

# ENHANCING LITERACY LEARNING OUTCOMES FOR BEGINNING READERS:

## RESEARCH RESULTS AND TEACHING STRATEGIES<sup>1</sup>

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<https://www.educationcounts.gov.nz/publications/schooling/early-literacy-research-project>

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## EXECUTIVE SUMMARY

The main purpose of the project was to improve the literacy learning outcomes of New Entrant/Year 1 children by providing teachers with supplementary teaching strategies focussed on specific literacy learning needs. This project provided professional learning and development (PLD) workshops and associated materials for teachers of New Entrant/Year 1 children, and assessed the impact of the workshops on the literacy learning outcomes during Year 2. The workshops provided teachers with the knowledge and skills to adopt explicit and systematic word decoding teaching strategies in their literacy instruction. Effective word decoding skills are a necessary requirement for learning to read.

The study reported here began with children who started school for the first time in February 2016. New Entrant teachers of these children participated in PLD workshops during 2016. These children and teachers formed the “Intervention” group. In addition, we had children from schools that chose not to have their teachers participate in the PLD workshops. These children formed the “Comparison” group. Literacy assessments were collected from school entry to the middle of Year 2 for children in both groups.

At the start of the project in 2016, assessment results showed that the Intervention and Comparison children were similar across a range of reading-related measures. By the middle of Year 2, the Intervention children significantly outperformed the Comparison children on assessments of reading and spelling. Especially significant was the finding that low decile Intervention group of children markedly outperformed low decile Comparison group of children, and in some measures they had mean literacy assessment scores that were close to or equal to those of the group of children in higher decile schools.

Assessments of the Intervention teachers showed important improvements in their knowledge of the language foundations associated with effective literacy teaching and learning. Video clips of classroom teaching also revealed changes in instructional practices that reflected the content and materials from the PLD workshops. The significant improvements in literacy learning outcomes of the Intervention children are consistent with the changes teachers made as a result of the PLD workshops.

The results of this project show that there is a large potential benefit for children and teachers throughout New Zealand in modifying significant aspects of literacy teaching in New Entrant/Year 1 classrooms. We provide specific suggestions to support such modifications.

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## INTRODUCTION

### What is this Research About?

Many teachers want to be more effective in their literacy teaching. We know that while a lot of New Zealand children do well with early literacy learning, many others struggle. The purpose of this research project was to enhance the literacy learning outcomes of children during the first two years of schooling by means of a teacher professional learning and development (PLD) programme.

Researchers and teacher educators at Massey University developed the *Early Literacy Project* in collaboration with, and funded by, the Ministry of Education.

The teacher PLD programme was based on extensive research showing the benefits of literacy instruction that includes explicit and systematic word-level decoding strategies and skills. Learning words and reading for meaning depends on children's ability to decode words they come across when reading connected text. We ran a series of teacher PLD workshops designed to provide additional teaching approaches that can enhance children's literacy learning outcomes.

Data were collected on children's literacy learning from the start of schooling (New Entrants) through to the middle of Year 2. We also collected data from teachers, including video observations supplied by teachers showing their literacy teaching practices.

In this report, we present information on:

1. The rationale for the research;
2. The nature of the teachers' PLD workshops;
3. Children's literacy learning outcomes;
4. Changes in teachers' knowledge, self-confidence and teaching practices;
5. Suggestions for practice.

### Why Was the Research Undertaken?

Numerous teachers, principals, Ministry of Education officials, and politicians have expressed concerns about the literacy performance levels of many New Zealand children. It became evident during the 1990s that compared to many other countries, New Zealand had the largest spread of scores between good and poor readers. Lower performing readers are often those from low-income backgrounds, and include disproportionately large numbers of Māori and Pacific children. Enabling equitable outcomes for children is crucial in our diverse, multi-cultural democracy.

The project was based on a substantial body of research and practice from previous studies in New Zealand and overseas. Our goal was to test research-based teaching strategies designed to improve the literacy learning outcomes of young children in New Entrant/Year 1 and Year 2 classrooms.

### What Does Current Research Say About Literacy Learning?

Extensive research shows that achievement in reading comprehension (reading for meaning) depends on two processes: the ability to recognise the words in text accurately and quickly and the use of language skills such as vocabulary and syntax. Progress in learning to read words requires the ability to translate letters and letter patterns into phonological forms (i.e., letter-sound relationships). Making use of letter-sound relationships provides the basis for beginning readers to build sight word knowledge—for building a mental dictionary of print words. This in turn allows beginning readers to use more of their cognitive resources to focus on language comprehension forms of knowledge such as sentence meaning and text integration.

To build up relationships or “mappings” between spelling patterns and sound patterns, children have to be able to segment words into phonemic sequences; they have to understand that spoken words and syllables are made up of sequences of speech sounds. Developing phonemic awareness (the ability to hear and manipulate the sounds in spoken words) is essential for discovering spelling-to-sound relationships and for grasping the alphabetic principle. Understanding the alphabetic principle, or “cracking” the alphabetic code, is necessary (but not enough by itself) for being able to read for meaning.



There is now a large body of research showing that explicit, systematic instruction in relating spellings to pronunciations positively influences reading achievement, especially during the early stages of learning to read. Explicit attention to alphabetic coding skills, alongside explicit attention to vocabulary, in early literacy instruction is helpful for all children and crucial for some (Arrow & Tunmer, 2012).



## ENHANCING CURRENT APPROACHES TO LITERACY INSTRUCTION

### Building Teacher Knowledge to Increase Word-Level Instruction

Over the past two to three decades, a lot of research has been conducted in numerous countries on improved methods for effective literacy teaching. Many New Zealand teachers, however, are not aware of these significant developments. It has become clear that effectively teaching reading skills to beginning readers now requires that teachers have a high level of understanding of the basic structure of the English language, including an understanding of the sound-symbol correspondences of written English and how this affects reading development. Louisa Moats, in her highly acclaimed publication *Teaching Reading IS Rocket Science* (American Federation of Teachers, 1999), showed that relevant teacher knowledge includes understanding language and some linguistics, as well as understanding the psychology of reading development and cognitive development.

Although phonics programmes have provided some of this knowledge, because of the different theoretical understandings of what reading is and how it should be taught, many teachers have not had the opportunity to refresh their teaching skills in line with current research on best practice in literacy instruction. This has been the case even when they knew they needed to do something different to what they were currently doing. This needs to change if the literacy learning outcomes of *all* children in New Zealand are to improve.

In this research project, we developed a teacher PLD programme that focussed on developing teachers' levels of knowledge and the practices required for more effective teaching. This year long programme consisted of five workshops spaced over the four terms and totalling six days of workshop attendance. To examine the effectiveness of the programme we followed the reading and spelling development of children in the classes of each teacher for that year and through to the middle of Year 2. We also assessed teacher knowledge and observed teacher practice.

## Teaching Word-Level Knowledge

To provide a guide in the teacher PLD workshops, we adopted the Cognitive Foundations of Learning to Read framework (shown below in Figure 1). This framework combines the two essential components required for independent reading for meaning (reading comprehension): language comprehension and word recognition. In applying this framework to early literacy instruction, it is necessary that *both* word recognition and language comprehension are taught in each literacy lesson. The weighting of the focus of the instruction on either word recognition or language comprehension differs, based on the learner's current needs. Beginning readers, for example, require focused instruction in word recognition, and all that it entails, with language comprehension taught in whole-class settings. Learners with greater word recognition knowledge have focused instruction on language comprehension, and less weighting on word recognition, because they have the foundation skills required for independently accessing the written word.

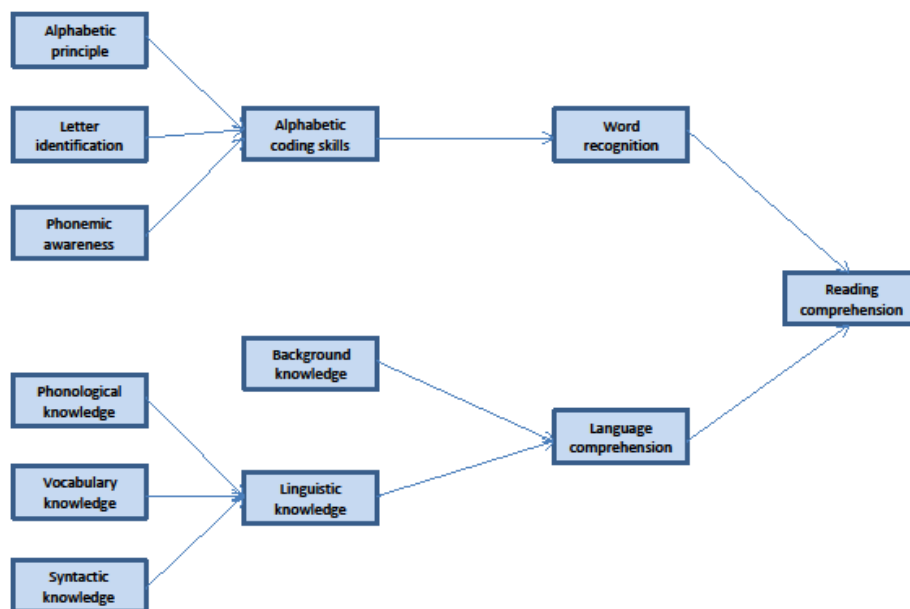


Figure 1: Cognitive Foundations of Learning to Read (Tunmer & Hoover, 2014).

Using the Cognitive Foundations of Learning to Read framework, five modules were developed to build teacher knowledge and practice. The five modules focused on phonemic awareness and letter knowledge, vocabulary, alphabetic coding and word recognition, syntactic knowledge and text structures (as a type of background knowledge). These modules were based on what research has identified as the most important elements across both language comprehension and word recognition.<sup>3</sup>

### Explicit Instruction

One major aspect of the PLD programme was the provision of strategies for teaching the necessary knowledge and skills. This revolved around the use of explicit, structured, and systematic instruction. Explicit instruction does not leave acquisition of essential knowledge to chance in the hopes that children will “get it”. Instead, explicit instruction requires breaking down the required learning into clearly observable components. In early literacy instruction, the components include each letter name and sound, blending of phonemes together to decode unfamiliar words, segmenting sounds in spoken words to spell unknown words, as well as teaching the meanings of target words.

Teachers were introduced to the key content knowledge of each, as teacher knowledge. They were also introduced to explicit instruction and in each module there was an emphasis on how to teach the content knowledge using explicit instruction. After each workshop, teachers were encouraged to make use of the new content in their classroom practice. This practice was discussed at the next workshop.

As each of the foundational components are taught, they are built on by increasingly complex elements, such as consonant and vowel digraphs, syllables and morphemes, and extending into syntax and punctuation. To facilitate the breaking down of the foundational components in a structured manner, we developed a scope and sequence for teachers to guide their planning and instructional decision-making based on specific assessments.

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<sup>3</sup>See National Reading Panel (2000). *Teaching Children to Read: Report of the National Reading Panel*. <http://www.nichd.nih.gov/publications/nrp/smallbook.pdf>

The effectiveness of explicit instruction in general, and in early literacy learning in particular, has been widely demonstrated in numerous countries with children from a range of socio-economic and cultural backgrounds. More information on the teaching approach is presented later in this report.

Because the Cognitive Foundations of Learning to Reading framework also provides the basis for specific assessments that can directly inform differentiated instruction, the use of assessments for planning was also discussed. For example, if beginning readers are struggling with reading for meaning (reading comprehension), it is because they are having problems understanding the language being read (language comprehension), problems recognizing the words in text quickly and accurately (word recognition), or both. Weakness in word recognition skill stems from underdeveloped alphabetic coding skills while reading. Weak alphabetic coding skill will also be due to inadequate knowledge of the alphabetic principle, letter name and/or letter sound knowledge, and/or phonemic awareness.

The parts of the framework should not be taught in isolation from each other, but instead should be taught in an integrated manner. Beginning readers should be given plenty of opportunities to practice and receive feedback when learning the foundation skills for reading, while also having the opportunity to engage in the more advanced, higher-order, language functions.

## HOW DID WE SELECT PARTICIPANTS AND WHAT WERE THEIR CHARACTERISTICS?

### Selection of Participants

Children who began school for the first time in February 2016, along with their teachers, were the focus of our research project. We wanted to examine whether their teachers' participation in the PLD workshops was associated with improved literacy learning outcomes. An important part of this research process was to compare the literacy achievements of these children with children whose teachers did not take part in the workshops.

Using the publicly available Ministry of Education database of schools in the lower North Island, we randomly selected schools for participation in the project. There were two phases of the project. The first phase focussed on children who entered school in February 2015. Teachers of students who formed the Intervention group participated in PLD workshops during the year. Although not intended to be a pilot study, our observations of the PLD sessions together with feedback from teachers and children's results indicated that changes were needed to the PLD programme. The programme was revamped and schools that had participated as part of the 2015 Comparison group were invited to participate as Intervention schools from the start of 2016. Some schools chose to continue in the newly formed Comparison group. We also followed the progress of a new group of school entrants whose teachers had participated in the first phase of the project.

The number of children who were in the project is presented as follows:

- Intervention1: Intervention children (N = 201) who started in the project as New Entrants in February 2015. Their teachers participated in the PLD workshops during 2015.
- Comparison 1: Comparison children (N = 158) who started in the project as New Entrants in February 2015; their teachers did not participate in the PLD workshops during 2015.

- Intervention 2: The second cohort of Intervention children (N = 127) who started in the project as New Entrants in February 2016. Their teachers participated in the PLD workshops during 2016.
- Intervention 2+: The second cohort of Intervention children (N = 150) who started in the project as New Entrants in February 2016, and whose teachers participated in the PLD programme during 2015.
- Comparison 2: The second cohort of Comparison children (N = 65) who started in the project as New Entrants in February 2016, and whose teachers did not participate in the PLD programme in either 2015 or 2016.

Our focus in this report is on the second cohort of children that formed the Intervention group (their teachers were in the 2016 PLD programme) and the Comparison group (their teachers did not participate in any of the PLD sessions).

Schools were located in Wellington, Hutt Valley, Wairarapa, Kāpiti, Horowhenua, Manawatū, Whanganui, Tararua, and Taranaki. We excluded very small schools because of the small numbers of New Entrants and the cost of travel.

Agreement to participate in the 2016 PLD workshops was given by 34 teachers in 13 schools. These teachers and their students were the “Intervention” group that is the focus of this report. We also had agreement from five schools to serve as the “Comparison” group referred to in this report.

### Number of Children in the Study and Broad Characteristics

There were 127 Intervention group children at the start of the project in February 2016. The Comparison group numbered 65 children.

Gender characteristics of the samples were as follows:

- Intervention: 55% males; 45% females
- Comparison: 59% males; 41% females

The following percentages of students within each decile band are shown for each group:

- Intervention: Low (1-3) = 35%; Middle (4-7) = 36%; High (8-10) = 29%



- Comparison: Low = 26%; Middle = 34%; high = 40%

The following percentages of students for ethnic background are shown for each group:

- Intervention: Pakeha = 61%; Maori = 27%; Pasifika = 5%; Other = 7%
- Comparison: Pakeha = 53%; Maori = 27%; Pasifika = 8%; Other = 11%

### Literacy-related Characteristics at the Start of the Study

It was important to establish that children in the Intervention and Comparison groups started school with similar literacy-related skills. To examine this, we administered the assessments of the following knowledge/skills:

- Letter name and letter sound knowledge
- Receptive vocabulary knowledge
- Word recognition
- Invented spelling
- Phonological awareness

When decile-level bands were combined, children in both the Intervention and Comparison groups were on average, similar in terms of these important pre-reading skills. This is important because it shows that both groups were starting out with comparable literacy-related abilities. This means that if children in the Intervention group did better at the end of the study than children in the Comparison group (our expectation), we could attribute the difference to the effect of the PLD teacher workshops and changes in teaching practices.

Although there were no significant between-group differences (Intervention vs. Comparison) in mean scores on these assessments, we conducted our analyses of school-entry results to compare groups of children between the school decile bands (low decile = deciles 1 to 3; middle decile = deciles 4 to 7; high decile = deciles 8 to 10). Significant differences for mean scores between children in each decile band were already apparent at school entry. The differences occurred in the three main early literacy entry skills of phonological awareness, letter knowledge and receptive vocabulary. Children in high decile schools were stronger than children in low schools on all measures. Children in middle decile

schools were also stronger than children in low decile schools on the assessments of letter knowledge and vocabulary.

## WHAT WERE THE RESULTS FOR THE CHILDREN?

Here we report results for the Intervention and Comparison children at the end of the study, when they were in the middle of Year 2 (2017). Forty children had left the participating schools, which meant that 152 children remained in the project at this endpoint. We found a number of important and statistically significant differences between the two groups, in favour of children in the Intervention group. Important differences are as follows:

### Word Knowledge

The Intervention children obtained, on average, significantly higher scores than the Comparison children on the three assessments of word knowledge. These three assessments were the Burt Word Test (which correlates very highly with reading comprehension); a measure of pseudoword reading (nonwords; a very useful means to determine if young learners can apply phonics rules to read genuine words); and, a spelling test (from the Wide Range Achievement battery). The following graphs illustrate the differences between the two groups on each of these assessments, shown in terms of Decile Bands. Importantly, children in the low decile Intervention group performed better than low decile children in the Comparison group.

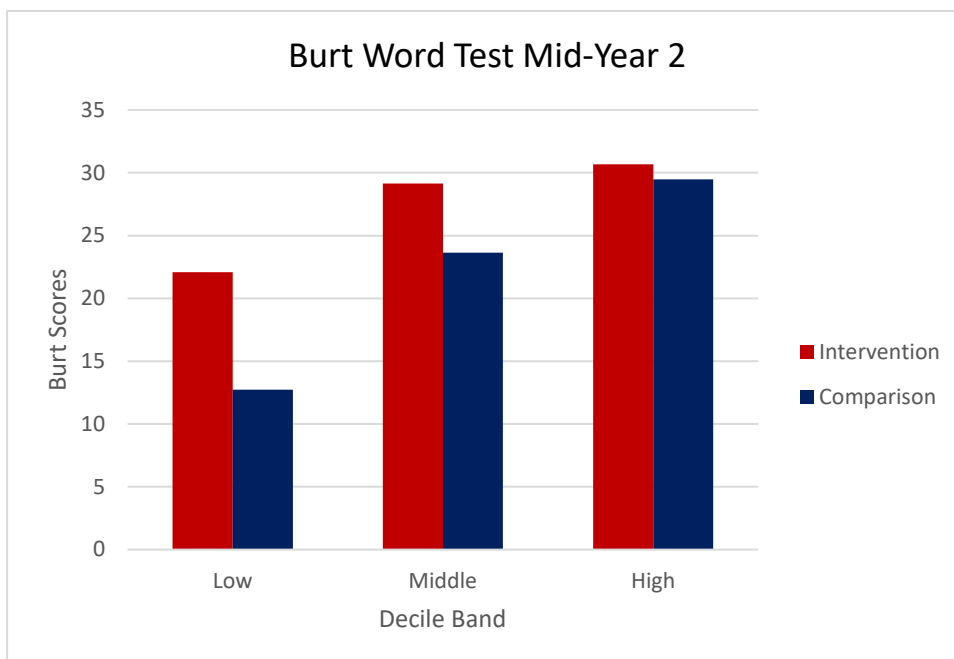


Figure 2: Middle Year 2 Group by Decile Band Mean Score Comparisons for the Burt Word Test.

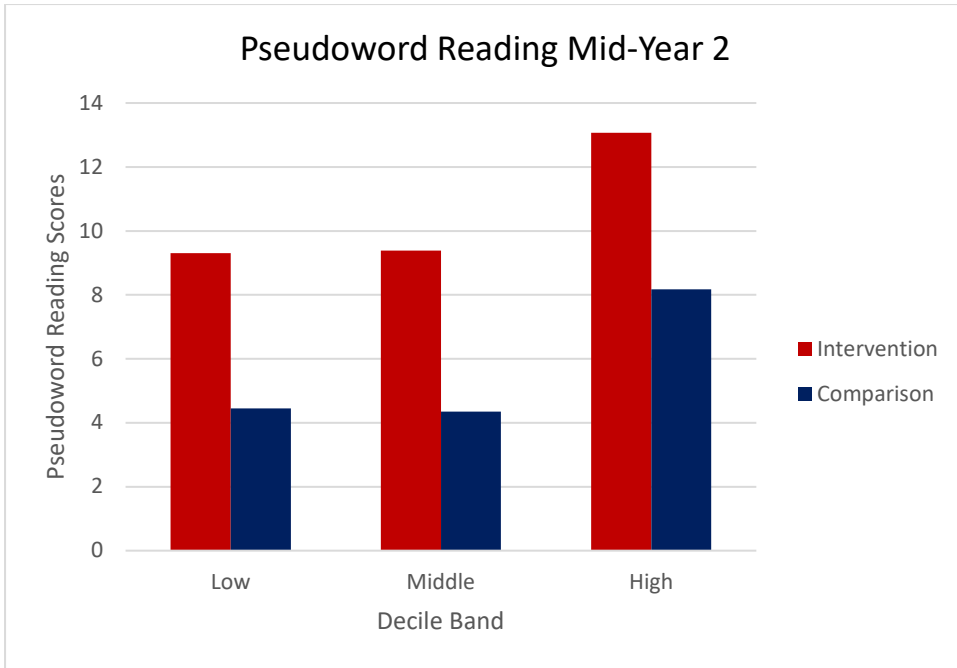


Figure 3: Middle Year 2 Group by Decile Band Comparisons for Pseudoword Reading Mean Scores.

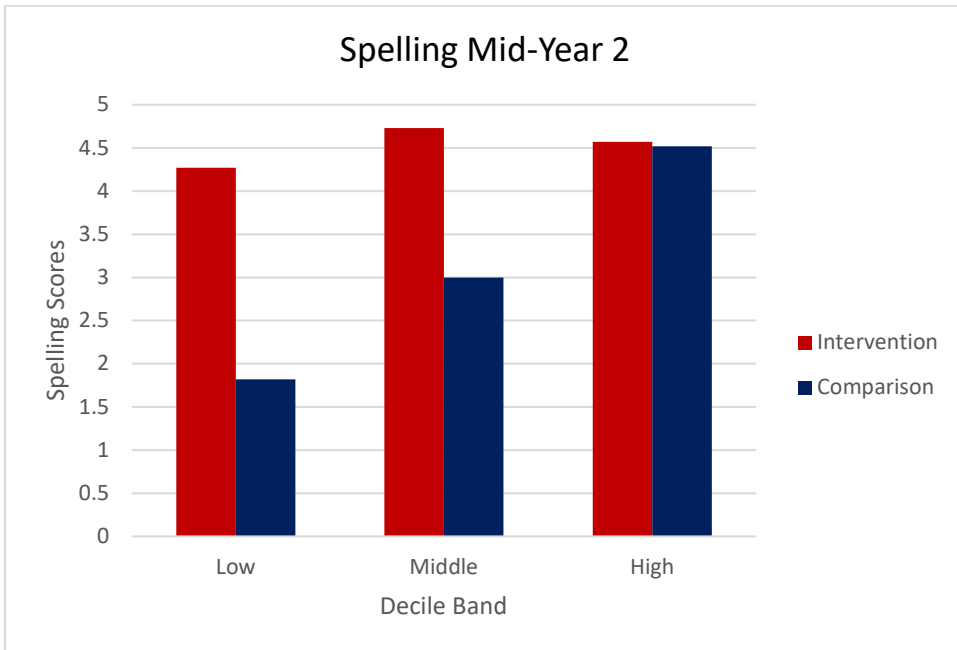


Figure 4: Middle Year 2 Group by Decile Band Comparisons for Spelling Mean Scores.

For Reading Book Level, schools supplied data for 140 of the 152 children who remained in the project at the middle of Year 2 (we were unable to obtain Reading Book Level

data for 12 children). The analyses showed that the Intervention group obtained significantly higher book levels than the Comparison group. The low decile Intervention children showed particularly impressive gains with average book levels very close to those of the middle and high decile Intervention children.

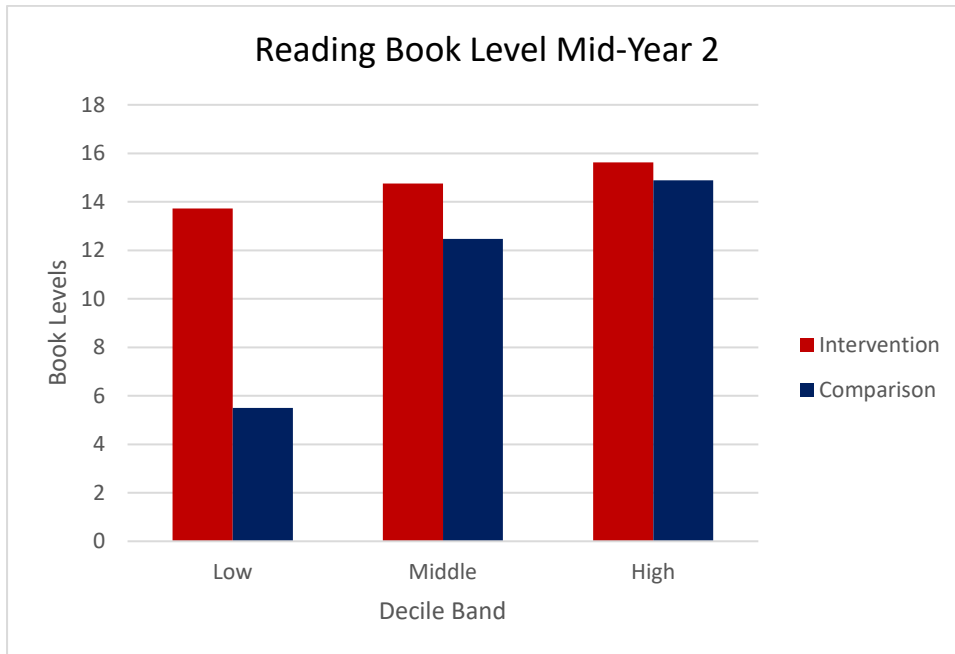


Figure 5: Middle of Year 2 Group by Decile Band Comparisons for Mean Reading Book Levels.

In sum, the Intervention and Comparison children were generally performing at similar levels on school entry at the start of Year 1 (i.e., prior to the intervention). By the middle of Year 2 when the project finished, the Intervention group outperformed the Comparison group on all key reading and spelling outcome assessments. Especially notable was the strong performance of the low decile intervention children.

These findings, showing significant advantages for children in low decile schools, are consistent with extensive research indicating that children from less advantaged backgrounds are the big beneficiaries of explicit and systematic word-level instruction during the early stages of learning to read. These children seldom benefit from the instructional approach that emphasises meaning, because this approach is based on the implicit assumption that all children have the necessary language skills to learn to read by being immersed in a print-rich environment. Not so. While all children can benefit from more explicit and systematic word-level instruction, some children especially benefit, as shown clearly in this research.



## EVIDENCE THAT PROJECT TEACHERS INFLUENCED CHILDREN'S IMPROVEMENTS

Evidence in support of our claim that teachers influenced Intervention children's literacy improvements comes from assessments of teacher knowledge of the basic language factors associated with effective literacy instruction, teachers' self-evaluations of their ability to be effective literacy teachers, observations of teaching practice, and teachers' preferred word identification prompts.

### Teacher Knowledge

We carried out a survey of teachers' knowledge of the basic language factors associated with effective literacy teaching. This survey was undertaken with 20 teachers early in the year and again towards the end of the year (i.e., when the Implementation children were in New Entrant/Year 1 classes). During this time, most children in the Implementation group had teachers who were participating in the PLD workshops.

The survey of basic language constructs was based on an assessment used in a number of important published studies. Included in the survey were questions about four key language constructs: phonemic, phonologic, phonics, and morphologic. Knowledge of these basic constructs enables teachers to understand the complexities of English orthography and how best to teach this to their learners.

Early in the year, at the first PLD workshop, teachers scored an average of 61% correct across the four domains. Phonemic and phonological questions in the survey were answered more correctly than phonic and morphological questions. At the last PLD workshop towards the end of the year, teachers improved their scores on the same survey, obtaining an average of 75% correct answers.

Teachers had high levels of phonemic knowledge (over 70% correct) on both occasions, and high levels of phonological knowledge (more than 85% correct) on both occasions. Phonic knowledge scores increased from an average of 47% correct early in the year to 68% towards the end of the year. Teachers' morphological knowledge showed a

dramatic increase from 32% early in the year to 60% towards the end of the year. These results are illustrated in Figure 6, with Time 1 representing assessments early in the year, and Time 2 representing assessments at the conclusion of the PLD workshops.

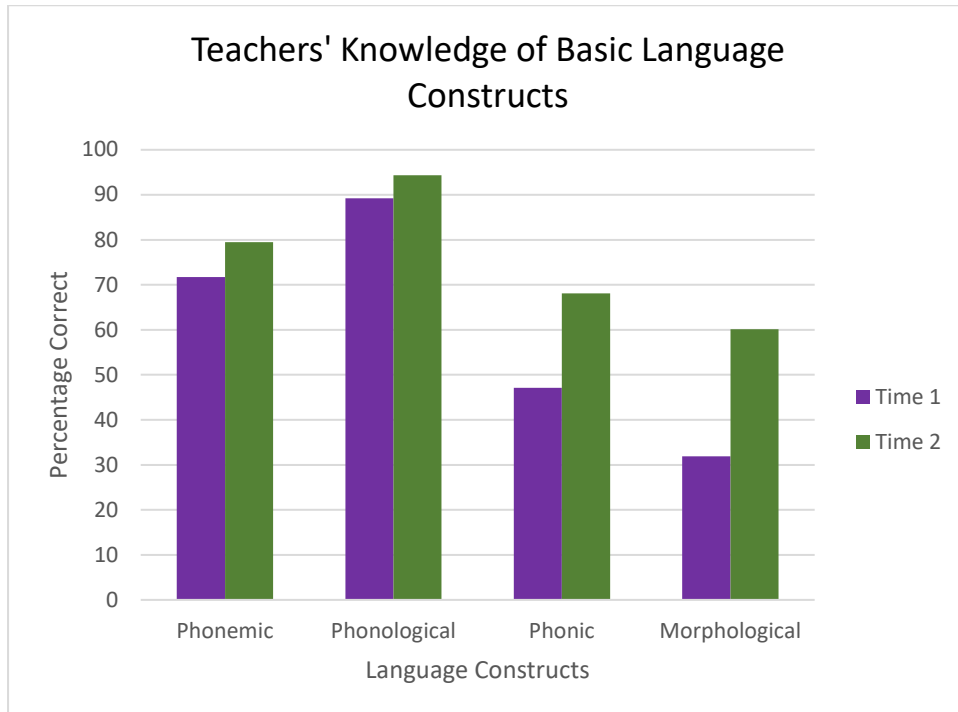


Figure 6: Percentages of Mean Correct Answers for Questions on Knowledge of Basic Language Constructs.

These results indicate that the PLD workshops had a positive impact on teacher knowledge. That said, reasonable gaps were still apparent in both phonic and morphological areas; improvement of these two knowledge areas would likely further improve teachers' practice with specific and explicit teaching.

### Teaching Practice

We analysed observations of teaching practice in small group reading instruction, and the approach teachers reported using when helping a child in the process of reading (teacher prompts). An observation rubric was developed to facilitate analysis of small group literacy teaching practice. A teacher prompts scenario was developed to analyse teachers' approaches to helping children correct mistakes or to work out unknown words during reading.



### Observations

In small group reading instruction, our focus in the intervention workshops was on an explicit and systematic approach to word learning. This approach was used because it is necessary for children to be able to decode words quickly so they can obtain meaning from the texts they read. From the observation data, teaching approaches were identified as either implicit or explicit. Implicit practices were those characterised by instruction that included the text selection that was the focus of the lesson; any word-level instruction was provided as the need arose in the text. In contrast, explicit instruction was based on the teacher choosing a specific text feature (or phonic pattern), providing direct instruction for the feature before reading the text.

Observation data were available from 21 teachers who supplied video samples of their teaching both before and after the PLD programme. The results showed that prior to the PLD programme, teaching practice in small group instruction followed an *implicit* approach, categorised as either Incidental or Implicit for developing word identification strategies. All lessons supplied by the teachers showed Incidental or Implicit teaching practices. None showed Explicit or Systematic approaches to the development of word decoding skills.

The results towards the end of the year, following the PLD programme, showed important and meaningful changes for many teachers. Almost 50% of videoed lessons showed stronger explicit or systematic word level instruction.

The changes to teaching practice that teachers made most easily were in the lesson focus and reading materials used. Many teachers modified their lessons by adding focused teaching time that used materials such as magnetic letters. Text selection and specific teaching strategies generally remained more implicit.

We found that many teachers had difficulty finding suitable texts to support the explicit teaching and application of effective decoding strategies. We also found that some teachers had insufficient time to develop instruction that involved explanations and modelling, instead of the traditional teacher questioning that tends to be used when children come across unfamiliar words in text. Teachers who quickly grasped the advantages of moving to more explicit instruction would say, for example, *"This is the letter D; it makes the sound*

/d/". Teachers who used this approach then reduced teacher input gradually over the lesson, moving on to questions, such as "What letter is this? What sound does it make?"

### *Teacher Prompts*

The teacher prompts scenarios asked teachers to write briefly about what prompts they would use to help children when they came across an unknown word, or when they made a mistake by saying a wrong word ("get" instead of "take"), or making up a non-existent word ("crooms" instead of "crumbs"). We presented five typical reading error responses taken from *Ready to Read* texts. The prompts were categorised as to whether they used a word-level prompt as the first prompt and whether there was specific direction to use a decoding strategy.

At Time 1, before the PLD programme, teachers' prompts involved a high proportion of questions that asked about the meaning or the structure of the sentence. Over 70% of the initial prompts were of this nature. At Time 2, after the PLD programme, there was a shift to 50% of prompts focussed on a word cue first, and 65% on a specific decoding strategy.

### *Teacher Interviews*

We interviewed four teachers to obtain a more in-depth insight into what teachers found to be enablers and barriers to changing practice. The interview questions were based on practices shown in the teachers' videos, and they were designed to reveal how teachers were applying the information from the PLD workshops.

**Barriers** to changing teaching practice included beliefs about how to teach reading, based on the primacy of using multiple cues when identifying unknown words in text and minimal value on the role of word-level decoding skills. These beliefs were reflected in set teaching practices that some teachers found difficult to change in the relatively short period that the PLD programme ran for. Resources were also seen as a barrier to changing practices. The *Ready to Read* texts are based on natural language and consequently do not provide much opportunity for children to quickly learn word patterns. Some teachers used the *Little Learners Love Literacy* (see <https://littlelearnersloveliteracy.com.au/pipandtim-books>)

decodable texts, which were supplied by the project to the lowest decile band schools<sup>4</sup>. Teachers who used them found the more decodable approach in these texts to be very helpful during the early stages of literacy learning.

**Enablers** of changed practice included provision in the PLD workshops of a scope and sequence that was based on the developmental phases of word learning. This provided a structure for teaching that was welcomed by most workshop participants. The increases in teacher knowledge of language factors that are crucial in learning to read, write and spell, were embraced by many of the teachers; they commented that they felt the new knowledge really improved their teaching. Many teachers also commented that collegial support helped them to make changes. When changes were made across a team, teachers reported feeling positive about making changes and positive about the impact these would have on children's literacy learning outcomes. Not surprisingly, children's improved progress resulting from changes were very reinforcing.

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<sup>4</sup> Intervention schools received a package of resources which differed by decile band. All schools received a package of magnetic letters and small decodable texts from Smart Kids. Mid-decile schools also received a set of structured *Word Detective* readers from Gilt Edge Publishing. In addition to all of the materials mentioned here, Low decile schools also received the *Little Learners Love Literacy* texts.

## SUMMARY OF THE RESEARCH RESULTS

The results reported for this Early Literacy Research project show improved literacy learning outcomes for most children in the Intervention group. The improvements were particularly strong for children in low decile schools. Children in low decile schools are often seen as those most likely to benefit from explicit and systematic instruction in word-level decoding skills during the early stages of literacy learning.

Data from teachers showed important and meaningful changes by many in terms of teacher knowledge of the language factors that are crucial for effective literacy teaching. The data also showed changes in teachers' understanding about literacy teaching, revealing higher levels of self-confidence. In addition, video clips of small group literacy teaching indicated that many teachers were able to change their practices, based on information provided in the PLD programme. Such changes were also reflected in many teachers' shifting from providing text-based prompts to word-level prompts when scenarios were presented relating to common reading errors or mistakes that children make during early literacy learning.

Although there continued to be some challenges and barriers that impeded changes to some deeply ingrained teaching practices, the changes that were made clearly had important outcomes for children—especially for children in low and middle decile schools.

## RECOMMENDATIONS FOR TEACHING

In this section, an approach to teaching early reading and spelling is outlined. This approach includes the integrated use of assessment, a scope and sequence, explicit instruction and differentiation. It draws on the most effective components of the PLD programme that the participating teachers found worked well with children and for them. The approach can be used as an entire literacy programme as it includes language development as well as integrated reading and spelling instruction from the start of literacy instruction.

Language instruction is led by vocabulary development as well as listening and speaking. Whole-class listening and speaking instruction and activities are a strength of early classrooms. To support language development this approach includes explicit vocabulary instruction through the use of picture books or big books. By moving vocabulary instruction from guided reading to whole-class teaching, all children are given the opportunity to learn new oral language words that they might not be able to access in their own reading materials due to their level of decoding skill.

In this approach, we move the type of instruction provided within commercial phonics programmes into the small group instruction that includes reading. This is not an additive model in which phonics instruction is provided and followed by guided reading. In this approach guided reading is replaced by small group work that integrates reading, spelling, and the practice of phonic knowledge in reading specially selected texts, or in guided writing. The specially selected texts are those that have meaning, but are constructed using only those elements of language children have learned up to that point in the scope and sequence. Guided reading still occurs in classrooms, but only once children have sufficient knowledge of phonic patterns to be able to focus on reading for meaning.

### Using a scope and sequence

The main component of the approach for reading and spelling is the use of the specifically developed scope and sequence. This scope and sequence drives instructional decision making and resource choice to apply in the explicit instruction. For the most effective use, it also requires assessment; initial screening assessment of letter knowledge and

phonological awareness will enable initial identification of the child's level of knowledge within the scope and sequence. Ongoing progress monitoring allows teachers to identify children who can be accelerated, or who need their progress through the scope and sequence to be slowed down for more targeted instruction.

The scope and sequence has four phases.

1. Letters and sounds. Children who begin school with low levels of letter knowledge and phonological awareness would begin in this phase. It is expected that most children would begin in this phase because most children start school with low letter sound knowledge. Phase 1 is developed so that three letters and one to three high frequency words are taught each week. In this phase children are also taught how to blend sounds so they can decode simple CVC (consonant-vowel-consonant) words and how to segment them so they can attempt spelling words.
2. Blends and digraphs. Once children are proficient in using letter sounds, and in blending single sounds, they progress to Phase 2. The first week is revision of Phase 1. Children are then taught how to use consonant blends and digraphs in reading. This is followed by trigraphs (e.g. /tch/ as one sound), double letter patterns and vowel split digraphs (magic-e). Blending and segmenting continue as strategies but children are also now taught to use context cues to check their decoding attempts. High-frequency words continue to be taught.
3. Vowels. Once children are proficient in using single letter sounds, blends, and digraphs in both reading and spelling, they move onto vowels. In this phase a variety of the most common vowel-team patterns are taught. It is in this phase that children will begin to be able to read independently *Ready to Read* texts from approximately yellow level. They have mastered sufficient decoding patterns that the emphasis can begin to shift to reading for meaning. It is also during this phase that punctuation and sentence construction can be taught explicitly. High frequency words continue to be taught.
4. Syllables and morphemes. Once children are proficient in using vowel-teams they move into Phase 4. Although this phase is identified as part of the early

literacy scope and sequence, it is also an ongoing phase in which the learning of its components will continue throughout the primary school years.

The Scope and Sequence design is presented in the table that follows.

## Scope and sequence

Phase	Week	Phonic knowledge	Strategy	High frequency words
1*	1-3 4 5 6 7 8 9	PA, 1:1, assessment Letter names & sounds: Bb, Tt, Pp, Oo, Aa Ss, Dd, Jj, Ee, Uu Kk, Mm, Ff, Rr, Ii Nn, Hh, Ll, Vv, Zz Gg, Cc, Ww, Yy Qq, Vv <i>Blending and segmenting across all weeks</i>	<ul style="list-style-type: none"> <li>• Print words are made up of letters</li> <li>• Letters have sounds that can be blended together to make words</li> <li>• Blend together to read simple words</li> <li>• Write letters to match sounds</li> </ul>	the  of, and a, to, in is, you, that it, he, was for, on, as
2	1 2 3 4 5 6 7 8 9	Revision sl, bl, pl, cl, fl br, cr, dr, fr, tr, pr sh, ch, wh, th, ph spr, str, scr, spl mp, nd, ft ng, tch, dge ck, ll, ss o_e, a_e, u_e, i_e	<ul style="list-style-type: none"> <li>• Blend together words with blends to read</li> <li>• Blend sounds including digraphs to read words</li> <li>• Use context cues to check decoding</li> </ul>	his, i, at, be from, have, or with, they, this had, by, word, but not, what, all, were we, when, your, can said, there, use, an she, do, their, if will, up, other, about



3	<p>1 2  34 5 6 7 8 9</p>	<p>Revision Vowel digraphs as one sound ai, ay, ei, ey, au, aw, ea ie, ee, ei, igh, ough oe, oa, ow, oo ew, ue oi, oy, ou, ow er, ir, ur, or, ar</p>	<ul style="list-style-type: none"> <li>• Recognise and use vowel digraphs in blending to read words</li> <li>• Finding and explaining punctuation</li> <li>• Using punctuation for fluency</li> </ul>	<p>each, which, out, many then, them, these, so</p> <p>some, her, would, make like, him, into, time has, look, to, more right, see, go, number no, way, could, people my, than, first, water been, who, call, now</p>
4 Ongoing	<p>Syllables Closed, open Vowel-consonant –e, vowel team Vowel-r, consonant-le</p> <p>Morphemes Base words &amp; inflections Compound words Prefixes Suffixes</p>	<ul style="list-style-type: none"> <li>• Looking for syllables and morphemes for decoding words</li> <li>• Using context and syntactic cues to confirm decoding</li> <li>• Whisper reading to silent reading</li> <li>• Main ideas and summarising</li> </ul>	<p>No longer necessary to teach high-frequency words as all can be decoded.</p>	

### Explicit and systematic instruction in learning to read words

In this approach, **explicit** instruction is defined as instruction that begins a lesson with a specific explanation statement that tells children what they are learning. For example, in the seventh week of Phase 3, the explicit explanation statement for phonic knowledge teaching would take the form of:

*“We are learning two new vowel digraphs today. Each of these digraphs make the same vowel sound but are spelt differently. The vowel sound is [ew]; the first spelling is E W and the second spelling is U E. I find the first spelling in the word threw (teacher spells it) and the second spelling in the word clue”*

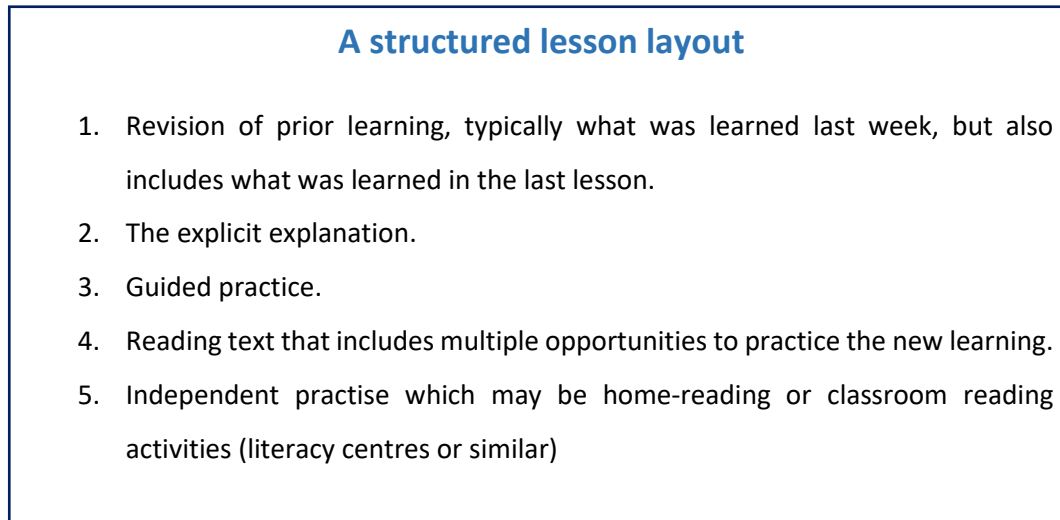
Within each week of the scope and sequence, the new phonic patterns learned are continuously revised. Students are also introduced to high-frequency words. The scope and sequence provided here uses the 100 most high-frequency words internationally rather than from the word frequency from the *Ready to Read* series. However, it will need adjusting to remove redundancy based on the scope and sequence itself. A high-frequency word instructional lesson would also have explicit instruction but would be slightly different. For example,

*“This weeks high frequency words are no, way, could, and people. Let’s start with people. It is spelt P E O P L E (orally spelled out while writing it into a word). This word is people ...”*

Beyond the explicit explanation of what is being learned, the other necessary component of explicit instruction is **structure**. The structure is in terms of how the lesson is run by the teacher. We use a five-step structured lesson plan (see the overview on the next page). The lesson structure is based on both cognitive science, and research on what works for students (see <https://deansforimpact.org/resources/the-science-of-learning/>).

The explicit explanation is followed by guided practice in which the children practise reading and spelling words using those patterns outside of reading materials. This guided practice would include children making words using magnetic letters, or it could include

children writing words with whiteboard makers. In Phase 1, it is important that children spend some time writing letters and words with pens or markers because it also provides opportunities for children to learn the handwritten formation of the letters they are working on. Indeed, aligning handwriting with the reading and spelling instruction is supported by research.



*Figure 7: Overview of the five step structured lesson plan*

An example of the lesson plan structure for the teaching of three of the letters in the fifth week of Phase 1 is presented on the following page. It provides examples of what is revised, the explicit instruction given, as well as guided practice (steps 1-3 of the structured lesson). In the fourth step, children read a carefully selected text that includes multiple opportunities to practise reading words with the new learning. These texts should not include words containing patterns that they have not yet met, except for those high frequency sight words that have already been learned. This fourth step of the instruction may also include writing that includes words using the learnt pattern.

The final step, independent practice, may include another activity with the teacher that is based on the new learning, or it could be the home-learning activity, or it could be classroom literacy centre activities. All should be based what was explicitly taught in the lesson just given.

Table 1: Phase 1 teaching K, M, F example

Lesson step	Example
Teacher preparation	Select additional letters from previous letters to support the teaching of new letters and sounds. Select a decodable text to match the new letters <i>or</i> construct several short sentences using words containing only previously learned letter units or sight words
Revision	Review prior learning including letters learned the week before: S, D, J, E, U as well as any others from the week before that may need revising. Also sight words: the, of, and.
Explicit explanation	“We are learning three more letters today. Our first letter is K which makes a /k/ sound. The next letter is M which makes a /m/ sound, and our next vowel, I which makes a /i/ sound. Let’s say the name and sound of each letter together while you put the letter in front of you [if using magnetic letters, otherwise have them write the letter on their own whiteboards].”
Guided Practice	Start this section with practise in saying the sounds of the letters and then move into asking children to spell, then read words using the new and previously learned letters (e.g., mat, kip, kid, sam, tom). Teachers would model segmenting sounds to spell, and blending sounds to read, while reminding children that they have learned these strategies over previous weeks.
Reading text	The children are asked to read a carefully selected text that includes multiple opportunities to practise reading words containing the new letter sounds learned. They would also contain words with previously learned letter sounds and sight words.
Independent practice	Following this lesson children may re-read the text, practice the new and previous letters on letter cards, tablet/iPad activities.

Note: the following three letters for this week and the high frequency words are taught on following days.

The planning guide for activities and resources on the following page provides some guidance on activities and resources to use when planning these lessons, and for follow-up activities. A lesson plan template is also presented in the Appendix.

This approach is **systematic** when following the scope and sequence. It means that all features of the English language writing system are taught, and build on prior learning. It ensures that children have developed the constrained foundation skills for decoding unknown words before asking them to use their higher order skills when reading independently. The teaching of higher order skills is provided in the whole-class shared reading time. However, once children have acquired the foundation skills across Phases 1 to 3, they would then be focused on the higher order skills in the small group time which would now be a guided reading approach.

Planning guide for additional teaching activities and resources

Phase 1	Phase 2	Phase 3	Phase 4
<b>Additional teaching activities</b>			
<ul style="list-style-type: none"> <li>• Explicit syllable and rime awareness instruction</li> <li>• Matching spoken word to printed unit reinforced with predictable texts</li> <li>• Initial sound sorting</li> <li>• Teaching names and sounds</li> </ul>	<ul style="list-style-type: none"> <li>• Explicit instruction in blends, sounds, sight words and strategy use</li> <li>• Reinforce with decodable text</li> <li>• Sounding and blending</li> <li>• Segmenting and blending</li> <li>• Say it and move it</li> <li>• Irregular and regular high frequency words</li> </ul>	<ul style="list-style-type: none"> <li>• Explicit instruction in patterns, strategy use, sight words and cross-checking attempts</li> <li>• Reinforce with a combination of decodable and levelled text</li> <li>• Irregular and regular high words</li> <li>• Analogy use</li> <li>• Teaching letter patterns</li> <li>• Question clusters</li> <li>• Direct comprehension instruction</li> </ul>	<ul style="list-style-type: none"> <li>• Explicit instruction reinforced with levelled text</li> <li>• Question clusters</li> <li>• Direct comprehension instruction</li> <li>• Story mapping</li> <li>• Text structure</li> <li>• Summarisation</li> </ul>
<b>Independent extension and home activities</b>			
<ul style="list-style-type: none"> <li>• Alphabet ring cards with letters that are already learned and being learned attached.</li> <li>• Mum &amp; Dad encouraged to read child’s library book to them and find letters in it.</li> </ul>	<ul style="list-style-type: none"> <li>• Decodable texts or teacher created sentences to re-read</li> <li>• Alphabet &amp; high-frequency words on rings to practice for fluency</li> </ul>	<ul style="list-style-type: none"> <li>• Texts with taught units within – levelled texts</li> <li>• Spelling words with taught units (not tested, just practiced)</li> <li>• Whisper reading</li> </ul>	<ul style="list-style-type: none"> <li>• Texts with taught units within</li> <li>• Spelling words with taught units (not tested, just practiced)</li> <li>• Silent reading</li> <li>• Asking questions about story and discussing</li> </ul>

<b>Centre/rotation activities</b>			
<ul style="list-style-type: none"> <li>• Handwriting using letters</li> <li>• Using phonic apps to practice sounds of letters</li> <li>• Dictating stories to teacher, peer, or into book apps</li> <li>• Reading known picture books and shared reading books – finding known letters</li> </ul>	<ul style="list-style-type: none"> <li>• Creating words with letters</li> <li>• Sentence construction with h-f words and punctuation cards</li> <li>• Handwriting using letters and words</li> <li>• Partner reading decodable texts</li> <li>• Phonics apps</li> </ul>	<ul style="list-style-type: none"> <li>• Games or apps to reinforce larger units</li> <li>• Handwriting and spelling using learned units</li> <li>• Genre writing using learned units and sight words</li> <li>• Partner reading</li> </ul>	<ul style="list-style-type: none"> <li>• Games or apps to reinforce larger units</li> <li>• Handwriting and spelling using learned units</li> <li>• Genre writing using learned units and/or summarise story</li> <li>• Partner or silent reading</li> </ul>
<b>Resource types to use</b>			
<ul style="list-style-type: none"> <li>• Letters (magnetic, plastic, foam, flash cards)</li> <li>• Letter-sound flip-charts (e.g., Smart Kids)</li> <li>• Smart Kids phonics 1</li> <li>• Yolanda Soryl stage 1 resources</li> <li>• Predictable texts (original RtR and PM books)</li> <li>• Alphabet books</li> <li>• Sounds like Fun (Allcock)</li> </ul>	<ul style="list-style-type: none"> <li>• Decodable texts (Yolanda Soryl EW readers 1 &amp; 2; Word detective; Letterland; About Words; Jolly Readers; Little Learners)</li> <li>• Alphabet cards &amp; resources</li> <li>• High-frequency word cards</li> <li>• Punctuation cards</li> <li>• Smart Phonics 2 kit</li> <li>• Yolanda Soryl stages 3-5</li> <li>• Sounds like Fun</li> </ul>	<ul style="list-style-type: none"> <li>• Levelled texts (yellow +, particularly PM+ range; Word detective)</li> <li>• Syllable and morpheme apps or games</li> <li>• Smart Phonics 3 kit</li> <li>• Yolanda Soryl stages 6-7 (if available)</li> </ul>	<ul style="list-style-type: none"> <li>• Levelled texts (Green +; all trade books including Ready to Read)</li> <li>• Comprehension activities and resources</li> <li>• Syllable and morpheme apps or games</li> </ul>

Using this structured and explicit approach means that the isolated teaching of phonics can be removed from the literacy programme. The teaching of phonics is an integral part of the teaching of reading. By putting the two aspects of the programme together children will be able to apply their phonics knowledge in reading and spelling from the start of their entry into a literacy programme.

### Explicit and systematic instruction in learning oral vocabulary words

Explicit instruction of oral language is also necessary, but best undertaken in the whole-class setting. This explicit instruction of oral language, particularly vocabulary, in the whole-class instructional setting, means that all children learn a range of vocabulary items that they may not otherwise have access to. The choice of vocabulary is open to teachers, although we have two recommendations for the choice of words used.

1. The first is that the words are based in academic language; that they are not simple words, but nor are they technical language words. Although technical language words will occasionally need to be taught, words like *compare*, *contrast*, *vanished*, *disappointed* are much more useful for children to apply in their own oral language.
2. The second recommendation is the words should be those that are relevant to other curriculum areas, such as what is being learned within the social sciences or science curriculum.

The explicit instruction of vocabulary should follow the same pattern of explicit instruction recommended for the scope and sequence. It differs in that we do not require children to read the words; we only require them to add these to their receptive (known) vocabularies and to use them in their own talk. It also differs in that all children are taught the new words, not just the children who can read them off the page.

### Assessment and Differentiation

A scope and sequence is sometimes considered to be a 'lock-step' approach to teaching. This is not the case. The current scope and sequence does provide a weekly breakdown of systematic instruction. However, it is recognised that some children will, through their own self-improving mechanism, quickly and implicitly learn many word patterns (blends, digraphs, vowel digraphs) and high-frequency words.



The scope and sequence can also be used by placing children into a phase based on their knowledge and teaching from that point, rather than needing to explicitly teach all children the same thing at the same time.

Screening at school entry is the first type of assessment that is necessary in this approach to early literacy. The two most important forms of knowledge that require screening at school entry are:

- *Letter name and letter sound knowledge.* This can be upper and lower case, or just lower case. Lower case is the most common format children will see in the classroom so it is more relevant for initial instruction.
- *Phonological awareness.* Initial screening is to identify if any children can already blend and segment sounds in words (phoneme awareness). Many children will do poorly on this but it does not automatically follow they will have difficulty in learning to read.

It would be expected that most children do not do well on either screening measure and they will start at the beginning of the scope and sequence. Children who have full letter sound knowledge should start in Phase 2 of the scope and sequence.

Ongoing progress monitoring is essential to ensure that children are receiving the optimal instruction for their current strengths and needs in reading and spelling. By monitoring progress, children can be moved to the place in the scope and sequence for which they are best matched. *Progress monitoring* is the observation of learning that takes place during lessons throughout the scope and sequence.

In the typical classroom, this would mean using assessment data (screening or progress monitoring) to differentiate by creating groups as closely aligned as possible and teach from the lowest point in the scope and sequence that children in the group meet. Some children would be taught elements they already know, but this will continue to reinforce their developing knowledge and skills.

If children are not making the expected progress then the teacher should slow down the progression through the scope and sequence. This could mean that instead of three letters per week, they may focus on one or two. Or, they may teach letters one week and high

frequency words and letter revision the next week. This would mean that progress through the phase would take longer, but the child is still getting the focused learning they require to progress.

Flexibility is thus a key part of the approach, by recognising children's progress and moving them to the right part of the scope and sequence instead of continuing to keep them with the same group.

### Other assessments

Other forms of assessment may, from time to time, be helpful to determine how children are using their knowledge for word reading. These forms of assessments, and their purpose, are noted below.

- |   |   |
|---|---|
| <b>Blends and digraphs:</b>   | Assessing children's knowledge of blends and digraphs can be used as a further screening measure to identify the correct placement into Phase 2.  |
| <b>Nonword reading:</b>   | Assesses children's ability to use blending as a reading strategy, necessary for the transition from Phase 1 to Phase 2. It can also be used to check children's knowledge of different phonic elements within words across Phases 1 to 3.          |
| <b>Spelling:</b>  | Assesses children's ability to use segmenting as a spelling strategy, necessary for the transition from Phase 1 to Phase 2. It can also be used to check children's knowledge of different phonic elements for spelling words across Phases 1 to 3. |
| <b>Single word reading (e.g., Clay reading or Burt word reading):</b> | Assesses children's knowledge of high frequency words and level of independence in reading words without context cues.  |

**Running records or PM Benchmark:** Assesses children’s ability to read connected text. Can be used as an outcome measure to identify how children use context and syntax to support decoding. Also useful as a measure of fluency.

**Concepts about print:** Assesses children’s explicit knowledge of a range of literacy concepts. Could be used as a screening measure.

### Summary of recommendations for teaching

This section has outlined an approach for teaching early literacy that combines whole-class instruction with small-group instruction for reading and spelling. Whole-class instruction provides instruction in oral vocabulary and concepts about print using picture books and big books. Small-group reading and spelling instruction combines phonics instruction with the reading of connected text and learning to spell words. The small group instruction is based on the use of a scope and sequence and assessment to ensure children are receiving the most precise instruction to meet their current strengths and needs. Both small-group and whole-class instruction are taught using explicit explanations but differ in the instructional strategies immediately following the explicit explanations.

## RECOMMENDED READINGS

- Arrow, A. W., & Tunmer, W. E. (2012). Contemporary reading acquisition theory: The conceptual basis for differentiated reading instruction. In S. Suggate & E. Reese (Eds.), *Contemporary debates in childhood and education* (pp. 241-249). London: Routledge.
- Castles, A., Rastle, K., & Nation, K. (2018). Ending the reading wars: Reading acquisition from novice to expert. *Psychological Science in the Public Interest*, 19(1) 5–51.  
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- Moats, L. C. (1999). *Teaching reading IS rocket science: What expert teachers of reading should know and be able to do*. Washington, DC: American Federation of Teachers.  
[https://www.aft.org/sites/default/files/reading\\_rocketscience\\_2004.pdf](https://www.aft.org/sites/default/files/reading_rocketscience_2004.pdf)

APPENDIX: Explicit instruction lesson template for small-group teaching

<b>Phase:</b> <b>Content:</b> <b>Strategy:</b>	
<b>Children</b>	
<b>Specific items being taught</b>	
<b>Resources:</b>	
<b>15 minute session</b>	<b>Recap of previous session and reminders about how it helps with reading</b>
	<b>Explicit instruction</b>
	<b>Guided practice in content and strategy</b>
	<b>Integrating content and strategy in reading/writing through discussion/guiding questions</b>
	<b>Reading/writing independently</b>