

Reading is a complex cognitive process. It involves reading accurately and with understanding. The simple view of reading (SVR) takes both of these factors into consideration. The developers of the model, Gough and Tunmer (1986), call it the simple view of reading, not because reading is a simple process, but rather their model is a conceptually simple representation of what a beginning reader needs to master.

Gough and Tunmer expressed their model as an equation:

$$RC = D \times LC$$

Where RC is reading comprehension, D is decoding and LC is language comprehension.

Decoding means accurate word recognition. This involves knowing letter-sound correspondences in order to decode the words and refers to phonological awareness and phonics (see the Big 6). Some versions of the model refer to 'word recognition' rather than 'decoding', acknowledging that familiar words are identified 'by sight' after they have been decoded multiple times.

Language comprehension means the ability to understand, or comprehend, spoken language and refers to oral language and vocabulary. As skills in word recognition and language comprehension develop, students also develop reading fluency and reading comprehension (see the Big 6).

Reading comprehension is the *product* of both decoding and language comprehension rather than decoding being added to language comprehension. If one aspect is absent or deficient then reading comprehension is absent or deficient (just as zero multiplied by anything is zero). The simple view of reading emphasises that both decoding and language comprehension must be taken into account when considering a child's ability to comprehend written text. If only one aspect is well-developed—for example, a student who can decode words accurately, but their understanding of language is low—then reading comprehension will be deficient.

Scarborough (2001), a senior scientist at Haskins Laboratory at Yale University, generated an infographic (based on the simple view of reading) to explain the complexities of learning to read to parents. In her infographic (see page 3), skilled reading resembles the strands of a rope. The upper strand, language comprehension, has sub-strands for background knowledge, vocabulary, language structures, verbal reasoning, and literacy knowledge. The lower strand, word recognition, has sub-strands for phonological awareness, decoding and sight recognition of familiar English patterns and words. These strands represent the interconnectedness and interdependence of all the components. The word recognition sub-strands become increasingly automatic with explicit teaching and deliberate practice. At the same time, teachers help students build their language comprehension skills, and over years of instruction and practice students become increasingly strategic when selecting relevant understandings to apply in order to understand the written text. Scarborough's rope shows skilled reading as the fluent execution and coordination of word recognition and text comprehension.

c ar r ai n
qu a ck m ay
m oo n



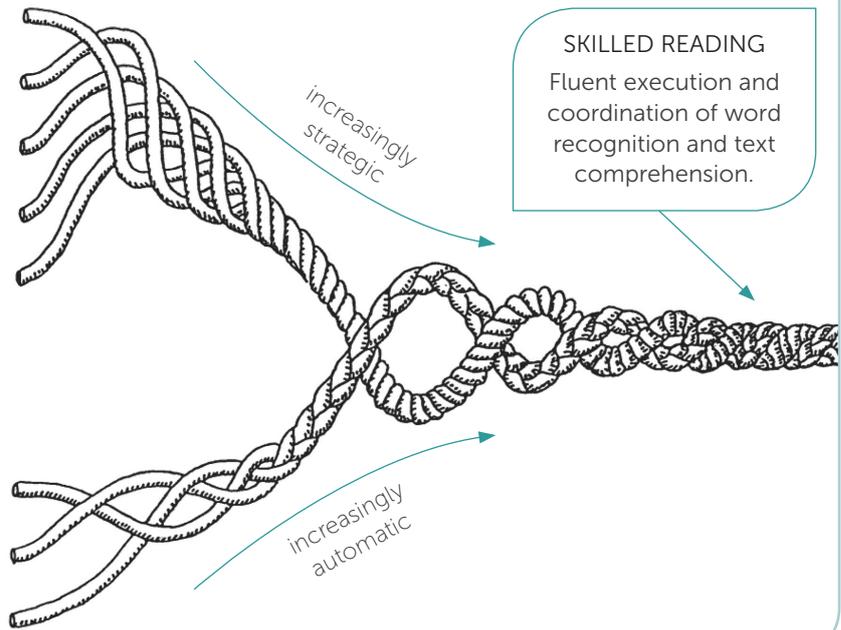
The many strands that are woven into skilled reading

LANGUAGE COMPREHENSION

- Background knowledge (facts, concepts, etc)
- Vocabulary (breadth, precision, links, etc)
- Language structures (syntax, semantics, etc)
- Verbal reasoning (inference, metaphor, etc)
- Literacy knowledge (print concepts, genres, etc)

WORD RECOGNITION

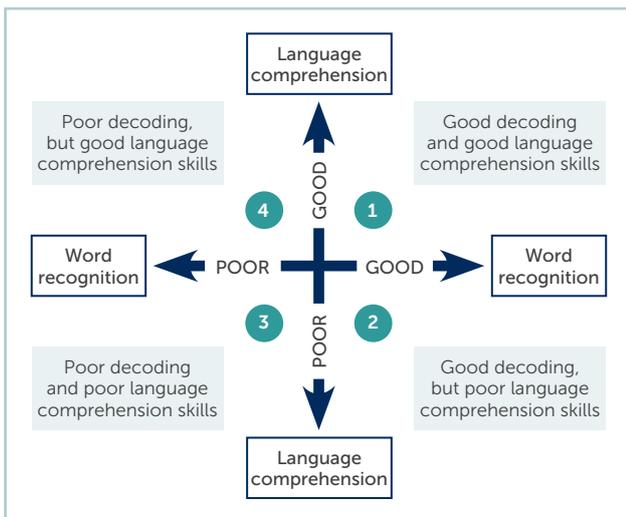
- Phonological awareness (syllables, phonemes, etc)
- Decoding (alphabetic principle, spelling-sound correspondences)
- Sight recognition (of familiar words)



Adapted from Scarborough, 2001 – reproduced with permission of Guilford Press

The SVR quadrants

The simple view of reading can be plotted on a quadrant chart, with accurate word recognition (decoding) on one axis and language comprehension on the other (Rose, 2006). This chart shows how student reading difficulties can be categorised for intervention.



Simple view of reading quadrant chart (adapted from Rose, 2006)

Good readers – students who recognise words quickly and accurately and have a good comprehension of language would be in quadrant 1. Students in all other quadrants have reading comprehension difficulties to some extent. Students in quadrant 3, who have both poor word recognition skills and poor comprehension skills, are the most disadvantaged.

Word recognition (decoding): the horizontal axis

Teaching phonics and sight words

Schools are expected to teach synthetic phonics in a systematic manner. Phonics teaching allows students to master letter-sound correspondences so that they can accurately decode words. While these letter-sound correspondences are progressively learned during the first two years of schooling some high frequency words, often inaccurately called ‘sight words’, also need to be taught, such as *the*, *said*, *because* so that independent reading can be accelerated.



The term 'sight word' has a least four meanings in education¹ but reading scientists reserve the term for any 'familiar word that is recognised instantly, automatically, and effortlessly, without sounding it out or guessing. It does not matter if the word is phonically regular or irregular. The point is that it is immediately recognised' (Kilpatrick, 2016, p.27). In fact, good readers can recognise printed words faster than objects and colours (Cattell, 1886). This discovery led to the understanding that the development of a sight word vocabulary depends on phonemic awareness, not visual memory. Whilst visual memory is essential for letter learning, it is not a major contributor to word recognition. Furthermore, visual memory scientists have shown we cannot store 30,000 to 90,000 words for immediate retrieval. Reading involves visual input but not visual storage.

The statistical correlation between sight vocabulary and phonemic awareness is large. So while it appears that visual memory and sight contribute to the acquisition of a sight vocabulary, in fact the phonological component linked to combinations of letters is the essential element for automatic recall when reading. We need to know the sounds that go with each 'legal' letter combination set, which are referred to as letter strings.² Studies using words in mixed case, where UpPeR and lOwEr case letters are used, have shown that letter order is more important than the way the letters are printed. We memorise particular letter combinations or strings. This process is called orthographic mapping. 'Ortho' comes from the Greek root meaning 'correct' and 'graphic' means 'to write' and orthography describes the way we write words correctly according to the English spelling system.

'Orthographic mapping is the mental process we use to permanently store words for immediate, effortless retrieval' (Kilpatrick, 2016, p.31).

Students need to master the alphabetic letters to the point of automaticity. This may take hundreds of exposures; think of learning the subtle differences between b, d, p and q. However, once basic letter-sound correspondences are mastered, students start to build their orthographic knowledge and

this makes the learning of sight words easier. Sight words, and letter strings, can be learned by typically-developing readers after only a few exposures.

Once children have a degree of automaticity, the cognitive load required to decode words is reduced, freeing up space in their working memory to attend to other aspects of meaning making from the written text.

Orthographic mapping is facilitated when students practice the letter-sound correspondences they are being taught by reading decodable readers, which include some high frequency words in order to make meaningful sentences. Sounding out becomes their first 'reading reflex', building their confidence that English is a logical language that can be read, and preparing students to learn words that have a more complex morphology or etymology.

The phonics screening check helps teachers to assess if their students are gaining mastery over letter-sound correspondences and the English alphabetic code. Some students will sound out every letter of each word in the check before they say the word. As long as they blend these sounds together to say the word they can be marked as correct. The phonics screening check only checks the student's ability to use phonic decoding to read words accurately. Some students will be able to say the word immediately, indicating they recognise that particular word. These students are developing decoding automaticity.

Students with poor word recognition skills (eg they do not attempt many words in the check or they sound out but do not blend the sounds into words) are developing or struggling decoders and could be placed in quadrant 3 or quadrant 4 on the SVR chart, even if their language comprehension is good. These students will need more explicit phonics teaching, or more time to master decoding and build up the neural pathways needed to be a successful reader.

¹ Sight word meanings include: irregular words (not easy to sound out), high frequency words, the whole word or look-and-say approach, and instant recognition of words regardless of whether they are regular or irregular.

² Even pre-readers can distinguish between legal and illegal combinations in their own language (eg brnta, rdka or jj are not legal letter strings in English).

Language comprehension: the vertical axis

Not only do students need accurate word recognition skills (decoding) but they also need to have good language comprehension. If a student performs well on the phonics screening check ('fluent decoder'), they might be in quadrants 1 or 2.

This can be narrowed down to one quadrant by considering the student's language comprehension. For example, if a student can read the text aloud accurately, but gives little indication of understanding, they would be placed in quadrant 2. The teacher would then design learning to develop their language comprehension by engaging them in a range of rich children's literature and vocabulary building experiences to improve their reading comprehension.

Teachers also need to consider how well the student understands spoken language. If the struggling reader shows a good understanding of stories when they are read to them, this would demonstrate placement in quadrant 4 and the learning focus would concentrate on mastering the alphabetic code. However, if the student also has poor understanding of spoken language as well as difficulty with reading words accurately, then the focus has to be on both decoding and language development (quadrant 3).

SVR and the Big 6

Firstly, it is important to consider the effectiveness of your systematic, synthetic phonics program. Are you confident that your students have had every opportunity to develop their letter-sound correspondences and practise them using decodable texts? Also consider how your reading program addresses the Big 6 components of reading. Do you address all of the components in an integrated way? How often do you read and discuss high quality children's literature with your students? This is important for developing the language capabilities of your students.

Scarborough's (2001) reading rope indicates the complexities of learning to read by displaying the aspects of word recognition and language comprehension as strands of a rope that need to be woven together through instruction and practice (IDA, 2018). The reading rope articulates aspects of word recognition (including phonological awareness, decoding and sight recognition) that

need to become increasingly automatic and the many aspects of language comprehension that a reader needs to learn to use strategically.

Language comprehension includes background concepts, vocabulary, language structures, verbal reasoning and literacy knowledge. Consequently, many synthetic phonics programs recommend spending half the literacy teaching time on developing decoding and accurate word reading, and the other half on reading quality literature to students and discussing it with them (Parker, 2018).

Through discussion, students become more aware of the structure of the English language, including its grammar and syntax. Student's literacy knowledge is developed as they are read a range of text genres, including information texts and narratives, and they hear a much wider range of vocabulary and more sophisticated sentence structures within a book context than they would through everyday conversations. They can develop their verbal reasoning skills as they discuss inferences and unpack metaphors. The Big 6 components of oral language and vocabulary can be developed in this way.



The kids were monkeys on the jungle gym.

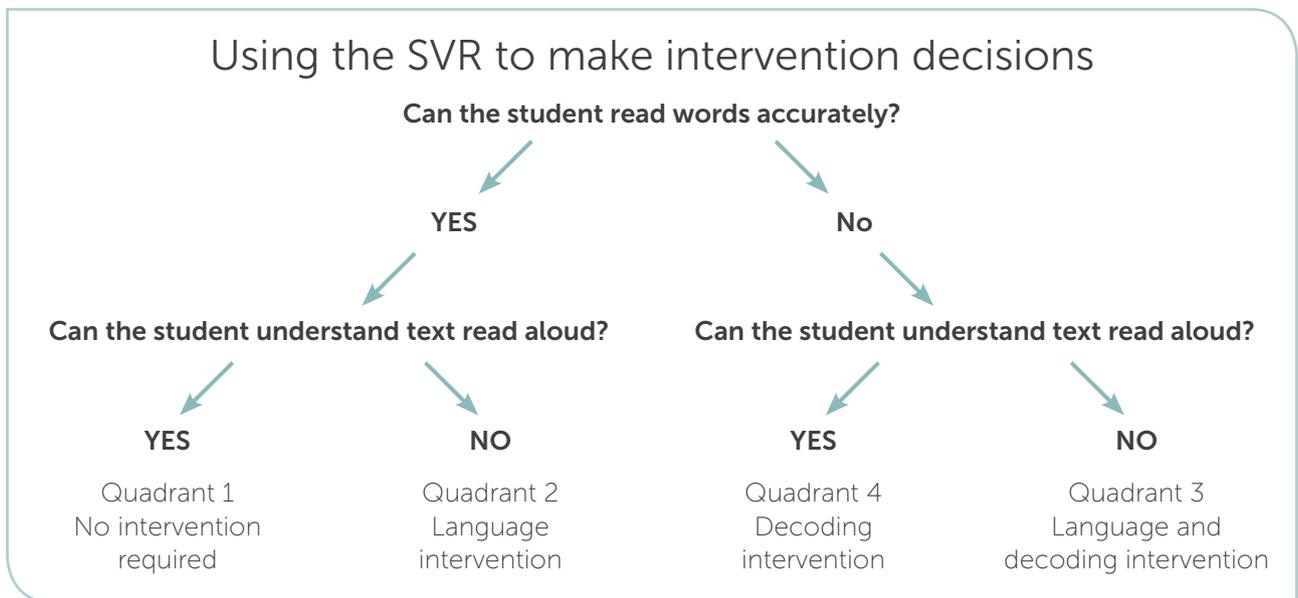
Using SVR to identify student needs

The placement of students in the SVR quadrants helps to inform the design of the classroom reading program, and to determine appropriate interventions for struggling readers.

The first diagnostic question to ask about a struggling reader is: 'If I read this passage to this student, would s/he understand it?' (Kilpatrick, 2015). If the passage is of an appropriate level and the answer is 'yes', then any reading comprehension problem is likely to be due to a weakness in word-level reading (decoding). Teachers could use the phonics screening check, MOTif assessments,³ and other data (eg PAT-EY) to confirm whether

weak decoding is causing the student's reading difficulties. If so, this places the student in quadrant 4 of the SVR chart and intervention will then focus on practising decoding skills.

However, if the answer to the question above is 'no', then the struggling reader is likely in quadrant 3 as they have not only difficulty with decoding but may also have language or listening comprehension difficulties. Listening comprehension levels tend to be higher than reading comprehension levels – it is very rare for a child with poor listening comprehension to have good reading comprehension.



³ Macquarie Online Test Interface <https://www.motif.org.au>



Using SVR to differentiate student learning

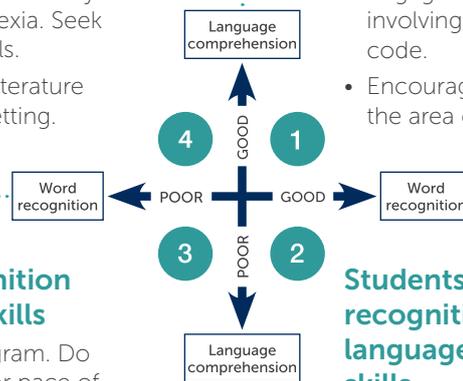
Once you have identified where students sit on the quadrant, you can consider how to address their differentiated learning needs. The following recommendations are provided for each of the quadrants:

Students with poor word recognition but good language comprehension skills

- Assess the effectiveness of your phonics program. Do you need to adjust the coverage, frequency or pace of your program? Do these students require further instruction with the teacher in decoding? These students may require multiple exposures and extra time to consolidate word recognition skills. It is possible that these students may have a specific learning difficulty such as dyslexia. Seek support and advice from relevant professionals.
- Continue to read and discuss rich children's literature and information texts within the classroom setting.

Students with both good word recognition and good language comprehension skills

- Engage students in activities involving the extended alphabetic code.
- Encourage free choice reading in the area of the student's interest.



Students with both poor word recognition and poor language comprehension skills

- Assess the effectiveness of your phonics program. Do you need to adjust the coverage, frequency or pace of your program? Do these students need more time on task; peer tutoring; further instruction by the teacher in both decoding and language comprehension; and/or periodic review with an SSO?
- Explore the language comprehension skills the students bring to the classroom. Address any special needs. Acquire expert help if required. Continue to read and discuss rich children's literature within the classroom setting as children often learn from each other.

Students with good word recognition but poor language comprehension skills

- Engage the students in oral language activities that involve dialogic talk.
- Read high-quality literature and information texts to students, accompanied with discussion incorporating shared, sustained interactions.

Glossary

basic code	Simple letter-sound correspondences, eg /a/ as in /cat/ or /stamp/.
dialogic talk	Extended talk and turn-taking between teachers and students, students and students. Students have an opportunity to initiate talk.
etymology	Etymology looks at the origin and history of words, eg <i>gar</i> means spear. So <i>garfish</i> is a spear-shaped fish, <i>garlic</i> is a spear-shaped leek, and <i>Edgar</i> is a wealthy warrior as <i>Ed</i> means prosperity (Adoniou, 2016).
extended code	More complex spelling and pronunciation alternatives for letter-sounds, eg the long /ay/ sound as in /play/ can also be written as /aigh/ as in /straight/, /ea/ as in /break/, /a-e/ as in /cake/ etc; and the short /a/ as in /cat/ can be pronounced as a long /ay/ as in /baby/.
morphology	A morpheme is a meaningful part of the English language, eg /s/ after a noun signifies a plural as in more than one /cat/ is /cats/; /ed/ after a verb often signifies past tense as in the past tense of /walk/ is /walked/. Knowing the meaning of prefixes and suffixes help to unlock the meaning of a word, eg /un/ in /undone/ gives an opposite meaning to /done/.

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This paper is part of the department's Leading Learning Improvement *Best Advice* series, which aims to provide leaders with the research and resource tools to lead learning improvement across learning areas within their site.

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