CHAPTER 2

How Writing Develops

GUIDING QUESTIONS

- How does handwriting develop over time?
- How does spelling develop over time?
- How do children master different types of composition?
- How do children learn to use writing processes?

Many teachers learn extensively about reading development in teacher education coursework, but what about writing? Teachers we know are quick to say that students struggle with writing in the primary grades, but what do they actually mean? How do they know? In this chapter, we share insights from research that will help teachers gain an understanding of how writing develops in young children.

Without understanding how writing develops, it is difficult to frame expectations about what children might be able to write or understand why they make the kinds of errors they do. Understanding writing development is not a simple task. Nearly all would agree with Berninger and Chanquoy's (2012) assertion that the development of writing is a complex process and that it requires years of practice and schooling for students to become proficient. Writing development depends on multiple factors: cognitive, social, linguistic, cultural, and instructional. Writing also depends on students' oral language, but it requires more than just strong language skills. For example, when we look at an example of students' oral and written summaries, stark differences emerge.

Lena is a curious prekindergartener who loves to hear stories. One day after reading *I'm Dirty* by Kate and Jim McMullan, her teacher asks Lena to tell what

happened in the book. The teacher prompts Lena with some questions, and as you can see, she provides a clear and detailed description.

TEACHER: Lena, what was happening in the story?

LENA: He was shiny at first and then he was dirty.

TEACHER: Do you remember what happened in the middle?

LENA: He was working all that and he got dirty.

TEACHER: Do you remember what he was doing?

LENA: He was cleaning up all the dirty stuff and the junk stuff.

TEACHER: Do you remember any of the things he was cleaning?

LENA: Uhh, the umbrellas the um . . . the . . . beach umbrellas and mud.

Later the teacher reads Lena another book, *Polar Bear Night* by Lauren Thompson. This time, she asks Lena to write about what happened in the book (see Figure 2.1). We can "see" Lena's process here. Lena started by copying the name of the author (Lauren Thompson), but she didn't finish. Then she wrote the string of letters underneath that begin with the letter *R*. When asked about what she wrote, Lena said that she wrote the word *rectangle* because on the book's cover the polar bear has a nose like a rectangle.

In this case, Lena was able to provide a clear and organized oral description of *I'm Dirty*, but her written summary of *Polar Bear Night* was puzzling. The differences in these responses highlight the challenges that writing poses for young children. These challenges include letter formation, word spacing and alignment, and
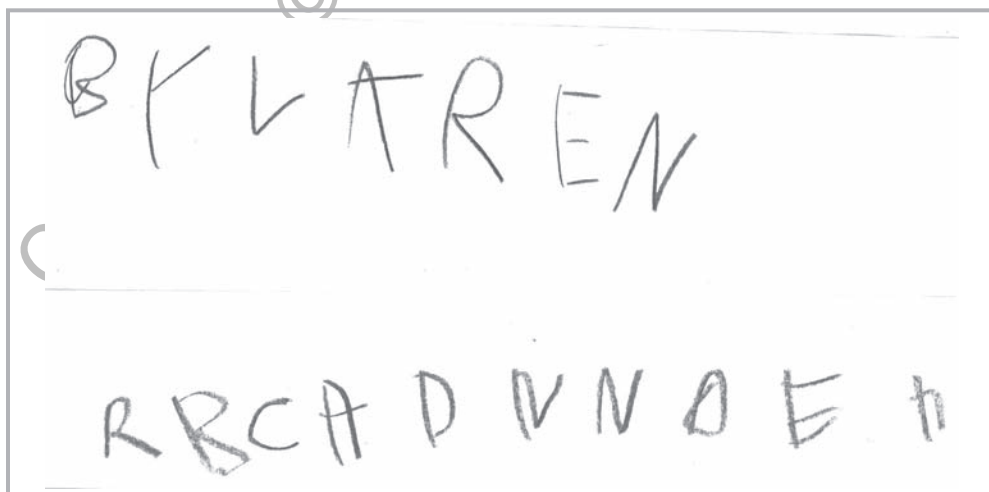
FIGURE 2.1. Lena writes about *Polar Bear Night*.

spelling, as well as composition processes such as planning her response and revising what she may have written. Writing is also difficult because the writer does not receive the same kind of feedback as a listener does. For example, when Lena described what happened in *I'm Dirty*, the teacher asked her questions about what she meant, and Lena was able to supply more detailed information about the book. Her teacher's questions may have helped Lena organize her oral summary. Perhaps her teacher also used nonverbal cues such as nodding her head while listening or looking confused when she needed more clarification. Immediate questioning and nonverbal cues are not possible when writing because the reader is not present. Even for an engaged listener like Lena, writing about a book is a substantial challenge. For Lena's teacher, understanding the challenges of writing is likely to help her set realistic expectations and plan meaningful instruction.

For both teachers and researchers a central question is deciding what it is that develops during writing development. Teachers and researchers have answered this question in different ways. For example, some focus on the skills that contribute to overall writing, such as spelling, handwriting, and compositional development. From this perspective, development is about writing better, more accurately, and with greater complexity. Another approach is to look at the processes necessary for writing. These include engaging in activities like planning or revising. Development from this perspective involves supporting students as they engage in these processes.

In this chapter, we provide an overview of writing development. Our discussion is not meant to be exhaustive, but the goal is to leave you with an understanding of how students' writing skills and their knowledge of certain processes change from PreK through second grade. Specifically, we discuss the development of the key skills of handwriting and spelling and growth in students' composition. Then we examine how the CCSS conceptualize writing development.

Handwriting Development

Attention to teaching handwriting seems to wax and wane historically in education; teachers who teach it are sometimes seen as old-fashioned. They are not. In fact, there is compelling evidence that success with handwriting is crucial to overall writing achievement (Graham, Bollinger, et al., 2012). We will review a selection of that research, but first it is important to clarify what we mean by handwriting.

In discussions about handwriting, frequently there is an assumption that handwriting is about producing beautiful, sometimes even ornate letters in either print or cursive. While the aesthetic qualities of handwriting are important in some areas, we think of handwriting a bit differently. We consider two other dimensions of handwriting to be the most important: fluency and legibility.

Handwriting fluency is simply the ability to produce letters, numbers, and punctuation marks easily and quickly (not necessarily beautifully). Young and struggling writers may write slowly because handwriting makes considerable demands on their working memory. This happens when letter formation and spacing are not automatic. It makes good sense. Students who rely on memory to recall letter forms and combine them into words tax their cognitive resources heavily. These things can be challenging for students because it places substantial demands on working memory, which is where active cognitive processes occur. They do not have much working memory left to create and organize the ideas in their writing. If you're interested in an example of how handwriting fluency can tax students' working memory, try the activity in Figure 2.2. We will tax your working memory, and you can see how it influences your own ability to write.

One way that researchers have looked at handwriting development is by measuring handwriting fluency (i.e., how many letters a student can copy in a set time).

We'll do three tasks: All you need for this is a piece of paper and a pencil or pen and a clock or timer.

Task 1: Simply print the letters of the alphabet in alphabetical order for 20 seconds. Use lowercase letters and be sure to print rather than write in cursive. If you make a mistake, don't erase, just cross it out and keep going. Your goal is to write as many letters as you can. (Time yourself for 20 seconds.)

Task 2: Do exactly the same thing, except this time print the letters using your nondominant hand. If you're right handed, use your left hand and vice versa. (Time yourself for 20 seconds.)

Task 3: For the last task, print the letters using your nondominant hand again. This time as you write, tap a rhythm with your other hand. Here's the rhythm that you will tap, dum dum dumdum. During the 20 seconds you will be writing with your nondominant hand and tapping a rhythm with your dominant hand. (Time yourself for 20 seconds.)

Count the number of legible letters that you wrote on each task and write it in the margin. When you compare the number of letters that you wrote across the three tasks, you'll see that you probably wrote fewer letters each time. This is because the tasks got cognitively harder. In the second trial, we made the task harder by using the nondominant hand. It's likely that you do not write with your nondominant hand much, so the movements for that hand are not as automated as they are for your dominant hand. You probably had to use more of your working memory to form the letters than you usually do. Then the last trial was even harder because tapping that rhythm used up more of your working memory. The tapping task was competing with the handwriting task, and that slowed you down even more.

   This simulates the challenge of writing letters for students whose handwriting is not fully automated. They may need lots of working memory to get the letters on the page. Of course, when students write, it may be even harder because they are also trying to generate content and organize ideas.

FIGURE 2.2. A brief simulation designed to show how difficult handwriting can be for young children.

> Throughout this text, we use the word *automatic* to describe a behavior that can be done without having to think about it. Examples of automatic behaviors for adults include signing your name, reading a stop sign, and driving (if you're an experienced driver). *Fluency* relates to the combination of accuracy and speed, and handwriting fluency may develop over time as students become more accurate and quicker at writing letters. For skilled writers such as adults, letter formation is automatic (it's not likely to get more accurate or quicker), but for developing writers, students are developing fluency.

Berninger and Rutberg (1992) examined handwriting fluency of students in grades 1–3 as part of a larger, cross-sectional study. One task was an alphabet writing task where they asked students to write the alphabet using lowercase letters, and they counted how many correct letters were produced in 15 seconds. The average number of letters produced was higher for each grade level (see Figure 2.3).

A second important part of handwriting is legibility. This simply refers to the ease with which a reader can read what a student wrote. Legibility is important because if you can't read what a student has written, it is impossible to see what ideas there are in the text. In fact, a review of studies with students in middle and high school found that papers written with poor legibility received lower-quality ratings than those written more neatly (Graham, Harris, & Hebert, 2011). Think about your own processes writing an important note to a young child or an older relative. You probably slow down to write more neatly. You may write your own lists and notes more quickly. With nearly all writers, there is a trade-off between fluency and legibility—the faster that we write, the more difficult it is for others to read the text.

Handwriting instruction ends in elementary school in most U.S. schools, but there is evidence that handwriting legibility and speed continues to improve through ninth grade (Graham, Berninger, Weintraub, & Schafer, 1998). Graham and colleagues (1998) found that students wrote more quickly with each subsequent year of school. Growth in handwriting legibility and speed was not consistent year to year. However, by ninth grade growth in handwriting speed was found to slow as it approached the speed of adult writers. There were some gender differences in handwriting legibility and speed. Girls were generally found to write more legibly and faster than boys.

1st Grade	2nd Grade	3rd Grade
4.6	6.8	8.7

FIGURE 2.3. The average number of letters produced in the first 15 seconds. Based on Berninger and Rutberg (1992).

> "Despite the widespread assumption that spelling is a mechanical skill that can be learned through incidental instruction or memorization, *spelling may from the very beginning be the critical skill* for developing word wizards and competent composers who can translate their ideas for others via well-crafted texts and read the text that others generate for its own sake or for use in creating their own texts." —ABBOTT, BERNINGER, AND FAYOL (2010, p. 296)

FIGURE 2.4. The importance of spelling.

Spelling Development

Like handwriting, spelling is a crucial component skill for writing (see Figure 2.4 above). A focus on spelling may also be seen as old-fashioned. This notion is false. The development of spelling skill is important for writers for a number of reasons. There is a strong relationship between spelling skill and overall writing quality (Graham, Berninger, Abbott, Abbott, & Whitaker, 1997; Juel, Griffith, & Gough, 1986). The same logic applies to both handwriting and spelling. When writers are able to spell fluently, they are able to devote more of their cognitive resources to the meaning of their writing (McCutchen, 2006). Spelling is also related to early reading skills through its reliance on phonemic awareness, letter knowledge, and the alphabetic principle (Snow, Burns, & Griffin, 1998; Hayes & Flanigan, 2014).

An important landmark in our understanding of spelling development was Charles Read's (1986) work on young children's spelling mistakes. His careful analysis showed the logic in students' spelling mistakes and gave rise to the term "invented spelling." This work has yielded several stage models of spelling development (Ehri, 1997, 1998; Gentry, 1982; Henderson & Templeton, 1986). These models differ slightly with respect to terminology and emphasis, but all recognize the importance of three types of linguistic knowledge for spelling: phonological, orthographic, and morphological knowledge (see Figure 2.5).

One insight from research on spelling development is that children begin exploring writing long before formal school instruction starts. Many children

| Phonology: The sound system	Orthography: The writing system	Morphology: The meaning system
• The word *shape* has three distinct sounds: /sh/ /a/ /p/	• The long-*a* sound can be spelled in various ways: ○ *a–e* in *lake* ○ *-ai* in *wait* ○ *-ay* in *day*	• Adding an -*s* or -*es* to a noun can make a word plural (*table, tables*). • Adding an -*s* or -*ed* to a verb can change verb tense (*jumps, jumped*).

FIGURE 2.5. Linguistic components that are important for spelling.

Many young students with developing spelling skill use *invented spelling* when they write words. Invented spelling is simply a student's attempts at conventional spelling. In many cases, invented spelling uses alternate ways to spell the sounds in a word. For example, a student might spell the word *phone* as "fon."
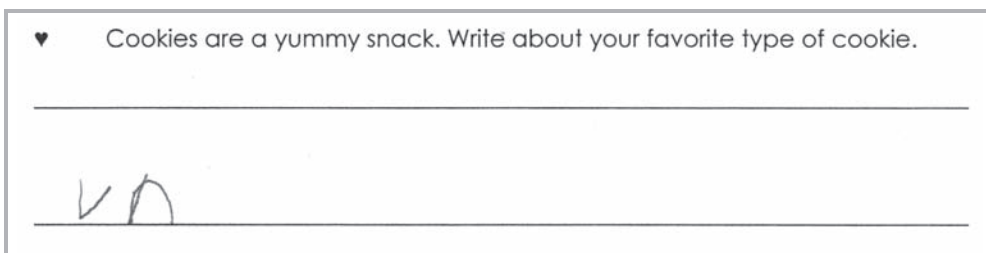
around age 3 experiment with letters in their writing and drawing (Snow et al., 1998). By age 4 the writing of many children resembles "a linearly arranged string of distinctive marks" (Tolchinsky, 2003, p. 59). These attempts are a far cry from conventional spellings, but they contain certain written features such as spacing, directionality, and horizontal alignment (Puranik & Lonigan, 2011). As children's knowledge grows, they incorporate more letter-like forms into their writing. This is often called the prealphabetic phase (Ehri, 1997) and can be characterized by a random use of letters (Sulzby, 1992). Figure 2.6 shows Ehri's (1997) stages of spelling development.

When children realize that letters can code for speech sounds, they have entered the partial alphabetic or semiphonetic phase (Ehri, 1997). Their spellings demonstrate some attempt to represent the sounds in words, but not all sounds are present. For example in Figure 2.7 on the next page, a kindergarten student was writing the word *vanilla* in response to a question about her favorite kind of cookie. The student's writing represented some of the sounds in the word. This spelling effort reflects a limited understanding of how the alphabet can be used to represent speech sounds.

The full alphabetic level is achieved when children can segment words into phonemes and can begin to represent each sound in a word with a letter (or letter combination). Movement into the full alphabetic level depends on an understanding of the alphabetic principle, which is the insight that speech sounds (i.e., phonemes)
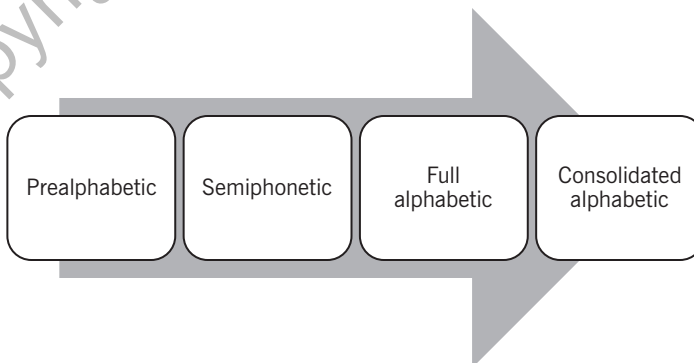
FIGURE 2.6. Stages of spelling development (Ehri, 1997).

FIGURE 2.7. Example of a semiphonetic speller.

can be coded with letters (Adams, 1990). Children at this level still make a number of errors as they rely on letter–sound relationships to spell. Typically they are not aware of spelling patterns or units that cannot be spelled phonetically.

Spellers in the consolidated alphabetic level develop an understanding of more complex spelling patterns. Some of these features reflect orthographic patterns of English spelling, such as vowel patterns like silent *e*, or consonant patterns such as digraphs (*sh*). Children also learn larger spelling units associated with meaning or morphology, such as prefixes (*re-*, *phono-*, *inter-*) and suffixes (*-ing*, *-tion*).

Overall, stage-based spelling models have had a significant impact on instruction; however, some researchers feel that stage-based models may not be fully accurate. One concern with stage-based models is the assumption that students move from one stage to another sequentially. This implies that students learn about the phonological aspects of spelling before they are able to use features such as morphological spelling units. However, some researchers have argued that the stage-based view of spelling is too simple (Bourassa & Treiman, 2007). In fact, there is growing evidence that children do learn features from all three types of spelling knowledge (phonological, orthographic, morphological) concurrently. One recent study examined the natural spelling of students in grades 1–9 (Bahr, Silliman, Berninger, & Dow, 2012). Across these grades, students continued to make spelling errors of all three types. This led the authors to conclude that learning about phonological, morphological, and orthographic word features continues across the school years. This has important implications for both beginning spelling instruction and spelling instruction in later grades.

Composition Development

The developmental research on children's composition has been fairly broad. We offer a summary of the relevant research that has been most important for teaching and learning. Researchers in literacy studies, educational psychology, and cognitive science have generally approached this question by studying one of two perspectives on writing: the written product or the writing process.

The Written Product Approach

Researchers who adopt a written product approach to development are interested in changes in the texts written by young children. By examining the writing of children over time or by looking at the writing of children across different grades, they draw conclusions about how writing develops.

Before children are able to write extended narratives or opinion and informational essays, they produce shorter pieces. Emergent writers may only be able to produce letter-like squiggles. Their understanding of the writing system grows over time, and they become fluent writing letters and then words. One of the first words that many students learn to write is their own name. Their names identify them in the world and make them unique. For this reason, children's names are powerful and familiar. Through their experiences with their names, children learn the letters that make up their names (Bloodgood, 1999). In fact, preschoolers' name-writing skill has been found to predict later spelling ability (Puranik, Lonigan, & Kim, 2011).

When young writers begin to combine words into phrases and then clauses, they can write texts for specific purposes. A text with a specific social purpose (e.g., to inform or persuade or describe an experience to a reader) and a structure or form that is widely recognized is called a genre (Donovan & Smolkin, 2006; Kamberelis, 1999). In this chapter, we examine what is known about the development of the three written genres targeted by the CCSS: narratives, informational text, and opinion texts.

Children learn to produce specific genres gradually. This means that when children first attempt any genre, their early forms are likely to be simple compared with those written by experienced writers. Berninger, Fuller, and Whitaker (1996) studied the stories and information writing of children across several grades and found evidence of the emergence of these two genres. Before the structure of narratives or expository writing was evident, children first generated a single topic. Next they added details related to the topic, then provided more elaboration of the details, or structured the information in the form of a list of events. While early forms of stories and other genres may not look like mature forms, they can contain some of the genre's characteristics. For example, Donovan (2001) found that the scribbles and letter strings of children may be their earliest forms of written narratives and informational text.

Another finding is that skill with each genre develops separately. This means that a student who writes excellent stories may not be as strong writing informational text. An important instructional implication is that students need instruction in every genre. As a result, if second graders are asked to write an opinion essay, they are likely to need instruction in the elements of opinion essays, which include stating an opinion and providing reasons.

Students' writing achievement also appears to be related to students' experience with the genre, including their ability to produce genres orally. In their review of genre development and writing, Donovan and Smolkin (2006) summarized

research on children's genre exposure at home and at school. They concluded that students become better writers of a specific genre when they have many opportunities to read and write texts in that genre. These findings were bolstered by a Purcell-Gates and colleagues (Purcell-Gates, Duke, & Martineau, 2007) study of reading and writing scientific texts, which found that involving students in authentic activities, such as reading science books to find out more about *Tyrannosaurus rex* or writing a letter to another class to describe a field trip, was associated with writing growth. Similarly, students' oral language skills with a genre can be influential. If students are able to tell better stories orally, it is more likely that their written narratives will be longer, contain more narrative elements, and be more interesting.

When researchers study students' genre-specific writing, they often analyze two different domains: the macrostructure and the microstructure. The macrostructure includes the kinds of elements and how they are organized. Some common features of the macrostructure of an informational text are a topic and details or information about the topic. The microstructure includes features typically at the level of the word (e.g., vocabulary, verb tense, linking terms). For example, two linguistic features of narratives are the use of the past tense (e.g., "When I fell down, I hurt my leg") and, in some types of stories, a stylized opening (e.g., "Once upon a time . . ."; Donovan & Smolkin, 2006). Expertise with any genre requires a writer to coordinate both the macrostructure and the microstructure. However, in this review we concentrate on the macrostructure of narratives, expository, and opinion texts.

Narrative Development

Research on narrative development has focused on the parts or elements that students include in their stories. These elements commonly have two main components: the setting and the episode. Important parts of the episode are events, goals, attempts, consequences, and reactions (Stein & Glenn, 1979; see Figure 2.8). This framework has been helpful in assessing students' narrative performance.

Another important insight from this work is that narrative structure is not universal. Different cultures may tell (or write) different kinds of narratives, and sometimes these narrative differences can create problems for teachers in the classroom (McCabe, 1996). For example, Michaels (1981) analyzed stories told during sharing time in a first-grade classroom. The teacher experienced difficulty supporting one African American student's efforts because her narratives tended to link events together thematically instead of focusing on a single episode.

Studies of written narratives have shown that children in the upper elementary grades tend to write longer and more complex narratives than those in the primary grades (Donovan, 2001; Kamberelis, 1999). But even by the end of elementary school, many students were still writing fairly simple narratives that lacked essential elements, such as goals and reactions. Differences in students' narratives suggest that narrative skill does not develop at the same rate for all students. We

Main components	Elements of main narrative components
Setting	1. Character introduction—character is described.
	2. Context of story—the important elements of the setting.
Episode	1. Initiating event—some type of physical or internal event to begin the story and cause the character to create a goal.
	2. Internal response—character's reaction, often as a thought, related to the goal.
	3. Attempt—series of actions to achieve the goal.
	4. Consequence—some action or event that shows the character reaching (or not reaching) the goal.
	5. Reaction—the character's feelings about the outcome.

FIGURE 2.8. Narrative components. Based on Stein and Glenn (1979).

believe that through careful instruction, even young children can be taught to produce strong narratives.

Informational Writing

The term *informational text* is broad and includes a number of different types of texts that young children might encounter. With respect to reading, these can include information trade books about science or social studies topics, textbooks for content areas, articles from magazines, websites, and a range of electronic texts. In the early grades, a primary role for informational texts has been to inform readers about the scientific or social world (Duke, 2000; Tower, 2003). Typically, informational text has a number of salient features such as present tense, descriptions of attributes, or characteristic features of a topic. More sophisticated informational texts, such as compare and contrast texts, often have an organizational structure (Donovan & Smolkin, 2011; Tower, 2003).

In an effort to investigate the development of children's informational text production, researchers began describing the structure of children's informational writing (Donovan, 2001; Kamberelis, 1999; Newkirk, 1987). Donovan and Smolkin (2011) provide a helpful summary of changes in how students structure informational text (see Figure 2.9 on pages 18–19). The simplest texts are labels that name or briefly describe an object or topic. More complex informational texts include descriptions of the topic. With greater complexity, those descriptions become more elaborated and organized in the form of couplets or fact lists. The most complex informational texts are organized paragraphs that include important transitions among ideas and between paragraphs. The authors of these studies caution that development does not always follow this pattern because some children continue to produce fairly simple informational texts even in the upper elementary grades.

Categories	Description	Example of student text
Category 1: Labels	A word or sentence written in present tense used to identify aspects of a picture.	*This is a girl in the grass and flowers.* (kindergarten girl) *This is a picture of my dog.* (first-grade girl)
Category 2: Fact statements	Clause or sentence going beyond labeling by including genre-specific features, present tense, and some specialized vocabulary; may introduce a topic.	*T–ball is fun.* (kindergarten boy) *Mama bears take good care of baby cubs.* (kindergarten boy) *Dinosaurs are dead.* (kindergarten boy) *Volcanoes are dangerous and hot.* (first-grade girl)
Category 3: Fact list	Two or more present-tense clauses related to a single topic for which order of presentation is unimportant.	*They like to swim in pools and they like to nibble on your finger and they don't fly that good and they like to splash and that's all.* (kindergarten girl) "Spiders" *Spiders lay eggs. Spiders make webs. Spiders use thread.* (kindergarten girl) "Dogs" *Some dogs chase cats. Dogs can be ordinary. Some dogs can be hunt dogs. Some dogs turn over to let you rub and scratch their stomach. Baby dogs need their mother to take care of them. Dogs are yellow, black, white, and brown. My dogs are pit, German Shepard, and Chow. Some dogs are wild. Dogs need toys to play with.* (fourth-grade boy)
Category 4: Couplet	Two or more present-tense clauses for which order is important; these include clauses with relationships, such as question/answer, statement/reason, and statement/example.	*Trucks go by motors that makes them go fast.* (first-grade boy) *Do you know where turtles swim? They swim in the ocean under the sea The end.* (second-grade girl) "Jungles" *Jungles have a lot of good animals. There are bears, tigers, monkeys, and gorillas.* (first-grade boy)

(continued)

FIGURE 2.9. Examples of students' information report compositions at different levels of the continuum. From Donovan and Smolkin (2011). Copyright 2011 by the International Reading Association. Reprinted by permission.

Categories	Description	Example of student text
Category 5: Fact list collection	Two or more attribute lists are created for subtopics of a larger topic; no order exists within or between the lists; generally only descriptions of attributes and characteristics are provided.	"Farm Animals" *Pigs are slippery. Pigs eat slops. They oink. Cows give milk. They eat grass. Some are brown. Sheeps give wool. They go baa. Some are brown.* (second-grade girl)
Category 6: Couplet collection	A collection of two related statements (simple couplets) serving as subtopics, which begin to include more supporting evidence and explanations.	"Hot Air Balloons" *They have special shapes. There are many shapes like T–Rex, a stork, and a shoe. Some balloons are all red. Some balloons are all colors of the rainbow. Balloons go up early in the morning. They go up when it is cold and we wear coats. The balloons glow at night. The burner shines in the dark.* (second-grade girl)
Category 7: Single and unordered paragraphs	Paragraphs that introduce a topic and subtopics, with subtopics in paragraph form consisting of three or more connected sentences; could be rearranged without disruption to the overall meaning.	"Dolphins" *There is lots to know about dolphins. Dolphins swim with their flippers and their fins. A dolphins flippers are like your hands. Their fins are on their backs.* *They also swim with their tails. A dolphins tail is like your feet. It has two sides. The dolphin waves it around so it will help it swim.* *Dolphins also have a blow hole so they can breath. The blow hole is on a dolphins back.* *Dolphins are friendly animals. They live in pods with other dolphins. And they like people, too. Some dolphins ride along with ships.* *I like dolphins. Do you?* (fourth-grade boy)
Category 8: Ordered paragraphs	Paragraphs that are slightly more complex than unordered paragraphs and cannot be rearranged without altering meaning unless through the use of connecting words and loose connections across paragraphs.	"Balloons" *Balloons are really neat. I'm talking about hot air balloons. They are made out of nylon. They can be special shapes or regular balloon shapes.* *First, you fill the balloon up with a big fan. A tarp is put underneath the balloon to roll it out. Many people have to work together.* *Then, it is neat riding up in a balloon. I have been up in a balloon and my dad is a person in a chase crew. When I am in the air, I can see him riding far below me.* *At the end, the balloon is put in a big bag when the ride is finished. When it is finished it is still filled with air. You jump or roll on the balloon to get the air out.* (fourth-grade girl)

FIGURE 2.9. *(continued)*

Opinion Texts

The development of skill with argumentative writing has also received attention from researchers. Different forms of opinion writing have been investigated, including persuasive and argumentative writing. In both persuasive and argumentative writing, the author makes a claim or takes a position on an issue. With persuasive texts authors can use emotions or sentiment to sway a reader. Argumentative writing relies on evidence and logic to support the position or convince a reader. The CCSS place considerable value on the ability to write arguments. However, in Appendix A of the English language arts (ELA) standards, the framers of the CCSS acknowledge that argumentative writing may be too demanding for young writers. Instead they include standards for opinion writing, which is seen as a stepping-stone to the formal arguments students are expected to produce in middle and high school (National Governors Association Center for Best Practices & Council of Chief State School Officers, 2010).

Parents and teachers know that children are skilled at persuading people to do things. For example, a young child pleading for an ice cream cone might whine, tell his mother that she is the meanest mom in the world, or throw a tantrum. Many ice cream cones have been bought because of young children's mastery of persuasion. However, research has suggested that writing in this genre does not come as easily for students (Ferretti & Lewis, 2013). One reason it is difficult is that children can only use words when writing, and they cannot rely on sad faces, voice inflection, and tears to convince their readers.

In kindergarten and first grade, the opinion expectations are most similar to a persuasive text, but gradually writers are expected to express a clear opinion and include evidence for their opinions, as in an argumentative essay. Like narratives and informational texts, opinion essays have specific elements that a reader can expect to see and a writer is expected to include. In Figure 2.10, we describe the elements for argumentative text based on Toulmin's (1958) work. Only the opinion and evidence elements appear in the CCSS for kindergarten through second grade. As students get older, they will be expected to explain how the evidence supports the claim, and this is accomplished with the warrant. In high school, students will need to raise potential counterarguments and then explain why they are not important through a rebuttal.

Studies of young students' opinion writing have tended to look at the elements listed in Figure 2.10. First-grade students have demonstrated that they can write an opinion essay with a claim (Knudson, 1994; Wollman-Bonilla, 2001). Older students include more and better evidence in their essays (Knudson, 1994; McCann, 1989). Counterarguments and rebuttals are rarely included in young students' writing. Frequently, even adolescents omit them from their oral arguments (Felton & Kuhn, 2001). Clearly, opinion writing is a challenging genre for children, and relatively little research has explored how skill with opinion essay writing develops.

Claim	An opinion or statement made by the writer. Examples:
	The Cat in the Hat is my favorite book.
	Schools should make time for recess every day.
Evidence	Facts or opinions supporting the claim. Evidence may come from a secondary or trusted source. Examples:
	I read it every day.
	The doctor says that kids need exercise every day.
Warrant	Statement that links the evidence to the claim. Examples:
	It's my favorite book because I read it so often.
	Since exercise is so important for kids, schools should have recess every day.
Counter-argument	A claim that contradicts the author's main claim or an alternate opinion that the author discredits. Examples:
	Some people might say that The Cat in the Hat is silly.
	One teacher said that kids get too excited during recess.
Rebuttal	Explanation for why the counterargument is not valid. Examples:
	I've always liked silly books. That's why this is my favorite.
	Even though kids may get excited during recess, they are able to settle down and listen better afterwards.

FIGURE 2.10. Opinion elements. Based on Toulmin (1958).

In sum, it is important for teachers to understand how skill with narrative, informational, and opinion writing develops in young children. This is quite a challenge in the classroom because the developmental research on early genre-based writing is quite limited. As a result, we do not know exactly what to expect for grade-level performance in each genre. Our reading of the research on the development of narrative, informational, and opinion writing led us to the following conclusions.

Conclusions about the Written Product Approach

Student writing performance depends on the nature of the writing task. When teachers create writing tasks, it is important to consider how students will be asked to respond. In a study of opinion writing in first grade, McCraw (2011) found that students produced better oral opinions than written ones. It is likely that the challenges of transcribing made the writing condition more difficult. Another way the writing task may influence performance is through genre knowledge. Some have argued that students may have difficulty with informational and opinion texts because they are unfamiliar with these genres (Donovan & Smolkin, 2006; Duke, 2000). By providing opportunities for students to read and interact with a variety

of texts, teachers may support the development of students' genre knowledge (Ukrainetz, 2006). The amount of content students must create can also make writing easier or more challenging. For example, it may be harder for students to compose an original story than it is to recount what happened to them yesterday (Kamberelis, 1999).

The Writing Process Approach

In the previous section, we examined the development of children's composition in three genres. Some researchers focus on *how* children write, instead of *what* children write. This approach reveals the development of the writing processes that are responsible for text production. These processes include planning, revising, and editing. Research with writers of all levels has indicated that increased time spent planning and revising is associated with better writing. Similarly, expert writers engage in much more planning and revising than novice writers, and students who are typically achieving engage in more of these processes than students with learning problems (Graham, 2006).

Research on writing processes has contributed important insights into writing development. Some researchers have focused on the social and cultural forces related to writing process development and include work done by Rowe (1994) and Dyson (2003), and others have been interested in the cognitive processes and include work done by Hayes and Flower (1980), Bereiter and Scardamalia (1987), and Berninger and colleagues (e.g., Berninger & Winn, 2006). We explain these two traditions in turn.

Sociocultural Models

An influential approach to studying writing processes emerged from sociocultural scholars. These researchers investigate the way that individuals engage in specific activities drawing on the immediate social environment, such as language, tools, and forms of social interaction (Prior, 2006). Researchers within this tradition take different approaches to development. For example, some have argued that writing is a natural process, like oral language. From this perspective, students would be expected to develop the processes and products if they are simply given opportunities to write (Calkins, 1994). Others have investigated how aspects of the immediate environment influence the way children's writing develops (Dyson, 2003).

In general, sociocultural approaches would reject the idea of a common developmental pattern because of the unique local and cultural factors that influence each writer. A limitation of this approach is that it does not offer a clear instructional path for teachers. Nevertheless, the sociocultural perspective has had a profound impact on writing instruction. The Writing Workshop approach grew

out of this tradition and has been widely adopted (Troia, Lin, Cohen, & Monroe, 2011).

Cognitive Models

In contrast, cognitive approaches to understanding the writing process have resulted in several theoretical models of how writers work. These models have evolved from early attempts to understand the processes of expert writers (Hayes & Flower, 1980) to other models designed to characterize how young writers work (Bereiter & Scardamalia, 1987).

Work by Berninger and her colleagues has resulted in the most specific cognitive model to date, the Not-So-Simple View of Writing (Berninger & Winn, 2006; see Figure 2.11). To write a text, the writer first needs relevant ideas, which is the text generation process that occurs in the mind. Then the language must be written onto the page (transcription). To transcribe ideas, a writer needs to handwrite (or use keyboarding) and must draw on spelling knowledge. Simultaneously, the writer is using self-regulation processes to set goals, monitor progress, and evaluate the current text. All of these processes—text generation, transcription, and self-regulation—are coordinated by components of working memory.

The Not-So-Simple View is complex, but it has a lot to offer teachers. For example, it helps us make sense of how handwriting and spelling problems can impact a student's writing. It also illustrates the importance of knowing strategies for the writing process, and how working memory supports a writer moving from writing to revising a text. Last, it provides a model for how a writer coordinates the incredibly complex writing process. Like all models it has its limitations. For example, the way that social forces, writing motivation, and even instruction operates are not fully described.
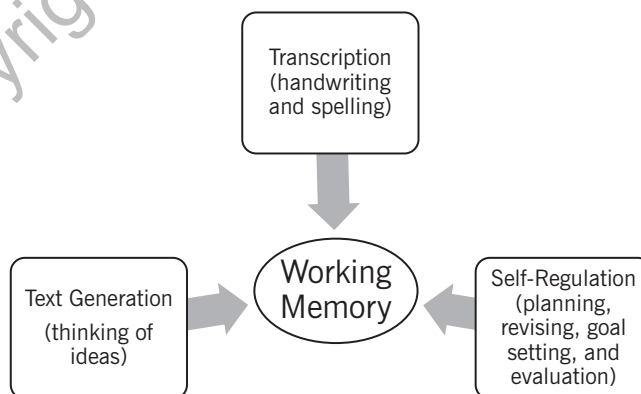
FIGURE 2.11. Berninger and colleagues' Not-So-Simple View of writing.

Cognitive models of writing have also supported the development of instructional approaches. Work on cognitive strategy instruction is rooted in this tradition, and has been found to be one of the most effective ways to teach writing (Graham, Bollinger, et al., 2012). See Chapter 6 for more on strategy instruction.

Conclusions about the Writing Process Approach

Work from both sociocultural and cognitive researchers has led to some insights about how to strengthen the way students write. Teaching students how to plan, revise, and edit is one of the most productive ways to strengthen students' composing (Graham, Bollinger, et al., 2012). One approach to teaching writing processes, Self-Regulated Strategy Development (SRSD; Harris, Graham, & Mason, 2006), has been particularly effective. The SRSD model includes a collection of genre-specific cognitive writing strategies for planning, revising, and editing developed for students across grade levels. Students' mastery and application of these processes is accomplished through teacher modeling and scaffolding. Students learn to apply mnemonic devices and graphic organizers to genre-specific writing processes. In addition, students are taught self-regulation strategies to help them manage the entire writing process. SRSD has been particularly effective with struggling students (Harris et al., 2006; Lane et al., 2009), but there is limited research on its whole-class implementation for young children (see Tracy, Reid, & Graham, 2009, for an exception). Our approach to composing (see Chapters 6–9) borrows important elements from the SRSD model. However, we provide additional support, activities, and assessments designed for classroom teachers in the early grades.

Another approach is scaffolding students' writing is by giving them opportunities to practice orally. Researchers have found that participating in oral debates can help students write stronger opinion essays (Reznitskaya et al., 2001). By providing various ways to support planning or even content generation, teachers can help strengthen student writing.

Efforts to understand the writing process have enhanced our understanding of writing development and led to instructional innovations. Both sociocultural and cognitive approaches have contributed important insights, and neither one is perfect. In our instructional approach, we draw on the best of both traditions.

CCSS and Writing Development

The CCSS also address writing development. They describe the kinds of writing products and processes that students should master by the end of each grade. When you look at the progression of end-of-year expectations, the standards present a vision of writing development. We think that the developmental nature of the writing standards has advantages because it offers some instructional clarity for

teachers. In the following section we describe the benefits and also the limitations of the writing standards' conception of development.

The CCSS orientation toward writing development is multifaceted. First, it is clear that the authors understand that both written products that writers produce, as well as the processes used by writers, are important. The genre-specific expectations described in the CCSS about text types and purposes outline some of the features that should be found in end-of-the-year writing samples. Similarly, the production and distribution standards address writing processes. Writing standard five specifies that children should be able to engage in supported revising and editing activities. Expectations for the development of written conventions skills are also specified. The inclusion of multiple writing-specific standards signals that the authors acknowledge the complexity and importance of writing.

Another benefit of the developmental nature of the writing standards is the framework they offer teachers. This fairly detailed framework makes it much more transparent for teachers what kinds of writing their students should do and the kinds of processes that students should use. In addition, the CCSS outline expectations on a grade-by-grade basis. The CCSS give teachers a concrete set of targets, which can inform curriculum design and lesson planning.

In addition to the many advantages of the CCSS writing Standards, there are some limitations. One of the more serious questions about the writing Standards is whether they are reasonable. This question was raised because the grade-level expectations do not appear to draw on the most current data on writing development. The authors of the Standards started with the 12th-grade Standards because they wanted, justifiably, students to enter college fully prepared for the academic expectations. After setting the Standards for 12th grade, the Standards were then adjusted backward. The expectations specified for the primary grades do not reflect the skills and competencies described in the research on writing development. In fact, research on grade-level expectations for all the skills and genres specified in the CCSS has not been conducted. As a result, some commentators have suggested that most students will be unable to meet the new expectations (Meisels, 2011).

Another limitation of the CCSS is that they begin in kindergarten. This may give teachers the false impression that writing development only begins when children start kindergarten. Preschool teachers and others who care for young children could also benefit from writing standards.

We noted that the CCSS take a multifaceted stance toward development, and we support this view. However, these standards could be of even more value to teachers by addressing some additional areas that impact writing development. These include the development of writing processes, such as planning, and other self-regulatory behaviors like goal setting. The CCSS could also be broadened to include the expectations about writing knowledge, attitudes, and motivation, all of which have been shown to be important developmental forces (Graham, 2006).

Conclusion

In this chapter, we summarized important aspects of early writing development. Writing is a complex process that depends on the integration of both skills and knowledge. Teachers who have a deeper understanding of writing development are likely to be more successful. Two central writing skills that teachers need to address are handwriting and spelling, which we address in Chapters 3 and 4, respectively. Chapter 5 addresses instruction in writing sentences. Successful composing also depends on several types of knowledge, including knowing about the structure and purposes of different genres and the writing processes. In Chapters 6–9 we describe our approach to composition instruction for the three genres targeted by the CCSS. Then in Chapter 10, we describe how teachers can provide accommodations for writers who may need extra support.