

# EDITED SUMMARY

| NSW Department of Education



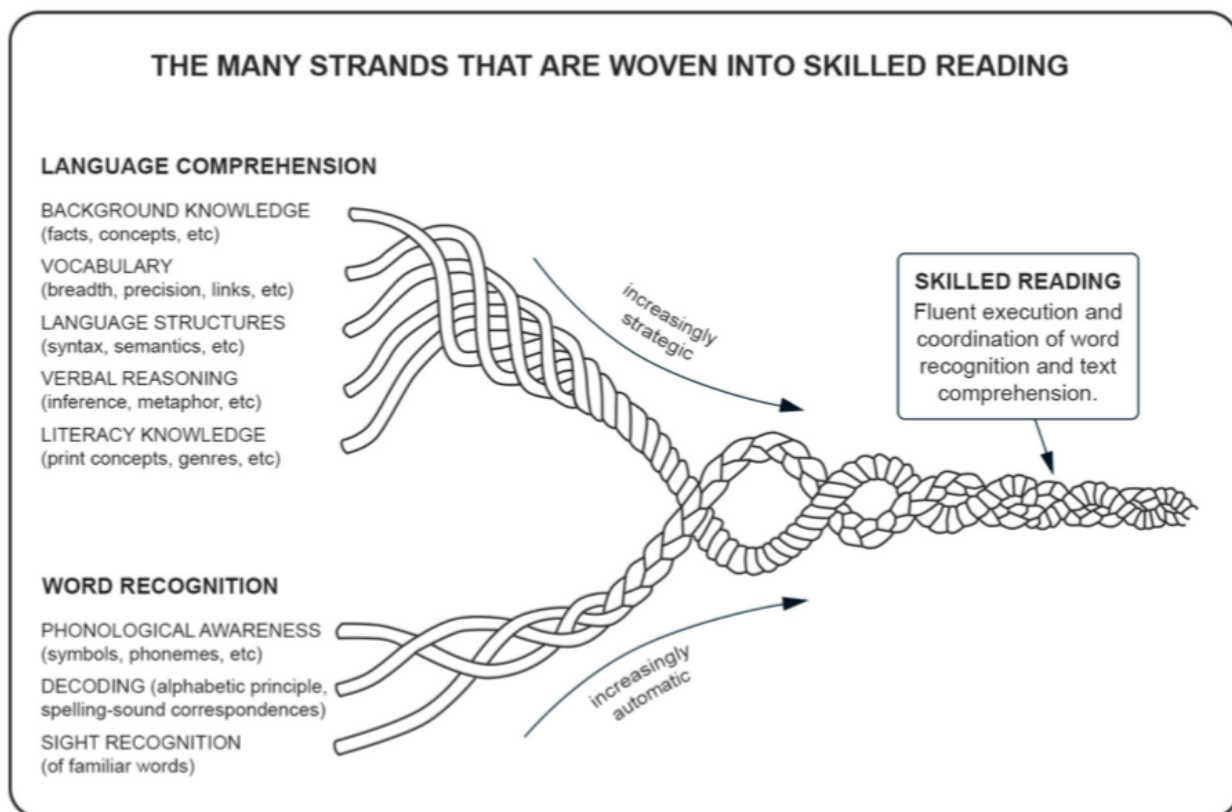
## Improving reading comprehension

# Reading comprehension evidence base

Reading is a complex cognitive process. It requires our brains to make new connections between the parts that were designed to enable us to develop oral language and process visual information. Learning to read requires explicit teaching in order for our brains to make those new connections.

The *Simple View of Reading* (Gough and Tunmer, 1986) suggests that reading comprehension is the product of two sets of skills: decoding and linguistic comprehension. Since their original paper, many researchers have provided evidence that 'measures of decoding and linguistic comprehension each predict reading comprehension and its development, and together the two components account for almost all variance in this ability' (Castles, Rastle and Nation, 2018 p.27).

The work of Hollis Scarborough (2001) further developed the Simple View of Reading through the use of a rope metaphor with strands of the rope representing the various interconnected components of skilled reading (refer to image below). This framework expands linguistic/language comprehension to include background knowledge, vocabulary knowledge, language structures, verbal reasoning and literacy knowledge. Scarborough also expanded the decoding/word recognition component of the Simple View of Reading to highlight the importance of phonological awareness, decoding and sight recognition.



Scarborough, H.S. (2001). Connecting early language and literacy to later reading (dis)abilities: Evidence, theory and practice. In S. Neuman & D. Dickson (Eds.), *Handbook for research in early literacy* (pp. 97-110). New York, NY: Guilford Press.

Reading researchers (as summarised in National Reading Panel, 2000, Rose, 2006 and Rowe, 2005) agree that well-developed skills in both word recognition and language comprehension are critical for skilled reading comprehension. Strength in one area cannot compensate for a deficit in the other area. Scarborough suggests that skilled reading involves the 'fluent execution and coordination of word recognition and text comprehension' (Scarborough, 2001).

All teachers need a thorough understanding of how the complex cognitive process of reading develops, and how the many components work together as students read increasingly complex texts skilfully, strategically and critically. Reading is required for success in every subject area and so every teacher has a responsibility to develop the general and subject, or discipline-specific, reading skills of their students.

## TEXT CONSIDERATION ACROSS THE CURRICULUM

It is important to remember that even though students may have learnt to read or decode with automaticity in the early years, they are still learning to read as they move through primary school and into secondary school because they are being faced with content, concepts, texts and tasks that are increasingly demanding. They must continue to be explicitly taught to read in all curriculum areas.

The *Literacy K-12 Policy* describes literacy as ‘the ability to understand and evaluate meaning through reading and writing, listening and speaking, viewing and representing.’ (NSW Literacy K-12 Policy, 1.1.1). This document includes advice for improving reading in Years 3-8. It is important to note that teachers can differentiate the application of skills and strategies according to stage of learning and complexity of texts.

## PHONOLOGICAL AWARENESS AND PHONICS

Phonological awareness is a critical skill for all students’ literacy development and a predictor of later reading and spelling success. Phonological awareness refers to oral language and is the understanding of the different ways that language can be broken down into smaller parts.

Phonological awareness development progresses from an understanding of the larger units of sound, beginning with the subskills of word, syllable and onset/ rime awareness, moving to the more complex subskills of basic and advanced phonemic awareness. Phonemic awareness is the most important phonological awareness skill and a prerequisite for learning the alphabetic or phonic code. When a student can hear and say the separate phonemes in spoken words, they can then relate the phonemes to the graphemes that are used to represent them in writing.

## PHONICS

**Phonics** is the relationship between printed letters and the sounds they represent and is a vital component of learning to read. Phonics relies on phonemic awareness. The reader must understand that words are made up of phonemes or units of sound. Phonics instruction connects these phonemes with written letters so that the reader can transfer knowledge of sounds to the printed word. Students need to learn to blend phonemes to read words. The goal of phonics instruction is to help readers quickly determine the sounds being represented in unfamiliar written words. When readers encounter new words in texts, they use their phonic knowledge to decode.

### CONSIDERATION FOR YEARS 3-8

Phonological awareness and phonic knowledge are constrained skills that are usually acquired in the early years of primary school. Students with strong phonological awareness and phonic knowledge are able to read words with automaticity and with minimal conscious effort, meaning that cognitive resources are available for comprehension. Strong phonological awareness and phonic knowledge is also important for supporting automaticity in spelling.

When a student is having difficulty with reading comprehension, it is important to investigate if there are phonological awareness and/or phonic knowledge concerns. Where concerns are identified, intervention may be needed to strengthen these word recognition skills to the point of automaticity. Intervention measures may include assistance from Learning and support (LaS) and English as an Additional Language/Dialect (EAL/D) teams. An EAL/D learner’s differing phonological awareness may arise from their English language proficiency level.

Students in Years 3-8 will also continue to use their phonological awareness and phonic knowledge alongside morphological knowledge to spell with accuracy and automaticity.

### WHAT DOES PHONOLOGICAL AWARENESS AND PHONICS LOOK LIKE IN A YEAR 3-8 CLASSROOM?

#### Students

- use phonological and phonemic awareness skills to decode unfamiliar words when reading
- use understanding of morphology to add meaning when decoding words
- participate in guided and collaborative practice of using phonic knowledge to decode and encode
- apply understanding of this learning by writing words and sentences that match the phonic code that has been taught.

#### Teacher

- has knowledge and understanding of the critical importance of phonological and phonemic awareness as a foundational skill for literacy learning
- understands that phonological and phonemic awareness is a precursor to learning the phonic or alphabetic code
- understands that phonic knowledge relies on phonemic awareness and makes clear to students how phonemic awareness is connected to word reading and spelling
- collaborates with literacy experts to refine practices in using evidence-based strategies, to analyse data, and to plan for student improvement
- explicitly teaches spelling patterns, rules and generalisations using phonological knowledge, phonic (orthographic) knowledge and morphological knowledge in all key learning areas
- explicitly teaches strategies to spell unfamiliar words using phonological knowledge, phonic (orthographic) knowledge and morphological knowledge in all key learning areas
- explicitly teaches how to edit writing for spelling in all key learning areas
- incorporates classroom visual resources to support spelling choices
- uses formative assessment information to inform differentiated instruction for all students
- identifies any students who need intensive targeted support using the Phonological Awareness Diagnostic Assessment and phonics assessment tools
- supports the planning and implementation of intensive targeted teaching for students who need further instruction in phonological awareness and phonic knowledge to support automatic word recognition and spelling automaticity.

## Fluency

Reading fluency refers to the reader's ability to read texts accurately, at an appropriate pace and with appropriate expression. Fluent reading acts as a bridge between automatic word reading and comprehension.

Reading fluency can be considered using three dimensions:

1. Accuracy in word decoding: the ability of the reader to read words with minimal errors.
2. Automatic processing (automaticity): this requires readers to expend as little mental effort as possible in the decoding aspect of reading so they can instead focus on making meaning.
3. Prosodic reading (prosody): the way in which readers use appropriate expression, emphasis and pause while reading. Speakers of additional languages will bring differing patterns of prosody to their reading, dependent on their first language. Prosody can be impacted by text purpose and author meaning in texts in all key learning areas.

### WHAT DOES FLUENCY LOOK LIKE IN A YEAR 3-8 CLASSROOM?

#### Students

- read often, widely and deeply
- use expression (prosody, tone, stress and intonation) appropriate to the text
- repeatedly read a text to improve rhythm and phrasing
- read familiar texts smoothly and with natural expression
- read a variety of texts such as information texts, poetry and plays
- recognise examples and non-examples of fluent reading
- reflect on their own reading and asks questions to ensure they are reading in a fluent way, reflective of the meaning of the text
- use the vocabulary of fluency to describe reading when engaged in feedback during self- and peer-assessment
- read texts in which they have an interest and prior knowledge of the vocabulary and content.

#### Teacher

- understands that fluency is crucial for skilled reading comprehension
- recognises that automaticity of word recognition must be mastered in order for the reader to have cognitive capacity to attend to comprehension

- understands that oral reading fluency is a strong predictor of how fluently students will read when reading silently, and that this is critical to the reader's ability to make inferences
- collaborates with literacy experts to refine practices in using evidence-based strategies, to analyse data, and to plan for student improvement
- assesses and monitors the three dimensions of reading fluency:
  - a) accuracy and automaticity can be measured by tracking the errors and the count of words read by the student. This can be timed to calculate the word count per minute or the WCPM. (Rasinski, 2014; Hudson, Lane and Pullen, 2005)
  - b) prosody can be assessed by teachers listening to students read and assessing elements such as their expression, inflection, volume and pace (Hudson, Lane and Pullen 2005).
- encourages students to read widely and frequently
- frequently models fluent reading with a range of texts within all subject areas
- recognises dysfluent readers and implements targeted explicit teaching and intervention
- uses supportive or assisted reading where students practise reading fluently; this can be done where a student reads a passage whilst being read to by a fluent reader, reading chorally in a group, reading to a more fluent partner and reading independently
- provides authentic opportunities for repeated reading of a text – students may use this as a rehearsal or performance whereby they may deliver a presentation, share their reading with a partner, group or class, give a speech, recite a poem, contribute in a mock debate or perform in a play
- reads in phrases demonstrating that words can be read (or grouped) together to make meaning reflective of the author's intent or message.

## Vocabulary

**Vocabulary** refers to the words we know, understand and use to communicate effectively. Vocabulary is critical to reading comprehension. Reading requires more complex, and often more abstract, vocabulary than that used in everyday oral interactions. Readers cannot understand what they are reading without knowing what most of the words mean.

Key to vocabulary instruction are three tiers (Beck, McKeown and Kucan, 2013):

**Tier 1:** Basic words used in everyday conversation that do not usually require explicit instruction, for example: 'think', 'around', 'eat', 'clock', 'orange'. The exception is for some **EAL/D** learners where Tier 1 words need to be taught in context.

**Tier 2:** Words that are used more frequently in texts than in spoken language and that usually require explicit teaching. Tier 2 word learning is essential for building formal academic language within all subject areas as they add precision and detail, for example: 'complex', 'review', 'interesting', 'unsure'.

**Tier 3:** Words with low frequency of use that is often limited to specific topics and domains. These words usually require explicit teaching within subject areas. Tier 3 words might be content words from science, geography, mathematics or history, for example: 'filibuster', 'pantheon', and 'epidermis'.

### WHAT DOES VOCABULARY LOOK LIKE IN A YEAR 3-8 CLASSROOM?

#### Students

- read widely to expose themselves to new vocabulary
- use word-learning strategies as part of their everyday reading practice
- draw on home language and literacy experiences when reading
- become 'word conscious' whereby they notice words and enjoy learning and talking about them
- use graphic organisers such as the Frayer model to learn and deepen understanding of unfamiliar words and important discipline-specific terms
- explain and use context clues and morphology to assist with determining the meaning of unknown words
- incorporate words that have been explicitly taught in their verbal and written work
- use subject-specific vocabulary to add precision when communicating understanding of key concepts in subject disciplines

- listen to and reflect on teacher and peer ‘think aloud’ of texts. A ‘think aloud’ strategy involves a skilled reader thinking aloud as they read so that others can eavesdrop on their thought processes as they approach unfamiliar vocabulary and comprehend a text.

## Teacher

- understands the importance of vocabulary for reading comprehension in all key learning areas
- incorporates purposefully selected quality texts in all key learning areas and uses these to model the discipline-specific vocabulary and characteristic language use relevant to that subject area
- considers home language and literacy experiences of all students, with a particular emphasis on Aboriginal students and those from language backgrounds other than English and EAL/D learners
- understands the three tiers of vocabulary (Beck, McKeown and Kucan, 2013) and the importance of selecting Tier 2 and Tier 3 words for explicit instruction
- selects and explicitly teaches targeted Tier 2 words from quality texts such as picture books, poems, novels, articles, short stories or non-fiction texts in all subject areas
- understands that the explicit teaching of morphology is a critical component of vocabulary instruction
- collaborates with literacy experts to refine practices in using evidence-based strategies, to analyse data, and to plan for student improvement
- incorporates explicit teacher talk and models the desired language of each key learning area. A teacher might explicitly teach key vocabulary and metacognitive reflection; whereby students think about their own thinking in order to improve understanding
- plans and implements targeted explicit teaching and learning of vocabulary such as with the SEEC model (Quigley, 2018, p.139):

**Select:** Select words with consideration for difficulty, importance to topic, prior knowledge of students, frequency of appearance in text, interrelationship between words and if academic (Tier 2) or subject specific (Tier 3) vocabulary

**Explain:** Say the word, write the word, define the word (using a student- friendly definition), give multiple meanings, examples and non-examples and clarify any misunderstandings

**Explore:** Explore the etymology and morphology of the word, including common word parts, word families, synonyms, antonyms, different meanings and the word in use in various contexts. Teachers might use word clines, word webs and the Frayer model as strategies to explore words

**Consolidate:** Engage in multiple and frequent opportunities for students to consolidate their understanding of taught vocabulary through activities such as cloze passages, short answer questions, using the word in real contexts and targeted research.

- assesses vocabulary progress through pre- and post-assessment opportunities such as writing samples, multiple choice questions and using the word in contexts both verbally and in writing
- promotes ‘word consciousness’ (Quigley, 2018) as part of everyday practice. Word consciousness is where words are noticed, and interest and curiosity are piqued to learn more about them
- teaches how to use contextual skills to determine word meaning.

## Reading comprehension

Comprehension is an active process that involves the reader understanding and interpreting what is read. It is heavily dependent on a student’s language comprehension skills and their ability to apply their background knowledge, vocabulary knowledge, knowledge about texts, understanding of language structures and reasoning skills to a text. The following section addresses three important components of reading comprehension: text knowledge, language structure and verbal reasoning. These work together with phonological awareness, phonic knowledge, vocabulary and fluency to enable skilled reading comprehension.

### TEXT KNOWLEDGE

Text knowledge is important as students use their knowledge of print concepts and genres to help them understand how to read the text, the purpose of the text, and the intended audience of the text. It is important for students to engage with a variety of texts to ensure their text knowledge is wide and deep.

### LANGUAGE STRUCTURE

Language structure refers to the arrangement of words and sentences in texts and the relationships between them. Its components include syntax (structure - for example, the order of words in a sentence), semantics (the way meaning is conveyed through specific arrangements of words and/or sentences) and pragmatics (the role of context in influencing the way words and sentences are arranged). Knowledge of language structure contributes to students' language comprehension.

## VERBAL REASONING

Verbal reasoning involves being able to monitor understanding, problem solve, and make inferences during reading, based on connecting background knowledge with the vocabulary, text and language structures of the text. A reader attends to the information within and across sentences and paragraphs to infer meaning, interpret figurative language and establish coherence. A reader constructs meaning by integrating their background knowledge, new information and inferred messages from the text.

### WHAT DOES READING COMPREHENSION LOOK LIKE IN A YEAR 3-8 CLASSROOM?

#### Students

- read widely and frequently, both fiction and nonfiction texts, for enjoyment and to build background knowledge
- observe and participate in 'think alouds' when reading texts
- engage in high quality conversations about texts
- monitor their understanding as they read and notice and repair any misunderstandings
- use [graphic and semantic organisers](#) to organise and categorise ideas and information.

#### *Students apply understanding of text knowledge by:*

- identifying and explaining the structural elements of a range of texts from a variety of genres
- skimming a text for overall structural elements and scanning a text to directly locate information
- using graphic organisers and text structure scaffolds when analysing texts.

#### *Students apply understanding of language structures by:*

- reading a range of texts from different subject areas and understanding the ways language is structured in different subject disciplines
- observing teachers thinking aloud when identifying language structures.

#### *Students apply understanding of verbal reasoning by:*

- using background knowledge, vocabulary and knowledge of text structure to reason and make inferences when reading
- articulating how and why writers leave out information and what readers do to make connections and inferences
- identifying connectives and cohesive devices in order to track ideas and characters
- constructing meaning from the text by thinking logically about what they have read, this could include representing ideas in a summary
- considering author, audience and purpose when reading a text.

#### Teacher

- understands that reading comprehension is dependent on a student's language comprehension skills and fluent decoding
- understands the importance of building student background knowledge through reading widely and frequently across a range of texts, including poetry, plays, classic and contemporary quality literature, non-fiction and multi-modal texts in all key learning areas
- considers text selection using the Text Requirements from the English syllabus, as required
- uses the Text Complexity appendix of the [National Literacy Learning Progression](#) to analyse texts, ensure appropriate challenge and plan for scaffolds and supports across all curriculum areas
- selects texts for purpose and ensures opportunities for students to explore the academic language and conventions of different subject areas. Teachers explore how the composer communicates effectively through

vocabulary, specialised text and language structures and supporting graphics which is specific to a subject discipline

- regularly reads quality texts and texts for specific learning purposes with students
- provides opportunities for independent reading and discussion of texts in all key learning areas
- uses the gradual release of responsibility model to ensure that students are explicitly taught the skills of reading comprehension in a supported way leading to independent application
- uses 'think alouds' to model reasoning, monitoring comprehension and inferring when reading texts – the teacher will draw attention to aspects such as author and purpose, structural elements of text, language features and vocabulary
- models crafting responses in real time and provide scaffolds to students to organise thoughts when answering questions about a text. By completing a response in real time, students can understand how an expert writer constructs a response rather than reading a pre-prepared answer
- explicitly teaches how to organise information and ideas with an increasing range of **graphic and semantic organisers**
- checks and understands where students are in their learning to monitor student progress with pre- and post-assessment. It is important to recognise that an **EAL/D** learner's English language proficiency will influence their reading comprehension and this should be taken into account when planning
- collaborates with literacy experts to refine practices in using evidence-based strategies, to analyse data and to plan for student improvement

*A teacher supports students to build an understanding of text knowledge by:*

- reading and analysing a range of texts of different genres in all key learning areas
- drawing attention to how an author uses text features and language to shape a text for **audience and purpose**
- explicitly teaching how to analyse the effect of key **structural features** including headings, sub-headings, topic sentences and paragraphing
- explicitly teaching **skimming** a text for overall structural features and scanning to find key information in texts in different learning areas
- explicitly teaching how to **compare and contrast** texts
- explicitly teaching how to **evaluate sources** in texts
- explicitly teaching the purpose of **text features** (code and conventions) such as brackets, inverted commas and italics.

*A teacher supports students to build an understanding of language structures by:*

- explicitly teaching language choices that indicate **audience and purpose** such as words that indicate that a text is explaining or persuading
- explicitly teaching syntax (sentence structure and grammar – organising words so that they make sense) and semantics (the meaning of sentences), as well as pragmatics (study of the meaning of sentences within a certain context).

*A teacher supports students to build an understanding of verbal reasoning by:*

- understanding the importance of explicitly teaching students to monitor comprehension, to notice and repair misunderstandings and to make inferences as they notice what the writer has left out
- understanding that **figurative language** is used across texts in all key learning areas as a communication device and that students must be explicitly taught figurative language to support reading comprehension
- explicitly teaching how to use background knowledge, vocabulary, knowledge of language and text structures and new information to make an **inference**
- explicitly building background knowledge and how to connect this prior knowledge to reading a text
- explicitly teaching how to **connect ideas** to maintain meaning across sentences, for example, tracking pronouns
- checking and understanding where students are in their learning to monitor student progress.