What are the benefits of implementing WONDER WORDS in your Kindergarten/Foundation classroom?

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Reading instruction has long been a debatable topic within the field of education. With so many varying opinions and takes on how to teach reading, the process of finding a reading program that is aligned with current research can get overwhelming. Wonder Words is developed by teachers, for teachers, to set your students up for success. We know how difficult and time consuming running an effective classroom reading program can be, so we have done it for you. Wonder Words brings a systematic, research-based reading program to your classroom. The methodical way in which the reading program is structured is immediately apparent when you start the program. The same teaching methodologies repeat as the student progresses, sending a clear message about how the alphabetic code and English language works, without any misleading or confusing over-explanations of spelling patterns and 'exceptions to the rules'. Additionally, content is taught progressively and cumulatively, taking students from their current level of development to their potential level. Wonder Words is sure to boost your students' confidence in reading and writing.

Here is why:

Many schools and national curriculums are making a shift toward synthetic phonics – but why? Based on *The Science of Reading* (a culmination of major research from experts in the field), we now understand the scientific processes behind learning to read, and the teaching of reading.

What does this body of research tell us about the effective teaching of reading? There is overwhelming research evidence that demonstrates reading needs to be taught in an **explicit**, **systematic** and **cumulative manner**. These findings are in direct contrast to the ideas of whole language teaching and learning. Whole language theory believes that reading is acquired as naturally as speaking, and that children will learn to read simply through the immersion of literature. In contrast, John White (2002) states that children "need deliberate induction and correction, for left to their own devices learners would never pick up sophisticated associations required to become proficient readers and writers". Wonder Words was created with this key idea in mind. Leading research is telling us that our students need to be taught synthetic phonics in an explicit and systematic manner, and that is what makes up the foundation of our Wonder Words program.

As the teacher, you are integral to this process. The learning content within Wonder Words has been presented as explicit scripts, enabling even a novice teacher to use this language with accuracy from the very beginning, to avoid teaching the common misconceptions still present within education today.

By following the scripts, regardless of a teacher's prior knowledge or understanding, students will be learning through evidence-based practice. This aside, it also serves as a learning process for both the teacher and student alike. We believe that through the use of these explicit scripts, teachers will also begin to understand the key principles behind them. Equally as important as it is for a student to understand the ***why***, it is also crucial that teachers understand the why behind these concepts as well.

Before we delve into **how** to effectively teach reading, it is important first and foremost to understand why students struggle to read. In order to answer that question, we will dissect and discuss current successes of **whole word language** and **analytical phonics.** While whole language approaches are still very common in many classrooms, it is rare to find a reading program that is strictly whole language. Many whole language programs also use embedded analytical phonics, widely referred to as 'Balanced Literacy'. What makes Wonder Words so special is our use of synthetic phonics. Below is a summarised table of the key differences between the two different phonics approaches.

Analytical Phonics	Synthetic Phonics
Focuses on the 26 letters of the alphabet and their corresponding sounds. A full range of their graphemes that represent those sounds may not be covered.	A systematic approach which focuses on the 44 phonemes of spoken English. Graphemes are taught systematically and cumulatively.
Focus is on initial and final sounds in words, and spelling patterns, without segmenting each individual sound.	Focuses on the segmentation of each individual phoneme in words.
Spelling is taught separately from reading with a heavy focus on spelling rules.	Word reading and spelling are taught simultaneously and focuses on the skills of blending and segmenting.
Sounds are taught with picture clues and mnemonic chants.	Learning is focused on the linking of sounds to their symbols/spellings, blending, and segmenting
Letter-sounds are taught in isolation.	Sounds are taught in contexts of words.
Progression is generally slower, sometimes teaching one sound per week. This unnecessarily delays reading progress.	A select few sounds are taught in context at the same time. Students are reading within the first few lessons.
Contain one or more of the following misleading explanations/teaching methods: - silent letters - 'Magic e' … what about words such as gone, engine, imagine? - consonant blends - heavy focus on letter names early on in the phoneme-grapheme mapping phase	Systematically teaches the key conceptual knowledge and skills that students need to know and understand to effectively read and write. Students are taught that the alphabetic code is reversible and that if they can read, they can write.

Whole Language Approach

Whole language operates on the basis of belief that children learn to read through the visual memorisation of whole written words. This includes memorising the **shape** and **letters** of the whole word, without the linking of graphemes to their corresponding phonemes. While it may **appear** that skilled readers absorb text as whole words, research conducted in the UK and US have demonstrated repeatedly that skilled readers actually do attend very carefully to each individual letter in a word (Beard, 2003). Studies tracking readers' eye-movements have established that fluent readers fixate on nearly every word as they read, and that, far from sampling letters on the page in a partial and semi-random fashion, a good reader processes just about every letter in every word (Beard, 2003). These results have been replicated by many other researchers; for a more comprehensive explanation on this topic, see Bonnie Macmillan's book *Why Schoolchildren Can't Read*.

Limits of Visual Memory When Using Whole-Language Approaches

Along with many other whole language/traditional phonics approaches, it was believed that there were a select group of words that appeared frequently in text that 'couldn't be sounded out' with basic alphabetic code knowledge. The idea was to give students a rapid start and increase their confidence in reading by boosting their 'sight vocabulary'. These words were coined 'Sight Words'. As the name suggests, these words were predominantly learned through rote visual memorisation. Unfortunately, any confidence developed is easily misplaced as students have now learned to use whole word memorisation as their primary strategy for reading. So, if students are learning to read through visual memorisation of words, what happens when a student has reached their visual memory limit?

Studies generally conclude that for an adult, the upper limit of memorisation of abstract visual symbols (in this case, words) is about 1500-2000; this would be less for a child (McGuinness, 1998). When students use whole word strategies as their primary strategy to read, they generally reach their upper limit for new words by around Year 3. Even children with very good visual memories begin to run out of space for new sight vocabulary. This leaves both teachers and parents worrying about why following what seemed like great progress in their early years, they are now coming to a grinding halt. This common 'dip' in literacy results, which has been coined numerous names from 'Grade 4 slump (US)' to 'Y3 dip (UK)' has been recognised globally (Chall, 1996).

Without proper decoding strategies, students are left with strategies such as 'skipping over words', 'looking at picture clues' and 'guessing' in a curriculum that grows in complexity each year. These strategies undermine a student's ability to decode words which are easily read with alphabetic code knowledge (e.g. *went* .../w/e/n/t/). It is important to note, that once a new word has been decoded numerous times, familiarity will begin to speed up the process until it is *just* as fast as whole-word memorisation.

Word Frequencies

In a US study conducted by Carrol et al. (1971) on the word frequencies encountered by children in a typical Year 3 classroom, it was found that in samples ranging from picture books, text books and reference books:

* 50% of a 100 word text consists of high frequency words
* 75% of an 800 word text consists of high frequency words
* 90% of a 2500 word text consists of high frequency words

While these percentages of high frequency words are high, **the total number of different words used was actually 23,477** (Carroll et al, 1971). This leaves around 21,000 not-so-frequently-encountered words for students to decode, who have predominantly learned to read through whole-word memorisation. We all know how overloaded our school days are, there are simply not enough hours to have students learn these words through look-and-say techniques. It is important to note, that as children progress through school, the number of not-so-frequent words encountered will continue to increase (there are 63,000 more words between Year 4 – Year 11) according to this study (Carrol et al, 1971). Understanding the limits of memory, and the pressure placed upon it for students in a whole-word approach, highlights the need for decoding strategies.

Wonder words teaches your students to read through decoding. They learn to break high frequency words into their phonemes systematically, and map the sounds to their corresponding letters. Once these words have been decoded several times, familiarity brings increased speed through a process known as orthographic mapping. Not to be confused with the memorisation of how a word looks, orthographic mapping is a mental process utilising the language processing centers of the brain to map the sounds of words to the spellings of those sounds. Students then permanently store those connected sounds and spellings of words as 'sight vocabulary'.

Kilpatrick (2019) suggests that while orthographic mapping cannot be taught as an individual skill, phonemic awareness and phonics skills which enable orthographic mapping **can** be taught. These core skills, are at the heart of Wonder Words.

Below, Kilpatrick (2015) has identified the 3 phases of word reading development and how they are aligned with the following phonological skill development.

Word Reading	Phonological Skill
Letters & Sounds: requires simple phonology to learn corresponding sounds and letters.	**Early phonological awareness:** rhyming, initial sounds, alliteration
Phonic Decoding: requires letter-sound knowledge to blend, ultimately leading to orthographic mapping.	**Basic phonemic awareness:** blending and segmenting
Orthographic Mapping: requires advanced phonemic awareness and letter sound skills.	**Advanced phonemic awareness**: phoneme manipulation

Clearly, the relationship between phonemic awareness, phonics knowledge and fluent reading, is an important one. Students naturally begin to orthographically map words with more exposure, therefore, Wonder Words has specifically designed a program which targets these critical phonemic awareness skills and enables ample exposure and time for students to engage in retrieval practice. This retrieval practice optimises the load on students' working memories to maximise their learning.

Cognitive Load Theory

How we teach students to read is the last vital piece to this puzzle. Why is it that sometimes students can grasp a concept immediately, and other times they struggle with a concept for weeks or months on end? Dylan William (2017) recently described Cognitive Load Theory (CLT) as 'the single most important thing for teachers to know', but why is that? Sweller's CLT is built upon two universally accepted ideas. The first, is that there is a limit to how much **new information** can be processed by the human brain at one time. The second, is that there are no known limits to how much **stored information** can be processed at one time (Lovell, 2020). Sweller's CLT is grounded in a robust evidence base, and provides theoretical and empirical support for explicit models of instruction. Research into CLT determined that instructional techniques that have been designed in accordance with how human brains learn are the most effective (Sweller et al, 2011).

By embedding CLT based techniques into the classroom, teachers are able to maxmise students' learning by better utilising working memory. The following diagram is a simple overview of the CLT.

How does the human brain process new information?

New Information

The human brain can only process a very limited amount of **new** information at once.

1. Working Memory

<u>New information</u> is processed in the working memory. The brain can only hold onto a small amount of new information for a short period of time.

2. Learning

Learning occurs when we successfully move this new information from our working memories into our long term memories.

3. Long Term Memory

Information is stored and organised in our long term memories in 'schemas'.

Optimising Load

Information which is stored in the long term memory can <u>reduce the load</u> on the working memory.

Cognitive Overload

Processing <u>too much information</u> at once can slow down learning or even stop learning from occurring due to cognitive overload.

Stored Information

There are no known limits to how much **stored** information the brain can process at once.

Learning content within Wonder Words is heavily governed by evidence-based research, and the program has been designed in accordance with how students learn best. Wonder Words avoids cognitive overload by controlling the amount of information students have to receive and process. Time is built into the program to lessen the cognitive load of new information by engaging in retrieval of stored information. This pattern optimises students' working memories, allowing that new information to be learned and stored.

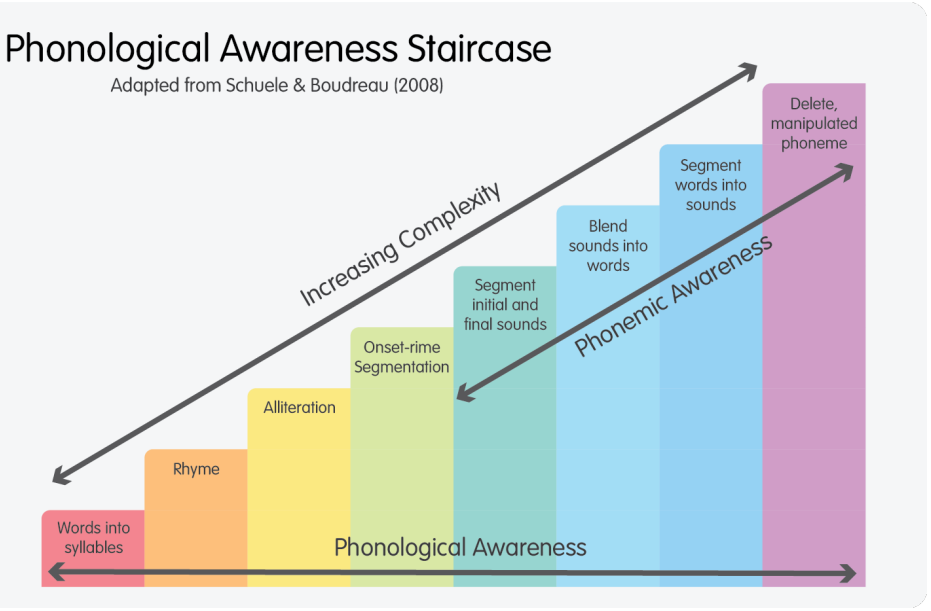
Research shows us why students struggle to develop their reading through whole language approaches and outdated theories in word processing. Wonder Words is very proud to deliver an alternative that is explicit, systematic, and evidence-based. Below is a summarised table of the key concepts and skills that are crucial in the development of reading that Wonder Words targets.

Wonder Words	
Phonological Awareness/Phonemic Awareness Ranging from basic phonological awareness to more complex skills such as blending, segmenting and phoneme manipulation through Wonder Words' Phonics/High Frequency Words Scripts. See Appendix 1.	✔
Synthetic Phonics Targets the core conceptual knowledge and skills required for **reading and writing** in an explicit manner through Wonder Words' Phonics Scripts and student workbooks. See Appendix 2.	✔
Fluency Decodable readers and guided gestures throughout the explicit Phonics Script component of the program enables ample exposure/opportunities to consistently practise reading fluency. Along with the High Frequency Words content, students will begin to orthographically map words, enabling reading fluency.	✔
Vocabulary Morphology within the High Frequency Words Scripts, prominent with Year 1 and 2 scripts. Repeated exposure of words within explicit teaching content/student workbooks.	✔
Comprehension Targeted within our Wonder Word's app through the use of phonically controlled decodable readers and questions to go along with the decodable texts.	✔
Oral Language Oral language is targeted through developmentally appropriate speaking and listening games which increase the quality and quantity of oral language.	✔
High Frequency Words/Sight Recognition High frequency words are taught in a systematic manner, with words being broken down phonetically, with explicit teaching of corresponding graphemes with ample practise time to enable orthographic mapping.	✔
Evidence-Based Practice Wonder Words was developed following the culmination of research on the 'Science of Reading'.	✔

On behalf of the Wonder Words team, thank you for choosing to give your students the best start to their reading journey.

The Wonder Words Team

Appendix 1



Phonological Awareness Staircase Adapted from Schuele & Boudreau (2008).

Appendix 2

Conceptual Knowledge

1. Letters are symbols (**spellings**) that represent sounds.
2. A single sound (**phoneme**) can be represented by 1, 2, 3 or 4 letters.

   cat greet night eight
3. A single sound (**phoneme**) can be represented by different spellings (**graphemes**).

   train steak rake day
4. One spelling (**grapheme**) can represent multiple sounds.

   young shout group

Skills

1. **Blending** – the ability to push sounds together to build words.

   /d/ /o/ /g/ → dog
2. **Segmenting** – the ability to separate individual sounds in words.

   dog → /d/ /o/ /g/
3. **Phoneme Manipulation** – the ability to insert and delete sounds in and out of words. This is a particularly important skillset, as it is necessary to test out alternatives for spellings that represent more than one sound when reading.

   E.g. spelling <a>... is it /a/ as in rat, /A/ as in baby, or /o/ as in want?

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