Empowering Literacy Instruction: Understanding and Applying the Science of Reading–Writing Connections

by Young-Suk Grace Kim

Do strong readers make strong writers? The vast majority of educators likely say yes, while a few may pause, thinking of students who read well but struggle to put words on paper, or conversely, creative writers who struggle with reading comprehension. This variation in our thoughts reflects the fact that reading and writing are related, but their relation is more nuanced than we might initially assume. Understanding the connection between reading and writing has profound implications for how we teach, assess, and support our students. When we recognize that reading and writing share foundational skills, we can design more efficient and effective instruction. When we understand that these skills have unique aspects, we can better identify and address students' unique needs.

In this article, I synthesize recent research on reading-writing connections, with a focus on applications for practice. Drawing primarily from the interactive dynamic literacy model (Kim, 2020, 2022, 2026) and empirical evidence, we will explore four key areas: reading-writing connections, the science behind these connections, the consequences of their relationship, and what this means for classroom practice.

Are Reading and Writing Actually Connected?

The relationship between reading and writing has been a topic of educational research for decades (e.g., Berninger et al., 2002; Fitzgerald & Shanahan, 2000), but only recently has the evidence been systematically synthesized to give us a clear picture. Kim and colleagues (2024) conducted a meta-analysis of 395 studies with 2,265 effect sizes and 120,669 participants. The overall finding was striking: reading and writing were strongly related, with a correlation of .72. To put this in perspective, a positive relation ranges from 0 to 1, where 0 indicates no relationship between two skills (they are completely independent), whereas 1 indicates a perfect relationship (the skills are identical). The correlation of .72 indicates a strong relationship: students who perform well in reading tend to perform well in writing, and vice versa.

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The Science Behind the Connection

Theoretical Frameworks: How Are Reading and Writing Related?

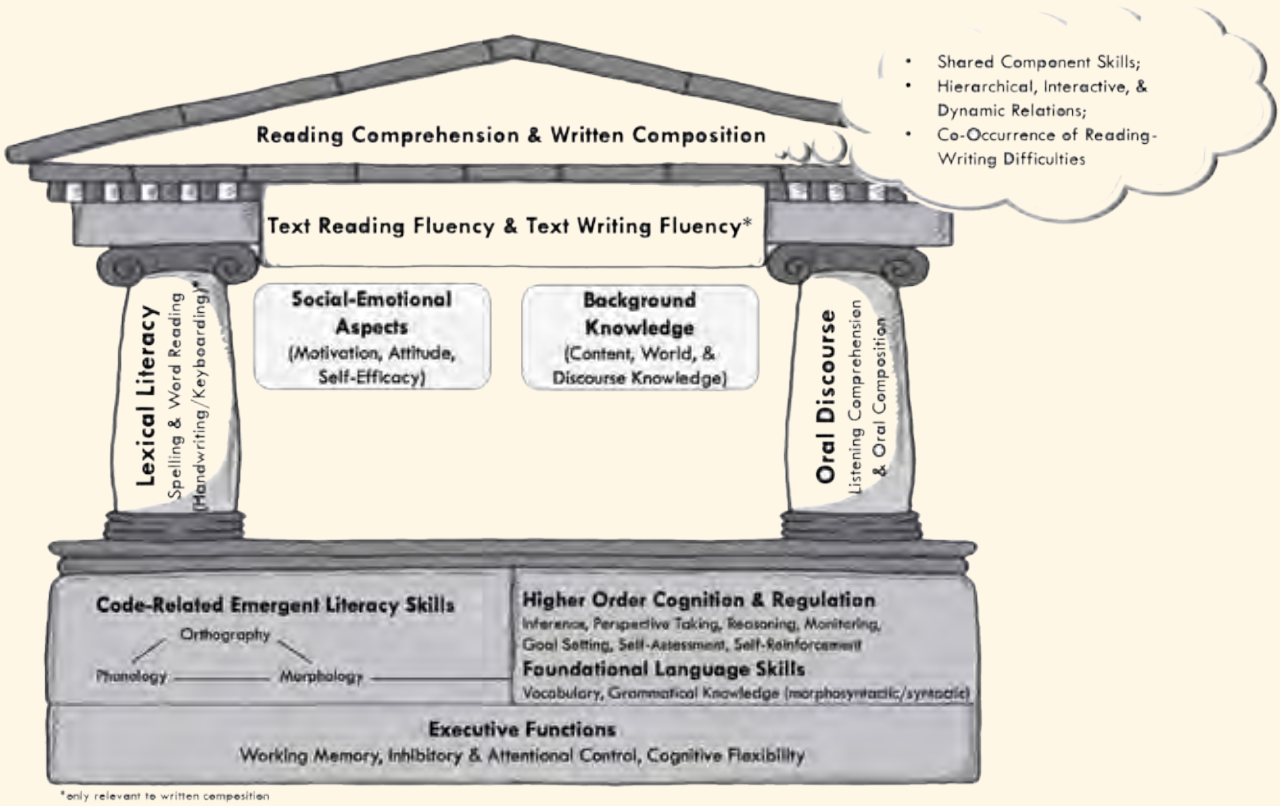
Two complementary theoretical frameworks help us understand why reading and writing are related: the shared knowledge model (Fitzgerald & Shanahan, 2000) and the interactive dynamic literacy model (Kim, 2020, 2022, 2026). Although they differ in specifics, both models propose that reading and writing are connected because they draw on common skills and knowledge. This shared foundation explains why students who excel in one area often perform well in the other. Figure 1 shows the skills and knowledge that contribute to reading and writing—many of which are shared—and illustrates how they build on one another according to the interactive dynamic literacy model. Table 1 provides definitions of the shared skills and knowledge.

Four Key Characteristics of Reading–Writing Relationships

While the overall relationship between reading and writing is strong, it varies in important ways. The interactive dynamic literacy model

Figure 1

Interactive Dynamic Literacy Model



identifies four key characteristics that explain how reading and writing influence one another: hierarchical relationships, interactive relationships, dynamic relationships, and consequences of reading–writing connections.

Hierarchical Relationships

The interactive dynamic literacy model emphasizes that lower-order skills serve as necessary foundations for higher-order skills. This hierarchical organization has a cascading effect: difficulties in foundational skills create a chain of influences that can affect higher-level literacy achievement. For example, a student with weak phonological awareness will likely struggle with word-level reading and writing skills (word reading and spelling). These word-level difficulties, in turn, negatively impact text-level reading and writing skills, reading comprehension, and written composition. This hierarchical nature suggests that effective instruction must ensure strong foundational skills while also providing appropriate support at each level of the literacy hierarchy.

Interactive Relationships

Reading and writing are bidirectional: Reading experience builds knowledge and skills that support writing, and writing experience builds knowledge and skills that support reading.

Research supports this bidirectional influence:

- Writing instruction improves reading comprehension (Graham & Hebert, 2010)
- Reading instruction improves written composition (Graham et al., 2018)
- Word reading instruction improves spelling (e.g., Ehri et al., 2001)

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Table 1

Shared Skills and Knowledge Between Reading and Writing Based on the Interactive Dynamic Literacy Model

Domain-General Cognitive Skills (Executive Functions)	
Working memory	Holding and manipulating information
Inhibitory & attentional control	Suppressing irrelevant information and focusing on relevant information
Cognitive flexibility	Shifting between different aspects of tasks
Foundational Language Skills	
Vocabulary	Breadth and depth of word knowledge
Grammatical knowledge	Understanding of morphosyntactic and syntactic structures
Code-Related Emergent Literacy Skills	
Orthography	Understanding of letters (shapes, names, sound) and spelling patterns
Phonology	Understanding sound structure of language (e.g., syllable, phoneme)
Morphology	Knowledge of meaningful word parts (e.g., prefixes, suffixes, roots)
Lexical Literacy	
Word reading and spelling	The ability to accurately and fluently decode and encode words
Oral Discourse Skills	
Listening comprehension	Understanding spoken language beyond words (e.g., sentences, stories)
Oral composition	Generating organized spoken language (e.g., conversations, storytelling)
Background Knowledge	
Content and world knowledge	Knowledge about topics/content, culture, and the world
Discourse knowledge	Knowledge of genre-specific structures and composition strategies
Higher-Order Cognition	
Reasoning	Logical thinking and problem-solving
Inference	Drawing conclusions beyond literal text
Perspective-taking	Understanding different viewpoints
Monitoring	Checking for understanding or coherence
Self-Regulation	
Goal setting	Establishing objectives for reading or writing
Self-monitoring & assessment	Observing, tracking, and evaluating one's own performance on a task
Self-reinforcement	Maintaining motivation and persistence
Social-Emotional Aspects	
Motivation	Desire to engage in reading and writing
Attitude	Feelings toward reading and writing
Interest	Focused attention or curiosity toward particular topics or activities
Self-efficacy	Beliefs about one's capabilities in reading and writing
Text-Level Fluency	
Text reading fluency	Smooth, accurate, and appropriately paced reading

Note. Handwriting, keyboarding, and text writing fluency are important for writing, but not necessary for reading.

- Spelling instruction improves word reading (Graham & Santangelo, 2014)

This interactive nature suggests that the inclusion of integrated reading and writing may be particularly powerful for literacy development.

Dynamic Relationships

The reading-writing relationship is not fixed; it varies systematically across several dimensions: grain size, developmental phase, linguistic and orthographic characteristics, and measurement of reading and writing skills.

Grain size. Word-level skills have a stronger relationship than text-level skills. This was confirmed in the meta-analysis previously referenced. Word reading and spelling correlate at .82, and when word reading and spelling skills were measured more precisely (reliability above .80), this correlation increases to an extremely strong .92 (Kim et al., 2024). This very strong relationship makes sense: both word reading and spelling require knowledge and awareness of phonology (phonological awareness) and its correspondences with graphemes and orthographic patterns, as well as morphological structures (morphological awareness). A student who understands that the /k/ sound can be represented by "c," "k," or "ck" depending on position and context will apply this knowledge in both reading and spelling words. A student who understands that the past tense is generally spelled as "-ed" across different phonological contexts (/ɪd/ as in "wanted," /d/ as in "played," and /t/ as in "talked") will apply this knowledge to reading and spelling words.

Text-level skills show a more moderate relationship. Reading comprehension and written composition correlate at .44 (Kim et al., 2024)—still meaningful, but considerably weaker than the word-level relationship. This moderate correlation reflects the shared skills that support both reading comprehension and writing (see Table 1), as well as the unique demands of each task. Reading comprehension requires constructing meaning from a given text, whereas written composition requires generating and organizing one's own ideas into coherent text. Therefore, reading comprehension and written composition are related but require differential uses of language and cognitive skills. Furthermore, written composition requires the production of written text, involving handwriting, keyboarding, and text production fluency, which are not required in reading comprehension.

Developmental phase. The strength of reading-writing connections differs in some ways as students develop skills. For example, the word-level reading–spelling relationship is stronger in the primary grades (r = .82) compared to later grades (r = .69). Similarly, the relationship between reading comprehension and written composition is expected to be stronger during an early phase of development (see Kim, 2026; Kim et al., 2024 for details).

Orthographic characteristics. The strength of reading–writing relationships also differs by linguistic and orthographic characteristics. For example, the word-level reading–spelling relationship is stronger in languages with alphabetic writing systems (e.g., English, Spanish, Finnish, Korean) compared to morphosyllabic writing systems (Chinese; Kim, 2026; Kim et al., 2024). This is because the gap between recognizing words versus spelling or producing words is greater in the Chinese writing system due to orthographic depth and visual complexities.

Measurement characteristics. The relationship between reading and writing varies depending on how these skills are measured. Different assessment types reveal different patterns. For example, reading comprehension assessed through multiple-choice tasks shows a different relationship to writing than comprehension assessed through cloze tasks. Similarly, different dimensions of writing—such as quality versus productivity (amount of text produced)—relate to reading in varying ways (Kim et al., 2024). Scoring approaches in word reading and spelling may also influence the observed relationship between reading and writing. The traditional approach scores words as simply correct or incorrect. However, a more nuanced approach analyzes which specific letters or sounds are misread or misspelled and reveals the degree of difference between correct and incorrect responses. This detailed scoring method not only provides more useful information for instruction but can also reveal stronger or different patterns in the relationship between word reading and spelling (e.g., Moon & Kim, 2026).

Consequences of Reading–Writing Relationships

The fact that reading and writing are related has several consequences. Here we highlight that reading and writing difficulties co-occur (see Kim, 2022 and 2026 for details). This has several specific manifestations.

Word reading and spelling difficulties co-occur. Students with dyslexia typically struggle with both word reading and spelling (e.g., Berninger et al., 2008). The strong correlation between word reading and spelling reflects their shared reliance on phonological awareness, orthographic awareness, and morphological awareness. A student who experiences difficulties in one or all of them will have difficulty in reading *and* spelling words.

Reading comprehension and written composition difficulties co-occur. The relationship between reading comprehension and written composition means that many students who struggle with reading comprehension also struggle with written composition. These students may have weaknesses in shared foundational skills such as vocabulary, grammatical knowledge, inference-making, or background knowledge. For example, a student with limited vocabulary will struggle both to understand texts and to express complex ideas in writing.

Dyslexia is also a writing disability. This point deserves special emphasis because dyslexia is often emphasized as a reading disability, overlooking writing. Consequently, students identified with dyslexia may receive intensive intervention in reading, but their writing needs may go unaddressed. Given the shared component skills between reading and writing, and the documented co-occurrence of reading and writing difficulties (Graham et al., 2021), students with dyslexia need explicit instruction and support in spelling, handwriting fluency, and written composition—not just word reading and reading comprehension.

What Are The Implications of Reading–Writing Relationships?

Now we turn to the most important section for educators: What do these research findings mean for practice? The science of reading–writing connections suggests four key instructional strategies (Kim, 2026; Kim & Zagata, 2024): leverage assessment data, teach shared foundational skills, integrate reading and writing instruction, and provide separate instruction as needed.

Leverage Assessment Data in Both Reading and Writing

The relationship between reading and writing has important assessment implications. Students should be assessed in both domains for three reasons. The first reason is to identify shared strengths and needs. Students who struggle with both reading and writing would benefit from instruction targeting shared skills. The second reason is to identify unique patterns. Some students show isolated difficulties—strong in one area but weak in the other. For example, a student might be a strong reader but a weak writer, or vice versa. These patterns suggest the need for domain-specific intervention in addition to foundational skills instruction. This discrepant pattern will likely be more prevalent between reading comprehension and written composition than word reading and spelling. The third reason is to monitor progress in both domains. Reading and writing skills are two dimensions of literacy skills, and monitoring both provides a more complete picture of literacy development.

There are a couple of specific action items that can be implemented. The first one is to include writing in your assessment battery. Many schools have robust reading assessment systems but limited writing assessments. To truly understand students' literacy needs, educators can do the following:

- Include writing assessments in screening and progress monitoring, in addition to reading assessments.
- Look for shared strengths and needs across reading and writing, as well as unique patterns where one area is relatively stronger or weaker.
- Use portfolio assessments when formal writing assessments are not available.

The second approach is the thoughtful use of assessment data (e.g., using item-level data rather than relying on total scores). Looking carefully at spelling data with attention to phonological, orthographic, and morphological aspects can inform word-reading needs (Kim & Petscher, 2023), and reading assessment data can inform writing needs (Ritchey & Coker, 2014). For example, if spelling assessment reveals a student consistently misspells words with vowel digraphs (e.g., coch for couch), this suggests the student needs instruction in vow-

Reflection Questions for Your Context

Does your current assessment system include writing assessment as part of formative assessment practices?

If yes, what does this look like in practice?

If no, what gaps do you notice and what opportunities might exist?

el patterns for both reading and spelling. If a student's reading comprehension assessment shows difficulty with vocabulary questions, targeted vocabulary instruction will likely benefit both reading and writing.

Thoughtful use of assessment data also applies to comprehension and composition instruction. This includes analyzing students' written responses to comprehension questions and their independent writing and looking for patterns such as the following:

- difficulty with main idea (affecting both reading comprehension and topic sentences in writing)
- limited vocabulary (affecting both understanding of text and expressing ideas in writing)
- weak inferential thinking (affecting both reading between the lines and elaborating in writing)
- poor text structure knowledge (affecting both comprehension of different text types and organization of writing)

An example of a discrepancy educators may notice is if a student's written response about a story shows they can retell literal events but miss the theme or character motivations. This suggests a need for inference instruction that can be applied to both reading and writing tasks. It is important to note, however, that for beginning writers, reading comprehension and written composition do not provide a full picture of their instructional needs because they're still developing word reading, spelling, and handwriting/keyboarding skills. This limits the extent to which skills like vocabulary and higher order cognition can be utilized in reading comprehension and written composition.

Teach Shared Foundational Skills

The positive consequence of shared component skills and knowledge, as shown in Table 1 and Figure 1, is that instruction targeting these shared foundations can efficiently support both reading and writing development. By teaching these shared skills explicitly and helping students see their application to both reading and writing, educators can create more efficient and integrated literacy instruction. Some examples are found in Table 2.

Integrate Reading and Writing Instruction

Reading–writing relationships have a crucial practical implication: Students benefit from integrated instruction that leverages reading–writing connections. Effective literacy instruction should therefore include integrated reading–writing instruction that teaches shared skills and makes connections visible. Beyond teaching shared skills, it is important to create explicit connections between reading and writing activities. For example, writing activities can be used to support reading comprehension. Before reading, quick writes or discussions about the topic help build and activate background knowledge and help predict what the text might cover. During reading, students can annotate the text to support active reading by marking important ideas, unfamiliar words, and questions (see Clemens et al., 2026 and Kim et al., 2025 for examples of integrated instructional approaches). After reading, students may write a summary to consolidate understanding or a critical analysis or response to deepen comprehension, using text evidence in their written responses. Reading activities can also be used to support written comprehension. Before writing, engage students in goal setting, asking questions such as "What kind of text will you write?" and "Who is your audience?" Students can also read mentor texts to see examples of the target genre. During writing, they can refer back to these texts for ideas about organization, word choice, or craft, and they can use notes and annotations from reading as content for writing. After writing, students can compare their work to mentor texts and use revision strategies based on those models.

Another important approach in integrated instruction is to make reading–writing connections visible. This includes supporting students' metacognition about the connections between reading and writing (Kim, 2026). An example of making connections visible is "*reading with writer's eyes*." Teachers can model this process for students by making statements like the following: "As I read this, I'm thinking like a writer. I notice how the author _____. I could use this same technique in my own writing." A similar technique is "*writing with reader's eyes*," where teachers model how to apply information learned from reading to writing (Kim, 2026). Other examples of making reading–writing connections visible include explicitly connecting how text structures are used in both reading and writing, using the same graphic organizer for reading comprehension and writing planning, demonstrating how character and story maps used for comprehension can guide narrative writing, and showing how understanding cause-and-effect relationships in reading helps with explanatory writing.

Table 2

Examples of Teaching Shared Foundational Skills

Skills & Knowledge	Examples
Phonological & Orthographic Skills	• Teach phoneme-grapheme correspondences, spelling patterns, and orthographic conventions explicitly, always connecting to both reading and writing • After teaching a spelling pattern (e.g., the "oi" and "oy" spellings for /ɔɪ/), have students both read and spell words with this pattern • Point out spelling patterns when reading together ("Notice how this author spelled *stretched*—what sounds do you hear?")
Morphological Skills	• Teach common prefixes, suffixes, and roots systematically • Show how understanding morphemes helps with both reading unfamiliar words and spelling complex words • Use morphological knowledge to build vocabulary for both reading and writing
Vocabulary & Grammatical Knowledge	• Teach vocabulary beyond definitions—multiple meanings, word relations, and usage • Teach sentence structures explicitly, analyzing them in mentor texts (for comprehension) and practicing them in writing • Use sentence combining and sentence expansion activities that build syntactic sophistication for both reading and writing
Higher-Order Thinking Skills	• Explicitly teach inferencing, perspective-taking, and reasoning skills, showing their application to both reading and writing • Model how to make inferences while reading and show how writers include clues for readers to make inferences • Teach students to consider different perspectives when interpreting texts and when writing for different audiences • Develop reasoning skills through both text analysis and argument construction
Text Structure	• Identify topic sentences when reading and practice composing topic sentences when writing • Analyze how authors develop ideas with supporting details and plan writing by organizing ideas before drafting • Recognize different text structures (description, sequence, compare-contrast, cause-effect, problem-solution) in reading and use them in writing and vice versa

Provide Separate Reading and Writing Instruction When Needed

While integrated instruction is powerful, remember that reading and writing are related but not identical. Some students show isolated difficulties—for example, strong reading comprehension but weak written composition, or strong spelling but weak word reading. Therefore, it is important to provide specific reading instruction (e.g., decodable texts, reading fluency practice, comprehension strategies) and specific writing instruction (e.g., writing process and strategies, idea generation and organization, revision) using assessment data as a guide.

Conclusion

The science of reading–writing connections reveals a complex but comprehensible picture. Reading and writing are strongly related skills that share many foundational components, yet they are not identical and require both integrated and specific instruction. By understanding the nature of their relationships—including shared skills and knowledge; hierarchical, interactive, and dynamic connections; and their instructional implications—educators can design more efficient and effective literacy instruction. Perhaps most importantly, educators need to recognize that students with reading difficulties—including those with dyslexia—need attention to their writing development, not just their reading development. The shared component skills mean that difficulties rarely affect only one domain. By applying the science of reading–writing connections thoughtfully and systematically, educators can empower all students to become capable, confident

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readers and writers. The goal is not just literacy, but integrated literacy—students who can flexibly apply their knowledge and skills across reading and writing contexts, who understand that growth in one area supports growth in the other, and who see themselves as both readers and writers. ■

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