



AUCKLAND

SATURDAY, 2 JUNE 2018

#rEDAuck

Why NZ and Australia suck at PIRLS and what can be done about it

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The Centre for Independent Studies



www.fivefromfive.org.au



What is FIVE from FIVE?

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.

All FIVE from FIVE resources are free and CIS has no commercial interest in any reading program.



Why is it called "FIVE from FIVE"?

Forty years of rigorous research has shown that children need explicit instruction in *the five essential components* of reading — phonemic awareness, phonics, fluency, vocabulary and comprehension — in the first year of school when they are five years old.

Educators, policy makers and parents need to know what effective, evidence-based reading instruction is, and how to use it.



Get all children reading...
Give them the five keys to literacy
from the age of five.



Five Keys to Reading



How to Teach Reading



Five From Five Video



Publications

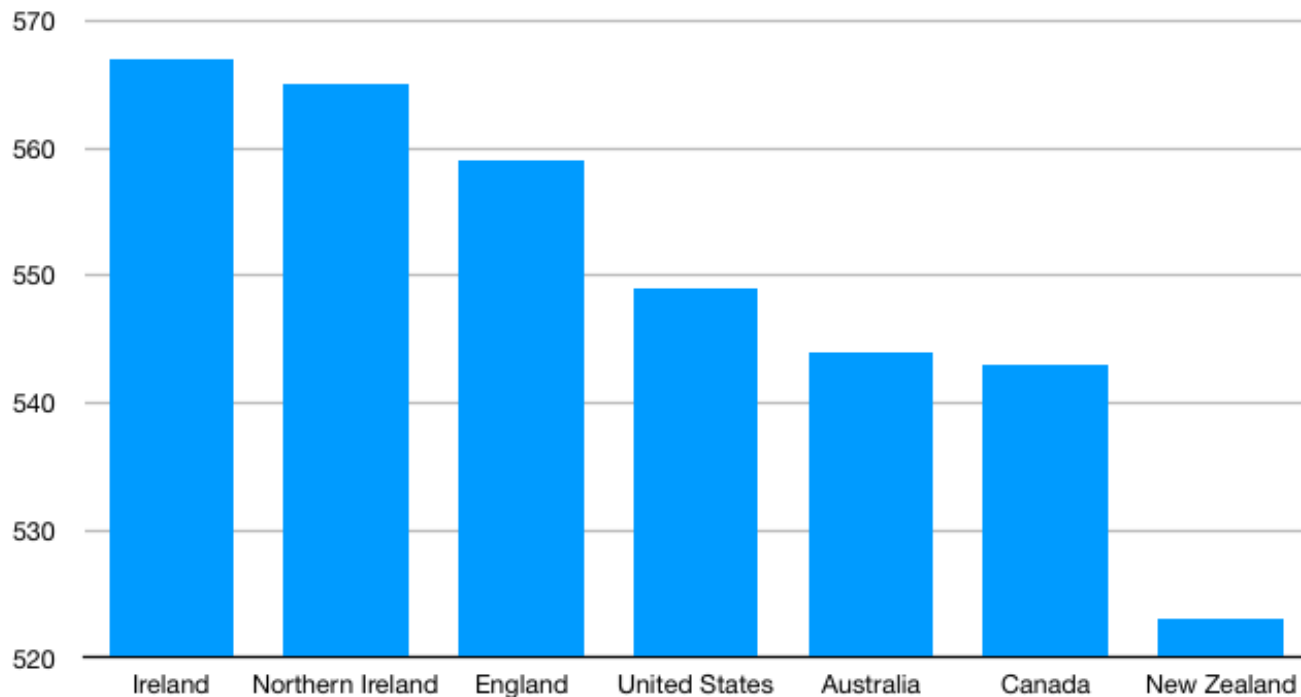


Events

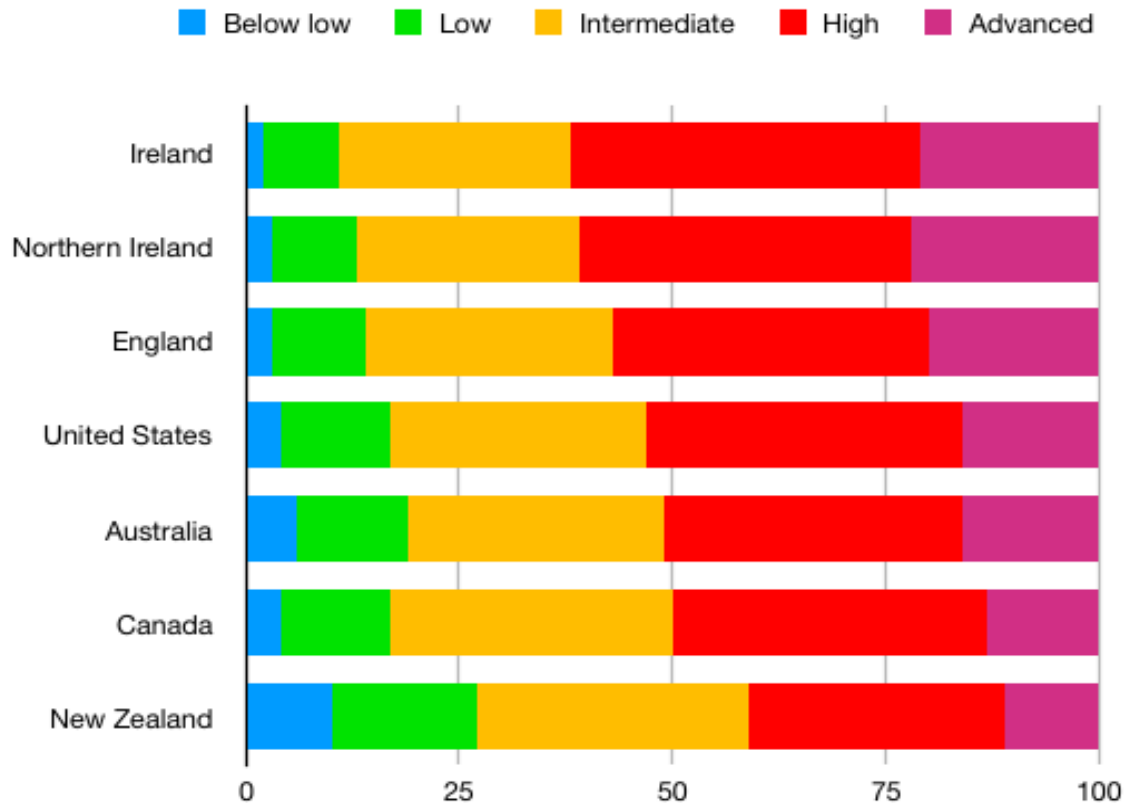
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What is the problem?

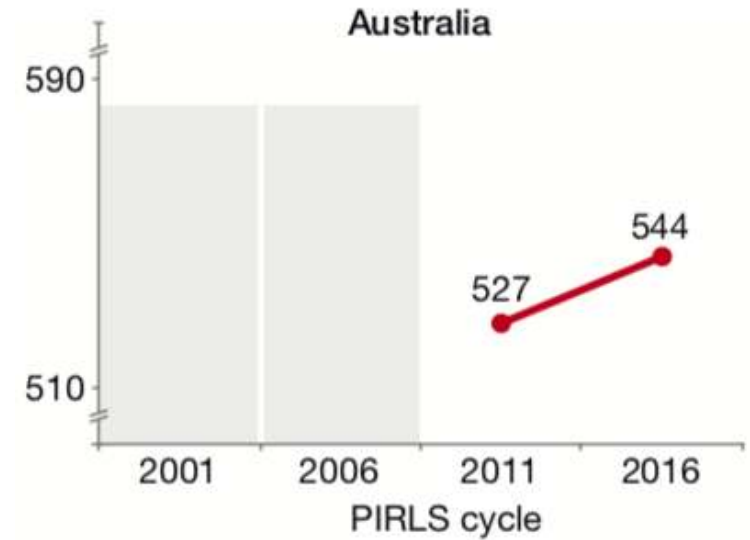
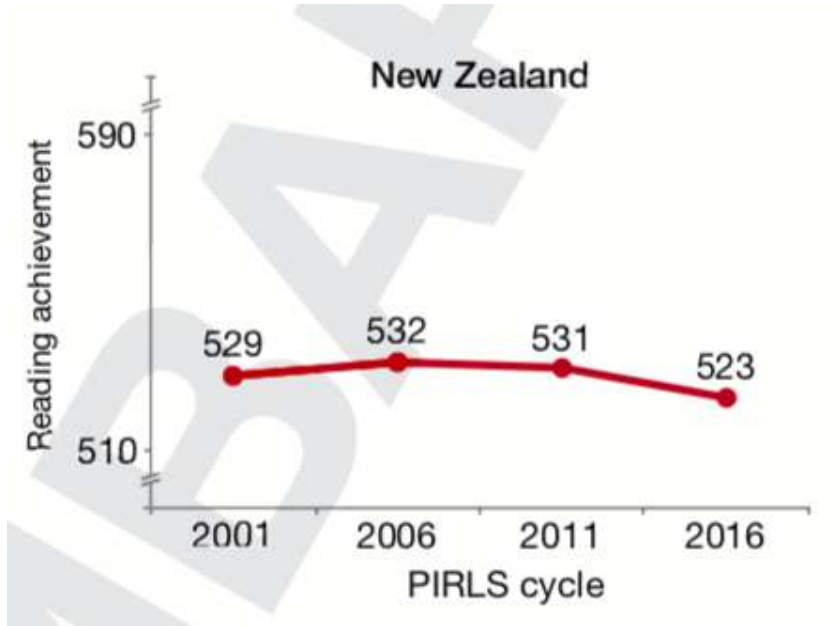
PIRLS 2016: English-speaking country means



PIRLS 2016: Distribution across benchmarks

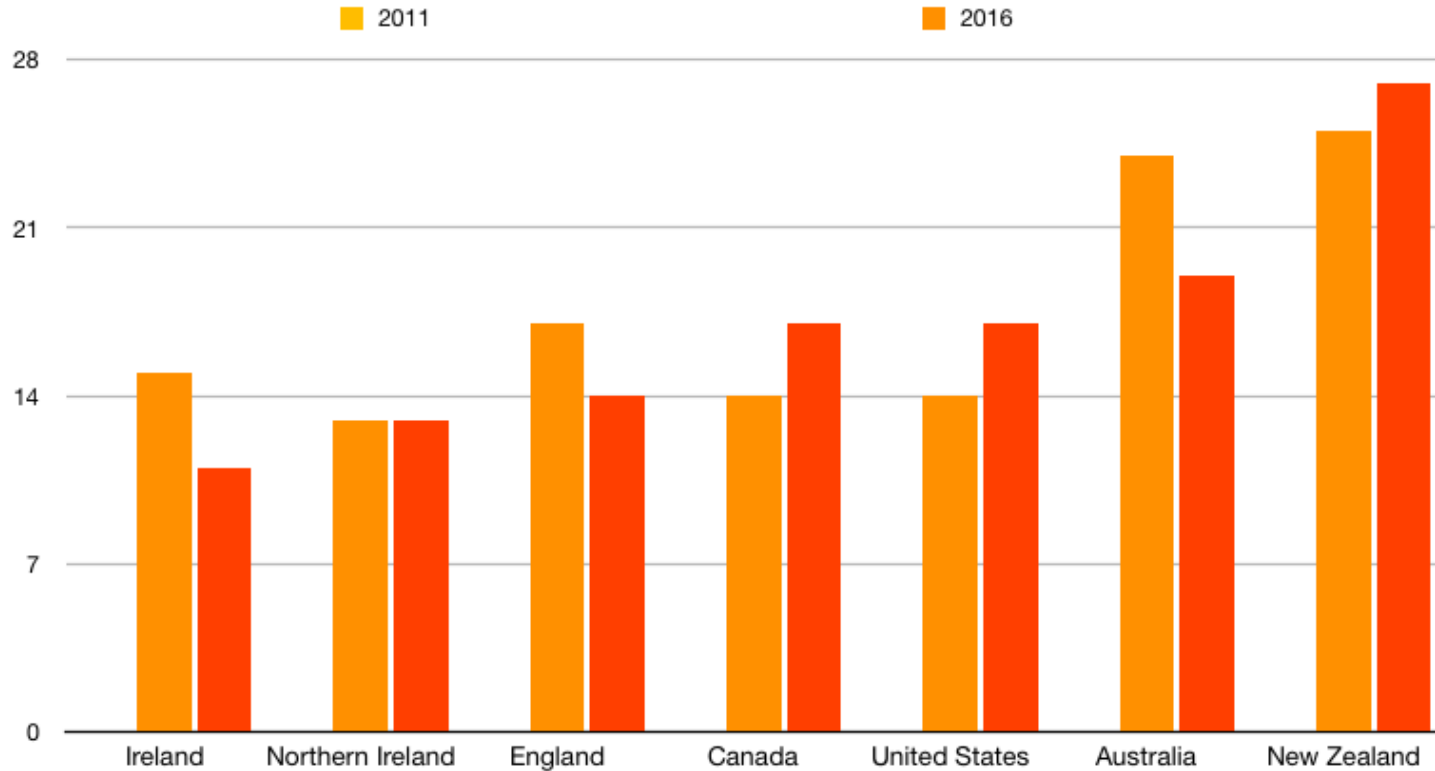


PIRLS 2011 & 2016: NZ & Australia

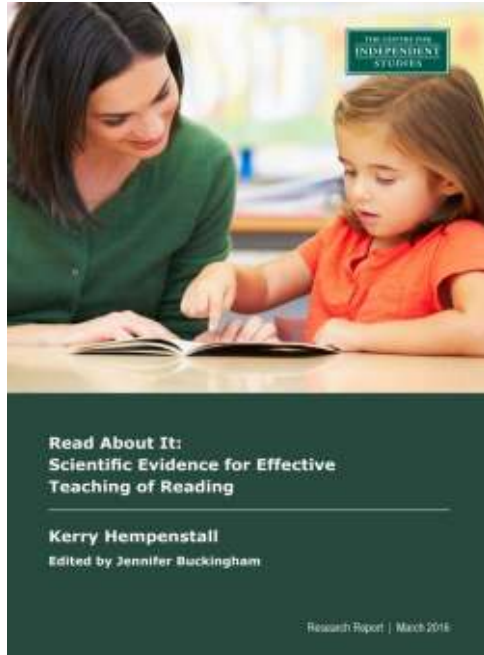


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PIRLS 2016: % below intermediate benchmark



What can we do about it?



Evidence-based reading instruction

Free download:
www.fivefromfive.org.au/publications/

“Matthew” effects

‘*Matthew effect*’ – the rich get richer, while the poor get poorer (Stanovich, 1986)

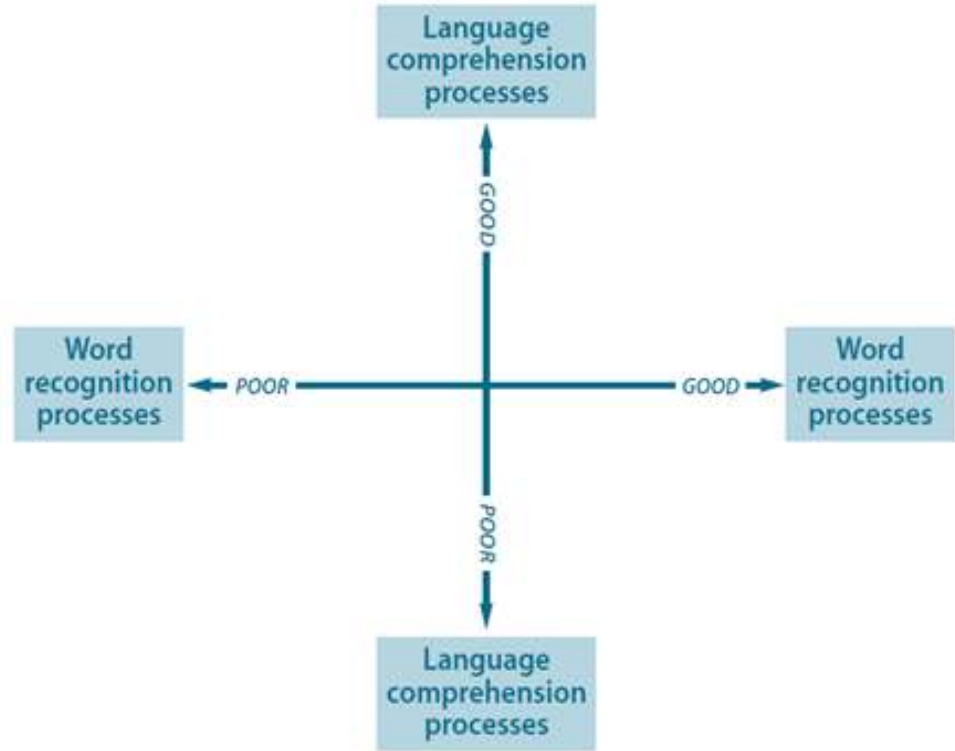
Children begin school with large individual differences in their readiness to learn to read when they begin school.

Genes interact with language and literacy experience in the home environment and the quality of education to widen or shrink the gap over time.

The 'simple view' of reading

Reading has two essential cognitive requirements - word identification and comprehension.

**Philip Gough &
William Tunmer
(1986)**



Rose (2006). Independent Review of the Teaching of Early Reading

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 ‘reading’ section 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.

English is a complex language

English has a deeper orthography (written language system) than other alphabetic languages. It uses 26 letters to make 250 graphemes to represent 44 phonemes. Finnish and Italian have 1:1 GPC .

English has multiple origins - German, Anglo-Saxon, Latin and Greek - each has unique orthographical features. New words are constantly added to the lexicon.

Nonetheless, most words follow spelling rules: 50% follow GPC rules, another 36% have one variation to GPC rules, 14% have two variations to GPC rules.

This complexity makes it *more* rather than *less* important to teach reading explicitly and systematically - the rules of language are not self-evident.

How to mitigate Matthew effects: Effective early reading instruction

Is based on scientific evidence and has proven effectiveness.

Has significant impacts on later literacy and can reduce Matthew effects.

Has most impact on at-risk readers but benefits all children.

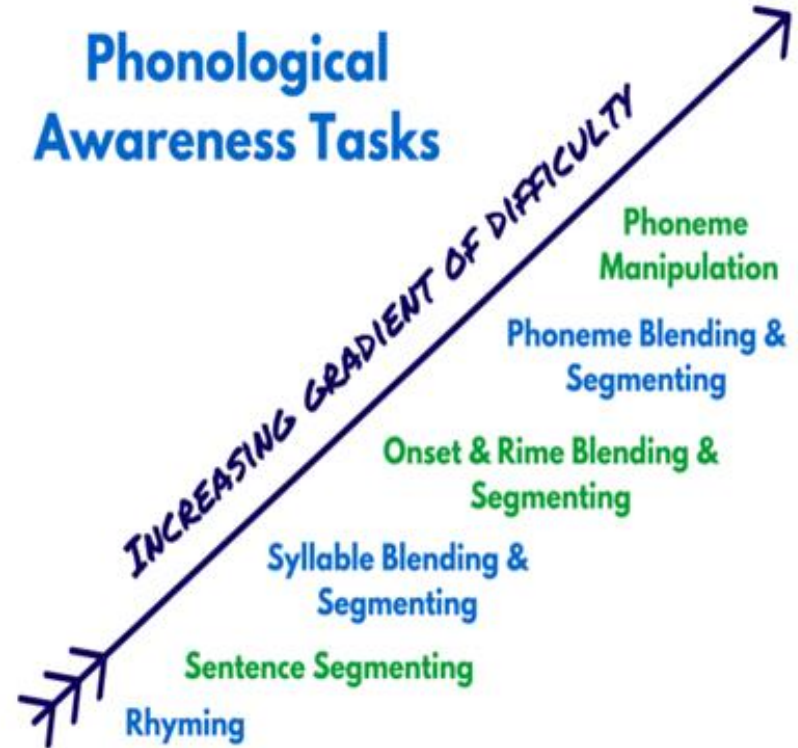
Has been shown to significantly narrow literacy gaps associated with SES.

Includes early and well-targeted intervention

Five 'keys' to reading

1. Phonemic Awareness

The ability to identify and work with the smallest distinct sounds in speech (phonemes)



PA is a strong predictor of reading ability

National Early Literacy Panel (2009)

Meta-analysis of 500 articles

Phonological awareness in preschool and kindergarten was a moderate to high predictor of later decoding and comprehension. Phonemic awareness had strongest correlation.

Melby-Lervag, Lyster & Hulme (2012)

Meta-analysis of 235 studies

Phonemic awareness was the strongest correlate of individual differences in word reading ability and this effect remained reliable after controlling for variations in both verbal short-term memory and rime awareness.

Five 'keys' to reading

1. Phonemic Awareness

2. Phonics

- *the relationship between speech sounds and their letter symbols: **grapheme-phoneme correspondence (GPC)***
- *the methods used to teach GPCs*
- *the process of using GPCs to sound out (decode) words*

Teaching Phonics

Implicit or Incidental Phonics

GPCs pointed out during reading of text. GPC, segmenting and blending skills and metalinguistic concepts (eg. split digraph rules) are not taught in isolation from text reading.

Analytic Phonics

Teaching begins with whole words. GPCs are taught by breaking down words into component parts and drawing comparisons between similar words.

Synthetic phonics

Instruction is systematic and sequential, building up from the simplest and most common GPCs to more complex and less common GPCs. Sequence is carefully planned for minimal confusion and to achieve decoding quickly. Blending is introduced early.

Phonics

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

Prof Keith Stanovich (2000)

“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.”

Prof Deslea Konza (2014)

Five ‘keys’ to reading

1. Phonemic Awareness

2. Phonics

3. Fluency

‘The ability to read quickly, accurately, and with expression’.

Fluency

Fluent readers are able to focus on reading for meaning because their decoding is automatic and almost effortless.

Reading fluency difficulties have been shown to be the single biggest concern for more than 90% of children with under-developed reading comprehension (Duke, Pressley and Hilden, 2004).

Fluency does not always develop from mastery of decoding. Explicit teaching of fluency is necessary for some students— for example, speed drills, modelling, repeated reading.

Students struggling with reading require multi-component interventions using direct instruction methods (Rasinski, Homan and Biggs, 2009).

Five 'keys' to reading

1. Phonemic Awareness
2. Phonics
3. Fluency
4. Vocabulary

Oral vocabulary is the words children recognise or use in listening and speaking.

Reading vocabulary is the words children recognise or use in reading and writing.

Vocabulary

On school entry, approximately 20% of Australian students are 'vulnerable' in the vocabulary domain. In disadvantaged areas, this percentage rises to nearly 30%.

Early vocabulary gaps tend to persist over time, and are a factor in further disparities in students' subsequent educational careers - a key factor in Matthew effects.

Vocabulary size is both a contributor to, and a function of, reading volume.

Five 'keys' to reading

1. Phonemic Awareness
2. Phonics
3. Fluency
4. Vocabulary

5. Comprehension

'Reading comprehension is extracting and constructing meaning from written text using knowledge of words, concepts, and ideas.'

Comprehension

There is growing evidence that reading comprehension is almost entirely dependent on decoding and vocabulary/listening comprehension.

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).

In a more recent study it was found that listening comprehension and word decoding, together with their interaction and curvilinear effects, explained 96% of the variation in early reading comprehension skills. (Lervag, Hulme, & Melby-Lervag, 2017).

Comprehension

Reading comprehension is dependent on word reading accuracy and vocabulary but in practice is complex and has multiple components:

Fluency/Decoding	Making inferences
Fluency/Prosody	Monitoring understanding
Vocabulary	Domain knowledge
Syntax	Text structure
Working memory	Attention allocation

Comprehension strategies

Even proficient readers benefit from explicit teaching in comprehension strategies but they are all the more important for struggling readers and students with learning difficulties.

Research-based explicit instruction strategies include:

Reciprocal teaching	Predicting	Questioning
Summarising	Mapping	Clarifying
Sentence combination	Inference-making	Think aloud

Cooper, McWilliams, Boschken, & Pistochini (1997); Mason (2013); Elbro & Buch-Iversen (2013)

However, there is a ‘dosage effect’ (Willingham, 2006)

Effective interventions

- Effective interventions are based on the same theoretical and evidence base as effective instruction for all children.
- For children with learning difficulties and children with specific learning difficulties in language impairment (eg. dyslexia), effective interventions will usually be based on the same instructional principles as whole class teaching but with varied levels of intensity and duration.

Why isn't this happening already?

“Peter” effects

- ‘Peter effect’ - One cannot teach what one does not know. (Binks-Cantrell, Washburn, Joshi, & Hougan, 2012).
- There is a lot that teachers (and teacher educators) do not know about how children learn to read, the structure of the English language, and the most effective ways to teach it.
- Numerous studies of pre-service and beginning teachers in Australia have found weak knowledge of basic language constructs and poor understanding of effective practice.

Expert teachers are essential

‘A well-prepared teacher must have a solid grasp of both the complexities of English orthography and the language systems that print represents in order to teach students recognition of written words.

Without such knowledge, the teacher is likely to promote guessing strategies (“What might make sense here?”), bypass strategies (“Skip that and go on.”), the belief that accuracy does not matter (“Nice try.”), or rote memorization of higher frequency words.

Louisa Moats (2014)

Low knowledge of language constructs among teachers

Stark, Snow, Eadie & Goldfeld (2016)

Prep teachers in Victoria:

- 38% correctly defined phonemic awareness
- 41% correctly defined a consonant blend
- 53% correctly defined a morpheme
- 63% thought that reading difficulties could be helped using coloured lenses or overlays.

Low knowledge of language constructs among teachers

Bostock and Boon (2010)

Fourth year pre-service teachers in a Queensland university:

- Mean scores in language test: Spelling 10/14; Punctuation 10/15; Use of apostrophes 3/4; identifying nouns 12/31; identifying verbs 6/13
- Students' survey responses indicated desire for more instruction in literacy basics and grammar.
- “The results show the cohort had, in general, a high level of self-efficacy for all constructs measured, however these high levels were not mirrored by high levels of personal literacy competence.”

Teacher educators

Widely used literacy textbooks for ITE courses provide information that is inconsistent with evidence.

“Phonic knowledge is probably best learned through lots of reading and writing, and activities that grow from reading and writing”, and “phonics needs to be taught in context”.

Emmitt, Zbaracki, Komesaroff, & Pollock. 2015. *Language and Learning: An Introduction for Teaching (6th edition)*. South Melbourne: Oxford University Press.

Academics continue to promote ‘whole language’ ‘balanced literacy’, and multi-cueing despite extensive evidence that explicit, systematic instruction is more effective.

“Whole language approaches have a significant pedagogical edge over phonics based approaches. They are intrinsically engaging because they begin with the end game on view for the students - meaning. This gives an immediate purpose and motivation for learning, and engages the students.”

Misty Adoniou, Senior Lecturer, University of Canberra (*Independent Education*, 2016)

Advice given to parents in a WA primary school

Listening to Students Read

What to say

- Listen and respond to the reading performance. You are the audience!
Correct a word if it doesn't sound right
eg "Did that sound sensible?" or "I didn't understand that, read it again." "That makes sense."

Example of acceptable Miscues	Examples of Unacceptable Miscues
'a' in place of 'the' eg The horse /a horse trotted down the street	'they' in place of 'the' eg They horse /the horse trotted down the street
'house' for 'home' eg That is my house/home	'horse' for 'house' eg I rode my horse/house down the street
'You can't go over/on my bridge'	'You can/can't go over my/me bridge'
'Mr Wolf was so frightened/scared, he ran far, far away'	'He was/saw so frightened, he ran/rained far, far away'

- The feedback you give, and how you give it plays an important role in building attitudes to reading.

Try saying ...

Good try. Keep going!

That was really good how you went back to fix that!

I like the way you corrected yourself!

You solved heaps of problems today!

I enjoyed listening to you read.

That was fun.

Note:

Avoid sounding out words, or encouraging students to sound out, as their knowledge of phonics is limited at this stage and it slows down their reading and causes child to lose meaning

Video on Victorian Dept of Education website

“This series of reading videos is presented to support teachers to make consistent and accurate judgements of student progress in the reading mode of AusVELS English Achievement Standards.”

Learning and Teaching Resources > Discipline-based Learning > English

English Developmental Continuum P-10

- History
- Languages
- Mathematics
- Science
- The Arts

Interdisciplinary Learning

Physical, Personal and Social Learning

Career Education

Curriculum Planning


Curriculum Design Frameworks

[AusVELS English – Reading achievement standards and progression points – Level 2](#)

A student progressing towards AusVELS Reading Level 2

Can recognise a wide range of letters and sounds and blends in words of more than one syllable

- [AusVELS English Reading - Level 1.5 video 1 \(WMV - 4.8Mb\)](#) ¹
video duration - 58sec, download time - 1min
- [Download the transcript of this video \(HTM - 2Kb\)](#) ¹
- [AusVELS English Reading - Level 1.5 video 2 \(WMV - 3.0Mb\)](#) ¹
video duration - 1.03min, download time - 1min
- [Download the transcript of this video \(HTM - 2Kb\)](#) ¹



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

Advice to teachers from New Zealand Ministry of Education

SOUND sense

Supporting reading and writing in years 1–3

When students come across unfamiliar words during guided reading, as well as drawing on their ideas about meaning and language structure, use prompts that encourage them to think about what they already know that can help them. Useful prompts and questions include:

- *Look for something that will help you. What can you see that might help? Do you know another word that starts with the same letter? Check it. Does it look right and sound like that? Have a close look at the word. Is there a part that you know?*
- *If the word was _____, what would you expect to see? (in response to an approximation by the student). Does that look right?*

Barriers to literacy

- Ignorance ('Peter effect')
- Impatience (explicit instruction is 'boring')
- Intransigence (change is too difficult)
- Interests (careers/reputations at stake)
- Indoctrination (no room for debate)
- Ideology (low standards of evidence)
- Investment (programs that are too big to fail)

Reading instruction in NZ

WHY THE NEW ZEALAND NATIONAL LITERACY STRATEGY HAS FAILED AND WHAT CAN BE DONE ABOUT IT

*Evidence from the Progress in International Reading Literacy Study (PIRLS)
2011 and Reading Recovery Monitoring Reports*

**William E. Tunmer
James W. Chapman
Keith T. Greaney
Jane E. Prochnow
Alison W. Arrow**

Why has New Zealand's National Literacy Strategy Failed?

Three factors have contributed to the failure of New Zealand's national literacy strategy:

- a constructivist orientation toward literacy education,
- the failure to respond adequately to differences in literate cultural capital at school entry, and
- restrictive policies regarding the first year of literacy teaching.

Also: Reading Recovery (thanks, guys)



Teachers' use of phonics, knowledge of language constructs, and preferred word identification prompts in relation to beginning readers*

James W. Chapman, Keith T. Greaney, Alison W. Arrow[#] and William E. Tunmer

College of Humanities & Social Sciences, Massey University, Palmerston North, New Zealand

ABSTRACT

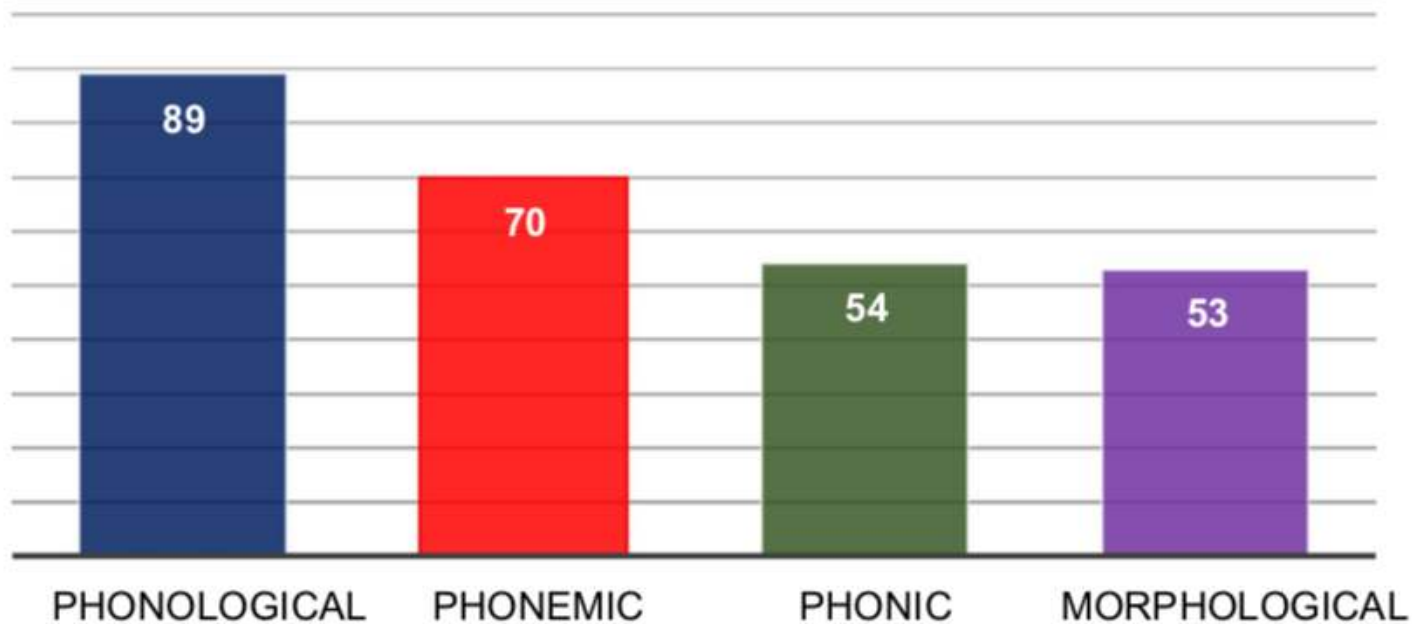
New Zealand's approach to literacy instruction is predominantly whole language. Explicit code-orientated literacy instruction is not favoured, however, most teachers are believed to include phonics in their literacy lessons. No study has been reported on phonics use in New Zealand schools. Survey responses on the use of phonics instruction from 666 primary school teachers were analysed. We also assessed knowledge of the basic language constructs related to early reading success with 55 teachers participating in a professional development program on literacy teaching. A word identification prompt task based on six common word error scenarios experienced by beginning readers was also administered. Results of the phonics survey revealed that 90% of teachers indicated they used phonics in their literacy instruction. Knowledge of basic language constructs was variable: phonological and phonemic knowledge were generally good, but understanding of phonic and morphological constructs was relatively weak. Only 40% of initial word identification prompts were focussed on word-level information; the remainder (60%) were based on context or were non-specific. The implications of these findings for beginning readers are discussed.

ARTICLE HISTORY

Received 18 February 2018

Accepted 17 April 2018

Percent Answers Correct for Knowledge of Language Constructs



- 90% of teachers said they were using phonics instruction of some kind
- Time spent on phonics in a literacy lesson ranged from 5 mins -20 mins
- 68% said phonics taught every day
- 40% of teachers used word-level cues for first prompt; 45% used context-based cues

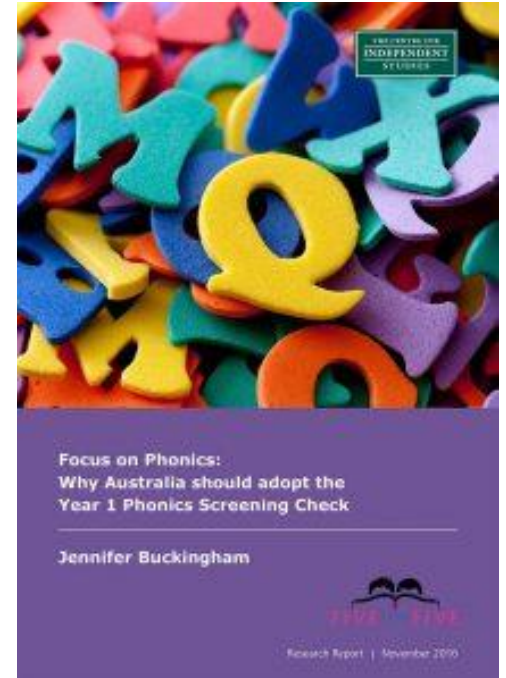
How can we change things?

Phonics teaching in England

- Introduced by UK Schools Minister Nick Gibb MP
- Following the findings of the Rose report in 2006, the UK government mandated that schools include systematic synthetic phonics instruction in reading lessons in the first two years of school.

What is the Phonics Screening Check?

- Administered at end of Year 1 (after two years of school)
- 40 items: 20 real words, 20 pseudo words
- 5-7 minutes per student
- Teacher-administered in 1:1 setting
- Simple to score (right or wrong)
- No incentives or penalties for teachers or schools
- Tests phonetic decoding only



Section 1

fip



pon



hab



ulb



Section 1

shed

long

soil

chart

Why use pseudo-words?

- A pure check of decoding ability
- Not affected by sight word memory
- Not skewed by language or social background
- No evidence that good readers are disadvantaged
- Careful word selection and guidance to teachers avoids inconsistency in scoring

PSC scores have improved each year

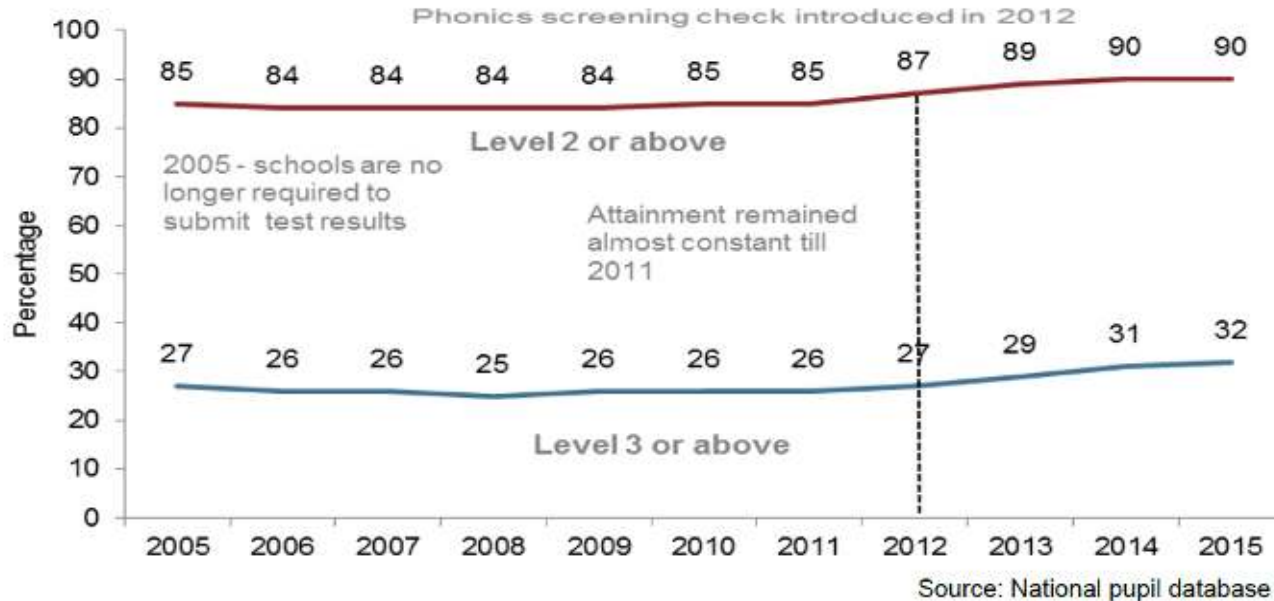
	Year 1	Year 2	Improvement from Year 1 to Year 2 (Percentage points)
2016	81%	91%	14
2015	77%	90%	16
2014	74%	89%	20
2013	69%	85%	27
2012	58%	Not applicable	

UK Department for Education. 2016. Phonics screening check and Key stage 1 assessments in England, 2016.

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/556769/SFR42_Phonics_KS1_2016.pdf

KS1 (Year 2) reading scores have improved

Figure 2: Attainment in reading at the end of key stage 1:
England, 2005 to 2015



Evaluations of the PSC

Validity and reliability

Convergent validity and discriminant reliability. Accurately identified children at risk of reading difficulties (Duff et al 2015)

PSC score is a good predictor of KS1 reading level.

Evaluations of the PSC

Time and cost

PSC takes 5-7 minutes per student.

Cost associated with the introduction of the PSC and on-going annual cost estimated to be £400-500 per school (£10-12 per student) per year.

(Walker et al 2015)

Evaluations of the PSC

Effect on teaching practice

- The majority of schools had made changes in their teaching practices
 - faster paced lessons
 - longer duration
 - more frequent
 - more systematic
 - better monitoring and assessment

“the national results show an improvement in performance in phonics, as measured by the Check, which would be consistent with adjustments to teaching methods reported” (Walker et al 2015)



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