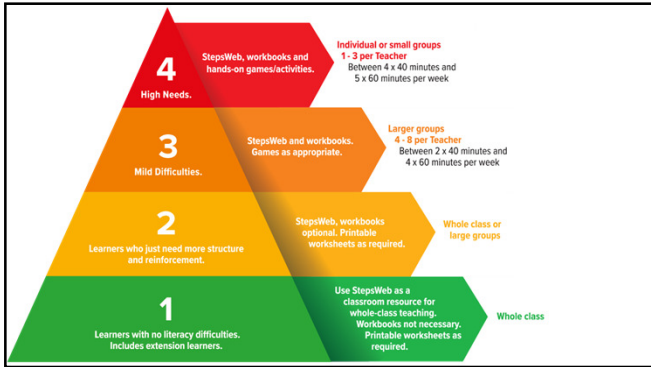
Core Principles of Structured Literacy

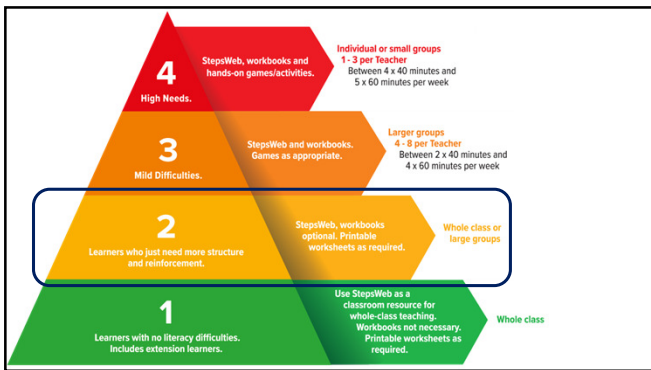
Assessments are used to help target specific skills that need to be addressed for individual students.

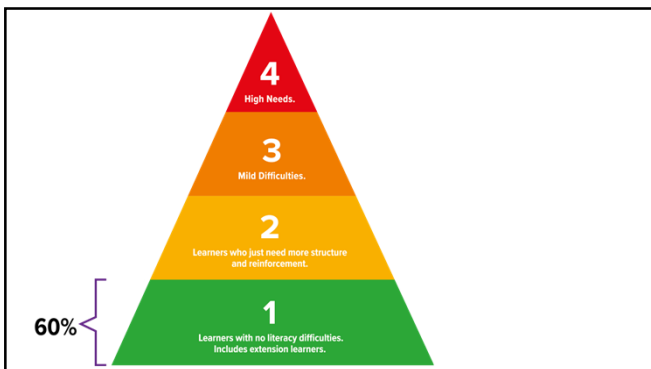
Interventions should be appropriately intensive, with a greater level of intensity (i.e. smaller group size, more time) for children who are further behind.

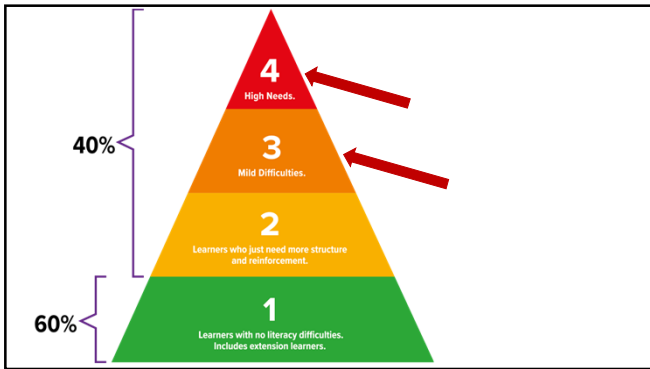


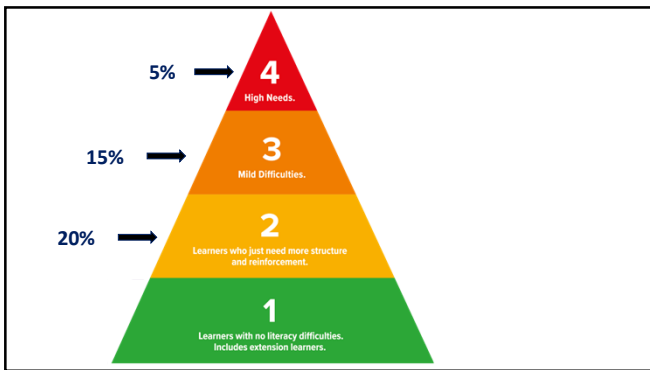
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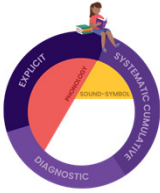
Core Principles of Structured Literacy

Phonology
Patterns of sounds in a language

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Core Principles of Structured Literacy



Sound-Symbol

Phonic knowledge and skills. Knowing how sounds are represented by letters and letter patterns.



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Syllables

A word unit/part with one vowel sound.



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Morphology

An understanding of words and their relationships.

- dog – dogs*
- walk – walking, walked*
- non/sense*



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Syntax

The arrangement or order of words in a sentence to convey meaning.



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Semantics

The meaning of language.



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How should this work out in practice?

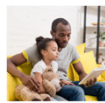
Teachers avoid introducing confusable phonic elements simultaneously.

Examples:

b/p

sh/ch

Multiple short vowel sounds



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How should this work out in practice?

Teachers avoid introducing confusable phonic elements simultaneously.

Children also have ample opportunities to apply their developing skills in reading texts they are capable of decoding and comprehending.



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A key model developed by the USA National Reading Panel in 2000

Describes the progression of skills as reading develops as:

- Sequential
- Cumulative

The 5 Big Ideas in Beginning Reading



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Cognitive Load Theory

Sweller, J., 1988

Cognitive Load Theory – learners can absorb and retain information effectively only if it is provided in such a way that it does not 'overload' their mental capacity.



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Cognitive Load Theory

Sweller, J., 1988

Key principle: You can't do two 'cognitive tasks' at the same time.

Cognitive = something you need to think about.



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Cognitive Load Theory

Sweller, J., 1988

Cognitive tasks overload working memory.

Working Memory = the ability to retain and simultaneously process information

Key message: Make as many aspects of literacy automatic for our learners.



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Cognitive Load Theory

Sweller, J., 1988

Rule-based teaching can lead to cognitive overload – particularly for our dyslexic and other struggling learners.



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Key misunderstandings about Structured Literacy



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Decodable Texts

We shouldn't be encouraging students to guess words from the context or from pictures.

Students should only be presented with texts with words they can decode.

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The Reading Ladder



Progress in reading



The Reading Ladder



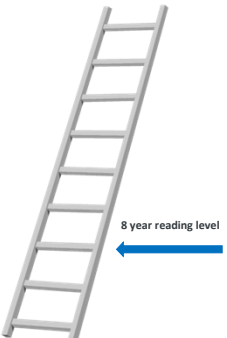

Using mainly decoding strategy
Can't follow the sense of what he's reading

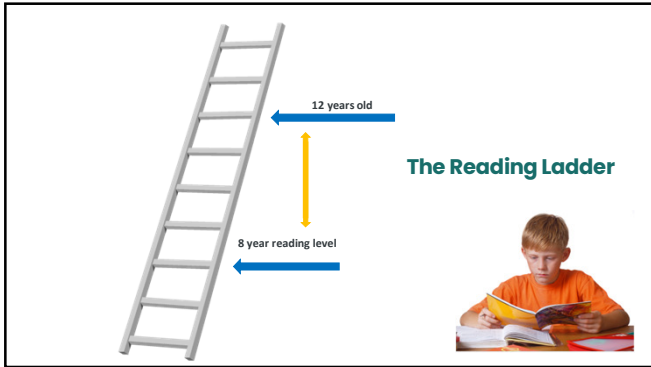


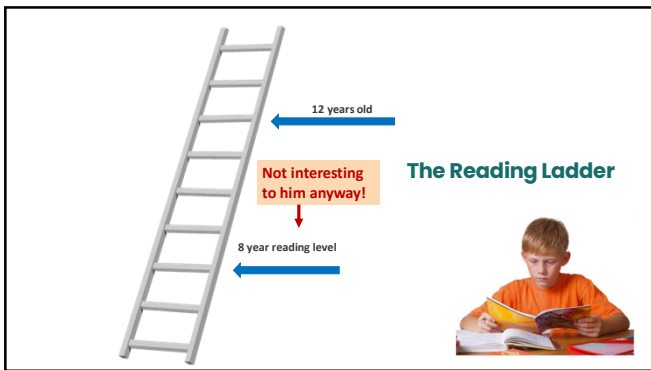
The Reading Ladder

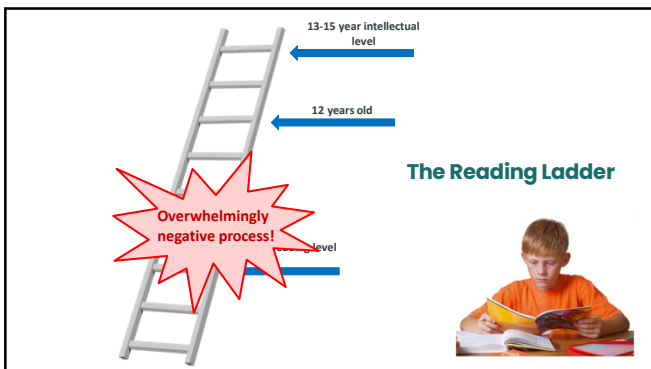


The Reading Ladder







The Reading Ladder

13-15 year intellectual level

Intellectual aspects:
comprehension
reading for information
enjoyment!

8 year reading level

Mechanical aspects:
decoding skill
word recognition
understanding text

The Reading Ladder

13-15 year intellectual level

Listening to books
Read to them
Audiobooks

8 year reading level

Comprehension

Vocabulary

Reading Fluency

Phonic Knowledge

Phonological Awareness

5

4

3

2

1

Listening to books is every bit as good as reading them for yourself.
Arguably even slightly better in some respects!

- Auditory processing
- Listening skills
- Auditory memory

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The Reading Ladder

Our 40% need a more spelling-based approach

8 year reading level

If a spelling-based approach is done in the right way, it will:

- Develop all the processing and perceptual skills needed for reading.
- Develop all the understanding of text needed for reading.
- Include the right kind of incidental reading to activate and develop the Visual Word Form Area.

The Reading Ladder

Genuine reading fluency!

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Questions which arise:

A structured phonics-based literacy approach needs to include decoding words in context.

BUT:

Be aware that you're only targeting the 'mechanical' phonic aspects – not the 'intellectual' ones. Don't do too much – or make this their only experience of books.

The Reading Ladder

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Questions which arise:

What about listening and following the text at the same time?

May be beneficial with some learners, if there isn't a huge discrepancy between reading age and intellectual age.

Of limited use with most learners in this category – and doesn't replace the other aspects.

The Reading Ladder



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So how do we develop decoding?

Some decodable texts – certainly!

Decoding skills and knowledge can effectively be taught through literacy games and activities.



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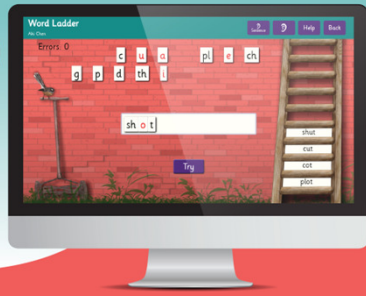
Phonic video + Find the Letter

A short phonic video introduces and explains a letter sound or phonic pattern. Then the student listens to sounds and chooses the right letter/pattern.



Word Ladder

Students are given a word and asked to change it into another word by swapping sounds.



Feed the kiwi

Students hear the word and assemble it using sound tiles. If they are correct, the kiwi gets his worm.



Using appropriate strategies

When reading a decodable text – absolutely stop and tackle each word.

Other passages – read for content or enjoyment – don't make your learner stop and work out each word. Just give it to him!



Key misunderstandings about Structured Literacy

1. We must only use decodable texts.
2. Everything needs to be at the individual phoneme level.
No word families or onset + rime.



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Phonic Approaches

Grapheme-Phoneme Level

Onset + Rime Level

Word Families Approach



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Phonic Approaches

Grapheme-Phoneme Level

b - a - t



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Phonic Approaches


Grapheme-Phoneme Level

Onset + Rime Level

b - a - t

b - at





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Phonic Approaches


Grapheme-Phoneme Level


Onset + Rime Level


b - a - t

b - at

Word Families Approach









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Statement on Phonic Approaches

National Reading Panel, 2000:
Found no difference in effectiveness between these approaches.

Some later research:
Initial focus on grapheme-phoneme level can lead to better reading outcomes.





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Phonological awareness

or

Phonemic Awareness

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Phonological awareness

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Rhyme Research

Rhyme Recognition for 4-5 year-old pre-readers is the single most important predictor of later reading accuracy.
Bryant & Bradley (1983)

Later research:
Ability to identify individual phonemes is the most important predictor.
for 6 year-olds

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Development of Segmentation

sentences → words
 words → syllables
 words or syllables → phonemes

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Development of Segmentation

sentences → words
 words → syllables
 words → onset + rime
 words or syllables → phonemes

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Onset + Rime

Breaking words into two 'chunks' is significantly easier than breaking it into individual phonemes (sounds).

string

Anything between 2 and 6!

cat hat rat

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Individual phonemes:

(sounds)

s - t - r - i - ng

Onset + rime:

str - ing



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Individual phonemes

Not a natural stage in the development of phonological awareness.

Dyslexic learners in particular will struggle with this activity.



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Rhyme

Rhyme Recognition – important for early literacy.

Particularly significant for developing **analogical transfer**.

Analogical transfer – the ability to:

Recognise patterns in words.

Apply that to work out unknown words.



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w



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w or



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w or l



ball
tall
mall
fall
wall



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Importance of onset + rime

(Word Families)

Make 500 common words from only 37 rimes.

Phase 1 Rimes

-ot	-ell	-in	-ot	-ug
-an		-ill	-op	-uck
-ap		-ip	-ock	
-ash		-it		
-ack		-ick		
		-ing		



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Importance of onset + rime

(Word Families)

Phase 2 Rimes

-ank	-est	-ink	-oke	-unk
-ate		-ice		-ump
-ole		-ide		
-ake		-ine		
-ame				

Phase 3 Rimes

-ail	-eot	-ight	-ore
-ain			
-aw			
-oy			



Note: This sequence is consistent with the Scope and Sequence for Ready to Read Phonics Plus.



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Individual Phonemes

Not a natural stage in the development of phonological awareness.

Dyslexic learners in particular will struggle with this activity.



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Rhyme

Students hear the target picture word and then select pictures which rhyme with that word. They can click on pictures to hear them.



Sound Chunks

Students hear the onset and rime of a word (beginning and end chunks). They mentally blend these and click on the correct picture.



Chunks

Students click on the onset (beginning) of the word and then select the correct rime (end chunk).

Sound Splits

Students break words into individual sounds.

Key misunderstandings about Structured Literacy

1. We must only use decodable texts.
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No word families or onset + rime.
3. We need to teach syllable rules.

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Syllabification

Auditory Syllabification – the ability to break spoken words into 'chunks'.

remember

Syllabification Rules – how to break written words into syllables



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Auditory Syllabification



The ability to hear the beats (syllables) in a word.

Easy way to teach it:

Hold your hand under your chin and say the word.

The number of times your chin touches your hand is the number of syllables.



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Syllabification Rules

Six Types of Syllable

Closed syllables

Open syllables

Silent 'e'

Vowel pair

R-controlled

-le ending



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Cognitive Load Theory

Sweller, J., 1988

Rule-based teaching can lead to cognitive overload – particularly for our dyslexic and other struggling learners.



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How reliable are syllabification rules?

"Does English have Useful Syllable Division Patterns?"

(Reading Research Quarterly, 2020)

Devin Kearns, PhD

Associate Professor at University of Connecticut



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How reliable are syllabification rules?

Syllable Pattern	Examples	Reliability
VC-CV	e.g. pic-nic, tab-let	41-79%



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How reliable are syllabification rules?

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CV-CV	e.g. tu-lip, cam-el	33-47%



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CV-CV	e.g. tu-lip, cam-el	33-47%
V-CV	With long 'u'	84%
V-CV	With long 'i'	18%



How reliable are syllabification rules?

"For longer CVC words, the vowel has the short sound more often than the long sound, in contradiction to the presumed pattern."

"The data suggest that there is really no V/CV division pattern at all."

Kearns, D., 2020



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How effective is it to teach syllabification rules?

Those approaches that taught rigid spelling rules for syllabification didn't improve reading.

Those that aimed at flexibility in the use of syllables to decode words did significantly better.

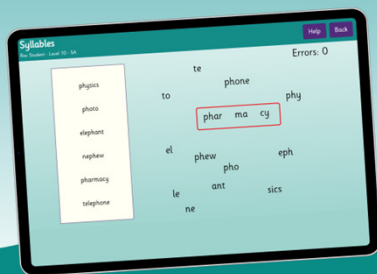
Bhattacharya & Ehri, 2004



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Syllables

Students join syllables together to form words.



Key misunderstandings about Structured Literacy

1. We must only use decodable texts.
2. Everything needs to be at the individual phoneme level.
No word families or onset + rime.
3. We need to teach syllable rules.
4. We shouldn't teach sight vocabulary any more.



What are sight words, exactly?

High frequency words which are irregular or not yet decodable.

WAS

What are sight words, exactly?

High frequency words which are irregular or not yet decodable.

Those words which have been orthographically mapped to the Visual Word Form Area, so they no longer need to be decoded. They can now be instantly recognised without conscious decoding.



Misunderstanding about sight words

~~Sight word is one which has been learned purely from its visual pattern.~~

A sight word is a word which has initially been decoded
- or its phonic structure has been explained.

said s ai d



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Misunderstanding about sight words

~~Sight word is one which has been learned purely from its visual pattern.~~

A sight word is a word which has initially been decoded
- or its phonic structure has been explained.

said s ai d



Then it's repeatedly seen until it becomes a sight word –
which can be recognised automatically without decoding.



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Why are sight words important?

By definition, they're common words which will be met frequently
in the early stages.

The more words which can be instantly visually
recognised, the quicker the reader will make that
transition to being a fluent reader.



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Key phases of literacy development

Ehri, L. 1985



Visual recognition
– tiny number of
words.

Ability to decode
regular words.

Visual recognition of
words without
conscious decoding.



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Understanding Structured Literacy

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