

CSEN | CONGRÈS INTERNATIONAL
LES SCIENCES COGNITIVES
DANS LA SALLE DE CLASSE

SCNE | INTERNATIONAL CONGRESS
Cognitive science in the classroom

POUR L'ÉCOLE
DE LA CONFIANCE

Lecture

Comment la recherche
en psychologie peut nous aider
à mettre fin aux « guerres de la
lecture »

Reading

How research in psychology can
help us end the “Reading wars”

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LITERACY AT THE FOUNDATION OF MODERN SOCIETY



Product Recall Notice

Steelcraft Agile, Agile Plus, Agile Twin, BOB Motion Strollers made before July 2013.



Hazard: A consumer's finger may become caught in the stroller's hinge while the stroller is being folded.

Risk: This presents a finger laceration hazard to consumers folding the stroller.

Recall Details: This recall applies to the Agile, Agile Plus, Agile Twin, and BOB Motion Stroller models manufactured between July 1, 2012, and July 31, 2013. The Agile, Agile Plus, Agile Twin, and BOB Motion Stroller models manufactured in Australia, British Columbia, Canada, and the United States are also included in this recall. The Agile, Agile Plus, Agile Twin, and BOB Motion Stroller models manufactured in the United States are also included in this recall.

Recall Period: From July 1, 2012, to July 31, 2013.

Recall Agent: BRITAX CHILD CARE PTY LTD, CAT. NO. 3914E, BATCH NO. 19, 90, 31 DORNEY ROAD, SANDHURST VIC 3088.

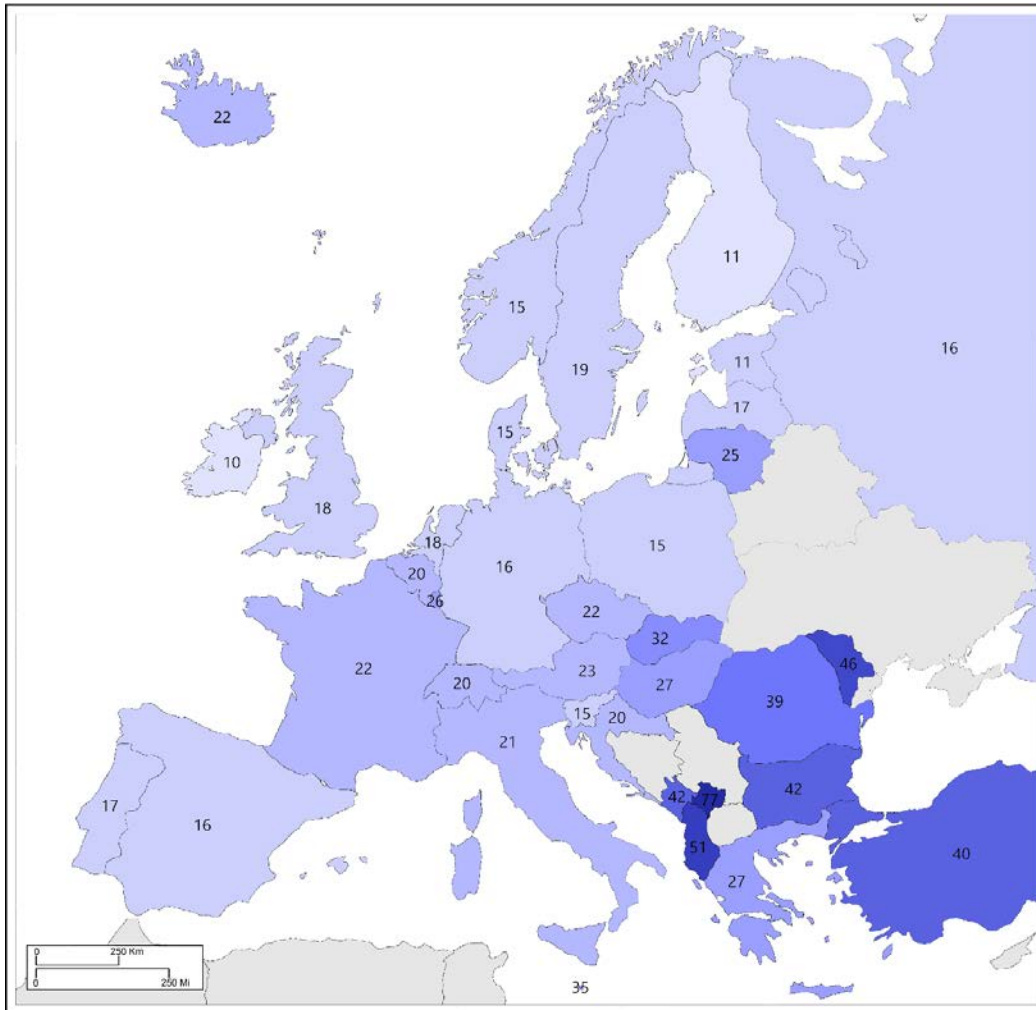
Recall Reason: A consumer's finger may become caught in the stroller's hinge while the stroller is being folded.

Recall Status: To arrange for a free Agile Cover Kit see one of the following 2 steps:
• Complete the online order form on www.recalls.gov.au or use this QR code.
• Call Britax Customer Support Line Australia 1800 856 914 (Monday - Friday, 9:00am to 5:00pm Eastern Standard Time) providing a model of stroller, date code and your address.

See www.recalls.gov.au for Australian Product Recall Information

MISSION CIRCULATION	PIER	KARI	SORI	PIER	KARI
Aéroport Charles de Gaulle 2 TGV	10 44	10 51		10 59	11 06
Aéroport Charles de Gaulle 1	10 47	10 54		11 02	11 09
Parc des Expositions	10 52			11 07	
Villepinte	10 54			11 09	
Sevran-Beaudottes	10 57			11 12	
Mitry-Claye			10 54		
Villeparisis			10 58		
Vert-Galis			11 01		
Sevran Livry			11 04		
Aulnay-sous-Bois	11 01		11 09	11 16	
Blanc-Mesnil	11 03		11 12	11 18	
Drancy	11 05		11 14	11 20	
Le Bourget	11 08		11 17	11 23	
La Courneuve-Aubervilliers	11 11		11 20	11 26	
La Plaine-Stade de France	11 14		11 23	11 29	
Gare du Nord	11 20	11 23	11 29	11 35	11 38
Chatelet-Les Halles	11 23	11 26	11 32	11 38	11 41
Saint-Michel Notre-Dame	11 25	11 28	11 34	11 40	11 43
Luxembourg	11 27	11 30	11 36	11 42	11 45
Port Royal	11 29	11 32	11 38	11 44	11 47
Denfert-Rochereau	11 31	11 34	11 40	11 46	11 49
Cite Universitaire	11 33	11 36	11 42	11 48	11 51

LOW LITERACY IN EUROPE



~22% of French 15-year-olds have reading skills below the baseline needed to participate effectively in life (PISA, 2015)

Reading below 'baseline' -> inability to find the main point of a passage.

WHAT DOES LOW LITERACY LOOK LIKE?

Peanut Allergy Alert Lemon Cream Biscuits

Date of alert: 04 February

Manufacturer's Name: Fine Foods Ltd

Product Information: 125g Lemon Cream Biscuits (Best before 18 June and Best before 01 July)

Details: Some biscuits in these batches may contain pieces of peanut, which are not included in the ingredient list. People with an allergy to peanuts should not eat these biscuits.

Consumer action: If you have bought these biscuits you may return the product to the place of purchase for a full refund.

Or call 1800 034 241 for further information.

Question 2: SUPERMARKET NOTICE

What is the purpose of this notice?

- A. To advertise Lemon Cream Biscuits.
- B. To tell people when the biscuits were made.
- C. To warn people about the biscuits.
- D. To explain where to buy Lemon Cream Biscuits.

THE READING WARS



- Decades of raging debate about best way to teach children to read
- Phonics versus “whole language”; touchstone for deep-seated philosophical differences
- Lack of consistent evidence-based policies and practices
- How children learn to read is a scientific question
- Psychological science has provided sufficient evidence to end the Reading Wars

WHAT IS READING?

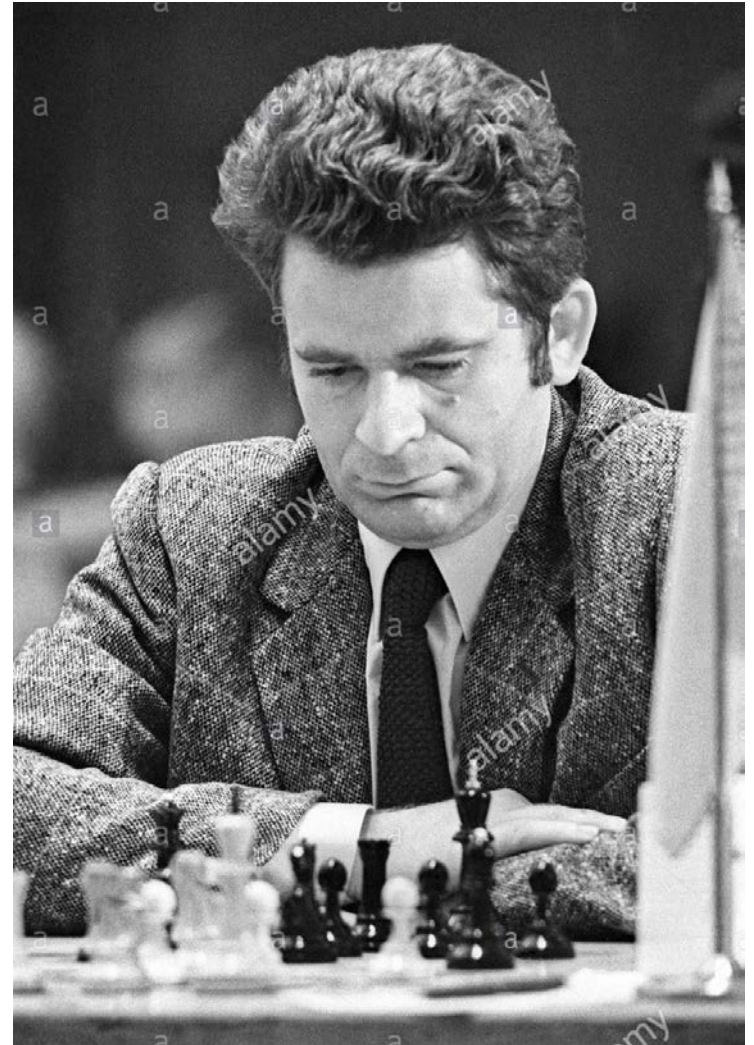
Jess decided to cut and run. She couldn't face what might happen next.

- Analysis of visual features (e.g. run vs rub)
- Analysis of letters and letter positions (e.g. run vs urn)
- Analysis of morphemes (e.g. -ed reflects the past)
- Analysis of meanings of individual words
- Analysis of figurative / ambiguous language
- Analysis of causal connections
- Use of background knowledge; inferencing skills
- Demands on working memory and executive skills
- Eye-movement control exquisitely tuned to aid comprehension

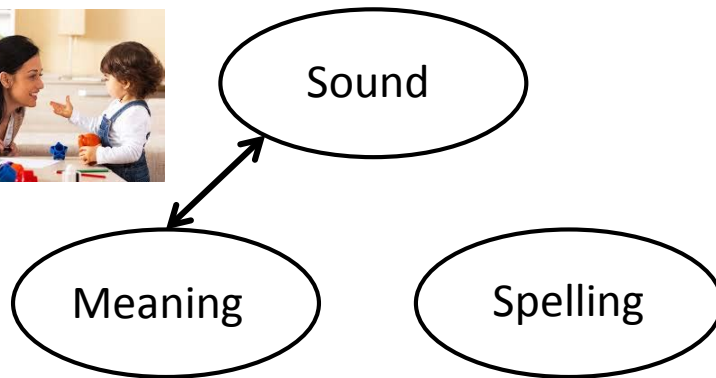


LEARNING VERSUS SKILLED PERFORMANCE

- Chess experts see the whole game, make plans before calculating individual moves, don't see pieces as distinct.
- Does this give insight into how beginners learn to play chess, or how they should be taught?
- Skilled readers draw meaning rapidly and without effort from printed words, draw causal connections within and between sentences, use background knowledge to make inferences.
- Does this give insight into how beginners learn to read, or how they should be taught?



READING STARTS WITH ORAL LANGUAGE

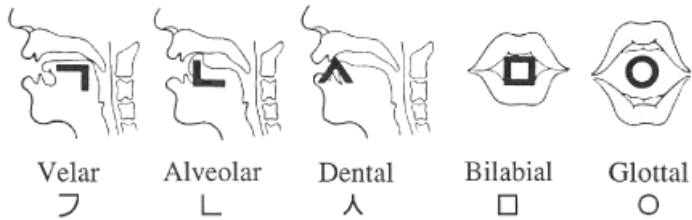


- Vocabulary, grammar, and narrative skill predict later reading comprehension
- Early interventions in oral language impact on later reading comprehension
- Enormous variation in language ability at school entry

WRITING SYSTEMS

가 ga	나 na	다 da	라 ra	마 ma	바 ba	사 sa	아 a
가 gya	냐 nya	다 dya	랴 rya	먀 mya	뵤 bya	샤 sya	야 ya
거 geo	너 neo	더 deo	러 reo	머 meo	뵤 beo	서 seo	어 eo
겨 gyeo	녀 nyeo	더 dyeo	려 ryeo	며 myeo	뵤 byeo	셔 syeo	여 yeo
고 go	노 no	도 do	로 ro	모 mo	보 bo	소 so	오 o
교 gyo	뇨 nyo	도 dyo	료 ryo	묘 myo	뵤 byo	쇼 sya	요 yo

K	L	M	N	O	P	Q	R	S	T
⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮
U	V	X	Y	Z	and	for	of	the	with
⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮
ch	gh	sh	th	wh	ed	er	ou	ow	W
⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮



Upper case
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

Lower case
a b c d e f g h i j k l m n o p q r s t u v w x y z

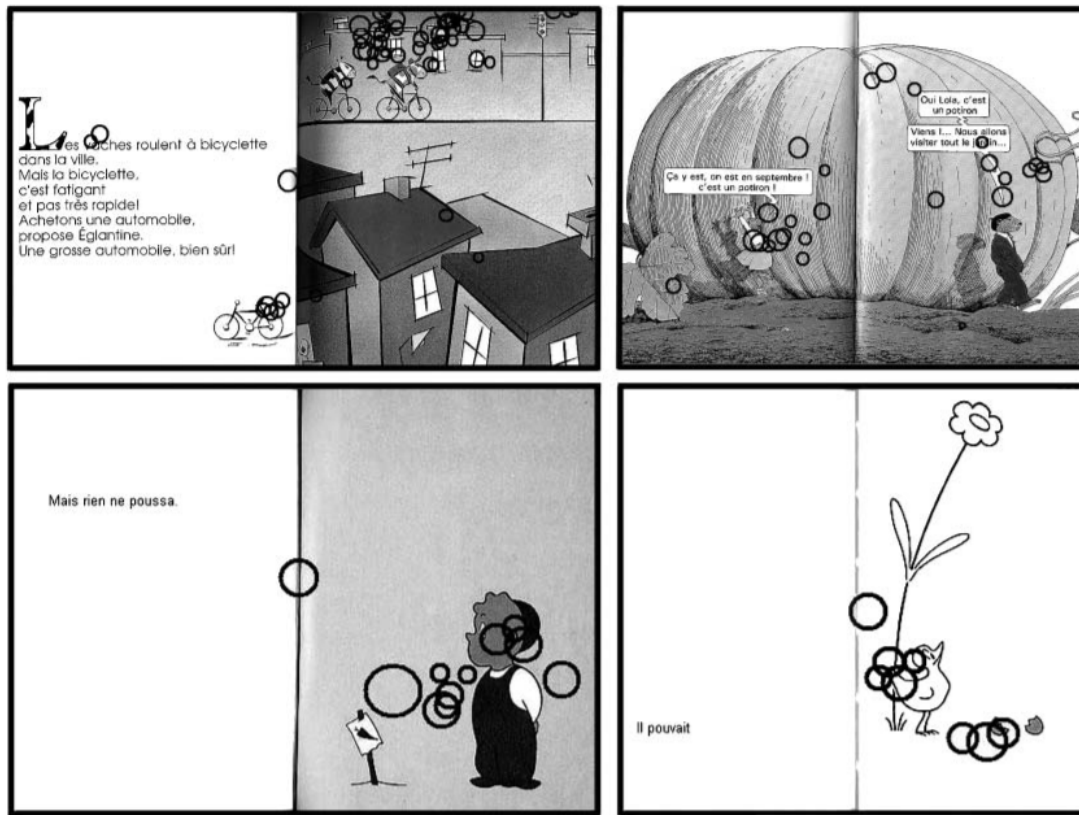
LEARNING LINKS BETWEEN SPELLING AND SOUND



- Memorising every word individually is not possible in languages like French and English
- Spelling-sound knowledge provides hook into oral language
- Systematic phonics is designed to teach spelling-sound knowledge
- Spelling-sound knowledge allows generalisation (e.g. NET)
- Most children require *explicit instruction*

SHARED BOOK READING

What are 4-5 year old children looking at during shared reading?

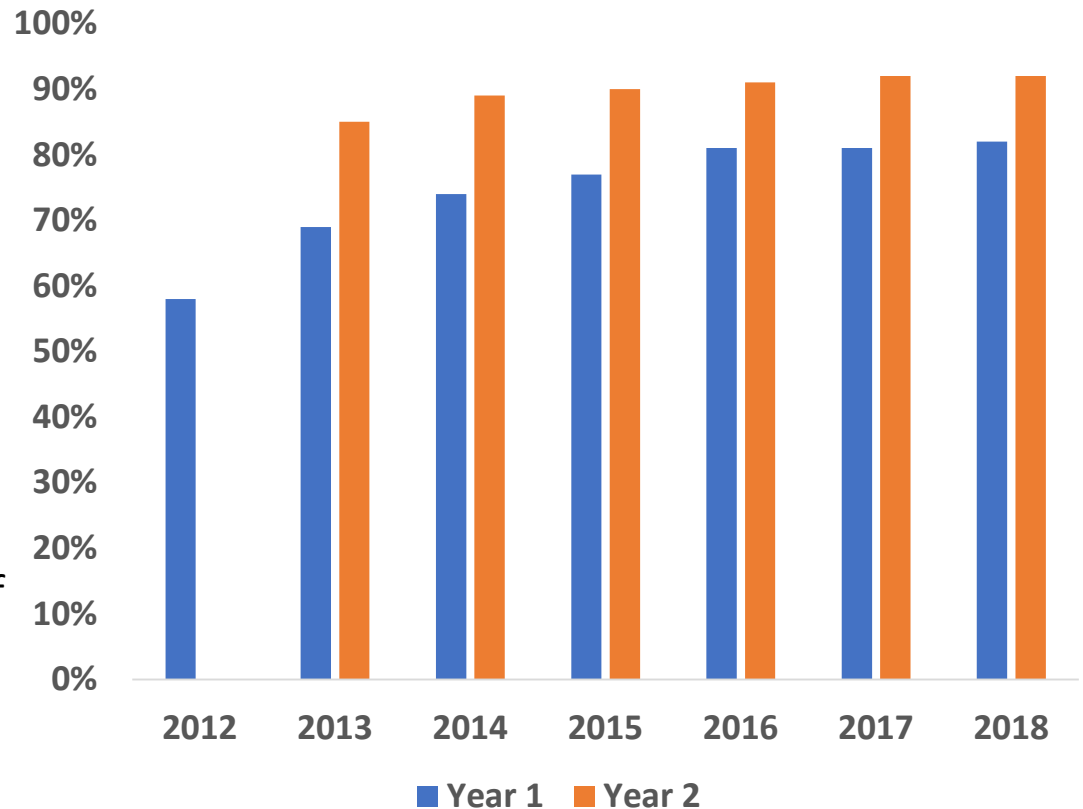


Evans & Saint-Aubin, 2005

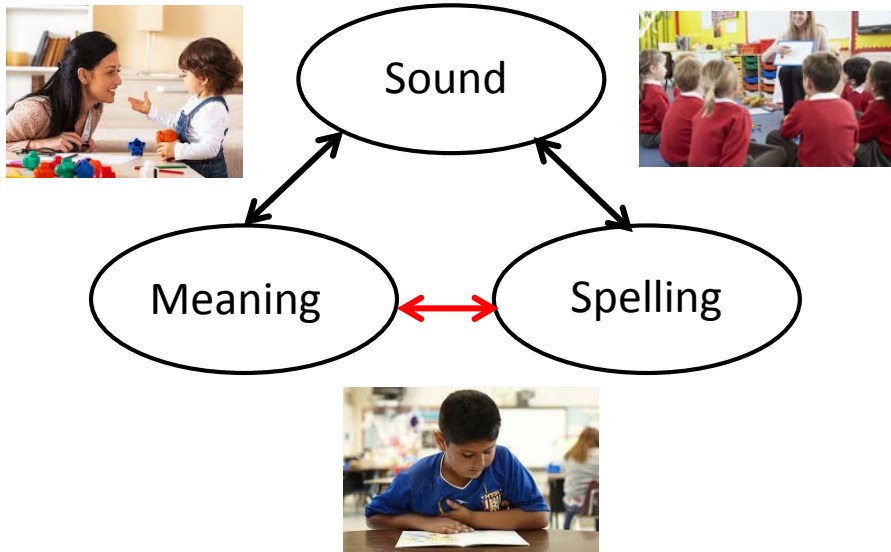
Unlikely this could be a major vehicle for development of print skills without other forms of systematic instruction.

PHONICS SCREEN IN ENGLAND

- Systematic phonics instruction is a legal requirement in England (since ca. 2007).
- Phonics screen in Year 1 when children are aged 5 or 6; short reading aloud test (20 words; 20 nonwords); intervention and retest for those who fail.
- Dramatic year-on-year improvements, lifting reading skills of hundreds of thousands of children.
- Evidence of broader and lasting benefits on reading in national exams, esp. for children who enter school at risk of reading failure.



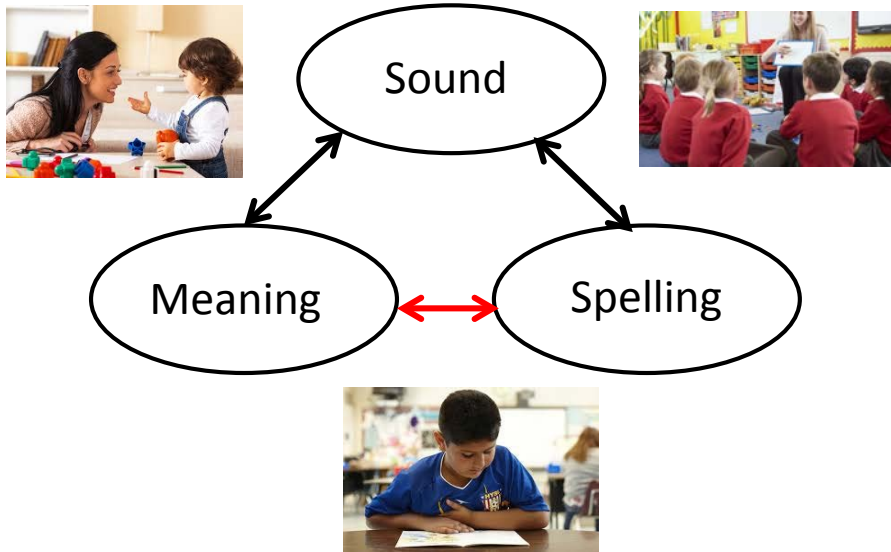
FROM NOVICE TO EXPERT



Reading for pleasure is important. Phonics instruction doesn't prevent that; it enables it.

- Skilled adult readers also use spelling-sound translation in text reading.
- But this process is slow and attention demanding; need direct link between spelling and meaning.
- Development of expertise through years of text experience; children use phonics to 'self-teach' through independent reading.
- Huge variation in text experience ... grade 5 children, 10th percentile 60,000 words / year; 90th percentile 6,000,000 words / year.

FROM NOVICE TO EXPERT



- Item-level orthographic learning.
- Learning of morphological families and morphological structure.

develop, develops, developing, developed, developer(s), undeveloped, undevelopable, developable, development(s), developmental, developmentally, antidevelopment, redevelop, predevelop, predevelopment

- “Islands of regularity” in spelling-meaning relationship
- Morphological knowledge critical in driving rapid skilled reading



TEXT COMPREHENSION

There were rooms in the old farmhouse which I never saw used and which smelt of the past that held extraordinary fascination for me: little windows where unknown ancestors had sat on autumn evenings; old leather-lined bookcases with books that no one had handled for fifty years; dust that no one had bothered to remove; piles of candle wax in unlikely corners; huge chamber pots and cracked basins, and everywhere a great generosity of space. Outside there was a big lawn hardly walked on, flowerbeds hardly looked at, a vegetable garden which always produced too much, a vast horse chestnut with enough conkers to satisfy the needs of a whole village of boys, a second lawn that nobody ever sat on, and the poignant smells of animals and harvests of a bygone age.

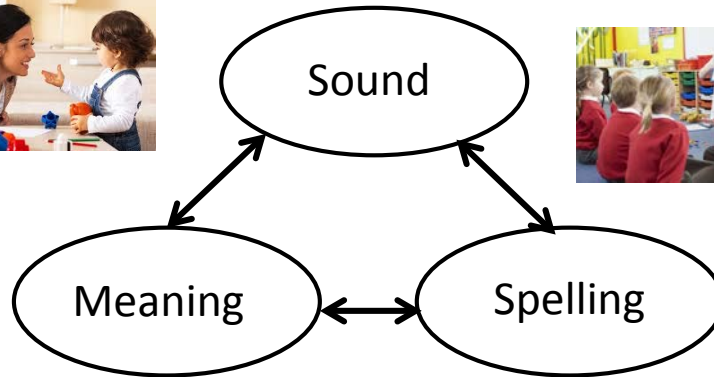
- Fluent word reading necessary but not sufficient.
- More complex than spoken language: richer vocabulary, more complicated syntax.
- Shared book reading to develop advanced language knowledge.
- Literacy provides the bridge to layers of language knowledge.

SUMMARY

Reading begins with oral language



Systematic phonics instruction helps *all children* to become independent, successful readers



Text experience builds fluency; releases cognitive resources for higher-level text comprehension; builds vocabulary

IT'S TIME TO END THE READING WARS

It's time to end the Reading Wars and adopt an instructional agenda that is developmentally informed and based on a deep understanding of how language and writing systems work.



Anne Castles



Kate Nation



Ending the Reading Wars: Reading Acquisition From Novice to Expert

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