No time to lose: Effective reading instruction to work towards 100% literacy

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Five from Five





Teach reading effectively in every classroom, every day





www.fivefromfive.com.au



Literacy

Literacy is a broad term that is sometimes applied to areas other than reading and writing – for example multimodal literacies, mathematical literacy, financial literacy, and scientific literacy.

Reading literacy underpins all other literacies.





Reading

When we teach children to read, we are giving them the ability to translate written words into language that they recognise and understand. Spelling is the reverse of this process.





Effective reading instruction is based on the 'Science of Reading', which 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.

https://www.whatisthescienceofreading.org/science-of-reading-guide





The Science of Reading is NOT...

- an ideology or philosophy
- a fad, trend, new idea, or pendulum swing
- a political agenda
- a one-size-fits-all approach
- a particular program of instruction
- a single, specific component of instruction such as phonics

https://www.whatisthescienceofreading.org/science-of-reading-guide





Scientific research looks for "what causes what" using...

- valid quantitative measures
- experimental/quasi-experimental or longitudinal research design
- replicable methodology
- published in peer-reviewed journal
- clinical and real educational settings



Image: Telethon Kids Institute



The evidence base is drawn from multiple disciplines

Education

Cognitive psychology

Developmental psychology

Linguistics

Neuroscience

School psychology

Implementation science

Communication sciences (eg. speech pathology)



Key reports



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Reading wars?



"We now have a really strong understanding of how children learn to read, and there is no longer any need for 'reading wars' ".

Professor Kathy Rastle

Royal Holloway University of London

https://www.psychologicalscience.org/news/releases/beyond-the-reading-wars-how-the-science-of-reading-canimprove-literacy.html



Why we need to know about the Science of Reading

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TARGET

Only 3-5% of students will have persistent difficulties with reading due to neurological factors but almost all can learn to read.

NAPLAN 2019 in Tasmania

Students at or below National Minimum Standard in Reading

	<u>percent</u>	<u>number</u>	
ear 3	17.6%	1,126	
ear 5	17.7%	1,214	
ear 7	21.6%	1,437	
'ear 9	28.1%	1,688	



Table 1. Number and percentage of Year 7 students below and at the National Minimum Standard for Reading (2019)*

	Student for		Students at NMS for Reading		Total below/at NMS
	%	Number	%	Number	Number
NSW	5.3	5,066	11.7	11,184	16,250
VIC	4.3	3,280	9.8	7,525	10,805
QLD	5.0	3,407	12.4	8,508	11,915
WA	6.3	2,134	11.1	3,779	5,913
SA	6.1	1,250	11.3	2,317	3,567
TAS	8.0	532	13.6	905	1,437
ACT	5.2	299	9.1	523	822
NT	29.7	944	15.4	489	1,433
AUSTRALIA	6.1	16,912	11.3	35,158	52,070

*Does not include students who were withdrawn or absent.

Source: Student numbers estimated using Australian Bureau of Statistics, Schools Australia 2019, 4221.0 Table 42b

Why we need to know about the Science of Reading



- 1. Earlier and more accurate word reading
- 2. Better reading fluency
- 3. Vocabulary growth
- 4. Proficient reading comprehension
- 5. More independent reading for enjoyment
- 6. Fewer students needing intervention



Key concepts in the Science of Reading





Key concepts in the Science of Reading





The alphabetic principle



English has an alphabetic writing system

Writing is a code invented to represent speech.

The letters of the alphabet *encode* speech into written words.

To read words, students must learn to *decode* the letter strings.



The Reading Doctor https://www.readingdoctor.com.au/

The alphabetic principle



The Science of Reading tells us that letter-sound correspondences are the cornerstones of reading.

Students need to learn the relationships between the letters of the alphabet (graphemes) and the speech sounds they represent (phonemes) as a first principle of reading.

Short vowels	a - ant	e - elephant	i-insect y-gym	o - otter	v - umbrella
Long vowels	ai - rain ay - play a_e - cake	/ē/ evening ee - tree ea - leaf e_e - eve _y - happy _ey - key	y- cry igh - light ie - bike	oa - boat ow - snow o_e - bone	unicorn ue - rescue ew - new u e - tube
Other vowels	oo - moon ue - blue ew - flew u_e - flute	oo - book	ow - cow ou - cloud	oi-coin oy-boy	extra garden basin button circus dollar doctor teacher

Key concepts in the Science of Reading









26 letters 44 sounds 200+ spelling combinations

A complex code



The spelling and writing system is still mostly regular.



The English writing system (orthography) has two layers:

Phonology (sounds)
 Morphology (meaning)

Key concepts in the Science of Reading





The reading brain



The Science of Reading tell us that humans are not born to read.

Unlike oral communication, humans are not neurologically predisposed for reading.

Learning to read requires 'neuronal recycling' – building connections between parts of the brain that specialise in specific functions.



Image: Neural Pathways of Skilled Reading (Rastle, 2018)

Key concepts in the Science of Reading





Beginner to expert



The primary route to reading for beginning readers is the **phonological** pathway.



Beginner to expert



The primary route to reading for skilled readers is the **lexical** pathway.

However, the phonological route is still used by skilled readers for new or rarely seen words.



Beginner to expert



"For reading scientists the evidence that the phonological pathway is used in reading and especially important in beginning reading is about as close to conclusive as research on complex human behavior can get."

Professor Mark Seidenberg

University of Wisconsin-Madison

"Every teacher of young children as well as those who train them should read this book." — Wall Street Journal

MARK SEIDENBERG LANGUAGE AT THE SPEED OF SIGHT HOW WE READ, THE S WHY SO MANY CAN'T, AND WHAT CAN BE

Key concepts in the Science of Reading





Effective instruction



The Science of Reading tells us that the same processes occur in all students' brains as they learn to read.

The difference is the ease with which they learn to read and how quickly they respond to instruction.



Key concepts in the Science of Reading









Oral language + Phonemic awareness Phonics Fluency Vocabulary Comprehension



Five Big Ideas



The Five Big Ideas are not an oversimplification of the reading process.

They are the *essential elements* of reading acquisition that have the strongest evidence in the Science of Reading literature.

They are each complex, interconnected, and have reciprocal relationships.

Each component develops alongside the others so none can be neglected or isolated.



Key concepts in the Science of Reading





Simple View of Reading





Hoover and Gough (1986)

Scarborough's reading rope





Scarborough (2001)

Key concepts in the Science of Reading





Response to Intervention



The Response to Intervention model is a non-categorical approach based on students' individual needs.

It allows student support resources to be targeted to the students whose needs are greatest.



Science of Reading in schools





INSTRUCTION ASSESSMENT INTERVENTION

Instruction



Literacy program includes the Five Big Ideas

- A scope and sequence for each component across all the primary years
- Skill and content development moves from simple to complex.
- Focus of instruction changes each year, gradually moving from a code emphasis in the early years to a meaning emphasis in the upper years.



Instruction



The key elements of effective instruction are designed to maximise understanding, retention, and transfer.

Systematic

methodical and planned to a high level of detail

Sequential

the order of content builds skill development

Structured

time is allocated to ensure all content and skills are covered and connected

Explicit

content is presented to students in small amounts with clear explanations and examples

Cumulative

content and skills are built and revisited through repetition, practice, and recall

Instruction



Example of a synthetic phonics lesson

- 1. Review previously taught GPCs and practise blending them to make words
- 2. Introduce a new GPC: show the letter, say the sound, write the letter, say the sound (I do, we do, you do) using a mnemonic aid
- 3. Explicitly teach the use of the new GPC in words with previously taught GPCs (I do, we do, you do) for reading and writing
- 4. Explain the meaning of unfamiliar words
- 5. Check frequently for understanding and provide frequent positive and corrective feedback
- 6. Students practise reading taught GPCs with decodable texts
- 7. Students practise writing taught GPCs with dictation activities



Bessie Bilby







The Science of Reading informs the construction and use of various types of validated, standardised, and curriculumbased assessments.

- 1. screening assessments
- 2. progress monitoring
- 3. assessments of reading subskills
- 4. diagnostic assessments



Primary Reading Pledge



Primary Reading Pledge

A plan to have all students reading by the end of primary school

August 2020



Five from Five is a community education initiative of MultiLit Pty Ltd. Five from Five provides educators, parents and policy makers with information and resources about evidence-based reading instruction.



AUSPELD is the Australian Federation of SPELD (Specific Learning Difficulties) organisations, which supports children and adults with learning and language difficulties, through professional learning, evidence-informed intervention, resources and assistance for schools, and policy advocacy.



Learning Difficulties Australia (LDA) is an association of teachers and other professionals dedicated to assisting children with learning difficulties, both directly and through publications and events to raise awareness of evidence-based teaching practices.

https://fivefromfive.com.au/primary-reading-pledge/

Primary Reading Pledge



An assessment and intervention framework

YEAR 1 STUDENT BELOW BENCHMARK RANGE IN PHONICS CHECK, OR DID NOT PARTICIPATE YEAR 3 /YEAR 5 STUDENT AT OR BELOW NAPLAN NATIONAL MINIMUM STANDARD, OR DID NOT PARTICIPATE



More information



Free live online presentations

The Science of Reading: Essential Knowledge for Teachers

Register interest now www.fivefromfive.com.au/presentations/

Coming soon:

Deep Dive Into Systematic Synthetic Phonics





Information and professional networks



Five from Five Reading Project www.fivefromfive.com.au

Nomanis www.nomanis.com.au

La Trobe University Science of Language and Reading (SOLAR) Lab www.latrobe.edu.au/school-education/solar-lab

Macquarie University Centre for Reading www.mq.edu.au/research/research-centres-groups-and-facilities/healthy-people/centres/macquarie-centre-for-reading

AUSPELD http://auspeld.org.au

SPELD NSW www.speldnsw.org.au

NSW Department of Education https://education.nsw.gov.au/teaching-and-learning/curriculum/literacy-and-numeracy

Learning Difficulties Australia www.ldaustralia.org

Tasmanian 100% Literacy Alliance https://www.tasmanianliteracyalliance.org/

Think Forward Educators https://thinkforwardeducators.org

Reading Science in Schools Facebook group

The Reading League www.thereadingleague.org

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