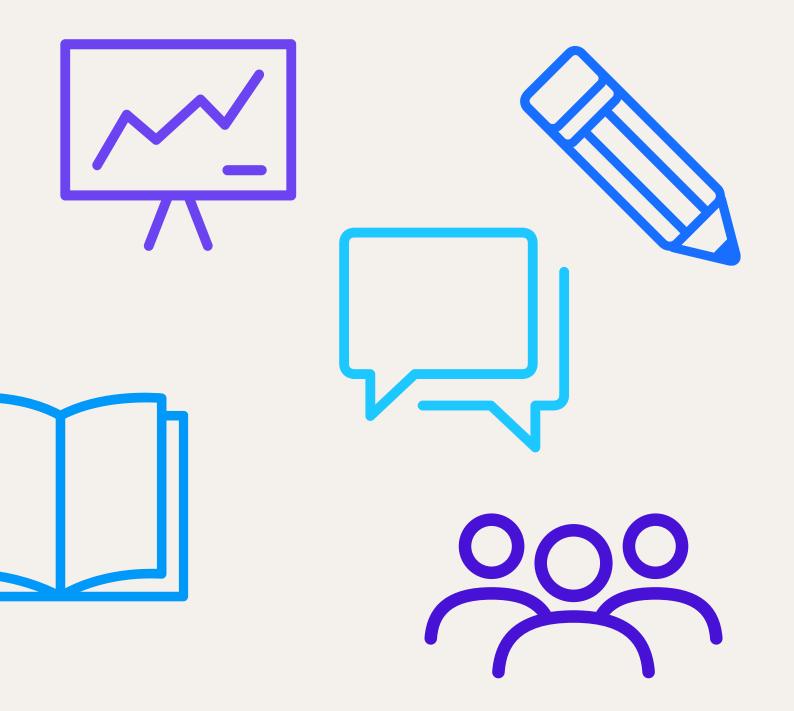


Guidance Report

Upper primary

Improving literacy in upper primary



This guidance report is based on original content from 'Improving Literacy in Key Stage 2' produced by the Education Endowment Foundation (EEF). The original content has been modified where appropriate for Australian context.

The authors of the original Guidance Report are Prof Steve Higgins, Thomas Martell, Dr David Waugh, Peter Henderson and Professor Jonathan Sharples. Australian content for this Evidence for Learning Guidance Report was provided by Matthew Deeble, Danielle Toon, Dr Tanya Vaughan and Susannah Schoeffel.

Evidence for Learning (E4L) thanks the Australian researchers and practitioners who provided input to and feedback on drafts of this Guidance Report. We acknowledge the insights and support of Anne Castles, Saskia Kohnen, Genevieve McArthur and Rauno Parrila (Macquarie University Centre for Reading). It is expected that we will update this Guidance Report in response to recently published and soon-to-be published research, in line with the next version coming from the EEF.

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Foreword

Good literacy skills provide us with the building blocks not just for academic success, but for fulfilling careers and rewarding lives. Yet despite our best efforts, a student in year 7 from the lowest quintile of social economic status (SES) is more than 10 times as likely to have reading skills below national minimum standard in comparison to a peer in the highest quintile of SES.¹

At Evidence for Learning, we believe the best way to break this link between family income and educational attainment is through better use of evidence: looking at what has—and has not—worked in the past can help us to decide what is likely to work in the future.

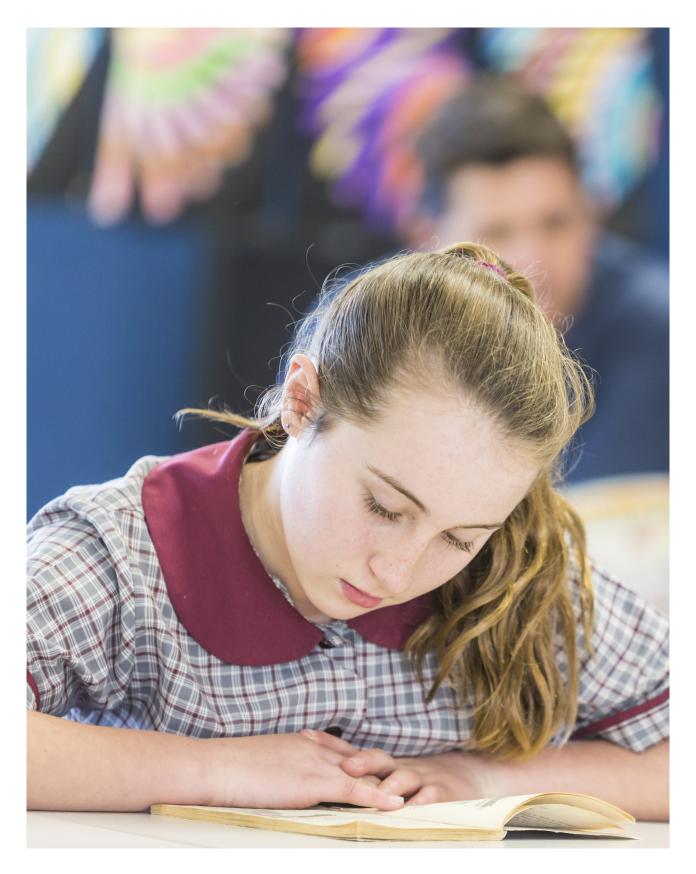
It can be difficult to know where to start. There are thousands of studies of primary literacy teaching, most of which are presented in academic papers and journals. Teachers are inundated with information about programs and training courses, all of which make claims about impact. How can anyone know which findings are the most robust, reliable and relevant to their school and students?

This is why we have produced this Guidance Report. Developed by our UK partner, the Education Endowment Foundation and updated for Australian audiences, it offers seven practical evidence-based recommendations—which are relevant to all students, and particularly for those struggling with their literacy. To develop the recommendations, the EEF reviewed the best available international research and consulted experts to arrive at key principles for effective literacy teaching. We at Evidence for Learning added to this Guidance Report through consultation with Australian Researchers and practitioners.

Of course, this Guidance Report on its own will not improve the literacy of primary school students. It is only when the research knowledge summarised in this guide is combined with teachers' professional judgement and expertise that students in classrooms across Australia will benefit.

We hope this guide will help to support a consistently excellent, evidence-informed primary system in Australia that creates great opportunities for all children, regardless of their family background.

The Evidence for Learning Team



Introduction

What does this guide cover?

This report is part of a series providing guidance on literacy teaching. It builds on the recommendations presented in our 'Improving literacy in lower primary' Guidance Report and is specific to the needs of students at the upper primary level (ages seven to eleven). It may also be applicable to younger students who are making rapid progress or older students who have fallen behind their peers. We will also be producing a report that covers the typical requirements of teaching literacy in secondary school.

In upper primary, students are consolidating their literacy skills, building their vocabulary and developing their fluency and confidence as speakers, writers and readers of language. While many of the strategies and examples presented in this report are similar to those in the lower primary Guidance Report, they are often more complex and multi-staged, reflecting the increasing depth and breadth of students' knowledge and skills. Students will be using strategies with increasing independence and sophistication, and will develop the capability to combine strategies.

This report is not intended to provide a comprehensive guide to literacy in upper primary school. The recommendations represent seven 'lever points' where there is useful evidence about literacy teaching that schools can use to make a significant difference to students' learning. The report focuses on pedagogy and approaches that are supported by good evidence; it does not cover all the potential components of successful literacy provision. Some will be missing because they are related to organisational or leadership issues; other areas are not covered because there is insufficient evidence to create an actionable recommendation in which we have confidence. There are other important issues to consider, including, but not limited to, leadership, staff deployment and development, parental engagement, and resources and technology.

This guide draws predominately on studies within the Teaching & Learning Toolkit.² As such, it is not a new study in itself, but rather is intended as an accessible overview of existing research with clear, actionable guidance. More information about how this guide was created is available at the end of the report.

Who is this guide for?

This guide is aimed primarily at literacy coordinators, principals, and other staff with leadership responsibility in primary schools. Senior leaders have responsibility for managing change across a school so attempts to implement these recommendations are more likely to be successful if they are involved. Classroom teachers will also find this guide useful as a resource to aid their day-to-day literacy teaching.

It may also be used by:

- school councils and parents to support discussions with school staff;
- program developers to create more effective Professional Learning and interventions; and
- educational researchers to conduct further testing of the recommendations in this guidance and to fill in any gaps in the evidence.

Improving literacy in upper primary

Summary of recommendations

This Evidence for Learning Guidance Report contains seven recommendations regarding the teaching of literacy to students aged between seven and eleven.

The recommendations are arranged in five groups:



For each recommendation, we have provided a statement regarding the strength of the evidence underpinning that recommendation, and an 'evidence summary' box that describes the supporting evidence. More information about the process used to create these statements is available in the 'How was this guide compiled?' section.

Overleaf is a summary of the recommendations.

Summary of recommendations

1



Develop students' language capability to support their reading and writing

Purposeful speaking and listening activities support the development of students' language capability and provides a foundation for thinking and communication.

Purposeful activities include:

- reading books aloud and discussing them;
- activities that extend students' expressive and receptive vocabulary;
- collaborative learning activities where students can share their thought processes;
- structured questioning to develop reading comprehension;
- teachers modelling inference-making by thinking aloud; and
- students articulating their ideas verbally before they start writing.

2



Support students to develop fluent reading capabilities

Fluent readers can read quickly,

Fluent reading supports comprehension because students' cognitive resources are freed from focusing on word recognition and can be redirected towards comprehending the text.

accurately, and with appropriate

stress and intonation.

This can be developed through:

- supported reading instruction teachers model fluent reading of a text, then students read the same text aloud with appropriate feedback; and
- repeated reading—students re-read a short and meaningful passage a set number of times or until they reach a suitable level of fluency.

It is important to understand students' current capabilities and teach accordingly. Most students will need an emphasis on developing reading fluency, but some students may need a focus on more basic skills, such as decoding and phonological awareness.

K



Teach reading comprehension strategies through modelling and supported practice

Reading comprehension can be improved by teaching specific strategies that students can apply both to monitor and overcome barriers to comprehension. These include:

- activating prior knowledge;
- prediction;
- · questioning;
- clarifying;
- summarising; and
- inference.

The potential impact of these strategies is very high, but can be hard to achieve, since students are required to take greater responsibility for their own learning.

The strategies should be described and modelled before students practise the strategies with feedback. Support should then be gradually reduced as students take increasing responsibility.

Texts should be carefully selected to support the teaching of these strategies.

See page 8 See page 10 See page 12 4



Teach writing composition strategies through modelling and supported practice

Purpose and audience are central to effective writing. Students need to have a reason to write and someone to write for.

Writing can be thought of as a process made up of seven components:

- planning;
- drafting;
- sharing;
- evaluating;
- · revising;
- editing; and
- publishing.

Effective writers use a number of strategies to support each component of the writing process. Students should learn how, when, and why to use each strategy. For example, students' planning could be improved by teaching the strategies of goalsetting and activating prior knowledge.

The strategies should be described and modelled before students practise them with feedback.

Support should then be gradually reduced as students take increasing responsibility.

See page 14 5



Develop students' transcription and sentence construction skills through extensive practice

A fluent writing style supports composition because students' cognitive resources are freed from focusing on handwriting, spelling, and sentence construction and can be redirected towards writing composition.

Extensive practice, supported by effective feedback, is required to develop fluent transcription skills.

Spelling should be explicitly taught, and diagnostic assessment should be used to focus effort on the spellings that students are finding difficult.

Students should practise sentence-combining and other sentence construction techniques.

ee page

6



Target teaching and support by accurately assessing student needs

High-quality assessment and diagnosis should be used to target and adapt teaching to students' needs.

Rapid provision of support is important, but it is critical to ensure it is the right support. Diagnostic assessment can be used to inform professional judgement about the best next steps. Diagnostic assessment makes teaching more efficient by ensuring that effort is not wasted on rehearsing skills or content that a student already knows well.

A range of diagnostic assessments are available, and staff should be trained to use and interpret these effectively.

This approach can be used for high- and low-attaining students and for whole-class and targeted interventions.

7



Use high-quality structured interventions to help students who are struggling with their literacy

Schools should focus first on developing core classroom teaching strategies that improve the literacy capabilities of the whole class. With this in place, the need for additional support should decrease. Nevertheless, it is likely that a small number of students will require additional support.

There is a strong and consistent body of evidence demonstrating the benefit of structured interventions for students who are struggling with their literacy. The first step should be to use accurate diagnosis of capabilities and difficulties to match students to appropriate interventions.

See page 18 See page 20 1

Develop students' language capability to support their reading and writing



Evidence summary

This recommendation is based on extensive evidence from nine meta-analyses that include studies of students aged seven to 11. These studies examine a range of areas related to speaking and listening skills, and a range of outcomes including reading and writing.

Speaking and listening are at the heart of language, not only as foundations for reading and writing, but also as essential skills for thinking and communication.² Teaching should focus on students' language development, particularly their expressive language, which will also support their writing. Speaking and listening can be used to model and develop expressive and receptive language:

- articulating ideas before writing means students are not hindered by handwriting and spelling skills; and
- listening activities, such as the teacher modelling thinking aloud, can develop inference skills without the need to process the written text.

Reading to students and discussing books is still important for this age group. Exposing students to an increasingly wide range of texts, with an appropriate level of challenge, will develop their language capability. This should include active engagement with a wide range of genres and media, including digital texts.

This variation is likely to be motivating and engaging and it provides an opportunity to explicitly teach the features and structures of different types of text, which can develop more advanced comprehension and reasoning skills.³

Speaking and listening are critical to extending students' receptive and expressive vocabulary. While students may have the decoding skills required to say a word out loud, they will only be able to understand what it means if it is already in their vocabulary. Approaches to developing vocabulary can be split into two groups: (1) explicit teaching of new vocabulary and (2) exposure to a rich language environment with opportunities to hear and confidently experiment with new words. Both approaches should be used and the following points should be considered:⁴

- repeated exposure to new vocabulary is necessary across spoken language, reading and writing;
- pre-teaching and discussing new words can support reading comprehension;
- students should learn both new words and how to use familiar words in new contexts;
- vocabulary learning should entail active engagement in learning tasks; and
- digital technology can be used to help develop and teach vocabulary

Teaching students to use morphemes (root words, prefixes and suffixes) can develop their vocabulary while also improving phonological awareness, decoding, and spelling.⁵ Many words can be modified by using morphemes, so if students learn the a base of roughly 100 words they should be able to read, spell, and understand several hundred words, as well as having developed an understanding of word-building, which they can apply to other vocabulary. The Australian Curriculum language strand includes elaborations on content descriptors including phonics and word knowledge which encompasses morphemes.⁶



Box 1: Collaborative learning

The impact of collaborative approaches on learning is consistently positive, but it does vary so it is important to get the detail right. Effective collaborative learning requires much more than just sitting students together and asking them to collaborate; structured approaches with well-designed tasks lead to the greatest learning gains. Effective collaboration does not happen automatically, so students will need support and practice. Approaches that promote talk and interaction between learners tend to result in the best gains. The following should be considered when using a collaborative learning approach:

- Tasks need to be designed carefully so that working together is effective and efficient, otherwise some students will try to work on their own.
- Competition between groups can be used to support students in working together more effectively within their group, though over-use of competition can focus learners on the competition rather than succeeding in their learning, so it must be used cautiously.
- It is particularly important to encourage lower achieving students to talk and articulate their thinking in collaborative tasks, as they may contribute less.
- Professional development may be needed to support the effective use of these strategies.



2

Support students to develop fluent reading capabilities



Evidence summary

Overall, the evidence is moderate. The evidence for an integrated approach to reading is extensive, from both observational and experimental studies. There are 15 meta-analyses of different approaches to reading, but only one comparing long-term follow up effects. There is, however, limited evidence on the best way to combine approaches for different ages and capabilities to develop fluency.

Scarborough's Reading Rope (Figure 1) provides a useful model for reading by likening it to a rope comprised of multiple strands. The two main strands, word recognition and language comprehension, are supported by a broad academic consensus and underpinned by research evidence. 9,10,11,12 These two main strands are composed of sub-strands that need to 'become entwined' as students learn to co-ordinate the different components of reading.

The model can be used as a diagnostic tool to identify areas to focus effort. Although all of the strands represent an important component of reading, this does not mean that they require equal curriculum time. For example, most students will require a greater focus on their language capability (language structures and vocabulary) and reading fluency, but some will still need a focus on more basic skills, such as decoding. Therefore, it is important to understand students' current capabilities and focus effort appropriately.

Fluent readers can read quickly, accurately, and with appropriate stress and intonation. A fluent reading style supports comprehension because students' limited cognitive resources are freed from focusing on word recognition and can be redirected towards comprehending the text. Most students will benefit from being explicitly taught, rather than just being encouraged to practise individually. The following approaches are well supported by evidence: 15,16,17

- supported reading instruction—fluent reading of a text is modelled by an adult or peer and students then read the same text aloud with appropriate feedback; and
- repeated reading—students re-read a short and meaningful passage a set number of times or until they reach a suitable level of fluency.

Box 2: Word recognition in upper primary

Actively teaching reading fluency is important for all students and those recognised to be struggling are likely to benefit from targeted support.

However, diagnosis of the specific issue should be the first step for any intervention. For example, it is important to rule out weaknesses in the individual strands (decoding and phonological awareness) before attempting to 'entwine' them by developing reading fluency. Fluency can be assessed by listening to students read from an appropriate text. Various rubrics, such as the Multidimensional Fluency Scale, can be used to inform accurate diagnosis.¹⁸

Students are likely to continue to benefit from some phonic work, especially focused on less common grapheme-phoneme correspondences. Students should have mastered the most common correspondences in lower primary, but some may still need support and guidance in upper primary.



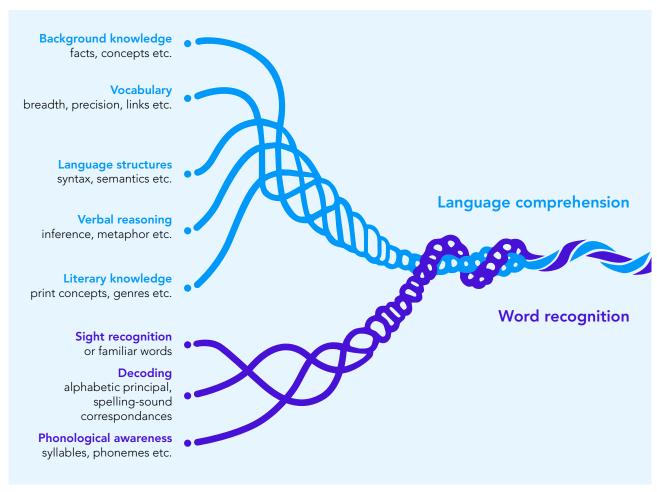


Figure 1: The many strands that are woven into skilled reading⁸

Teach reading comprehension strategies through modelling and supported practice



Evidence summary

Very extensive evidence from eight meta-analyses has consistently demonstrated the impact of teaching metacognitive strategies for reading comprehension. Much of this research has been with students aged seven to 11.

Reading comprehension can be improved by teaching students specific strategies that they can apply both to monitor and overcome barriers to comprehension. ^{19,20} A number of different strategies exist and some overlap. ²¹ The following strategies should be modelled and practised to ensure they become embedded and fluent: ^{22,23,24}

- Activating prior knowledge—students think about what they already know about a topic, from reading or other experiences, and try to make links. This helps students to infer and elaborate, fill in missing or incomplete information and use existing mental structures to support recall.
- **Prediction**—students predict what might happen as a text is read. This causes them to pay close attention to the text, which means they can closely monitor their own comprehension.
- Questioning—students generate their own questions about a text to check their comprehension.
- Clarifying—students identify areas of uncertainty, which may be individual words or phrases, and seek information to clarify meaning.
- **Summarising**—students describe succinctly the meaning of sections of the text. This causes students to focus on the key content, which in turn supports comprehension monitoring. This can be attempted using graphic organisers that illustrate concepts and the relationships between them using diagrams.
- Inference—students infer the meaning of sentences from their context, and the meaning of words from spelling patterns.

The potential impact of these approaches is very high, but can be hard to achieve, since students are required to take greater responsibility for their own learning.²⁵ This requires them to learn three things: what the strategy is, how the strategy is used, and why and when to use the strategy.¹⁸ Developing each of the strategies requires explicit instruction and opportunities to practice. Evidence-based collaborative activities and approaches, such as reciprocal teaching, which structure interaction with peers, are likely to be beneficial.^{7,25} The gradual release of responsibility model describes how greater responsibility for using these strategies can be transferred to the student:²⁶

- an explicit description of the strategy and when and how it should be used;
- 2. modelling of the strategy in action by teachers and/ or students;
- 3. collaborative use of the strategy in action;
- 4. guided practice using the strategy with gradual release of responsibility; and
- 5. independent use of the strategy.

These strategies can be introduced in isolation, but students should also be taught how to integrate combinations of strategies to develop effective comprehension of different texts. The effectiveness of teaching students to integrate multiple strategies is well supported by research evidence, and this approach is likely to be more effective than relying on single strategies in isolation.²² Ultimately, the aim is for students themselves to take responsibility for automatically using these strategies to monitor and improve their learning, in this instance reading comprehension.²⁵

A key issue is selecting suitable texts to extend students' reading comprehension capabilities: too easy and students do not need to use the strategies, too hard and they cannot understand the text.¹⁹ Teachers should read and carefully consider the challenges and opportunities presented by a text before using it. Important considerations include:

- **Opportunities**—does the text provide opportunities to use the strategy?
- Vocabulary—how suitable is the vocabulary?
- Prior knowledge—what prior knowledge will students need to understand the text?



4

Teach writing composition strategies through modelling and supported practice



Evidence summary

There is extensive evidence for the impact of teaching writing composition strategies from three meta-analyses.

Writing can be thought of as a process made up of seven components. Students should be taught each of these components and underlying strategies. A strategy is a series of actions that writers use to achieve their goals and may support one or more components of the writing process. Strategies should be carefully modelled and practised. Over time, students should take increasing responsibility for selecting and using strategies.^{27,28}

- Planning—setting goals and generating ideas before students begin writing. Students could write down goals so that they can refer back to them as they write. Example strategies: goal setting, activating prior knowledge, graphic organisers, and discussion.
- **Drafting**—focusing on noting down key ideas. Students should set out their writing in a logical order. Although accurate spelling, grammar and handwriting are important, at this stage they are not the main focus. Example strategies: making lists, graphic organisers, and writing frames.
- Sharing—sharing ideas or drafts throughout the writing process gives students feedback. Example strategy: in pairs, listen and read along as the author reads aloud.
- Evaluating—checking that the writing goals are being achieved throughout the process. This can be done by students as they re-read their writing or through feedback from adults or peers. Example strategies: self-monitoring and evaluation by asking questions like, 'Have I met my goals?' and 'Have I used appropriate vocabulary?'
- Revising—making changes to the content of writing in light of feedback and self-evaluation.
 Where digital media are available this can be done easily and quickly. With pen and paper, it should be accepted that work may become messy but that at this stage the audience will be limited.
 Example strategies: peers placing a question mark next to things they do not understand and students thinking of synonyms for repeated words.

- Editing—making changes to ensure the text is accurate and coherent. At this stage, spelling and grammar assume greater importance and students will need to recognise that their work will need to be accurate if readers are to engage with it and extract the intended information from it. Example strategies: checking capital letters and full stops and reviewing spellings using a dictionary.
- Publishing—presenting the work so that others can read it. This may not be the outcome for all pieces of writing, but when used appropriately it can provide a strong incentive for students to produce high-quality writing and encourage them in particular to carefully revise and edit. Example strategies: displaying work, presenting to other classes, and sending copies to parents and carers

Writing strategies should be explicitly taught using the 'gradual release of responsibility' model (see page 12). This can be repeated for each strategy. However, students will inevitably learn the strategies at different rates, so it is important to recognise that the model is not a linear process. For example, based on observations of students' guided practice it may be beneficial to provide repeated modelling emphasising different aspects of the strategy.

Teachers should introduce each strategy by describing how and when to use it. Then strategies should be modelled. Shared writing allows teachers to 'think-aloud' and share their thought process for each strategy with students. For example, teachers can model the revising process by posing questions to themselves:

- How could this be improved?
- Is some of the vocabulary and phrasing repetitive?
- Which synonyms could be used?

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Box 3: Purpose and audience

Consideration of purpose and audience is vital for effective writing. Like adults, children need to have a reason to write and someone to write for. There are four main purposes of writing: to describe, to narrate, to inform, and to persuade. Memorable experiences, such as trips out of the school or visitors to the school, can help to create a purpose for writing. It is important that students learn to modify their writing according to the audience for whom they are writing, which includes selecting an appropriate form or genre.

Students need to learn the features and conventions of different genres. Exposure to a rich range of genres and identification of key features will support this. The purpose and audience of writing will influence the writing process—for example, writing that is intended to be published is likely to need a greater focus on revising and editing.



5

Develop students' transcription and sentence construction skills through extensive practice



Evidence summary

The evidence regarding physical writing skills is limited, and based on reviews and single studies. Fewer studies have been conducted regarding teaching transcription skills than other aspects of literacy. Evidence for sentence construction is more consistent and robust.

It is important to promote the basic skills of writing—skills that need to become increasingly automatic so that students can concentrate on writing composition.³⁰ This includes the transcription skills of spelling and handwriting (or typing, where appropriate), as well as sentence construction.²⁷ If these skills are slow or effortful then this will hinder progress in writing composition. High-quality practice is essential to develop fluent transcription skills. Practice should be:^{31,32}

- extensive—a large amount of regular practice is required for students to achieve fluency in these skills:
- motivating and engaging—achieving the necessary quantity of practice requires students to be motivated and fully engaged in improving their writing; and
- **supported by effective feedback**—with teachers providing feedback to help students focus their effort appropriately.

Sentence construction can be developed through activities like sentence-combining where simple sentences are combined so that varied and more complex multi-clause sentences are produced.^{27,33,34,35} Initially, the teacher can model this, but students should go on to work collaboratively and independently. Students need to learn to construct increasingly sophisticated sentences, for meaning and effect, with speed.

Fast and accurate spelling of an extensive vocabulary is a key component of writing fluency. There is limited high-quality evidence about how to teach spelling, but it is clear that spelling should be actively taught rather than simply tested.³⁶ Phonics provides a foundation for effective spelling but it is not the only skill needed. By analysing the types of spelling errors students make it is possible to provide support specific to their needs (see Figure 2).³⁷

The teaching of spelling is likely to work best when related to the current content being studied in school and when teachers encourage students to use new spellings in their writing. Other promising approaches include the teaching and practising of word patterns, paired learning approaches, and the use of techniques such as 'look-say-cover-write-check'. 38,39,40



Box 4: Feedback and marking

Feedback studies typically show very high effects on learning. However, they also have a very wide range of effects, with some studies showing a negative impact.³¹ Therefore, it is important to consider carefully how feedback is given. Feedback can come from peers as well as adults and be can be verbal, written, or can be given through tests or via digital technology.

Marking is just one type of feedback, but it contributes significantly to teachers' workload.⁴¹ Despite this, there is currently only limited evidence about the most cost-effective marking approaches.⁴² A guiding principle might be to mark less, but to mark better. Consider the following characteristics of effective feedback:³¹

- be specific, accurate, and clear (for example, 'You have made good use of adjectives to describe the scene' rather than 'Your writing is getting better')
- compare what a student is doing right now with what they have done wrong before (for example, 'Your use of speech marks is much more accurate than before')
- encourage and support further effort by helping students identify things that are hard and require extra effort (for example, 'You need to put extra effort into your editing to improve your spelling').
- give feedback sparingly so that it is meaningful
- provide specific guidance on how to improve rather than just telling students when incorrect.

Phonological errors are not phonologically plausible, e.g. 'frist' for 'first' or 'gaj' for 'garage'.	Orthographical errors are phonologically plausible, but inaccurate, e.g. 'gud' for 'good' or 'carm' for 'calm'.	Morphological errors are due to a lack of awareness of morphemes, e.g. 'trapt' for 'trapped'; 'realshun' for 'relation'; 'ekscuse' for 'excuse'.	
Strategies Explicit teaching of consonant and vowel phonemes. Practise sounding phonemes all the way through words. Focus on identification of common digraphs in words.	Strategies Look at patterns of letters and syllables within words. Encourage automatic recognition of whole words in conjunction with an emphasis on careful decoding and encoding.	Strategies Focus on prefixes, suffixes and root words and learn common rules. For example, most words ending in 'f' or 'fe' change their plurals to 'ves', e.g. 'half' to 'halves' and 'knife' to 'knives'. Explore the relationship between meaning and spelling by looking at etymology.	

Figure 2: Types of spelling error and appropriate strategies to improve spelling



Evidence summary

This recommendation is supported by moderate evidence from several reviews and intervention studies where an accurate baseline test is given to ensure the intervention is appropriate.

As students develop their literacy skills, teaching should adapt to their changing needs. This makes teaching more efficient because effort is focused on the best next step. This approach can support students no matter their starting point by ensuring that the challenge and support that they receive is appropriate.

Once a teacher has identified a student's specific needs, teaching can be adapted by:⁴³

- changing the focus—targeting an aspect of literacy where a student needs more support, for example, another strand of the Reading Rope model; or
- changing the approach—for example, using the principles of scaffolding to provide the right level of support that fades as responsibility transfers to the student.

Prompt identification of a student's specific literacy needs and provision of appropriate support are critical to ensuring sustained progress. 44,45,46 While a quick response is important, it is essential that the support offered is appropriate. For example, providing a student who has a very limited vocabulary but good decoding skills with additional phonics support — no matter how prompt or high-quality the support provided is — will do little to improve their overall reading.

Once students are identified as struggling, the first step should be to accurately diagnose the specific issue(s) and then carefully plan how to support the student. This should be underpinned by high-quality assessments, which can be helpfully split into two stages: monitoring and diagnosis. Monitoring can identify students who are struggling (or making faster progress), whilst diagnosis identifies a student's specific capabilities and difficulties.⁴⁷

A range of diagnostic assessments* for literacy is available and staff should be trained to use and interpret these effectively. However, the results of diagnostic assessments should be used to supplement, not replace, professional judgement about a student's current capabilities. This in turn should inform the next steps for teaching and sufficient time should be given for effective targeted planning.

Targeted planning can appear daunting when students appear to have weaknesses in many areas, but it is crucial to understand fully such students' specific literacy needs before planning support. This is also true for students with special educational needs who may have specific or complex needs. There is evidence to suggest that all aspects of reading can be improved, but it is important to get the targeting right. For example, comprehension difficulties are sometimes, at least partly, due to an underlying oral language weakness.

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^{*}Refer to the glossary for the definition of diagnostic assessments as it relates to this Guidance Report.



Box 5: How can digital technology be used to improve literacy?

Digital technology can be a useful tool to improve achievement in literacy.⁵⁰ There is promising evidence that digital technology can improve students' writing—in particular when students are drafting, editing and revising.⁵¹ Digital technology can also be used to support students to write more and to a higher standard.⁵² However, technology is not a panacea and although on average it has positive effects, the range is very wide. This suggests that how technology is used is critical.⁵⁰ The impact of technology can be maximised by considering the following:⁵³

- Clarify the rationale—will students work more efficiently, more effectively, or more intensively?
- **Identify the role**—will it help students to access learning content, teachers, or peers? Will the technology provide feedback or will it support more effective feedback from others, or better self-management by learners themselves?
- **Better interaction**—technology should support collaboration between students or teachers should use it to support discussion, interaction, or feedback.
- **Training**—for teachers, this should ideally go beyond mere technical skills and focus on how to use the technology to improve pedagogy.
- **Supplement**—digital technology usually works best as a supplement rather than as a replacement to normal teaching. Consider what it will replace or how the activities will be additional.





Evidence summary

There is extensive and consistent evidence from at least six meta-analyses and reviews, including studies involving students aged seven to 11 of the impact of structured interventions and intensive one-to-one support.

Schools should focus first on developing core classroom teaching strategies that improve the literacy capabilities of the whole class. With this in place, the need for additional support should decrease. Nevertheless, it is likely that a small number of students will require additional support—in the form of high-quality, structured, targeted interventions—to make progress. 54,55

Identifying students who are struggling with their literacy is the first step (see <u>Recommendation 6</u>). Diagnostic assessments should then be used to understand the specific nature of the student's difficulty to match them to an appropriate intervention or to plan targeted support.⁵⁶

Many literacy programs claim to be supported by evidence, but it can be challenging to assess these claims or make comparisons between different programs. The following free online resources provide a good starting point for assessing claims by summarising the available evidence:

- the EEF's literacy theme an overview of the EEF's work on literacy including all literacy trials;⁵⁷
- the 'Evidence for Impact' (E4I) database a summary of programs available in the U.K.;⁵⁸and
- 'What works for children and young people with literacy difficulties?' – an overview of the effectiveness of literacy intervention schemes.⁵⁹

Box 6: Implementing programs

There is a consistent body of evidence demonstrating the benefits of using structured programs for targeted interventions. Appraising the available evidence before selecting a program is important, but it is critical first to understand your school's context. Research evidence indicates what was successful in various schools in the past, so careful consideration is needed to determine if it is likely to work in your school.⁶⁰ Programs are likely to have the greatest impact where they meet a specific need.

For example, a program designed to increase the amount that students read is most likely to be effective if students in your school do not currently read enough.

Faithful implementation is critical to the success of any program and this is likely to be improved by careful piloting and training for staff. Once a program has become established it is important to consider ongoing training needs for new and experienced members of staff. Monitoring and evaluation should be used to ensure that the program is having the intended impact.⁶¹

Evidence for Learning has produced a general Guidance Report on effective implementation in schools that can be used to support this.⁶²



As each of the summaries show, few programs available in Australia currently have robust evidence of effectiveness. The following common elements are features of effective targeted interventions. If your school is considering programs that have not been rigorously evaluated, you should ensure that they include these features:^{54,63,64}

- brief (15-45 minutes) and regular (3–5 times per week) sessions that are maintained over a sustained period (8–20 weeks) and carefully timetabled to enable consistent delivery;
- extensive training (5–30 hours) from experienced trainers or teachers for those implementing the intervention;
- structured supporting resources and/or lesson plans with clear objectives;
- assessments to identify appropriate pupils, guide areas for focus, and track pupil progress;
- tuition that is additional to, and explicitly linked with, normal lessons; and
- connections between the out-of-class (intervention) learning and classroom teaching.



Box 7: Who should deliver catch-up interventions?

One to one instruction from qualified teachers and reading specialists is one of the most effective, but also one of the most expensive, interventions for struggling readers. ⁶⁵ The cost may be justified if it makes a substantial difference to students at a critical point in their reading development and therefore reduces any later need for further intensive support.

The evidence suggests that interventions delivered by Teaching Assistants (TAs) can have a positive impact on attainment, but on average this impact is lower than when delivered by a teacher.66 Crucially, these positive effects only occur when TAs work in structured settings with high-quality support and training. When TAs are deployed in more informal, unsupported instructional roles, they can impact negatively on students' learning outcomes. In other words, what matters most is not whether TAs are delivering interventions, but how they are doing so. In this context, structured evidence-based programs provide an excellent means of aiding high-quality delivery.

Evidence for Learning's Guidance Report 'Making best use of Teaching Assistants' provides further guidance regarding the deployment of TAs.⁶⁴

Acting on the evidence

There are several key principles to consider when acting on this guidance:

- 1. These recommendations do not provide a 'one size fits all' solution. It is important to consider the delicate balance between implementing the recommendations faithfully and applying them appropriately to your school's particular context. Implementing the recommendations effectively will require careful consideration of how they fit your school's context and the application of sound professional judgement.
- 2. The recommendations should be considered together, as a group, and should not be implemented selectively. For example, although there is very extensive evidence for teaching reading comprehension strategies (Recommendation 3), this is just one part of a broad and integrated approach to teaching reading (Recommendation 2).
- **3.** It is important to consider the precise detail provided beneath the headline recommendations. For example, schools should not use <u>Recommendation 7</u> to justify the purchase of lots of interventions. Rather, it should provoke thought about the most appropriate interventions to implement.

Inevitably, change takes time, and we recommend taking at least two terms to plan, develop, and pilot strategies on a small scale before rolling out new practices across the school. Gather support for change across the school and set aside regular time throughout the year to focus on this project and review progress.

Evidence for Learning has produced 'Putting evidence to work: a school's guide to implementation'62, a Guidance Report which could be used as a guide as you make changes. Figure 3 provides an overview of the implementation process which schools can apply to any implementation challenge.

The stages of implementation

Foundations for good implementation

- Treat implementation as a process, not an event. Plan and execute it in stages.
- Create a leadership environment and school climate that is conducive to good implementation.

Implementation process begins

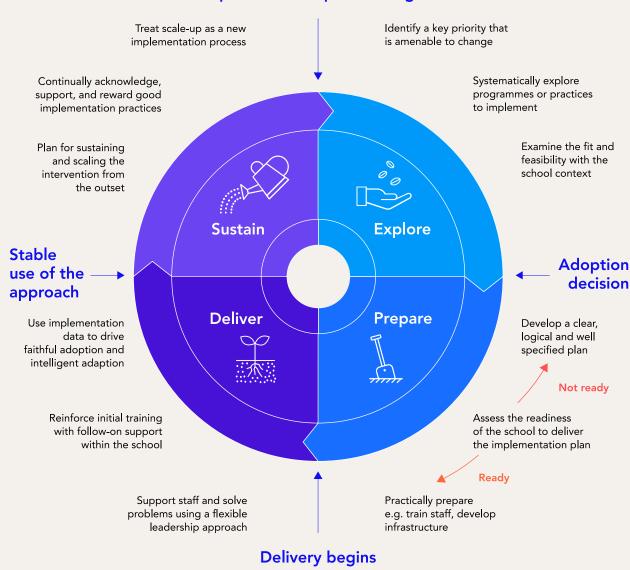


Figure 3: The foundations and stages of implementation

How was this guide compiled?

This Guidance Report draws on the best available evidence regarding the teaching of literacy to primary-aged students. The primary source of evidence for the recommendations is the Teaching & Learning Toolkit, which is a synthesis of international research. However, the report also draws on a wide range of evidence from other studies and reviews regarding literacy development and teaching. The emphasis is on rigorous evaluations that provide reliable evidence of an impact on student learning outcomes. The intention is to provide a reliable foundation of what is effective, based on robust evidence.

The report was developed over several stages. The initial stage produced a scoping document that set out the headline recommendations and supporting evidence. This was subjected to an academic peer review. The feedback from this review informed the writing of a final draft of the report which was then subjected to a second external review by a group of academics, practitioners, and other stakeholders.

An evidence rating which represents the authors' judgement regarding the strength of the evidence base is provided for each recommendation. The authors considered three features of the evidence when creating the ratings:

- quality and quantity—recommendations that were based on a large number of high-quality studies such as meta-analyses or randomised controlled trials received higher ratings;
- **2. consistency**—recommendations that were based on relatively consistent evidence received higher ratings; and
- **3. relevance**—recommendations based on evidence that directly related to students aged seven to 11 received stronger ratings.



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Further reading

The Australian Curriculum General Capability: Literacy aims to ensure that 'students become literate as they develop the knowledge, skills and dispositions to interpret and use language confidently for learning and communicating in and out of school and for participating effectively in society. Literacy involves students listening to, reading, viewing, speaking, writing and creating oral, print, visual and digital texts, and using and modifying language for different purposes in a range of contexts.' The website contains resources for school leaders and teachers that will assist in the implementation of the recommendations outlined in the Guidance Report.

australian curriculum.edu.au/f-10-curriculum/general-capabilities/literacy/

Evidence for Learning has published a Guidance Report on <u>'Metacognition and self-regulated learning'</u> which may be useful when thinking about a number of these recommendations. In addition, the Guidance Report <u>'Making best use of Teaching Assistants'</u> may be helpful in supporting Recommendation 7.

Glossary

Diagnostic assessment	An assessment that aims to identify a student's current strengths and weaknesses to determine the most helpful teaching strategies and content to move the student forwards. It can be distinguished from tracking or monitoring where the aim is just to check progress. Diagnostic assessment aims to make teaching more efficient.
Etymology	The study of the origins and history of words and the way in which their meanings have changed. The etymology of 'phonics', for example, is from the Greek 'phone' meaning 'voice'. It was originally used in the 17th Century to mean the science of sound, but has now come to mean an approach to teaching reading.
Expressive vocabulary	The words that a student can express through speaking or writing.
Grapheme	A letter or combination of letters used to represent a phoneme, for example, in the word 'push', the graphemes , <u>, <sh> represent the phonemes /p/σ//ʃ/ to make the work 'push' and phonetically /pσf/.</sh></u>
Grapheme-phoneme correspondences	The relationship between sounds the letters that represent those sounds.
Inference	Using information from a text in order to arrive at another piece of information that is implicit.
Meta-analysis	A particular type of systematic research review which focuses on the quantitative evidence from different studies and combines these statistically to seek a more reliable or more robust conclusion than can be drawn from separate studies.
Morphemes	The smallest units of words that contain meaning, such as the 'root' word 'child' and the affix '-ish', which in combination make a new word 'childish'.
Morphology	The form and meaning of a language; the study of the smallest units of words that contain meaning.
Orthography	The rules for writing a language, including spelling, punctuation and capitalisation.
Phoneme	A phoneme is a speech sound. It is the smallest unit of spoken language that distinguishes one word (or word part) from another. For example, 't' and 'p' in tip and dip. Phonemes are represented with a range of symbols as most letters can be pronounced in different ways.
Phonemic awareness	The ability to hear and manipulate the sounds in spoken words, and the understanding that spoken words and syllables are made up of sequences of speech sounds. Phonemic awareness involves hearing language at the phoneme level.
Phonics	An approach to teaching reading that focuses on the sounds represented by letters in words.
Reading comprehension	The ability to understand the meaning of a text.
Reading fluency	The ability to read quickly, accurately, and with appropriate stress and intonation.
Receptive vocabulary	The words that a student can understand through reading or listening.
Transcription	The physical process of handwriting or typing, and spelling.

References

- 1 Lamb, S., Maire, Q., Doecke, E., Macklin, S., Noble, K & Pilcher, S. (2020). 'Impact of learning from home on educational outcomes for disadvantaged children.' Centre for International Research on Education Systems and the Mitchell Institute, Victoria University.
- 2 Education Endowment Foundation. (2020). Evidence for Learning Teaching & Learning Toolkit: Education Endowment Foundation. Retrieved from: <u>evidenceforlearning.org.au/the-toolkit/full-toolkit/</u>
- 3 Shanahan, T., Callison, K., Carriere, C., Duke, N. K., Pearson, P. D., Schatschneider, C. & Torgesen, J. (2010). 'Improving reading comprehension in kindergarten through 3rd grade: A practice guide' (NCEE 2010-4038), Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education.
- 4 National Reading Panel. (2000). 'Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction', Washington DC: National Institute of Child Health and Human Development, National Institutes of Health, 4–27.
- 5 Goodwin, A. and Ahn, S. (2013) 'A meta-analysis of morphological interventions in English: effects on literacy outcomes for school-age children', Scientific studies of reading, 17 (4), 257–285.
- 6 Australian Curriculum, Assessment and Reporting Authority. (2019). Learning Continuum of Literacy: Word Knowledge. Retrieved from: <u>australiancurriculum.edu.au/f-10-curriculum/general-capabilities/ literacy/learning-continuum/?isFirstPageLoad=false&element=Word+Knowledge&level=Level+4</u>
- 7 Education Endowment Foundation. (2020). Evidence for Learning Teaching & Learning Toolkit: Education Endowment Foundation. Collaborative learning. Retrieved from: <u>evidenceforlearning.org.au/toolkit/collaborative-learning/</u>
- 8 Scarborough, H. S. (2001). 'Connecting early language and literacy to later reading (dis) abilities: Evidence, theory, and practice', in Neuman, S. and Dickinson, D. (eds), Handbook for research in early literacy, New York: Guilford Press (97–110).
- 9 Price-Mohr, R. & Price, C. (2016). 'Gender Differences in Early Reading Strategies: A Comparison of Synthetic Phonics Only with a Mixed Approach to Teaching Reading to 4–5 Year-Old Children', Early Childhood Education Journal, 1–8.
- 10 Savage, R., Burgos, G., Wood, E. & Piquette, N. (2015). 'The Simple View of Reading as a framework for national literacy initiatives: a hierarchical model of student level and classroom level factors', British Educational Research Journal, 41 (5), 820–844.
- 11 Torgerson, C. J., Brooks, G. & Hall, J. (2006). 'A systematic review of the research literature on the use of phonics in the teaching of reading and spelling', London: Department for Education and Skills.
- 12 Wyse, D. & Goswami, U. (2008). Synthetic phonics and the teaching of reading. British Educational Research Journal, 34(6), 691–710.
- 13 Swanson, H. & O'Connor, R. (2009). 'The role of working memory and fluency practice on the reading comprehension of students who are dysfluent readers', Journal of Learning Disabilities, 42 (6), 548–575.
- 14 National Reading Panel. (2000). 'Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction', Washington DC: National Institute of Child Health and Human Development, National Institutes of Health, 3–20.
- 15 National Reading Panel. (2000). 'Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction', Washington DC: National Institute of Child Health and Human Development, National Institutes of Health, 3–15.
- 16 Scott, A. Binder, K. Foster, T. & Zawoyski, M. (2016) 'Repeated versus wide reading: a randomized control design study examining the impact of fluency interventions on underlying reading behaviour', Journal of School Psychology, 59(6), 13–38.
- 17 Therrien, W. (2004) 'Fluency and comprehension gains as a result of repeated reading', Remedial and Special Education, 25 (4), 252–261.

- 18 McKenna, M. C. & Stahl, K. A. D. (2015) 'Assessment for Reading Instruction' (3rd edn), New York: Guilford Publications.
- 19 Education Endowment Foundation. (2020). Evidence for Learning Teaching & Learning Toolkit: Education Endowment Foundation. Reading comprehension strategies. Retrieved from: evidenceforlearning.org.au/the-toolkits/the-teaching-and-learning-toolkit/all-approaches/reading-comprehension-strategies/
- 20 Oakhill, J., Cain, K. & Elbro, C. (2014). Understanding and teaching reading comprehension: a handbook, London: Routledge.
- 21 Davis, S. D. (2010). 'A meta-analysis of comprehension strategy instruction for Upper elementary and middle school students'.'
 Retrieved from: etd-06162010-100830/unrestricted/Davis_dissertation.pdf
- 22 National Reading Panel. (2000). 'Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction: Reports of the subgroups', Washington, DC: National Institute of Child Health and Human Development, 4–39.
- 23 National Reading Panel. (2000). 'Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction: Reports of the subgroups', Washington, DC: National Institute of Child Health and Human Development, 4–83.
- 24 Stuart, M. & Stainthorp, R. (2015). 'Reading development and teaching', London: Sage.
- 25 Education Endowment Foundation. (2020). Evidence for Learning Teaching & Learning Toolkit: Education Endowment Foundation. Meta-cognition and self-regulation. Retrieved from: <u>evidenceforlearning.org.au/toolkit/metacognition-and-self-regulation/</u>
- 26 Pearson, P. D. & Gallagher, M. C. (1983). 'The instruction of reading comprehension', Contemporary Educational Psychology, 8 (3), 317–344.
- 27 Graham, S., Bollinger, A., Booth Olson, C., D'Aoust, C., MacArthur, C., McCutchen, D. & Olinghouse, N. (2012). 'Teaching elementary school students to be effective writers: A practice guide' (NCEE 2012–4058), Washington DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education.
- 28 Graham, S., Bruch, J., Fitzgerald, J., Friedrich, L., Furgeson, J., Greene, K., Kim, J., Lyskawa, J., Olson, C. B. & Smither Wulsin, C. (2016). 'Teaching secondary students to write effectively (NCEE 2017–4002), Washington, DC: National Center for Education Evaluation and Regional Assistance (NCEE), Institute of Education Sciences, U.S. Department of Education.
- 29 Education Endowment Foundation. (2018) IPEELL: Using Self-Regulation to Improve Writing. Retrieved from: <u>educationendowmentfoundation</u>. <u>org.uk/projects-and-evaluation/projects/ipeell-using-self-regulation-to-improve-writing/</u>
- 30 McCutchen, D. (2000). 'Knowledge, processing, and working memory: Implications for a theory of writing', Educational Psychologist, 35 (1), 13–23.
- 31 Education Endowment Foundation. (2020). Evidence for Learning Teaching & Learning Toolkit: Education Endowment Foundation. Feedback. Retrieved from: evidenceforlearning.org.au/toolkit/feedback/
- 32 McGraham, S. & Harris, K.R. (2005) 'Improving the writing performance of young struggling readers writers: theoretical and programmatic research from the center on accelerating student learning', The Journal of Special Education, 39 (1), 19–33.
- 33 Andrews, R., Torgerson, C., Beverton, S., Freeman, A., Locke, T., Low G., Robinson A. & Zhu D. (2004). 'The effect of grammar teaching (sentence combining) in English on 5 to 16 year olds' accuracy and quality in written composition', Research Evidence in Education Library, London: EPPI-Centre, Social Science Research Unit, Institute of Education.
- 34 Berninger, V. W., Vaughan, K., Abbott, R. D., Begay, K., Coleman, K. B., Curtin, G., & Graham, S. (2002). 'Teaching spelling and composition alone and together: Implications for the simple view of writing'. Journal of Educational Psychology, 94(2), 291–304.

- 35 Saddler, B. & Graham, S. (2005). 'The effects of peer-assisted sentence-combining instruction on the writing performance of more and less skilled young writers', Journal of Educational Psychology, 97 (1), 43–54.
- 36 Department for Education. (2012). 'What is the research evidence on writing?', Research report DFE-RR238, London: Department for Education. Retrieved from: <u>assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/183399/DFE-RR238.pdf</u>
- 37 Moats, L. (n.d.) Looking Beyond Standardized Test Scores. Retrieved from: rest%20Scores%20Handout%20Louisa%20Moats.pdf
- 38 Fisher, B., Cozens, M. E. & Greive, C. (2007). 'Look-say-cover-write-say-check and old way/new way mediational learning: A comparison of the effectiveness of two tutoring programs for children with persistent spelling difficulties', Special Education Perspectives, 16 (1), 19–38. Retrieved from: research.avondale.edu.au/edu_papers/31
- 39 Goodwin, A. P. & Ahn, S. (2010). 'A meta-analysis of morphological interventions: Effects on literacy achievement of children with literacy difficulties', Annals of Dyslexia, 60 (2), 183–208.
- 40 Nunes, T. & Bryant, P. (2006). Improving Literacy through Teaching Morphemes, London: Routledge.
- 41 Department of Education. (2016). 'Reducing teacher workload: Marking policy review group report.' Retrieved from: <u>gov.uk/government/</u> <u>publications/reducing-teachers-workload/reducing-teachers-workload</u>
- 42 Elliott, V., Baird, J., Hopfenbeck, T., Ingram, J., Thompson, I., Usher, N., Zantout, M., Richardson, J. & Coleman, R. (2016). 'A Marked Improvement? A review of the evidence on written marking', London: Education Endowment Foundation. Retrieved from: educationendowmentfoundation.org.uk/public/files/Publications/ EEF_Marking_Review_April_2016.pdf
- 43 Van de Pol, J., Volman, M. & Beishuizen, J. (2010). 'Scaffolding in teacher-student interaction: A decade of research', Educational Psychology Review, 22 (3), 271–296.
- 44 Al Otaiba, S., Connor, C. M., Folsom, J. S., Wanzek, J., Greulich, L., Schatschneider, C. & Wagner, R. K. (2014). 'To wait in Tier I or intervene immediately: a randomized experiment examining first-grade response to intervention in reading', Exceptional Children, 81 (1), 11–27.
- 45 Berninger, V. W. & Amtmann, D. (2003). 'Preventing written expression disabilities through early and continuing assessment and intervention for handwriting and/or spelling problems: Research into practice', in Swanson, H. L., Harris, K. R. and Graham, S. (eds), Handbook of Learning Disabilities, New York: Guilford (345–363).
- 46 Wanzek, J., Vaughn, S., Scammacca, N., Gatlin, B., Walker, M. A. & Capin, P. (2015). 'Meta-analyses of the effects of tier 2 type reading interventions in grade K–3', Educational Psychology Review, 28 (3), 551–576.
- 47 Education Endowment Foundation. (2019). Assessing and monitoring pupil progress: Diagnostic assessment. Retrieved from: educationendowmentfoundation.org.uk/tools/assessing-and-monitoring-pupil-progress/developing-whole-school-assessment/diagnostic-assessment/
- 48 Snowling, M. J. & Hulme, C. (2011). 'Evidence-based interventions for reading and language difficulties: creating a virtuous circle', British Journal of Educational Psychology, 81 (1), 1–23.
- 49 Clarke, P.J., Snowling, M.J., Truelove, E. & Hulme, C. (2010). Ameliorating children's reading-comprehension difficulties: a randomized controlled trial. Psychological Science. 21(8) 1106–1116.
- 50 Education Endowment Foundation. (2019). Evidence for Learning Teaching & Learning Toolkit: Education Endowment Foundation. Digital technology evidenceforlearning.org.au/toolkit/digital-technology/
- 51 Graham, S. & Perin, D. (2007). 'A meta-analysis of writing instruction for adolescent students', Journal of Educational Psychology, 99 (3), 445–476.
- 52 Morphy, P. & Graham, S. (2012). 'Word processing programs and weaker writers/readers: A meta-analysis of research findings', Reading and Writing, 25 (3), 641–678.

- 53 Higgins, S., Xiao, Z. & Katsipataki, M. (2012). 'The impact of digital technology on learning: a summary for the Education Endowment Foundation', London: EEF. <u>educationendowmentfoundation.org.uk/public/files/Presentations/Publications/The Impact of Digital Technologies on Learning (2012).pdf</u>
- 54 Slavin, R. E., Lake, C., Davis, S. & Madden, N. A. (2011). 'Effective programs for struggling readers: A best-evidence synthesis', Educational Research Review, 6 (1), 1–26. <u>bestevidence.org/word/strug_read_Jun_02_2010.pdf</u>
- 55 Scammacca, N. K., Roberts, G., Vaughn, S. & Stuebing, K. K. (2015). 'A Meta-Analysis of Interventions for Struggling Readers in Grades 4–12 1980–2011', Journal of Learning Disabilities, 48 (4), 369–390.
- 56 van Geel, M., Keuning, T., Visscher, A. J. & Fox, J. P. (2016). 'Assessing the Effects of a School-Wide data-based decision-making intervention on student achievement growth in primary schools', American Educational Research Journal, 53 (2), 360–394.
- 57 Education Endowment Foundation (2019). School themes: language and literacy. Retrieved from: educationendowmentfoundation.org.uk/school-themes/literacy/
- 58 Evidence4Impact. (2020). Database Index. Accessed June 2020 from: evidence4impact.org.uk/index.php.
- 59 Brooks, G. (2016). What Works for Children and Young People with Literacy Difficulties? The Effectiveness of Intervention Schemes (5th edn), Bracknell: Dyslexia-SpLD Trust.
- 60 Cowen, N. & Cartwright, N. (2014). 'Making the most of the evidence in education: a guide for working out what works... here and now', Chess Working Paper, 2014 (3), 1–28.
- 61 Education Endowment Foundation. (2019) Assessing and monitoring pupil progress. Retrieved from: <u>educationendowmentfoundation.org.</u> <u>uk/resources/assessing-and-monitoring-pupil-progress/</u>
- 62 Evidence for Learning. (2019). Putting evidence to work: a school's guide to implementation, Guidance Report. Sydney, Australia. Retrieved from: evidenceforlearning.org.au/guidance-reports/puttingevidence-to-work-a-schools-guide-to-implementation/
- 63 Education Endowment Foundation. (2020). Evidence for Learning Teaching & Learning Toolkit: Education Endowment Foundation. One to one tuition. Retrieved from: evidenceforlearning.org.au/toolkit/one-to-one-tuition/
- 64 Evidence for Learning. (2019). 'Making Best Use of Teaching Assistants, Guidance Report', Sydney: Australia. Retrieved from: evidenceforlearning.org.au/assets/Guidance-Reports/Teaching-Assistants/E4L-Guidance-Report-Teaching-Assistants-Sep-WEB.pdf
- 65 D'Agostino, J. V. & Harmey, S. J. (2016) 'An International Meta-Analysis of Reading Recovery', Journal of Education for Students Placed at Risk (JESPAR), 21 (1), 29–46.
- 66 Education Endowment Foundation. (2020). Evidence for Learning Teaching & Learning Toolkit: Education Endowment Foundation. Teaching Assistants. Retrieved from: <u>evidenceforlearning.org.au/the-toolkits/the-teaching-and-learning-toolkit/all-approaches/teaching-assistants/</u>

