



LITERACY SUMMIT

TUESDAY 26 FEBRUARY 2019



From Sounding Out to Sight Words

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The Centre for Independent Studies



Note:
Five from Five is now an initiative
of MultiLit (as of June 2019)



What is FIVE from FIVE?

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**Five from Five is now an initiative
of MultiLit (as of June 2019)**



FIVE from FIVE is an initiative of The Centre for Independent Studies to bridge the gap between classroom practice and the research on effective reading instruction.

The Centre for Independent Studies is a non-partisan, not-for-profit policy research organisation.

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FIVE from FIVE supported by



How do children learn to read?

The 'reading wars' began as a debate between proponents of code-based (phonics) vs whole language approaches

Code-based:

Phonics is **necessary but not sufficient** for learning to read



Whole language:

Phonics is **not necessary** for learning to read

Whole language approaches



- Late 1970s to early 2000s, still around today
- Frank Goodman: Children ‘discover’ how to read by reading, analogous to spoken language
- No need for explicit instruction
- Phonics is boring and leads to reading without meaning
- Brian Cambourne: Teaching phonics is ‘readicide’

Code-based approaches (phonics)



- Rudimentary form used from 1700s through to 1900s
- Learn correspondences between letters and sounds (e.g. ch sounds like “ch”)
- Simple words repeated frequently develops sight vocabulary
- But **generalisation** most important

The “Reading Wars” continue to this day



- Embedded in differences in educational philosophy: traditional vs constructivist approaches
- Many children will eventually learn to read regardless of the method, so everyone has a success story.
- Tendency for proponents of each side to caricature the other – “straw man arguments”.
- Balanced literacy is often not a ‘best of both worlds’ solution. The phonics aspect of balanced literacy programs is typically not systematic or explicit.

Code-based approaches teach phonics

Phonics is

A body of knowledge about the sounds in spoken words and the letters that represent them in written words.

Phonics instruction is

The various ways in which students are taught to use phonics to read

simple code		complex code							
units of sound (phonemes and combined phonemes)	graphemes: spelling variations which ARE CODE FOR the 44+ phonemes and combined phonemes such as /k+s/ and /y+oo/ and key words								
/s/	s snake	-ss glass	-ce palace	-se house	ce cents city bicycle	ci certain circle lacy	cy scissors scythe ascent	-st- castle	ps pseudonym
/a/	a apple								
/t/	t tent	-tt letter	-ed skipped						
/i/	i insect	*-y sunny	-y cymbals	*-ey monkey	*-ie movie				

English has a complex orthography – and phonics helps

- English has a deeper orthography (written language system) than other alphabetic languages.
- English uses **26 letters** to make **200+ graphemes** to represent **44 phonemes**. Finnish and Italian languages have 1:1 grapheme-phoneme correspondences.
- Nonetheless, most words follow spelling patterns closely:
 - 50% follow GPC rules
 - 36% have one variation to GPC rules
 - 10% have two or more variations to GPC rules
 - 4% are irregular
- The complexity makes it **more important to teach reading explicitly and systematically** because the rules are not self-evident. Few children will work them out just by reading

English writing is a 'morphophonemic' system

A **phoneme** is the smallest unit of speech which distinguishes one word from another

e.g., **r**ate vs **l**ate

A **morpheme** is the smallest unit of meaning

- freestanding words e.g., hard
- bound e.g., -*en* hard**en**, -*s* in run**s**



Written English represents both phonemes
and morphemes

heal

health

healthy

How does phonics fit within the big FIVE/SIX?

Learning to read has five essential elements

1. Phonemic awareness
2. Phonics
3. Fluency
4. Vocabulary
5. Comprehension



Some people add a sixth element— oral language – however it arguably is incorporated in a broad definition of vocabulary (and comprehension)

The role of phonics in learning to read

- The Simple View of Reading
- The reading brain: Why phonics works
- The difference between beginning and skilled readers



“There is clear consensus and abundant evidence that in alphabetic languages, phonological decoding is at the core of learning to read words”

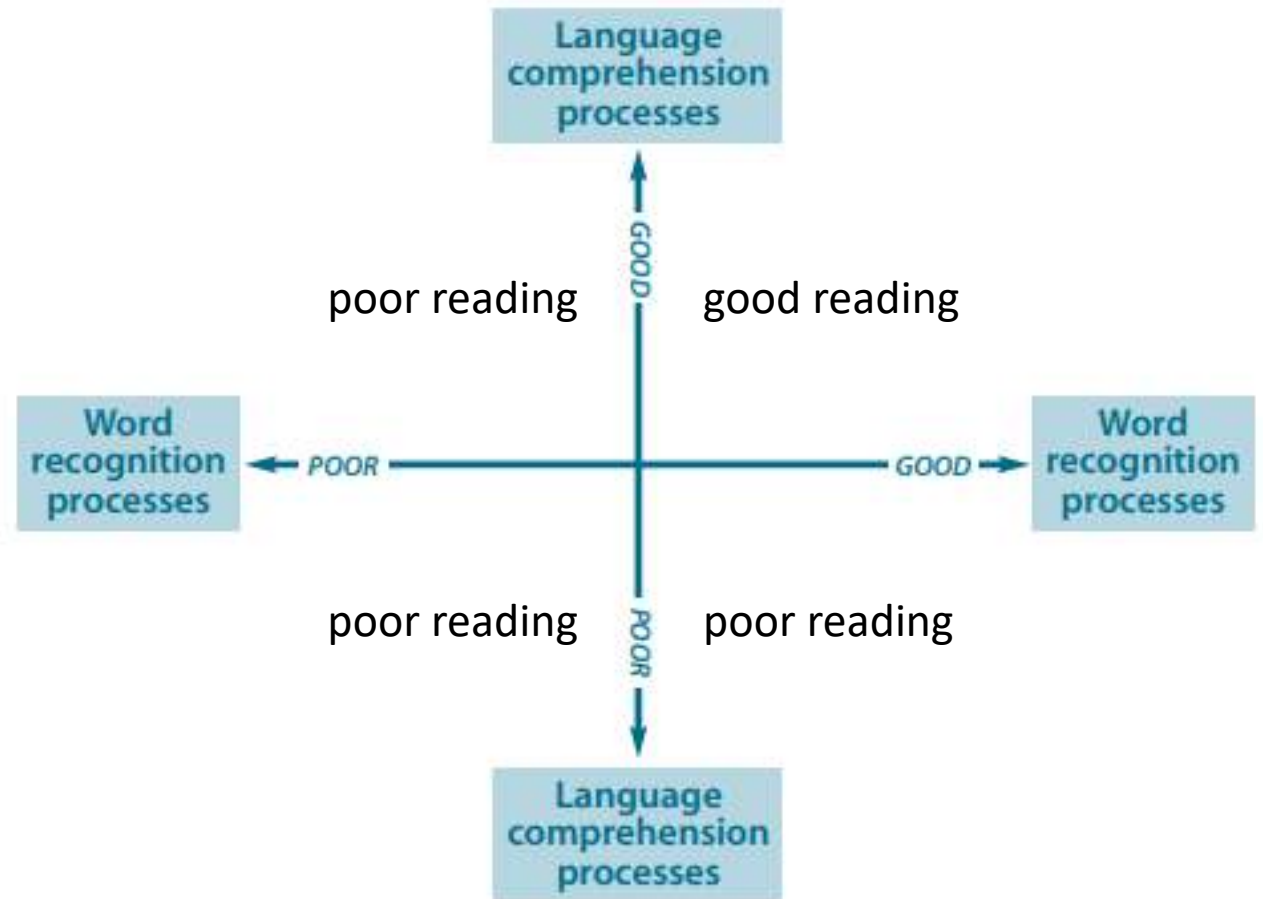
Professor Kate Nation, *ReadOxford*

The Simple View of Reading

Reading has two essential cognitive requirements — word recognition processes and comprehension (Gough & Tunmer, 1986)

Reading comprehension will be impaired for anyone who has difficulty recognising the words of the text or understanding the language being read, or both (Hoover & Tunmer, 2018)

The relative contributions of language comprehension and word recognition to reading comprehension changes across grades, with word recognition having a stronger relation to reading comprehension for younger than for older children (Lonigan et al., 2018)



Evidence for the Simple View of Reading

There is a large amount of consistent evidence that reading comprehension is almost entirely dependent on word recognition and language comprehension.

$$RC = D \times LC$$

“The Simple View of Reading continues to withstand rigorous empirical evaluation, providing a strong explanation of what reading is at its broadest level”

Hoover & Tunmer 2018

Evidence for the Simple View of Reading

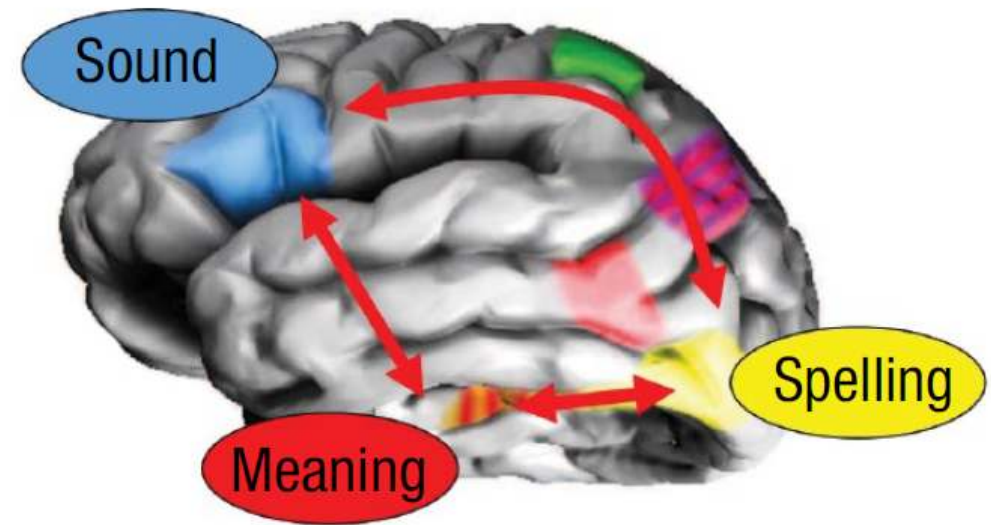
A few of the dozens of scientific studies supporting the SVoR:

- In a study of over 400,000 students from Year 1 to 3, it was found that among students whose decoding and vocabulary were developing normally, **less than 1%** displayed reading comprehension problems (Spencer, Quinn, & Wagner, 2014)
- Listening comprehension and word decoding, together with their interaction, explained **96%** of the variation in early reading comprehension skills (Lervag, Hulme, & Melby-Lervag, 2017)
- Listening comprehension and word recognition provided a good estimation of Grade 3 reading comprehension, explaining around **94%** of the variance (Language and Reading Research Consortium, 2018)



The reading brain

- Written language is a new ‘technology’ as far as the evolution of the brain is concerned. It is not naturally acquired like spoken language
- There is no single ‘reading’ area of the brain. Making sense of the printed word requires making connections between regions of the brain that were originally devoted to other processes
- Whole language teaching assumes that learning to read involves switching on the reading centre in the brain. It’s not that simple. A complex set of neuronal circuitry needs to be deliberately created



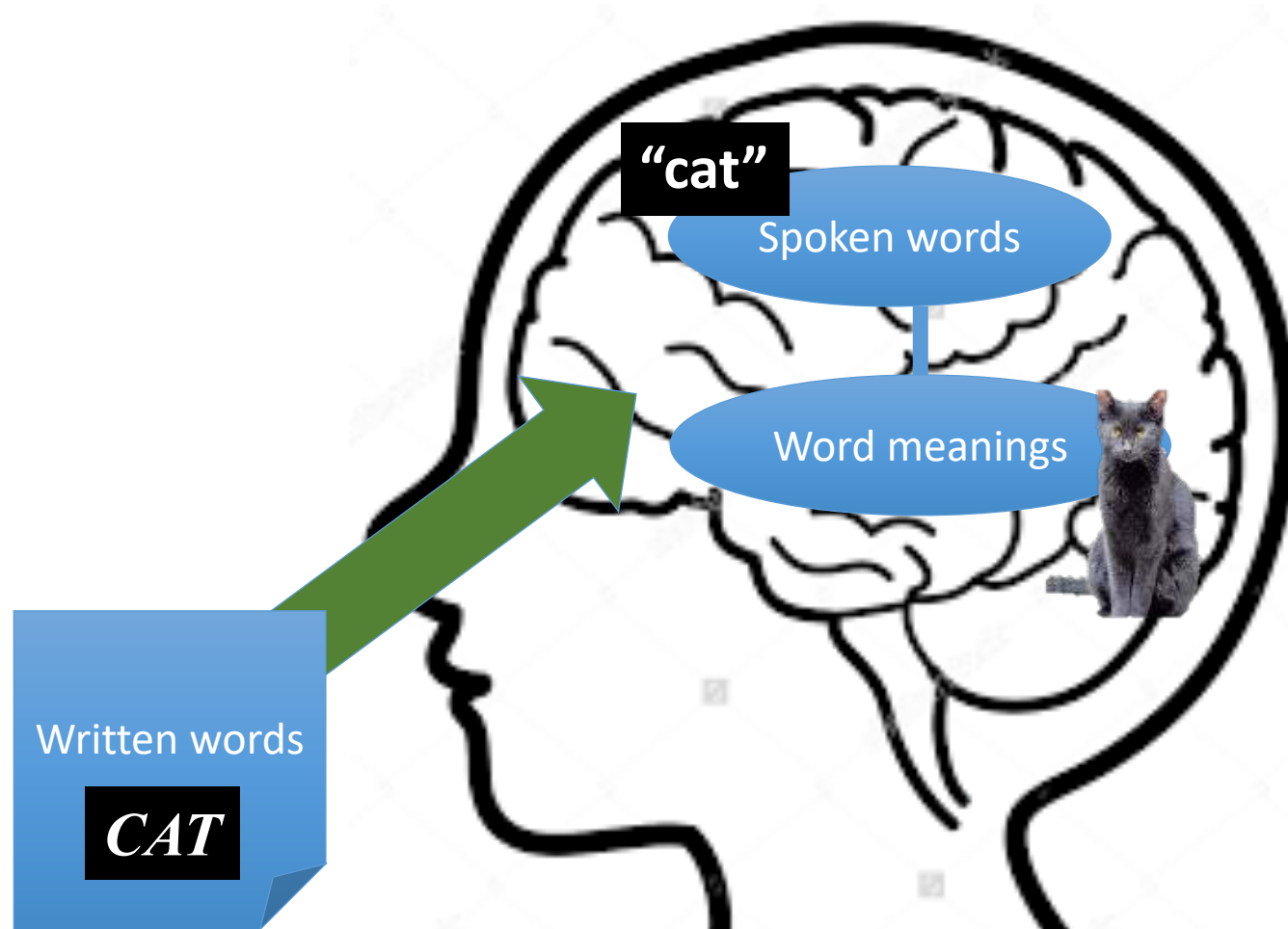
Neural Pathways of Skilled Reading
(adapted from Rastle, 2018)

Children are not born with a “reading brain”

Byrne’s series of experiments on the development of the alphabetic principle among preschool age children

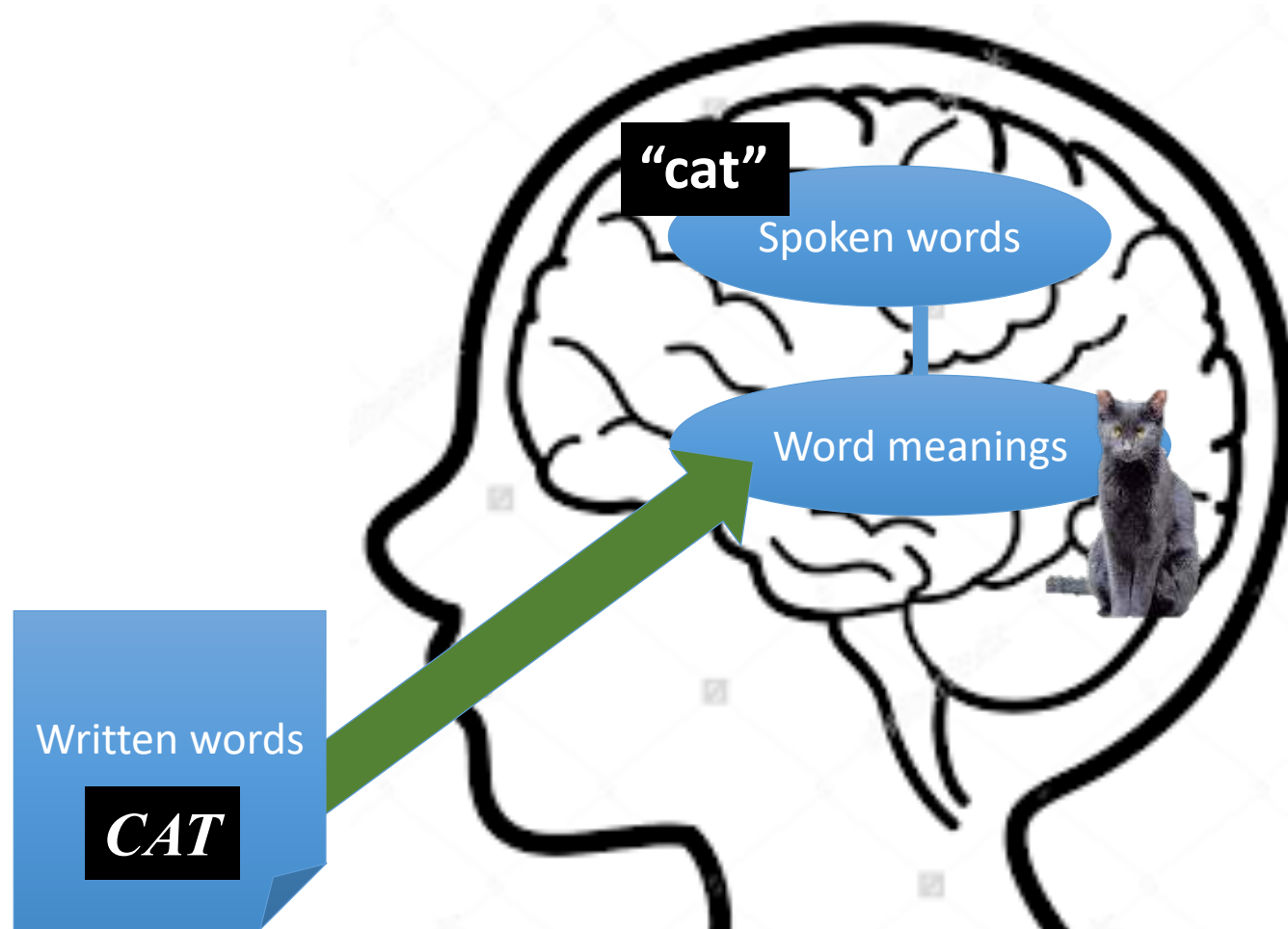
- Children who knew no letter names were taught pairs of written words, such as *fat* and *bat*
- When the children were later shown the word *fun* and asked if it was fun or bun, almost none achieved this transfer task
- Children showed no evidence of **inducing** the alphabetic principle in this way
- Children did achieve transfer when they had been taught phoneme segmentation and letter-sound correspondences
- They were then able to generalise to other words

Why does phonics work?



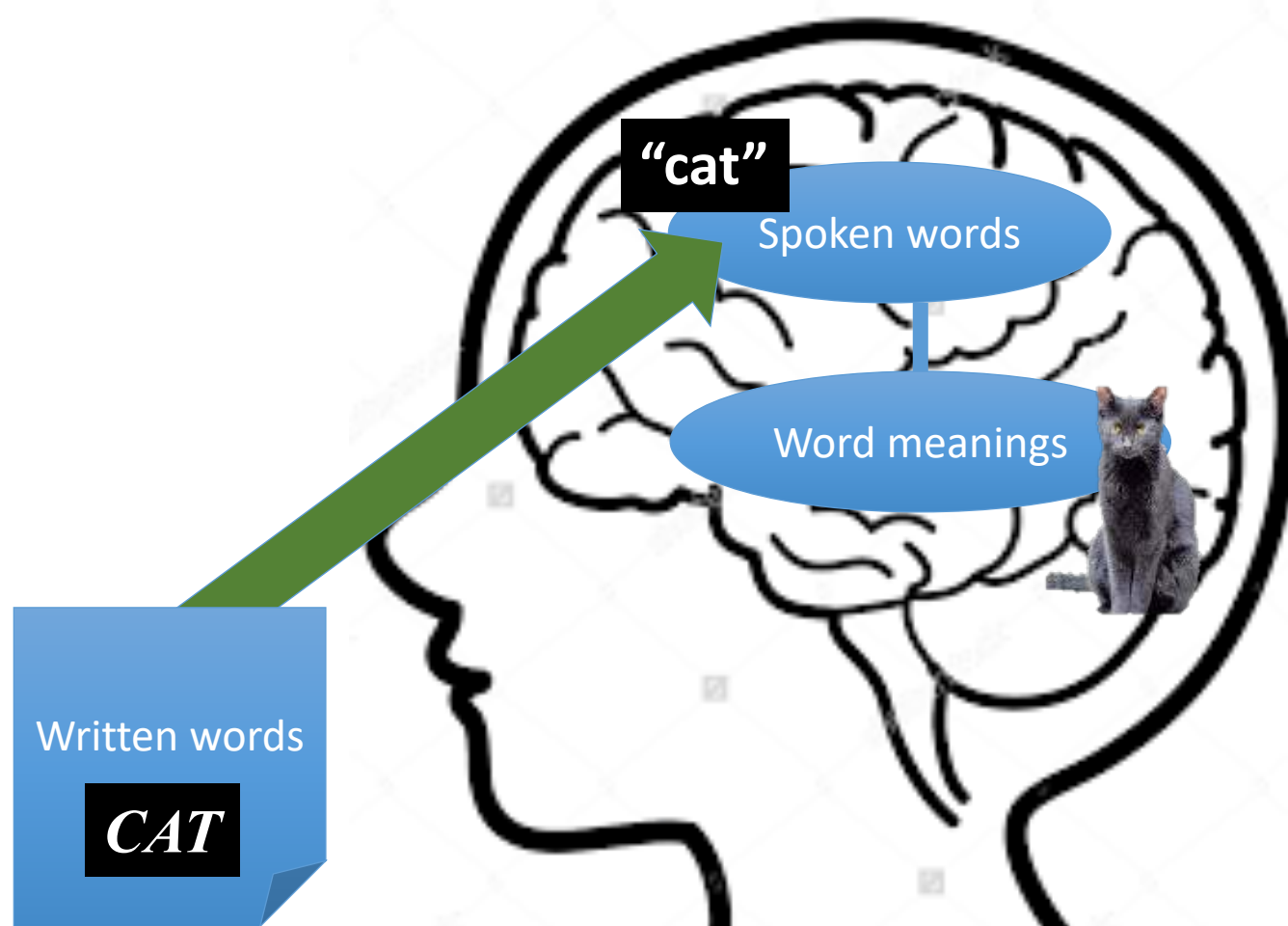
- What is the best way to learn these mappings?

Why does phonics work?



- Learning this mapping is difficult because it is not *systematic*
- Words that look similar do not mean similar things (e.g. pant, pint, punt)

Why does phonics work?



- This mapping is *systematic*. There is a “code” linking the letters and the sounds (e.g. C-“c”; A – “a”; T – “t”)
- Knowing this code provides a hook into reading

Why does phonics work?

- Phonics allows children to sound words out for themselves, putting them on the path to reading independently
- Ultimately, with reading experience, children will read words ‘by sight’, accessing meaning directly
- But teaching phonics helps them get there
- Must not confuse the **endpoint** of learning to read with the best way to **teach** it



“That direct instruction in alphabetic coding facilitates early reading acquisition is one of the most well established conclusions in all of behavioural science”

Keith Stanovich 2000

Piano playing analogy



- Skilled pianists can play complex concertos fluently and expressively
- But we don't teach children the piano by putting them in front of a Tchaikovsky score
- We make them learn and practice notes, scales, and finger positioning
- And so it is with reading

Phonics is not “barking at print”

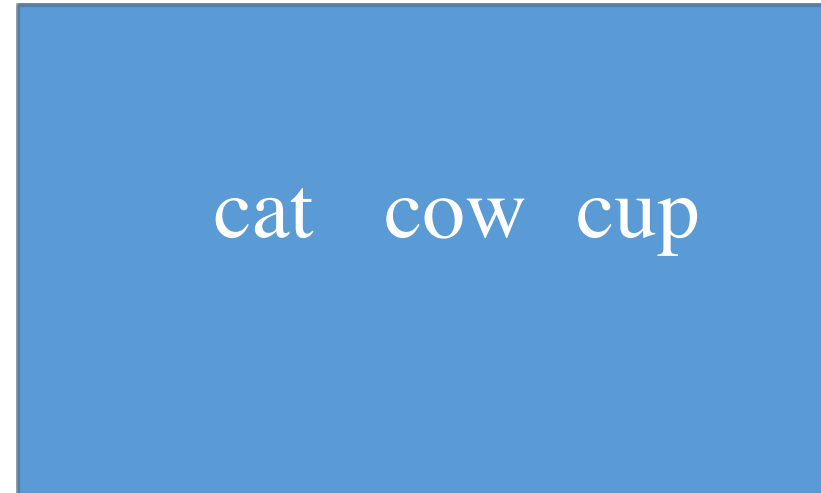
Print is a code for speech, not for meaning.



cat



cow



Beginning readers **access the meaning of words via their sound**

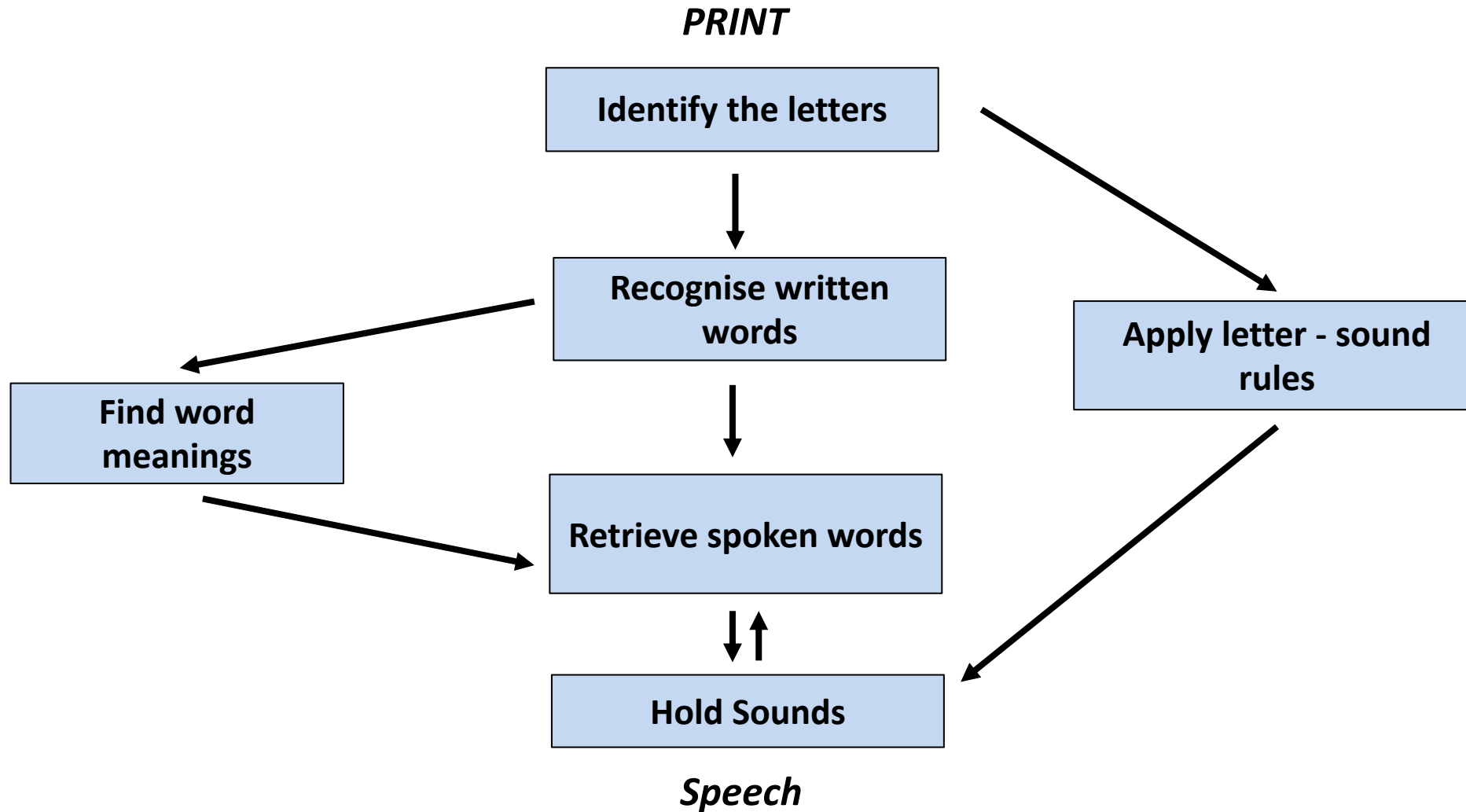
Skilled readers access meaning more directly after multiple exposures to a word

Beginning readers are different to skilled readers

Dual Route Model:

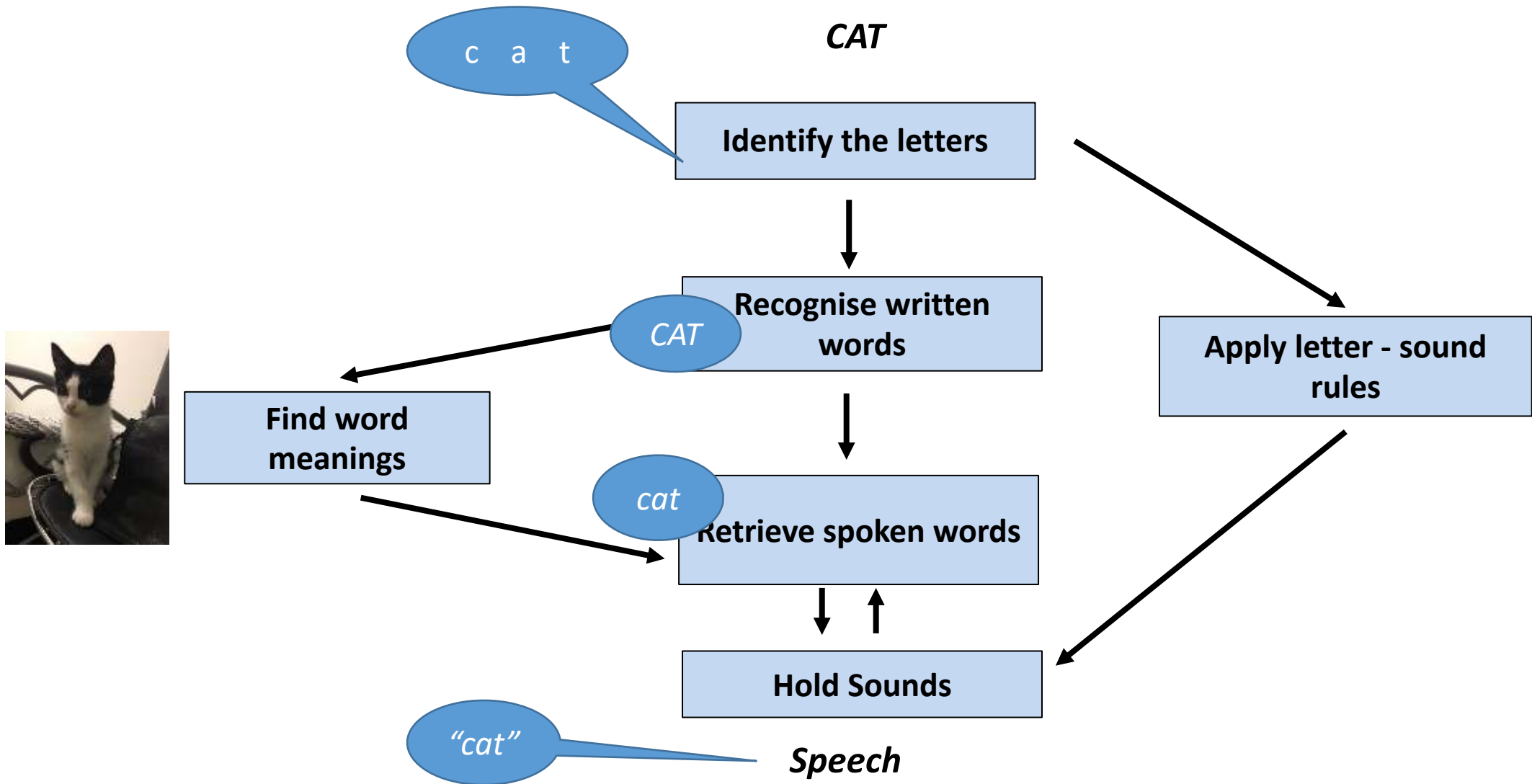
- a well researched model of reading
- explains both skilled and novice reading
- shows how skilled readers differ from novice readers

THE READING SYSTEM
How it works (skilled readers)



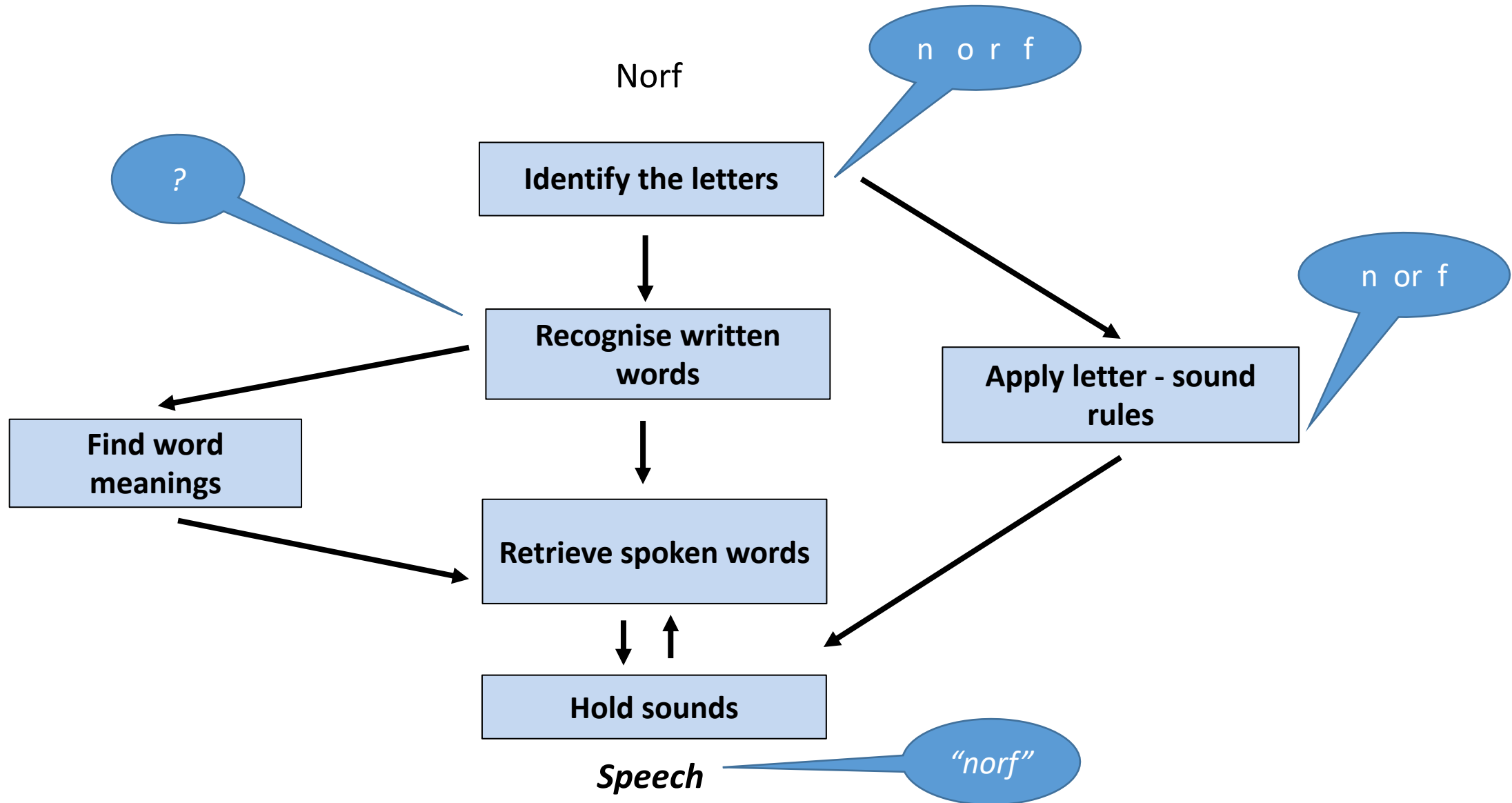
THE READING SYSTEM

How it works (skilled readers)



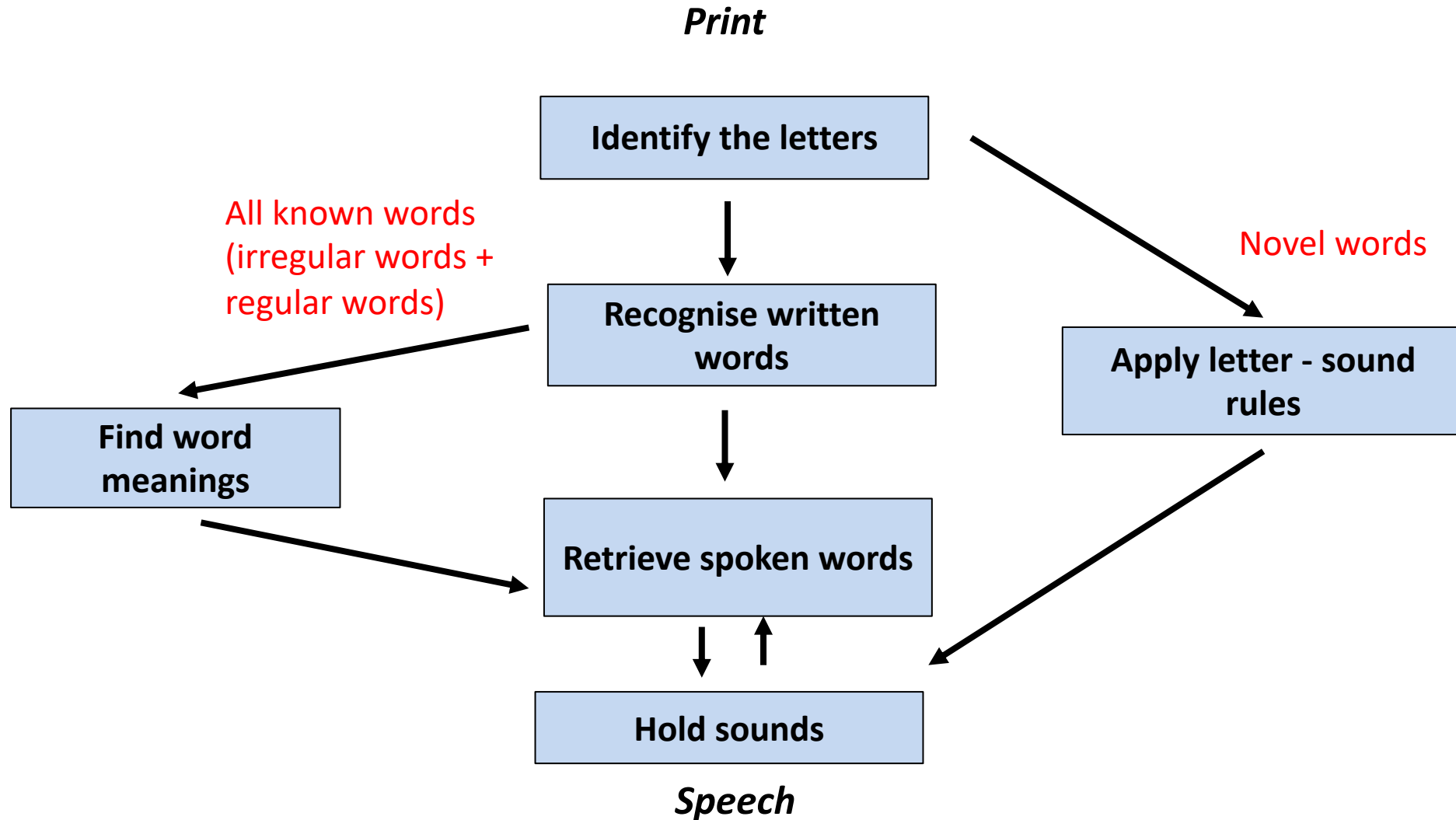
THE READING SYSTEM

How it works (skilled readers)

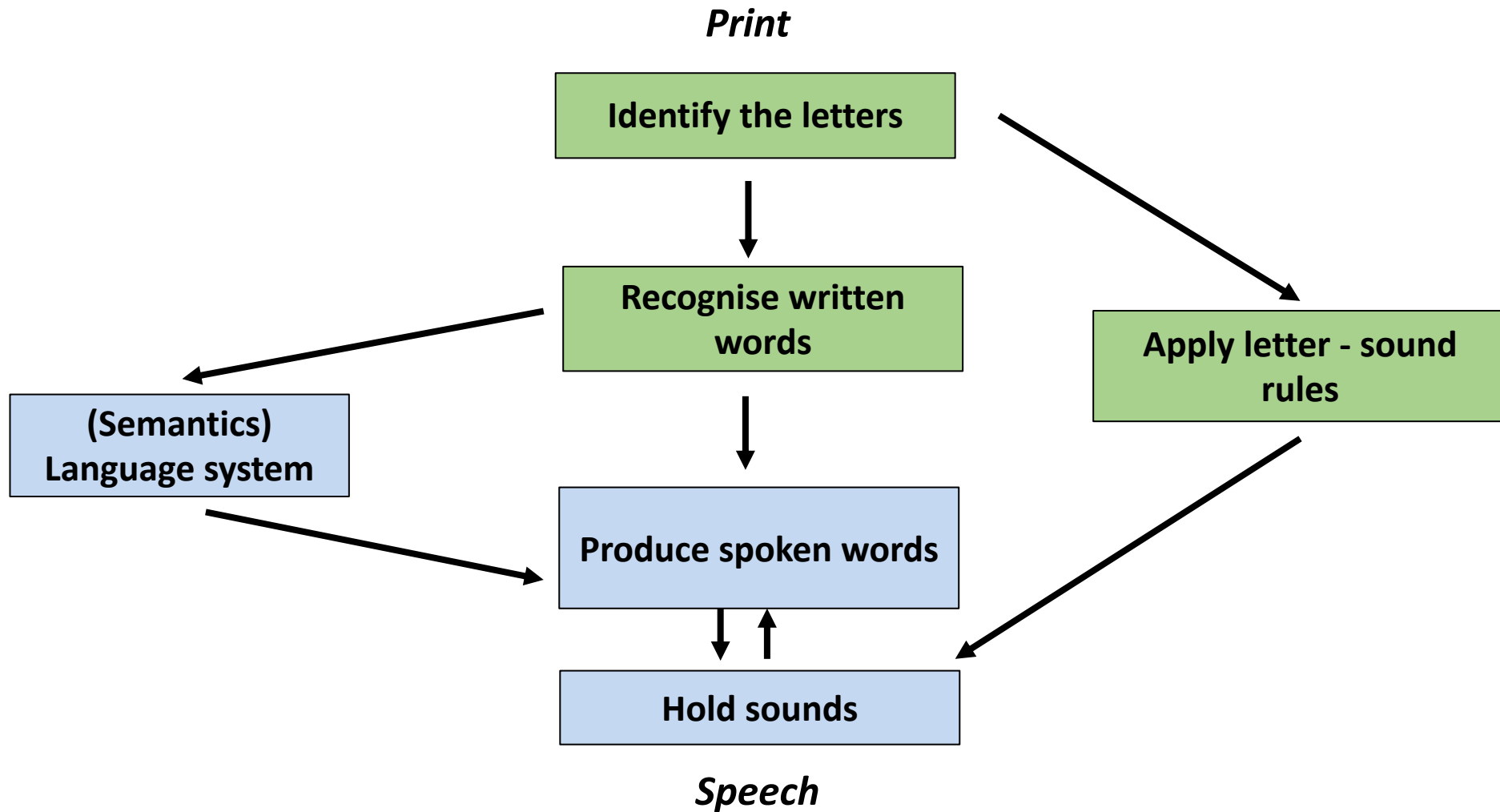


THE READING SYSTEM

How it works (skilled readers)

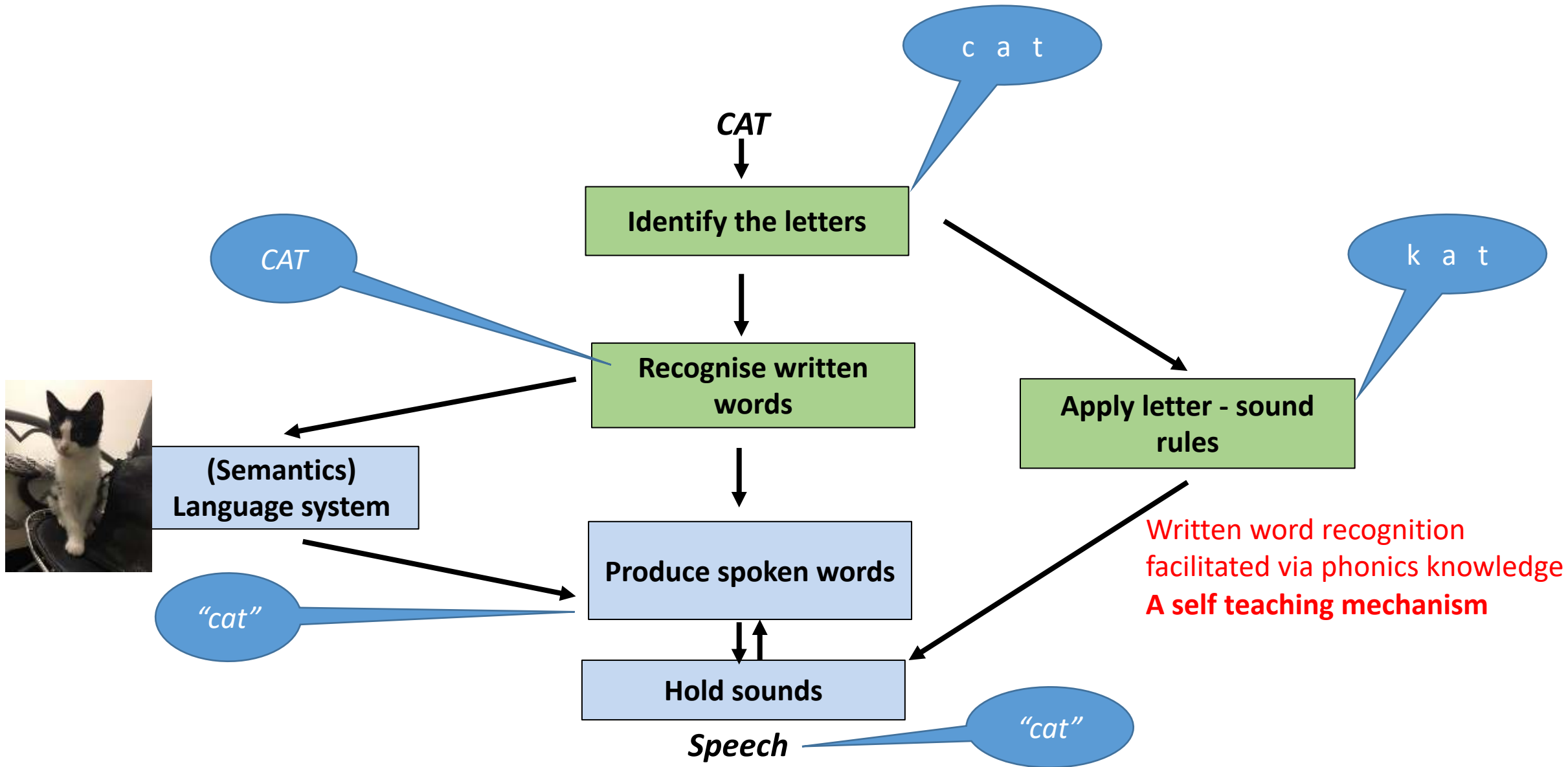


THE READING SYSTEM
How it works (novice readers)



THE READING SYSTEM

How it works (novice readers)



Orthographic mapping

- When we have seen and read a word many times, it is stored in long term memory as a unique letter string and can be read instantly. This process is referred to as 'orthographic mapping'
- When we have seen and read a word many times, it is stored in long term memory as a unique letter string and can be read instantly. This process is referred to as 'orthographic mapping'
- It is not the same as learning words as 'sight words', where words are memorised as logographs (word shapes) without reference to the grapheme-phoneme properties of the word.

- This mapping process means that students are developing their knowledge of common letter combinations, as well as 'legal' and 'illegal' English spellings.
- Orthographic mapping facilitates vocabulary development. [Research](#) has shown that children are more likely to remember a new word if they know how it is spelled.



sh

i

p



ch

ur

ch

8



eigh

t

The self-teaching hypothesis

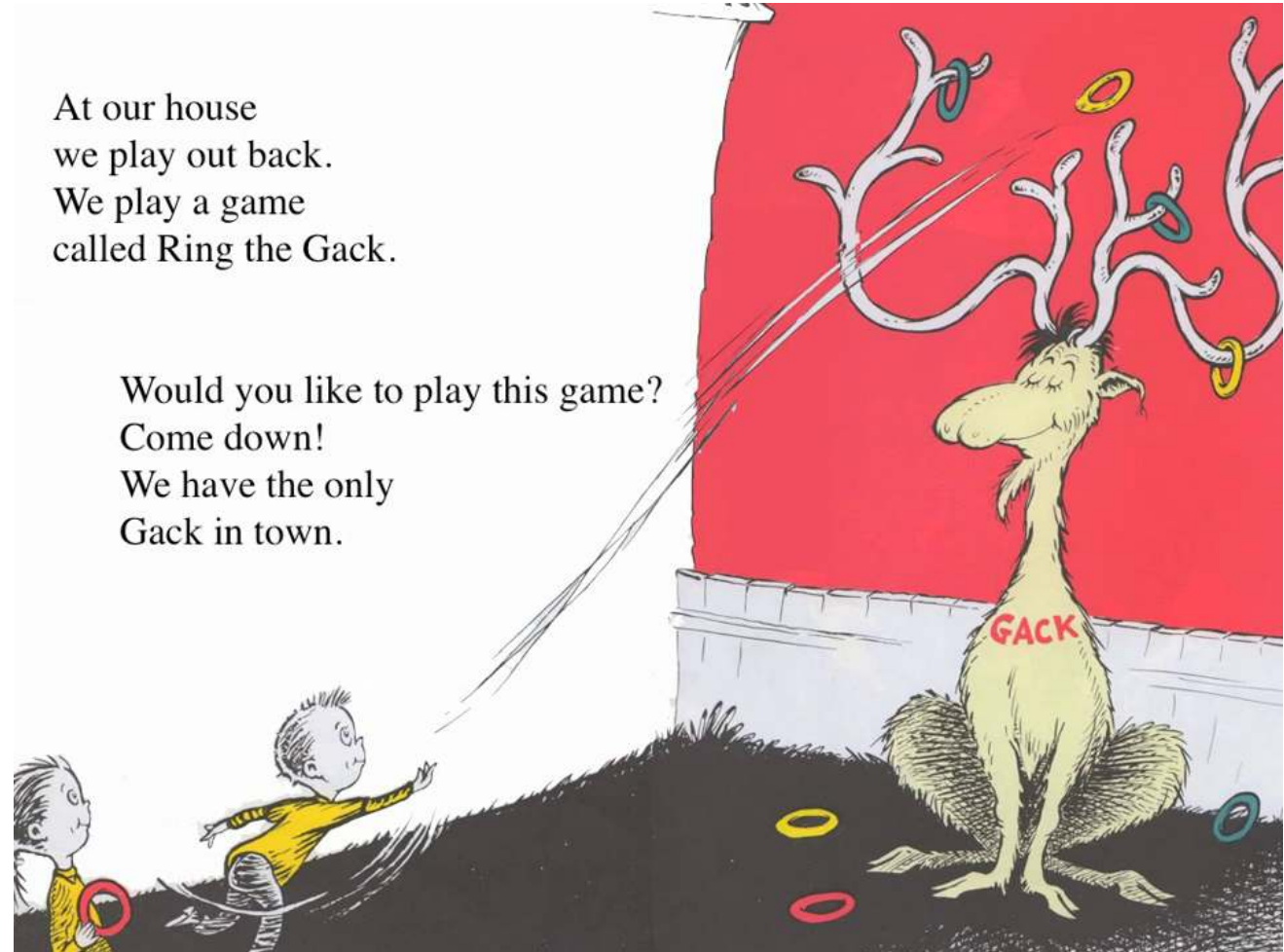
- Once learners have established their knowledge of grapheme-phoneme correspondences and segmenting and blending, they begin to apply this knowledge to new and novel words.
- Proficient decoders can do this because the reader is able to pay attention to the order and identity of letters and how they map onto the spoken form of the word.
- Each time a reader is exposed to a new word when reading they are able to use their knowledge of phonics to work out how to say the word and add it to their orthographic memory.
- At first this is a slow process, however each successful decoding of a new word gives the reader exposure to orthographic patterns and information that is the foundation of skilled word recognition.
- The self-teaching hypothesis enables independent reading of increasingly more complex texts and allows readers to expand their knowledge of vocabulary through reading.
- This process starts early and continues over many years and probably never stops.

Dr Seuss was a genius.

The book Fox in Socks is a great example of how the self-teaching hypothesis works.

Knowledge of the sounds represented by g – a – ck and familiarity with the word 'back' help them to read this new word. The book contains other made up pets such as a Zans, a ying, a gox, a yink, and even a pet zeep.

Children may have never encountered these words before yet they can read and pronounce the names of these creatures when they apply phonological decoding skills.



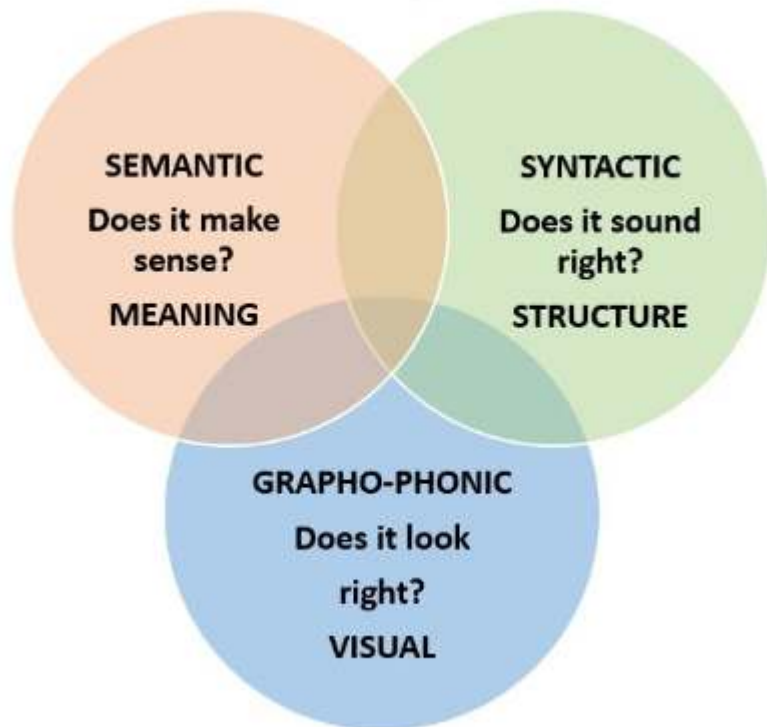
Helping orthographic mapping to develop

- GPC mapping exercises
- These exercises help student to understand how to form between oral phonemes in spoken words and the corresponding grapheme representations in print.
- Before students can attempt a direct mapping exercise they must have the ability to orally segment a word and have some knowledge of letter-sounds.
- An essential part of this process is the anchoring of the graphemes to the phoneme **sequence** in the spoken word, for example recognising the difference between 'pot' and 'top'.

Good readers do not 'sample' print

- Goodman (1976): Reading is a 'psycho-linguistic guessing game' in which readers use a variety of 'cues' that are primarily context-based.
- This theory has since been disproven
- Weak readers, not good readers, rely heavily on guessing from context
 - Poor readers are weak in phonic decoding. They have to rely on guessing from context to compensate (25% accuracy).
- Skilled word recognition **does not require context**
 - Hundreds of studies have demonstrated that skilled readers instantly and effortlessly recognise familiar words when those words are presented in isolation.

The three cueing system is not an effective strategy



- Skilled word reading does not require context.
- Guessing words from context is not as efficient as phonic decoding.
- Poor readers, not skilled readers, rely heavily on context.
- Context guessing does not promote sight word learning in poor readers.
- Semantic errors are not a sign of better reading development than phonetic errors.
- One of the three cues in the three cueing model is not related to word reading: syntax may be essential for comprehension, but it is not critical for word-reading development.



Wouldn't it be simpler to use phonics to decode the word and read it accurately?

If a child gets stuck on a word?

- **DO** ask the child to look for clues in the pictures
- **DO** encourage strategies
- **DO** ask the child to read on or re-read the passage and fit in a word that makes sense

Some strategies

- Have the child re-read the passage out aloud
- Ask the child to look at the first letter to help make attempts at the word
- Tell the child the word after all of the above strategies
- Use the picture

Prompting for cross checking on information

Teacher: it could be ... but look at ...

Teacher: Could it be ...? (meaningful substitution that requires letter knowledge).

Teacher: Check. Does it look right and sound right to you?

Searching for and using information

Early

- Searching for meaning

Teacher: You said ... does that make sense?

- Searching further on meaning

Teacher: Try that again and think what would make sense.

- Searching for structure

Teacher: You said ... can we say it that way?

- Searching further on structure

Teacher: Try that again and think what might sound right.

- Searching for visual information

Teacher: You said ... does it look right?

- Searching further on visual information

Teacher: Try that again and get ready to say the first sound.

- General

Teacher: What's wrong with this? (repeat sentence)

Teacher: Try that again and think what would make sense/sound right/look right.

Later

Teacher: How did you know it was ...?

X Teacher: What could you try?

X Teacher: Do you know a word like that?

X Teacher: Do you know a word that starts with those letters?

Teacher: What do you know that might help?

Self correcting

Early

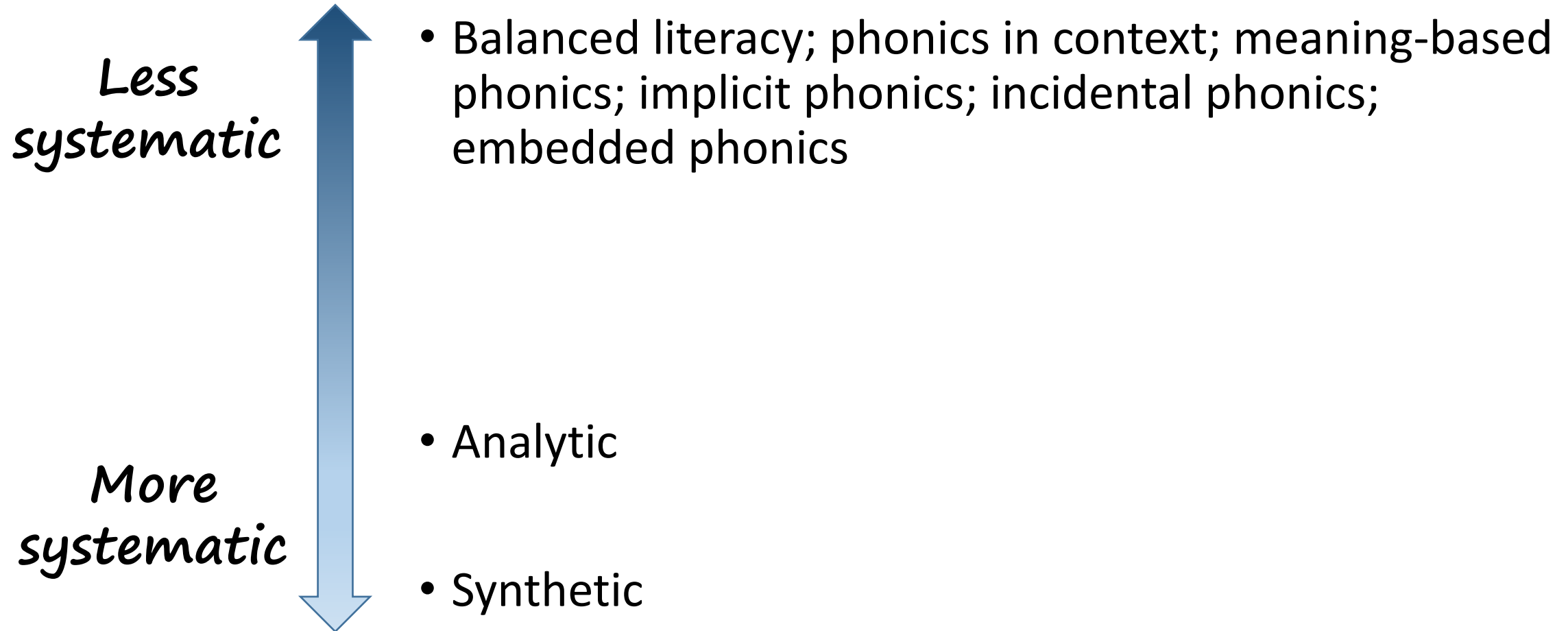
Teacher: I liked the way you fixed that all by yourself.

Later

Teacher: You made a mistake on that page. Can you fix it?

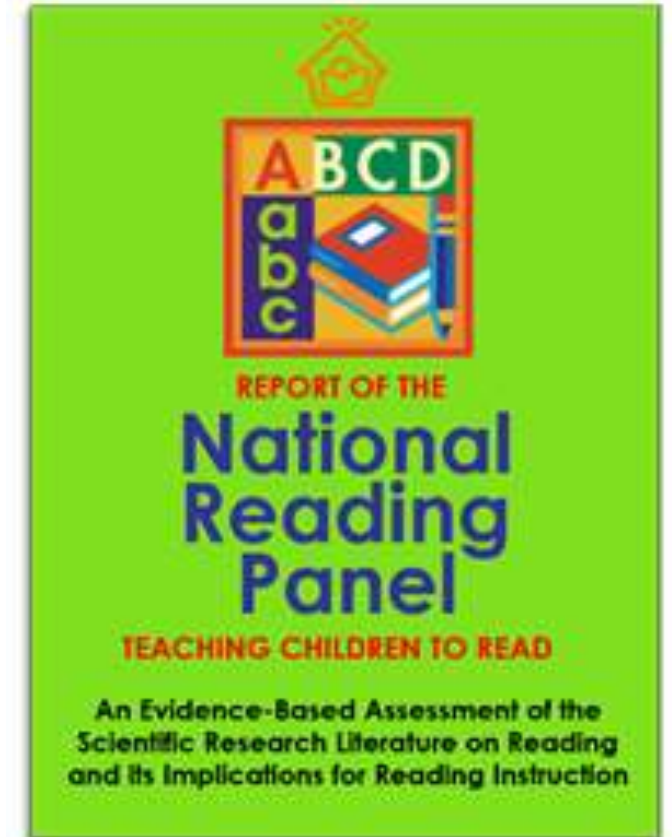
*Just decode
The word!*

Methods of teaching phonics



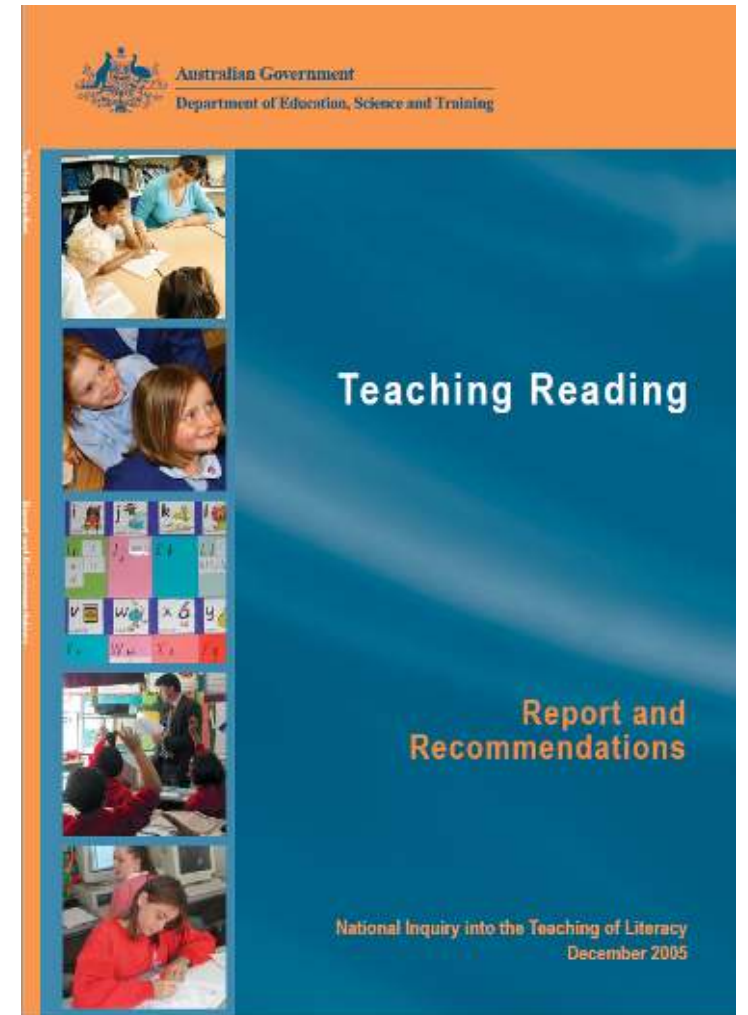
Key Findings of National Reading Panel (2000)

- Quantitative meta-analysis evaluating the impact of systematic phonics instruction compared with nonsystematic or no-phonics instruction
- Combined results of 38 experiments involving 66 treatment-control comparisons
- **Systematic and explicit phonics instruction makes a bigger contribution to children's growth in reading and spelling than alternative programs providing unsystematic or no phonics instruction**
- Systematic and explicit phonics instruction has the biggest impact on growth in reading and spelling when it begins in Kindergarten or 1st grade, before children can read independently
- Phonics instruction is significantly more effective than no phonics instruction in helping to prevent reading difficulties among at risk students and in remediating reading difficulties in disabled readers



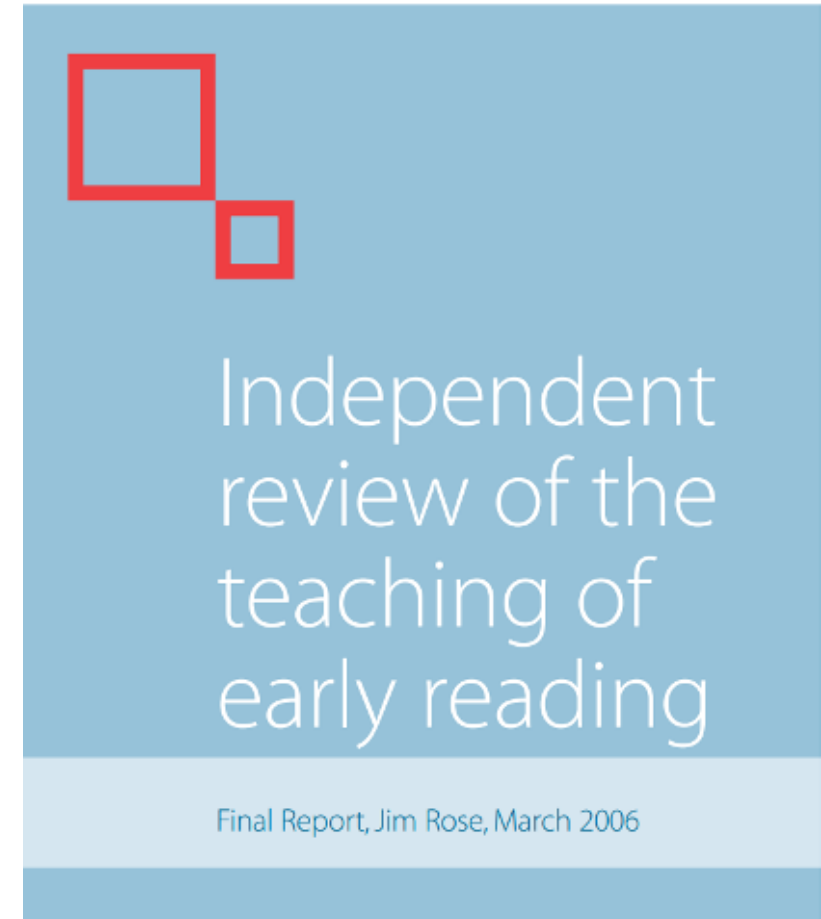
Key Findings of National Inquiry Into the Teaching of Literacy (2005)

- A whole-language approach to the teaching of reading is not in the best interests of children, particularly those experiencing reading difficulties.
- Where is unsystematic or no phonics instruction, children's literacy progress is significantly impeded, inhibiting their initial and subsequent growth in reading accuracy, fluency, writing, spelling and comprehension.
- In sum, the incontrovertible finding from the extensive body of local and international evidence-based literacy research is that for children during the early years of schooling (and subsequently if needed), to be able to link their knowledge of spoken language to their knowledge of written language, they must first master the alphabetic code – the system of grapheme-phoneme correspondences that link written words to their pronunciations.
- Because these are both foundational and essential skills for the development of competence in reading, writing and spelling, they must be taught **explicitly, systematically, early and well.**



Key Findings of the 'Rose Report' 2006

- Phonic work is a necessary but not sufficient part of the wider knowledge, skills and understanding which children need to become skilled readers and writers, capable of comprehending and composing text.
- The findings of this review argue strongly for the inclusion of a vigorous, programme of phonic work to be securely embedded within a broad and language-rich curriculum.
- There is much convincing evidence to show from the practice observed that, as generally understood, 'synthetic' phonics is the form of systematic phonic work that offers the vast majority of beginners the best route to becoming skilled readers.



Other important reviews of research

Let's learn, not just to read



Ending the Reading Wars: Reading Acquisition From Novice to Expert

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Abstract

There is intense public interest in questions surrounding how children learn to read and how they can best be taught. Research in psychological science has provided answers to many of these questions but, somewhat surprisingly, this research has been slow to make inroads into educational policy and practice. Instead, the field has been plagued by decades of “reading wars.” Even now, there remains a wide gap between the state of research knowledge about learning to read and the state of public understanding. The aim of this article is to fill this gap. We present a comprehensive tutorial review of the science of learning to read, spanning from children’s earliest alphabetic skills through to the fluent word recognition and skilled text comprehension characteristic of expert readers. We explain why phonics instruction is so central to learning in a writing system such as English. But we also move beyond phonics, reviewing research on what else children need to learn to become expert readers and considering how this might be translated into effective classroom practice. We call for an end to the reading wars and recommend an agenda for instruction and research in reading acquisition that is balanced, developmentally informed, and based on a deep understanding of how language and writing systems work.

DON'T THINK WE'VE MET
HOW TWO THINGS ABOUT
THE MARK SEIDENBERG IS
THAT YOU ARE READING THIS
WID LANGUAGE AT THE WORD
THESE SPEED OF SIGHT WORDS
READING THESE WORDS IN
HOW THAT YOU ARE AN EXPERT
YOU HOW WE READ, THE SCIENCE
WHY SO MANY CAN'T, I
HOW AND WHAT CAN BE DONE
EVERY DONE ABOUT IT DAY
WHETHER YOU WANT TO O



Non-systematic methods (e.g incidental phonics, phonics in context)

- No phonics scope and sequence
- Teaching is not explicit
- Grapheme-phoneme correspondences (GPCs) are pointed out during reading of text
- GPCs, segmenting and blending skills and metalinguistic concepts (eg. split digraph rules) are not taught explicitly.
- Children are encouraged to use context to predict unknown words (three-cueing model)

Analytic phonics

- Often taught after an initial sight word vocabulary is established
- Teaching begins at the word level
- Word 'families' and onset-rime are the main sub-word units
- Teaching can take up to three years
- There are 2000+ onsets and rimes

Including 27 consonant clusters that come at the beginning of syllables (e.g. bl, str) and 49 consonant clusters that come at the end (e.g. nd, mpt), and only three of these occur in both positions (sk, sp, st).

Word Families

	ack		an
	ad		and
	ag		ank
	ain		ap
	ake		ash
	ale		at
	am		ate
	ame		ay

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Synthetic phonics

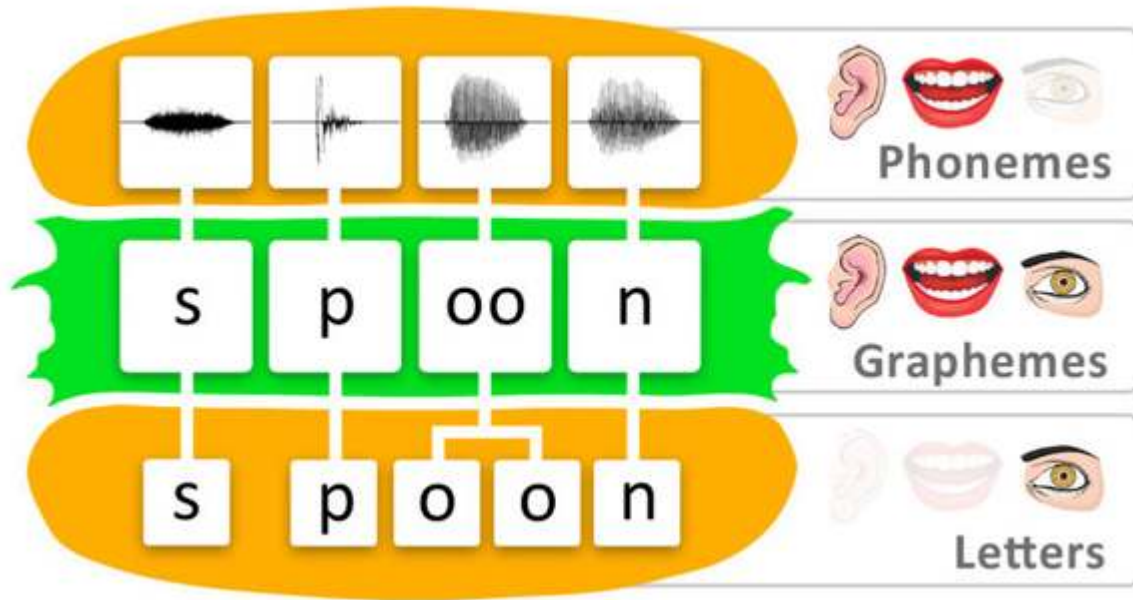


Image: Reading Doctor www.readingdoctor.com.au

- Synthetic means **building** words
- Teaching starts at the phoneme level
- Grapheme-phoneme correspondences are taught in a carefully developed sequence from simple to complex
- Blending and segmenting is introduced as soon as a few GPCs are learned
- Teaching is explicit: “I do, We do, You do”
- The simple code can be taught in a few months and the extended code in two years

Elements of a synthetic phonics lesson

- Review previous content
- Introduce the sound/phoneme
- Teach letter-sound associations (aka grapheme-phoneme correspondences)
- Blending/word building
- Reading decodable text (words; sentence strips; books)
- Application/transfer in another context

- Curriculum-based assessment: checking what has been learnt

How to tell if a program is synthetic phonics

- There is a clearly defined sequence of grapheme-phoneme correspondences (GPCs)
- Grapheme-phoneme correspondences are introduced at the rate of 4-6 per week
- Starts with single letters and a sound for each, moving onto common digraphs (sh, oo) and larger grapheme units (eigh, air, igh)
- Blending of phonemes for reading is introduced with the first set of GPCs, adding more GPCs as they are taught
- Segmenting of phonemes for spelling is introduced with the first set of GPCs, adding more GPCs as they are taught
- Introduction of the most common spellings for sounds first, and then the alternative sounds for spellings and alternative spelling for sounds
- Introduction of strategies for reading and spelling high frequency words containing unusual GPCs
- Provision of opportunities for the application of word-reading skills in reading decodable books matched to the phonics sequence to support students in using phonological strategies as a first approach to reading and spelling, and to allow them to experience success.

Explicit

- Teaching that explains, models and demonstrates the content or skill to be learned
- Uses clear and unambiguous language
- Has a defined and stated learning objective
- Teacher modelling and then teacher guidance is followed by scheduled opportunities for practice with immediate feedback.
- Student/teacher interaction is high, and students are active and engaged participants
- Does not leave learning to chance.

“It is true that some children readily acquire the skills of independent reading without highly explicit teaching, but if balanced is interpreted as offering all children only an embedded rather than an explicit approach to phonics instruction, those most in need will be further disadvantaged”

Deslea Konza 2014

Systematic

- Instruction that starts with a clearly planned sequence of phonics elements
- Logical progression of skills and knowledge (e.g. introduction of carefully selected and sequenced letter sound relationships in a logical order)
- Clearly defined objectives or statements of what students will do in each lesson
- Planned and sufficient practice to build fluency and ensure learning is retained
- Activating previously learned skills and applying them to new examples.

Systematic = methodical or according to a plan

Teaching grapheme-phoneme correspondences (GPCs)

Teaching systematically involves

- a clearly planned sequence of phonic elements that builds gradually from simple to complex.
- checking for student understanding,
- ensuring active and successful participation of all students
- allowing time for practice of newly learned knowledge and skills.

David Kilpatrick (2018) outlines a number of well-established methods for learning letters:

1. Provide multiple exposures
2. Use multisensory methods of learning (tracing and writing letters while saying their phonemes)
3. Teach small set of letters at a time
4. Teach letter sounds in a developmentally appropriate manner
5. Point out visual features of letters
6. Teach letter sounds using embedded mnemonic letters

Embedded mnemonic letters

- It can be helpful for children to visualise a letter using a picture clue that reminds them of the letter sound.
- Alphabet charts with pictures are common but embedded mnemonics are different. They integrate the picture and the letter.








- Be careful when choosing mnemonic letters because they can be counterproductive (eg t is for thumb)
- Alison Clarke has some great ones available on her Spelfabet website. (Saves making them yourself)

Grapheme-phoneme charts

Grapheme-phoneme charts are an important reference tool for beginning readers and should be accessible in the classroom and used consistently across the whole school.

There are a variety of these available for free or for purchase online.

The English Alphabetic Code

simple code		complex code							
phoneme/s with picture prompts	graphemes in key word examples	graphemes, or spelling alternatives, which are code for the sounds							
/s/ 	s snake	-ss glass	-ce palace	-se house	ce cents	ci city	cy bicycle	sc scissors	-st- castle
/a/ 	a apple							/s/ 	ps pseudonym
/t/ 	t tent	-tt letter	-ed skipped	-bt debt	pt pterodactyl				
/i/ 	i insect	-y cymbals							

20 Vowel Phonemes / Graphemes

Needs to be at least one of these vowel sounds in every word (one per syllable)

Phoneme (sound)	Examples	Graphemes (written patterns)	Phoneme (sound)	Examples	Graphemes (written patterns)
Short Vowel Sounds /a/	apple	a	/oo/	moon, screw	oo, ue, ou, ew, u-e
/e/	elephant, bread	e ea	Other Vowel Sounds /oo/	book, could	oo, u, ou
/i/	igloo, gym	i y	/ou/	house, cow	ou, ow
/o/	octopus, wash	o a	/oi/	coin, boy	oi, oy
/u/	umbrella, wagon	u o	'r' Controlled Vowel Sounds /ar/	star, glass	ar, a
Long Vowel Sounds... /ae/	rain, tray	ai, ay, a-e, a	/or/	fork, board	or, aw, a, au, ore, oar, oor
/ee/	tree, me	ee, ea, ie, y, e, ey	/er/	herb, nurse	er, ir, ur, ear, or
/ie/	light, kite	igh, i-e, y, i, ie	/air/	chair, pear	air, ear, are
/oa/	boat, bow	oa, ow, o, o-e	/ear/	spear, deer	ear, eer, ere
/ue/	tube, emu	u-e, ew, ue, u			'schwa' unstressed vowel close to /u/ as in teacher, the, picture

Regular Alphabet Letter Patterns and Sounds Advanced Letter Patterns and Sounds

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24 Consonant Phonemes / Graphemes

Phoneme (sound)	Examples	Graphemes (written patterns)	Phoneme (sound)	Examples	Graphemes (written patterns)
/b/	banana, bubbles	b bb	/s/	sun, mouse	s ss, ce, se, c, sc
/c/	car, duck	c k, ck, q, ch	/t/	turtle, little	t tt
/d/	dinosaur, puddle	d dd,	/v/	volcano, halve	v ve
/f/	fish, giraffe	f ff, ph, gh	/w/	watch, queen	w wh, u
/g/	guitar, goggles	g gg,	/x/	fox	x
/h/	helicopter	h	/y/	yo-yo	y
/j/	jellyfish, fridge	j g, dge, ge	/z/	zip, please	z zz, ze, s, se
/l/	leaf, bell	l ll, le	/sh/	shoes, television	sh, ch, si, ti
/m/	monkey, hammer	m mm, mb	/ch/	children, stitch	ch, tch
/n/	nail, knot	n nn, kn	/th/	mother	th
/p/	pumpkin, puppets	p pp	/th/	thong	th
/r/	rain, write	r rr, wr	/ng/	sing, ankle	ng, n

Regular Alphabet Letters and Sounds Advanced Letter Patterns and Sounds

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Scope and sequence

There is no accepted 'gold-standard' scope and sequence, however there are some guidelines to consider

1. Are visually and auditorily similar letters separated in beginning instruction?
2. Are more useful GPCs introduced first? For example, s, a, t are more useful than x, z, j, q.
3. Does the sequence begin with a small set of GPCs and build gradually?
4. Single letters and sounds first before moving to digraphs, trigraphs and quadgraphs – this is the hallmark of a systematic approach.
5. Teaching one sound per week is not sustainable. GPCs should be introduced at a rate of about 3 –6 per week, but this should ultimately be determined by student performance.
6. The scope and sequence chosen must be consistent with the GPCs presented in the decodable readers used by the school to support early reading instruction.
7. It is important that a whole school approach is used so that the language for learning is consistent across the classes and grades.

Auditorily similar	Visually similar
/f/ /v/	b d
/t/ /d/	b p
/b/ /d/	q p
/b/ /p/	n m
/k/ /j/	h n
/m/ /n/	v w
/i/ /e/	n r
/o/ /u/	

General Sequence for Teaching **Phonic** Elements

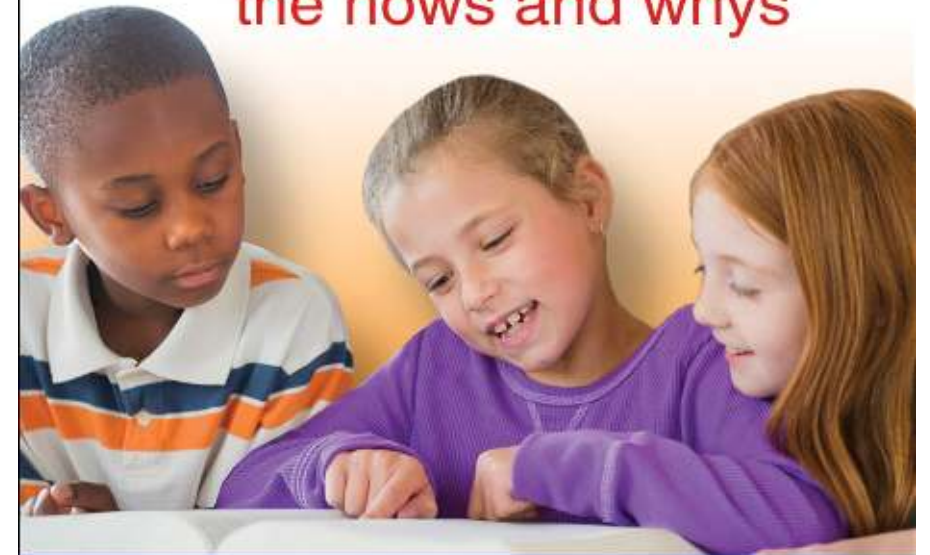
1. Individual consonants — b ,c ,d...
2. Short vowels — a (cat)
3. CCVC words (stop, frog) & CVCC words (jump, best)
4. Consonant digraphs — ck (back)
5. Long vowels in CVCe words (cake)
6. Long vowels in CVVC words ai/ay (rain, may)
7. R-controlled vowels — ar (bark)
8. Diphthongs and other vowel patterns like vowel digraphs — oi/oy (join, boy), oo (spoon)

(Adapted from Beck & Beck, 2013, p. 40)

SECOND EDITION

making sense of phonics

the hows and whys



ISABEL L. BECK and MARK E. BECK

Programs with a scope and sequence that follows those principles

- Letters and Sounds
- InitialLit/MiniLit/MultiLit
- Get Reading Right
- Read Write Inc
- Sounds Write
- Jolly Phonics
- Cracking the ABC Code
- Little Learners Love Literacy

National Literacy Learning Progressions: Phonic knowledge and word recognition

PKW3	Says most common phoneme for taught single letter graphemes Blends phonemes of taught graphemes to decode VC and CVC words
PKW4	Says the most common phoneme for all single letter graphemes Writes/selects corresponding graphemes for all common phonemes Blends phonemes for all common single letter graphemes to read VC and CVC words
PKW5	Gives examples of how a phoneme can be represented by more than one grapheme Says short and long vowel sounds for a, e, i, o, u Reads single syllable words with common double letters Reads single syllable words with taught consonant digraphs Reads single words with common long vowel CVCe [split digraph] Reads one and two syllable words with common suffixes (s, ed, ing)
PKW6	Reads words with taught vowel digraphs Reads two syllable compound words with taught GPCs
PKW7	Reads words with two and three consonant beginning/end blends (trust, scrap) Reads words with r-controlled vowel combinations Applies common phonic generalisations (eg soft c and soft g rule)
PKW8	Reads less common graphemes with alternative spellings (ch/tch/j/g) Reads multisyllabic words with prefixes and suffixes (in-, ex-, dis-, -ful, -able, -ly) Reads words with silent letters (kn, mb, bt)

Incorporating incidental learning in synthetic phonics

- Following a scope and sequence does not require teachers to ignore letters and sounds outside it
- Children quickly become aware that there are spellings that do not follow the rules of the simple code. Their own names are often the most obvious example of this (eg. Thomas, Michael, Philippa)
- This can be acknowledged and discussed using grapheme-phoneme correspondence charts
- The sequence ensures that all GPCs are learned by all children, and introduced in a way that is conceptually logical and facilitates the development of automaticity

Blending and segmenting

- The first words to work on with students should be *regular* words. Regular words are words that contain grapheme-phoneme correspondences that represent their most common sounds. 'Dog' is considered a regular word because each of the letters represents its most common sound, whereas the word 'gem' might be introduced later because the g is representing its less common /j/ phoneme.
- These regular words should also have a simple VC (vowel/consonant) or CVC (consonant/vowel/consonant) structure.
- Letter by letter blending is more difficult when letter combinations are effected by articulation, therefore the consonants chosen for initial study should be continuous sounds when possible because these are easiest for students to sound out.
- Continuous sounds allow the learner to 'slide' into the vowel to blend.
- Stop consonants can be introduced in the final position after students have demonstrated proficiency with continuous sounds.
- Repetition, repetition, repetition! With the same words and different words until it is smooth.

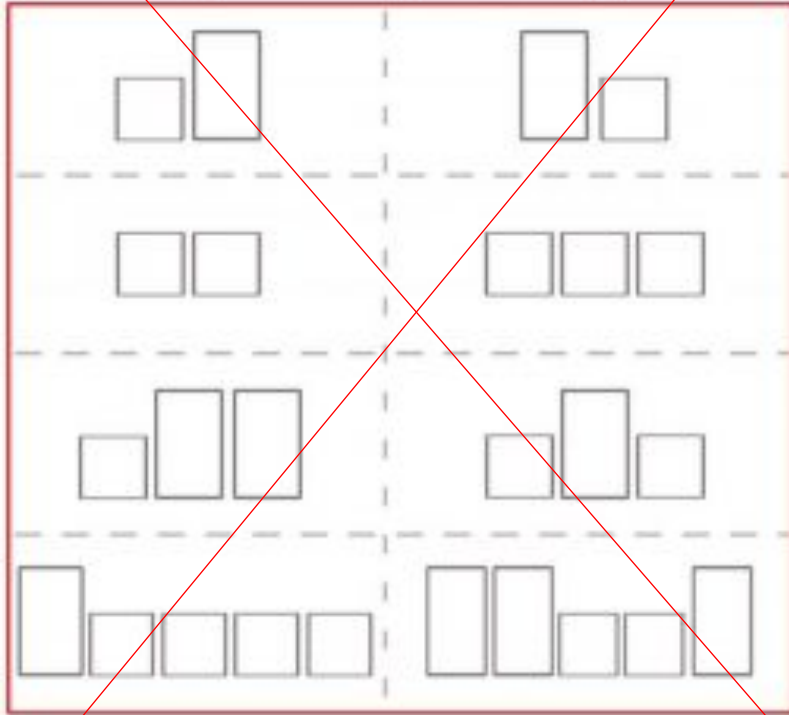
Teaching sight words

- In reading research, 'sight words' are words that are read instantly because they have been stored in memory by orthographic mapping
- In teaching, 'sight words' usually mean words that are taught as whole words.
- This is fine for a small number of high frequency words that do not follow regular GPC pronunciations. Eg. the, was, one, gone, said.
- However, show children the letters of the word that are regular eg the 'th' in the.
- It is easier for children to learn irregular words if they can see the stable GPCs and then only to remember the variable part, eg the 'ai' in said.

of was said above

o	f = /v/		
w	a = o as in off	s = /z/	
s	ai = e as in egg	d	
a = /schwa/	b	o = u is in up	ve

all	am	are	at
ate	be	black	brown



Please, for the love of [insert preferred deity here], do **not** do this.

Synthetic phonics example sequence

	the main letter/s-sound correspondences introduced and/or revisited in each unit
unit 1	s a t i p n c k ck e h r
unit 2	m d g o u l -ll f -ff s -ss b y ai ay w oa ow ie igh -le o
unit 3	ee or z -zz w wh ea e-ea /z/ s se ze
unit 4	ng nk v ve oo-oo y -y x ch sh th-th
unit 5	qu ou ow-ow oi oy ue-ue er ar -ve -ce s-ss ge- -se y-y-y
unit 6	ce,ci,cy ge,gi,gy o-oe 'oes' ie,i-e ee,e-e oe,o-e ae,a-e ue,u-e air are ear ere eer ear ere ier ir ur ear wor er,our -re
unit 7	le il al el aw au al oar oor ore our ch,tch ge,dge x,x kn wr mb sc gu bu ch rh
unit 8	sh,ch ti ci ssi /zh/ si s z g ge ou 'ous' ph gh g,gg,gh ch,ch,ch wa qua war gn st
unit 9	-ey eigh -ea -aigh -ey -ie -y -ie ei
unit 10	-o -ew -ui -ou -o eu ew -iew
unit 11	ough augh ch qu -que quar
unit 12	-gue -ine -ine -ine mn ps alm alt -ture -eau -re

What to look for in a synthetic phonics program?

- Is there published research of evaluations or trials in schools?
- Is it underpinned by the scientific evidence of how children learn to read?
- Do independent experts recommend it?
- Does it claim to improve reading by having children do things other than reading?
- Does it make unrealistic claims of success?
- Is professional development available on how to use the program?
- What are the qualifications/experience of the program developers?
- Are there decodable books available to match the GPC teaching sequence?
- Does it fit the requirements / context of your school?

Which synthetic phonics program is best for your school?

There is no phonics program that is 'best' for all schools, the best phonics program depends on the context of the school.

Choice of synthetic phonics program depends on

1. Space (if the program requires small/ability groups)
2. Number of teachers and other instructors available (if the program requires small/ability groups)
3. Level of knowledge of phonics instruction among teachers
4. Funding

How do synthetic phonics programs differ?

<p>PHONICS ONLY → COMPREHENSIVE</p> <ul style="list-style-type: none">• Teach only the code• Teach the code + morphology, etymology, and vocabulary• Teach the code in a comprehensive program including all five keys to reading	<p>PROFESSIONAL DEVELOPMENT / COACHING</p> <ul style="list-style-type: none">• Offer no professional development• Offer professional development in use of the program• Offer professional development in the evidence and knowledge base + use of the program
<p>RESOURCES PROVIDED</p> <ul style="list-style-type: none">• Basic components such as sequence and example lessons• Scope & sequence + activities + decodable books• Scope & sequence + detailed lesson plans• Scope & sequence + detailed lesson plans (or scripts) + print/digital resources and activities for teaching• All of the above + decodable books	<p>COST</p> <p>There is a big range in costs, from essentially free to several thousand dollars. Cost is determined by:</p> <ul style="list-style-type: none">• Resources provided• PD required to implement properly• Research that has been undertaken to ensure efficacy

Recommended reading

- Adams, M.J. (1990). **Beginning to read: Thinking and learning about print.** Cambridge, MA: MIT Press.
- Dehaene, S. (2009). **Reading in the brain.** New York, NY: Penguin Viking.. Cambridge, MA: MIT Press
- Kilpatrick, D.A. (2015). **Essentials of assessing, preventing and overcoming reading difficulties.** Hoboken, NJ: Wiley.
- Moats, L.C. (2010). **Speech to print: Language essentials for teachers.** Baltimore, MD: Brookes Publishing.
- Oakhill, J., Cain, K., & Elbro, C. (2014). **Understanding and teaching reading comprehension: A handbook.** Abingdon, England: Routledge.
- Seidenberg, M. (2017). **Language at the speed of sight: How we read, why so many can't, and what can be done about it.** New York, NY: Basic Books.
- Stuart, M., & Stainthorp, R. (2015). **Reading development and teaching.** Thousand Oaks, CA: SAGE.
- Willingham, D. (2017). **The reading mind: A cognitive approach to understanding how the mind reads.** San Francisco, CA: Jossey-Bass.
- Wolf, M. (2007). **Proust and the Squid: The story and science of the reading brain.** New York, NY: Harper Collins.

For more information



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