

## **CHAPTER 5**

# **Writing to Promote Better Reading Comprehension**

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Writing provides a powerful and flexible tool for promoting learners' comprehension of the text they read as well as the development of stronger reading comprehension skills (Graham et al., 2020; Shanahan, 2016). Unfortunately, elementary and secondary students and teachers do not always take full advantage of the benefits of writing as a tool to facilitate comprehension and learning. This chapter presents evidence-based writing practices that enhance younger as well as older students' reading. For these evidence-based practices (EBP), we also suggest additional procedures that should enhance their effectiveness. We offer the following three questions to guide your reading of this chapter.

### **GUIDING QUESTIONS**

- How can writing enhance reading comprehension?
- What instructional writing practices make students better readers?
- How can these practices be improved?

### **Have Students Write More**

#### **How Does Extra Writing Improve Reading Comprehension?**

One way to help students learn to better comprehend text is to increase how much they write (Graham & Hebert, 2011). This EBP is a win-win situation for elementary and middle school students because it improves not only their skills in comprehending text, but also the overall quality of their writing (Graham,

Harris, & Santangelo, 2015). The impact of increased writing for high school students, however, is uncertain. Even so, it is important to ensure that these older students write frequently, as they need to use and practice applying this versatile tool in multiple situations if it is to become a common and useful part of their literacy toolkit.

Readers of this chapter may ask, “Why does increasing how much students write help them become better at comprehending the text they read?” Simply put, writing and reading are both communication activities (Tierney & Shanahan, 1991), and engaging in either of these processes should allow students to gain insight into the operation of the other process. Accordingly, as writers create text for others to read, even when the author is the intended audience, they gain insight about the process of reading. For example, writing requires that students make their assumptions and premises explicit and observe the rules of logic as they write. This can make them more aware of the same issues when reading text produced by others. Similarly, students have to think about the needs of their audience as they write, so increasingly the likelihood they will consider how authors of the material they read attend to this same issue. In essence, writing can make students more reflective about the material they read.

### **Examples of EBP for Extra Writing**

For students who are just learning to write, relatively small increases in time spent writing can produce positive gains in their reading comprehension. This was illustrated in a study by Sussman (1998) with first-grade students. Students in this study spent between 75 to 100 minutes each week writing. Over the course of 23 weeks, they were asked to write for an additional 20 minutes 1 day a week. Students were encouraged to use invented spellings for all of their writing. For the extra writing they did each week, they were provided with a picture and asked to write something about it. At the end of the 23 weeks, their reading comprehension scores on a norm-referenced reading test were 9 percentile points higher than the scores of their peers who were not assigned extra picture writing.

It is also important that the extra writing students produce has a purpose and a real audience (Graham, Harris, & Santangelo, 2015). This was illustrated in a study by Dana and her colleagues (1991). They asked sixth-grade students to exchange a total of five letters with local college students, providing the sixth graders with an audience that would respond to their writing. This extra writing resulted in a 10-point percentile jump in their reading comprehension scores when compared to students who did not write to a pen pal.

There are many different writing activities that can enhance students’ comprehension of content material (Graham, Kiuahara, & MacKay, 2020), including journal, narrative, informational, and persuasive writing. Extra writing instruction can involve these different types of writing, but it can also involve extra writing to create possible semantic representations of material that is to be read. This was demonstrated in a study by Reutzel (1985) with fifth-grade

students. Before reading a story, but after a brief introduction to it, students created a written map in response to questions such as: “What do you think this story is about? Who do you think the first character is in the story? Do we know anything about this character? Do you think a story like this could be true?” Using these questions as a guide, students created a semantic map showing the relationships between their ideas about the story (e.g., main idea map, a compare and contrast map). They then read the story to see if their guesses were accurate. When compared to students who were not engaged in this extra writing, students who created these story maps evidenced a 31-point percentile jump in the comprehension of the stories they subsequently read.

### Extensions

With the exception of the example involving extra writing through creating story maps above, reading comprehension gains occurred without explicit guidance, hints, or help from the teacher. We believe that the positive benefits of extra writing might be enhanced by explicitly directing students’ attention to how their writing can inform their reading. One possible way of accomplishing this is to have students set a goal to address the needs of their audience. First, students can identify the specific audience need(s) they will address. This can be facilitated by providing students with a list of possible audience needs (e.g., make sure each point makes sense, provide adequate detail for each idea, make sure each idea logically leads to the next idea, define unusual words, write neatly), and asking them to choose one or more of these goals to address. Once goals are established, students should develop a plan for how they will accomplish their goal (e.g., check each sentence to be sure it connects to the next idea). After they have written their paper, they should be asked to reread it to determine if they met their desired goals. If not, they should be encouraged to revise their paper.

Another possible avenue for making the link between writing and reading more concrete is to have students write something and then view how their audience reacts (Couzijn & Rijlaarsdam, 2005). For instance, they can write directions for carrying out a specific activity, and then watch what happens as another student applies these directions. If the directions are not adequate, they can be encouraged to revise them. Likewise, they can be asked to write a paper on a controversial topic and to participate in a discussion where their ideas are examined and debated. These types of activities should make the connections between writing and reading as communication activities even clearer to students.

As students are encouraged to write more, teachers can also conference with them, asking them questions about their composition in progress. Some questions can focus specifically on the needs of the writer’s audience. This includes questions such as: “Will your reader understand what you mean here? Does your reader need additional information to understand what you are saying here? What does this word mean? Will your reader think you are providing too much detail here?”

## **Have Students Write about What They Read**

### **How Does Writing about Material Read Improve Reading Comprehension?**

When students write about material they read, it helps them understand it better (Fitzgerald & Shanahan, 2000). It can facilitate comprehension of text in one or more of the following ways:

1. It fosters explicitness, as students must decide which information in text is most important.
2. It supports integration, as it encourages students to organize ideas in text into a coherent whole, creating explicit relationships between ideas.
3. It promotes reflection, as students can easily review, reexamine, connect, critique, and construct new understandings of reading material they commit to paper.
4. It generates a personal connection with text, as students must make active decisions about what is to be written and how it is to be treated.
5. It involves students putting ideas from text into their own words, making them think about what these ideas mean.

More specifically, writing about text facilitates comprehension because it provides students with a tool for visibly and permanently recording, connecting, analyzing, personalizing, and manipulating key ideas in material read (Graham & Hebert, 2011).

Writing about material read can also facilitate learning and comprehension as it provides students with a tool that helps them integrate information from text with their current knowledge held in long-term memory (Silva & Limongi, 2019). As students write about text, they rehearse information read, modifying and elaborating on it as they integrate these ideas with what they already know. For example, recording in a journal information taken from text acts as a rehearsal strategy, increasing students' exposure to the material read and extending time on task. Similarly, writing a response to a particular passage can evoke the use of organization and elaboration learning strategies, as students build a structure for presenting text ideas in writing, including linking new ideas in the text with their current understandings. Specific writing activities may further encourage comprehension monitoring. This can happen when a writing activity prompts students to reconsider old ideas in light of new information presented in a passage.

Writing can further facilitate comprehension when students transform material read into an argument, informational text, creative stories, or personal narratives (Klein, 1999). Genres are particular kinds of text, with specific purposes and text structures (Langer & Applebee, 1987). When students use a specific genre structure to organize relationships among ideas in the material they are reading, it helps them better understand how these ideas are related (see also Chapter 6, this volume). As students bring together ideas from text using the organizing structure of a specific genre (e.g., evidence, claims, and

warrants when writing an argument), they acquire new understanding as they construct corresponding relations among the knowledge in the text and their own knowledge.

Writing is clearly a powerful tool for helping students better understand the material they read. In the next section, we present EBP examples of different types of writing that can enhance students' comprehension of text.

### Examples of EBP for Writing about Material Read

Table 5.1 presents seven writing activities that are effective at improving students' comprehension of text. Drawing on research with younger and older students, as well as students who find literacy challenging, we provide examples of each of these writing activities.

#### *Answering Questions in Writing*

Perhaps one of the easiest ways of using writing to enhance comprehension is to have students answer in writing questions about the material they are reading. While this can be done verbally, writing the answers to such questions makes them more memorable because it provides a second form of rehearsal and the answers are available for review, reevaluation, and reconstruction (Graham & Hebert, 2011).

An example of this approach involves a study by Berkowitz (1986) with sixth-grade students. After being introduced to new vocabulary and needed background knowledge, students read a social studies text and answered in writing 10 main idea and 10 detail questions about it. They then discussed their answers with the teacher, with the goal of identifying the correct answer for each question. Students studied their answers and shared with a peer all they could remember from the social studies material read. Students applied these procedures to six social studies texts over a 6-week period, resulting in a 14-point percentile jump in students' comprehension of social studies materials.

An even more active approach to using writing to answer questions about material read is to have students generate their own written questions about

**TABLE 5.1. Seven EBP Writing Activities for Promoting Text Comprehension**

Use writing to . . .

- Answer questions about text
- Create written questions about text and answer them
- Take written notes about text
- Produce a summary of material read
- Generate a story about material read
- Describe how to apply information taken from text
- Develop an argument to support or reject a position presented in text

the material they read. Andre and Anderson (1979) applied this approach as a way to improve high school students' comprehension of expository text. Students were taught how to generate their own questions about the material they were reading. This involved the following three steps: (1) directing students to identify the main idea for each paragraph in a three-paragraph composition, (2) generating a question for each idea that focused on generating new instances or ideas that would logically flow from the main idea, and (3) generating a written question about a concept in text if the second step proved too difficult. The teacher modeled how to carry out these procedures, provided students with examples of self-generated written questions, and had them practice generating their own written questions for the main ideas presented in several practice paragraphs. The use of this question generation process resulted in a 20-point percentile increase in students' reading comprehension.

As these two examples illustrate, responding to questions about text in writing or students creating their own questions about the text they are reading enhances understanding of this material. The examples above do not exhaust the types of questions that students can answer or generate. Questions can range from those that ask students to make inference, focus on text organization, or evaluate an idea in text. They can involve answers that are directly presented in text, only exist in the reader's head, or both. They can focus attention on clarifying new meanings, making predictions, or considering an author's intent. These various purposes provide teachers with multiple avenues for using questions and writing as a means for helping students understand what they read.

### *Note Taking*

Taking notes about material read requires students to shift through text to determine what is most relevant and transform these ideas into written words, phrases, and even sentences (Graham & Hebert, 2011). It can also involve connecting one text idea to another and blending this information from text with what a student already knows, resulting in new understandings.

Two basic approaches to note taking for reading have been studied scientifically. With one approach, students are directed to take notes but provided with little guidance on how to do so. For example, fifth- and sixth-grade students in a study by Leshin (1989) were simply told to take notes about passages they were reading, whereas Ryan (1981) directed middle school students to take written notes after each paragraph read and Kulhavy and colleagues (1975) directed students to take up to three lines of notes after reading each page. Despite the relative simplicity of these approaches, they resulted in gains ranging from 14 to 20 percentile points in reading comprehension.

With the other approach to taking notes from reading materials, students apply a much more structured strategy. This approach was illustrated in a study by Berkowitz (1986) with sixth-grade students who were good and poor readers. These students were taught how to construct a semantic map of the social studies material they were reading. For instance, when reading a

passage entitled “What Makes a Nation?,” they would construct a map with this question in the center and main ideas in this text connected to this hub with arrows or straight lines. Each main idea was represented by a labeled box (e.g., national unity, territory, government) with relevant notes included within the box.

To teach this note-taking procedure, the teacher introduced students to the reading topic prior to reading about it. This included introducing the topic, defining unfamiliar vocabulary words in the social studies text, and presenting background information needed to understand the passage. Students then read the text and constructed a map on a blank sheet of paper. Students wrote the title of the passage in the center of the page. Next, they skimmed the article to find four to six main ideas. They rewrote these ideas in their own words in a clockwise direction around the title. They again skimmed the article to find two to four important details to mention under each main idea. Finally, they connected the main idea and supporting details to the title of the passage. They then studied their map, reciting main ideas as well as the details until they could do this without looking back at the map. They further told a partner all they could remember from their reading. Students practiced applying these procedures under teacher direction, and they received feedback on the maps they produced. This approach to note taking was effective, as students made a 31-point percentile jump in reading comprehension.

A variety of structured note-taking procedures have positively enhanced students’ reading comprehension. This includes outlining reading material, using a two-column note-taking method, and taking notes on a structural/graphic organizer that provides already designated categories (Graham & Hebert, 2011).

### *Summarizing Text in Writing*

When students summarize text read into writing, they must decide what is and is not most important and transform this into a written statement that captures the essence of the material (Graham & Hebert, 2011). Written summaries present a synopsis of what was read, and they can readily be critiqued and reworked. This makes summary writing a powerful tool for understanding text.

Summarization is a complex skill, and we recommend teaching students how to apply this skill when writing a summary. A study by Hare and Borchardt (1984) provides one example of how students can be taught to summarize material read. They taught eleventh-grade students rules for writing a summary. This involved the following four steps: (1) Read the text and ask questions to be sure you understand it (“What is the text about? What did the writer say? Try to state the general theme to yourself”); (2) reread the text to be sure you got the theme right, be sure you understand important parts, and star these parts; (3) apply four summarization rules to create a summary of the passage read (i.e., collapse lists of ideas to a single word or phrase, use topic sentences as they often summarize a paragraph, get rid of unnecessary details,

collapse paragraphs by deleting unimportant ones or combining those talking about the same topic); and (4) write and double-check your summary to polish it and make sure you didn't repeat yourself, leave in lists of items, or omit important information.

Hare and Borchardt (1984) taught these summarization rules in three 2-hour sessions. On the first day, the teacher and students defined a summary, and the teacher introduced the rules for writing a summary presented above. The teacher modeled how to use these rules on a selected passage, receiving help from the students. After they completed this summary, students compared what they had produced to a polished summary of the passage read, and they reviewed the rules for writing a summary. As a group and individually, students practiced writing summaries of materials read, receiving feedback from the teacher. On Day 2 of instruction, the teacher again modeled all the summarization rules for students, and students practiced writing summaries on materials more similar to what they would use in class. On the final and third day of instruction, students again practiced using the summarization rules, but now applied them to longer passages. This approach to teaching summarization was successful, as the students in this study experienced a 17-point percentile jump in reading comprehension.

Another approach to teaching summarization is illustrated in a study by Chang et al. (2002) with fifth-grade students. Students were first introduced to an expert summary of material read, and they examined and discussed it with their teacher. They then completed an expert summary that was missing a piece of key information from the material read. Missing information from the expert summary was signaled with a blank line. As students practiced completing expert summaries of material read, more and more information was deleted until students were writing the full summary by themselves. As they completed the incomplete expert summaries, they were provided feedback on the number of blank lines completed successfully. Students who learned to create summaries through this fading method evidenced a 20-point percentile jump in reading comprehension.

We share one additional approach to teaching summarization of material read that was applied with grade 3 to 6 students with learning disabilities (Jenkins et al., 1987). This involved three phases of instruction whereby students were taught to write brief restatements of the main ideas as they read each paragraph. In Phase 1, students were provided with retyped narrative stories with lined space between each paragraph. Using modeling, practice, and corrective feedback, students were taught to name the most important character/person and the main event in each paragraph. This was guided through the use of two supportive questions for formulating restatements: who and what is happening. If students were unable to generate a restatement, they were asked to read the paragraph a second time, and if they were still unable to identify an important event from the paragraph, the teacher provided corrective feedback. During Phase 2, students worked individually writing their restatements on the lined spaces given after each paragraph, receiving feedback as needed. When students finished writing restatements, the reading material was removed, and

students were asked to elaborate on material read in each paragraph. In the third phase of instruction, students read regular narrative passages with no spaces for writing notes and practiced recording their restatements on a separate piece of paper. Students taught these procedures evidenced a 10-point percentile jump in reading comprehension.

### *Extended Writing*

Writing a more extended response to reading material provides students with the opportunity to express a personal reaction to it, analyze and interpret it, or both (Graham & Hebert, 2011). Newer and better understanding of text are likely to occur when students write about reading material in such ways.

To date, scientifically tested extended writing activities involve a variety of narrative, information, or persuasive writing tasks. This includes writing a personal response to material read, writing about a personal experience evoked by reading text, writing an analysis of a character in a story, showing or explaining in writing how to apply knowledge presented in text, and analyzing a particular point of view presented in text.

To illustrate the use of extended writing, we share procedures applied in two different studies. Wong and her colleagues (2002) used journal writing as a way of helping grade 12 students better understand themes and main characters in F. Scott Fitzgerald's novel *The Great Gatsby*. For selected chapters in the novel, students responded to specific questions about the chapter by writing their responses in a journal they completed in class. For example, for Chapter 7, where Gatsby forces Daisy to choose between himself and her husband Tom, students responded to a series of questions about what they noticed (e.g., "Do you notice anything ironic?"), questioned (e.g., "Do you question Gatsby's soundness in forcing Daisy to choose?"), and felt (e.g., "Does the story leave you feeling sad, angry, scared?"). For the final chapter in the book, students responded to questions about what they had learned (e.g., Nick's view of Gatsby's vigil) and felt (e.g., "How do you feel about Gatsby?"). Once they completed their journal entries, they discussed as a group their reactions to the guiding questions. Once students began talking, the teacher maintained the flow of class discussion by using open-ended questions, incorporating students' comments in her follow-up comments or questions, and validating student's responses. This use of extended writing through journal entries increased students' comprehension of the novel by 33 percentile points.

In a study with much younger second-grade students, Denner et al. (1989) applied an interesting writing activity where students constructed a story before reading it (see also Reutzell, 1985, presented earlier where an outline of a story was created). This was done by giving students clues and hints concerning how the events and characters interacted in the story to be read. After writing their story impression, students shared their stories in class. Students then read the actual story that inspired the narrative they wrote. Creating such impressions of the story to be read led to a 30-point percentile increase in comprehension of it.

## Extensions

While research has demonstrated that writing about text can enhance a student's comprehension of it, studies of writing as a tool to promote comprehension have only tested a relatively small number of writing activities. It is likely that other writing activities can also increase students' comprehension of text. Table 5.2 presents a variety of writing activities that can potentially enhance students' text comprehension. These eight writing activities were drawn from a meta-analysis demonstrating that writing about material presented in class can improve students' learning of such content (Graham et al., 2020). As a result, we believe these writing activities are also viable candidates for improving the comprehension of text read.

Because the writing activities in Table 5.2 have not been scientifically tested with reading material specifically, we make three important recommendations. First, it is important to identify what you want students to understand or learn as a result of reading a particular text. Such learning can take many forms, including determining the central ideas in a reading selection, comparing different ideas in a text, connecting text information to current knowledge, extending thinking about a topic, generating solutions and outcomes, or better understanding specific ideas presented in a text. Once you identify what students are to learn or better understand as they read a particular passage, you can identify one or more activities that will help them meet these goals. For example, if you want students to extend their thinking about the basic ideas in a text, you could ask them to write a poem or story using these ideas.

Second, it is important that students possess the prerequisite writing skills needed to use the selected writing activity effectively. The best way to ensure this is to teach students how to apply the writing activity when reading. This includes describing the writing activity, why it is useful, when and when not to use it, as well as modeling how it is used and providing students with guided practice doing so until they can apply it correctly and effectively. We find that it is advisable to use the writing activity yourself before teaching your students

**TABLE 5.2. Eight Additional Writing Activities for Promoting Text Comprehension**

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Use writing to . . .

- Compare and contrast ideas in text
  - Connect new information in text with information already known
  - Describe the possible effects of an idea presented in text
  - Present one or more solutions for a problem presented in text
  - Create a written image of information, ideas, or processes presented in text
  - Explain in your own words ideas presented in text
  - Create a poem to illustrate or extend text ideas
  - Construct analogies to describe information, ideas, or processes presented in text
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to use it. This will help you think more clearly about how to teach it and how it is applied.

Finally, please do not assume that any writing activity, an EBP or not, will automatically be effective with your students. The best advice we can give is to carefully monitor if the selected writing activity achieves the desired goals you have set for it. If it does not enhance your students' comprehension of text, investigate why this is the case and make needed adjustments in its use as needed.

## **Teach Students to Write to Improve Their Reading**

### **How Does Teaching Writing Improve Students' Reading?**

While writing and reading are not identical skills, they both draw on common sources of knowledge (Fitzgerald & Shanahan, 2000). Students draw on knowledge stored in long-term memory to help them understand what they read and to obtain ideas to write about. Students also apply what they know about the functions and purposes of written language to help them create text for others to read and interpret text written by others. Students further use their knowledge of words, syntax, usage, and the features of text to decode and write words as well as comprehend and produce larger units of text. Moreover, students use their knowledge of cognitive activities such as goal setting, accessing information, questioning, predicting, summarizing, visualizing, and analyzing to understand text read and write what they intend. As a result, instruction that enhances writing knowledge, skills, and processes should improve students' reading, too.

### **Examples of EBP for Teaching Writing to Improve Reading**

#### *Spelling*

Teaching students how words are spelled provides them with schemata about specific connections between letters and sounds. This should make it easier for them to identify and remember words in text containing these connections (Ehri, 2000; see also Chapter 2, this volume). There are multiple examples of studies where teaching spelling to young students improved their word reading, reading fluency, and reading comprehension (see Graham & Santangelo, 2014). We share one example here from a study by Graham and colleagues (2002) conducted with second-grade students experiencing difficulty with reading, spelling, and writing.

Each 2-week unit (six 20-minute sessions) in the spelling program devised by Graham and his colleagues (2002) began with a word-sorting activity where students determined the underlying rules of the two or three spelling patterns presented in that unit (e.g., consonant–vowel–consonant and consonant–vowel–consonant and letter *e* patterns for short and long /a/). The instructor

placed two or more word cards next to each: one for each spelling patterns. The word was pronounced twice, with the instructor emphasizing the target sound the second time. New words were then introduced that included the target spelling patterns, and the teacher solicited students' help in placing each new word under the word that illustrated the same spelling pattern. To help students do this, the instructor provided hints, pointing out similarities and differences in sounds and letters. The instructor encouraged students to identify a rule for each of the target spelling pattern, and to test these rules as they carried out the word-sorting activity. Once the instructor believed students were ready, they generated a rule for each spelling pattern.

After the word study activity and throughout the unit, students were encouraged to "hunt" for words in their reading and writing that fit the spelling pattern they were working on in that unit. These were shared and discussed with the instructor and other classmates to ensure that they, in fact, fit the specified spelling pattern.

On the second day of each unit, students were provided with a list of spelling words to study that fit the spelling rules targeted. They had misspelled these words on an earlier assessment administered before the start of the study. They were taught a specific strategy for studying the words. They were taught to: (1) say the word and study the letters, (2) close their eyes and say the letters, (3) write a word three times without looking at it, and (4) check to see if their spelling were correct (correcting any misspellings). They graphed how many words were spelled correctly and set a goal for how many words they would spell correctly during the next session.

Students not only set goals for how many practice words would be spelled correctly, but also created a plan for studying these words. This could involve the strategy described above as well as the use of a variety of games, such as tic-tac-toe or hangman, which were played with a peer. Moves in these games depended on how many letters in a word were spelled correctly.

For four of the six sessions in each spelling unit, students began the lesson with a spelling warm-up activity. This involved identifying the letter that represented onset, medial, or final sounds in simple words. This warm-up activity was done in pairs, with one student holding up a card with a picture on one side and a corresponding letter on another side. The child said the word depicted by the picture and made the sound and identified the location of the sound in the word (beginning, middle, or end). The student's partner then identified the letter(s) that correspond to that sound. If an incorrect letter was identified, the student holding the card said the correct response. Students spent several minutes as the tutor and the tutee in each session.

Students also built words from the spelling patterns they were studying. For long and short /a/, they were provided with rimes such *ad* and *ade*, and directed to work with a partner to build as many real words as possible by adding consonants, blends, and diagraphs.

Throughout the spelling program, review of spelling patterns provided in previous units occurred. For example, in each unit, students built words from rimes introduced in the previous unit. This program enhanced not only

students' spelling, but also resulted in an 18-point percentile increase in students' word-reading skills.

### *Sentence Construction*

Teaching students how to construct more complex sentences by combining smaller, less complex ones should result in greater skill in recognizing and understanding such sentences when reading (Neville & Searls, 1991). This was illustrated by Neville and Searls (1985) in a study with sixth-grade students who were taught how to construct more complex sentences over a period of 10 weeks as well as identify kernel sentences (i.e., short simple sentences used to make longer more complex ones). First, students were given an assigned text to read. They then practiced combining kernel sentences from this text into more complex sentences. In the first three exercises, they combined 2 to 7 kernel sentences into a single sentence. In the next two exercises, they combined 7 to 19 kernel sentences into as few sentences as possible. Students shared the sentences they produced with the class, defending the choices they made. Students also completed kernel-recognition exercises by identifying kernel sentences taken from more complex sentences in the assigned text they were reading. Each recognition activity included kernel sentences that were and were not included in the more complex sentence. Again, students shared and defended their answers with their peers. This sentence construction program resulted in a 12-point percentile jump in reading comprehension.

### **Extensions**

The EBPs presented here involved teaching spelling and sentence construction skills. It is also likely that instructional practices designed to increase students' knowledge of text structure as well as cognitive process used when writing, such as goal setting, self-monitoring, planning, evaluating, visualizing, questioning, creating analogies, and accessing information, provide students with strategies that can also be used when reading. For example, when students are taught to produce content for a narrative they are writing by generating possible writing ideas around the basic building block of a story ("Who is the story about? Where does it take place? When does it occur? What are the main characters' goals? What do they do to achieve them? What emotions do characters display? How does the story end?"), this provides them with schema for interpreting stories read. Likewise, teaching students how to visualize a scene so that they can make it more vivid when writing about it provides students with a tool they can use to better imagine a described setting in a story, characters' actions, or even their own feelings and emotions.

Instead of assuming such transfer occurs, however, we encourage teachers to make sure students see and understand how such knowledge and processes can be applied across both reading and writing. This includes not only teaching students how to use these processes when writing, but also making explicit connections on how to profitably use them when reading. This can be

illustrated with the visualization example above. Students can be taught how to form images of scenes, characters, or actions they want to include in their story, while at the same time using the process of imagery to form mental pictures of the same aspects of stories they are reading. Such integration makes the connections between reading and writing even more concrete and visible to students.

### **Concluding Comments**

The effectiveness of using writing or writing instruction as a tool to support students' understanding of text and growth as a reader depends on how writing is valued in the classrooms where it is applied (Smagorinsky, 1995). It is more likely to be a successful tool in classrooms where it is sanctioned and valued, and less likely to be useful in classrooms where this is not the case and writing occurs infrequently (Graham, 2018). The best way to ensure that the effects of writing on reading comprehension are maximized is to make writing a common and typified action in your class. Have students write frequently, ask them to use writing to think about what they read, teach students how to write, and make connections between writing and reading visible and as concrete as possible.

In closing, we ask you to consider the following questions as you apply procedures and information presented in this chapter in your own classroom:

- What writing activities presented here can you successfully apply with your students?
- How will you need to use these writing activities to maximize their success with your students?
- How will you evaluate if the writing activities applied were successful?

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