

CHAPTER 1

Executive Skills

What They Are, and Why They Matter in Learning to Write

One of the goals of education is not simply to fill students with facts and information but to help them learn how to learn.

—ZARETTA HAMMOND

This book invites you to enter through two red, double doors and tour a school where explicit writing instruction works to build all levels of literacy—laying a foundation for students to use writing to discover what they think, share their messages, and, ultimately, *learn how to learn*. This includes learning *how to think*, as writing not only makes thinking visible but also offers a pathway to sharpen it. Our tour is based on examples from real schools that have successfully made the leap to implement evidence-based practices for teaching writing, now commonly termed the *science of writing*. This science of writing is grounded in the core principles of cognitive science, which focuses on how students learn, and is receiving growing attention (Swain, 2024). This book takes the next step to *cognitive science applied*—how real teachers apply these principles in granular and replicable ways that you can easily carry to your classroom tomorrow.

Back to our tour. After the teachers in our school learned and began using these principles in ways aligned with what research shows works, they saw remarkable gains in writing. These gains carried over to support English language arts (ELA) proficiency growth on their state assessments, with similar results seen in nearly 100 schools also using the thinkSRSD approach presented in this book (Hansford et al., 2024). Students compose daily across all disciplines, using writing as a tool to raise content learning (Graham et al., 2020) along with all the underlying levels of literacy, language, and reasoning. Yet—and perhaps this is the most inspiring fact—these students *self-regulate* as well, meaning that they can now independently take themselves through using the writing process.

From the first moment students pick up a pencil through when they craft advanced essays, writing raises all areas of literacy. Whether it is a kindergartener who labors to sound out words they want to write or a high school student who puts in the effort to explain a connection across two texts they read, writing builds skills all the way from the alphabetic principle (letters represent sounds) through advanced critical analysis (Quitadamo & Kurtz, 2007; Rowe et al., 2024). Despite its immense power, writing is one of the hardest areas to teach. Seventy-six percent of the students in our nation do not write proficiently (National Center on Education Statistics, 2011). We all see this statistic reflected in the students in our classrooms. This may be the reason you are reading this book.

Writing programs often focus on teaching isolated skills such as grammar, sentences, or paragraph organization rather than the bigger goal of self-regulation. This goal enables students not only to become skilled faster but also to take the bull by the horns and write on their own far more quickly. As you visit classrooms throughout this book, you learn how you can deliver this kind of instruction “from soup to nuts.” More importantly, you have behind-the-scenes access into how these students now think while writing. Then, the curtain is drawn back to reveal how—and why—the instruction that got them there works. The most well-supported practices for teaching writing enable students to harness the power of executive skills and learn to self-regulate. This focus is spotlighted and brought to center stage throughout this book.

The Hidden Key: Supporting Executive Skills

Executive Skills Defined

Executive skills may be one of the most neglected—and yet critical—puzzle pieces that should drive how we think about writing instruction. These include three core *lower-order* skills: working memory (holding and juggling information), inhibition (holding back automatic responses), and cognitive flexibility (adapting, shifting focus and attention), along with the *higher-order* executive skills they support such as planning, organizing, self-monitoring, and developing social understanding (Diamond, 2013; Ruffini et al., 2024).

More broadly, the term *executive skills* refers to the top-down mental, or cognitive, processes students use to self-regulate their thoughts, actions, and feelings in ways intended to help them meet their goals (Doebel, 2020; Friedman & Miyake, 2017; McCloskey, Perkins, & Van Divner, 2009; Zhou et al., 2012). They are, essentially, what put us in charge of directing our own lives. Students can be taught to self-direct these processes starting as young as preschool and then continue learning these skills all through the highest levels of education (Diamond, 2013). Decades of empirical research show that supporting executive skills leads to better writing (Graham et al., 2012, 2016, 2019; Santangelo & Graham, 2016; Wanzek et al., 2017). Yet this research is not yet widely applied in schools (Graham, 2019).

Hiding Beneath the Surface

Looking inside our school, we see pencils moving or students keyboarding. When we stoop down and look at the students' notebooks, we see conventions such as spelling, punctuation, outlines, and drafts. Skimming what they draft, we can judge whether students seem to understand the material they're taught, if they can reason well, and if their intended meanings are clear. Less visible though, and critically important, is how these students are mentally *recruiting* and coordinating their executive skills (Kim & Graham, 2022), even in the earliest grades (Purinak et al., 2019).

The term *recruit* implies that students actively make an effort to call up and enlist specific executive skills, such as consciously planning or working to sustain their attention.

Recruiting these hidden skills is a necessary gateway to learning to write (Kim & Graham, 2022; Ruffini et al., 2024). Better supporting these skills offers a rapid and easy way to strengthen writing skill acquisition and independence. When we teach in ways that do not recognize their importance, students with the greatest needs are the canaries in the coal mine who suffer the most (Altemeier et al., 2008; Diamond, 2013). The good news is that executive skills are not a fixed trait or something that is just happening. They can be taught and can improve. Let's take a virtual field trip to go see how, as our tour begins.

Let's Tour Our School for Examples of Self-Regulated Writing

Starting off our tour on floor one, in the kindergarten–grade 1 wing, we see students learning about the life cycle of butterflies. Their teacher has just shown a 2-minute video and read aloud a short informational book. As they shared what they learned, their teacher scribed a “fact list” on the whiteboard. This included drawn images, key words, and short phrases about the topic. While watching and contributing, students take notes on their clipboards, jotting down line images or single words. In these early grades, this work is done collaboratively, with the teacher closely guiding and supporting students' efforts for some time.

Students now make their way to their desks to tackle explaining this process to their future readers. When they take out their writing folders, they see their personalized goal sheets, which, for many, remind them to add more details when they write. Earlier in the year, these students might have shown task avoidance. Some might have asked to go to the restroom or gotten sidetracked and began playing with erasers. However, after several weeks of instruction, they settle right in and know what to do.

They first write encouraging self-talk such as “I've got this!” or a smiley face. They look over their drawings and notes from earlier. They might look at the opening-sentence stems in their writing folders, also posted on the wall, such as “I know about _____” or “These are facts about _____.” Some begin to work independently. Some work with a buddy, and some go to the teacher's table for support as they work. They continue to the next sentence, using the letters they know in their

attempts to sound out and spell the words they want to write. Since they practiced writing past tense verbs in their daily sentence exercises earlier in the day, correct grammar flows. They break down the words they want to write into syllables, then into individual sounds that they have been explicitly taught to identify. When they reach the end of a line, they remember to “sweep it back,” subvocalizing this while writing, as they have now seen their teacher model many times.

Heading up two flights of stairs, we find the upper-grade classrooms. In a similar way, students are learning rich content about ancient Athens and Sparta while tackling a unit on Greek mythology. Likewise, students have watched a short 2-minute video about daily life in ancient Greece, read an introductory knowledge-building passage about this time period, and then read another, more complex passage that presented the advantages of each community. Students jotted notes as they read, then created an organizer on paper to prepare them to argue which community they would rather live in.

Before they begin writing, they had already argued about their position in small groups, using notes from their organizer to make and defend their point. As peers responded, they adjusted and revised their organizer notes. They now take out their writer’s notebook and see the personalized goals they had all set after self- and peer scoring their last piece of writing the prior week. One recalls his grammar goal to use a less passive voice and try out artful use of participles to make his writing clearer and more stylish. He also sees his list of sentence stems that include: “By using (name a literary device such as mentoring or imagery) _____, the author achieves the effect of _____” (Levine, 2019). He remembers noticing this in a peer-written essay and wanting to try it out himself. Another remembers his goal is to not get discouraged as he writes. He reminds himself to “Stay the course; you’ve got this!”

As they begin writing, each student is checking off their organizer and referencing the materials they had read to find or adjust quotes in the process. Yet, just a few weeks before, when asked to write in response to texts, most quickly read the texts once, picked up a pen, and began free writing their essay with no plan or organizer. Their essays were filled with facts but were not organized well. Some points were off topic, and students may have included little analysis of the quotes they chose. Several students did not understand the prompt and so did not answer the question with a relevant response. Now, they know how to get themselves motivated to begin and they use strategic thinking processes as they take themselves through the phases of the writing process expertly.

Adding Executive Skills Instruction to the Mix

The lessons you just observed showcase what happens when teachers prioritize supporting executive skills. These teachers taught similar language lessons, such as effective word choice and sentence composing, in previous years, but this year was different. They added instruction and scaffolds to help students better manage their executive skills while writing. In response, students stopped passively believing that writing is something you are either good at or not and realized that they can all write far better

if they use strategies and positive self-talk to get started, stay on track, and work to meet their goals.

Without direct instruction and support, less proficient writers do not recruit their executive skills (Costa et al., 2022) and may work even harder than their peers but not see the same rewards. Perhaps most importantly, the biggest difference teachers see now beyond just better overall writing is tangible confidence and even joy felt in the room. Writing has become liberating—the favorite time of day for students and teachers.

Writing Broken Down

Let’s look now at the writing skills these students mastered. Broadly, as shown in Figure 1.1, writing can be broken out into five main areas. From pencil to Pulitzer, the following skills come into play. Each layer should be considered when assessing writing and targeting instruction (Truckenmiller, Cho, & Troia, 2022; Valentine & Truckenmiller, 2025).

Content/Reasoning

Developing writers initially engage in simple knowledge telling (Scardamalia & Bereiter, 1987) by listing ideas in sentences without connecting them, making inferences, or showing how they relate. This causes the writing to feel surface and disjointed. As they mature, they move ahead to knowledge transformation where their executive skills help them to better plan, revise, reason, and generate novel insights (Mason & Brady, 2022).

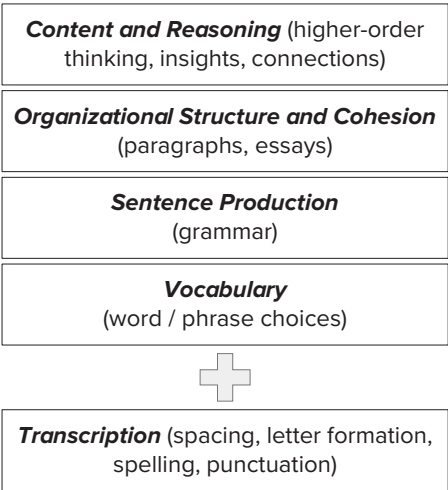


FIGURE 1.1. Five main areas of writing.

Organizational Structure and Cohesion

Students also need to organize their ideas into an introduction, related body sections, and a conclusion. Arranging ideas into logical groups and sequencing them draws on higher-order executive functions such as *organization*. This book discusses the three broad organizational text types—informative, argument/opinion, and narrative—while acknowledging subtypes within all.

Sentence Production

To produce sentences, students must take a preverbal idea and come up with labels, or words, for their ideas and use grammatical elements correctly to string the words together. For example, to write “I saw a cat walk by,” students might first generate a label such as “cat,” then add “I, saw, walk,” and finally add the preposition “by” to complete the thought. They quickly arrange the words, move them around, and monitor whether the words make sense in *cognitively flexible* ways. To do this, they draw on *verbal working memory* (Olive, 2011), *planning*, and *inhibition* (Drijbooms et al., 2017).

Vocabulary or Word Choice

Next up is vocabulary. *Central executive skills tied to verbal fluency* impact how quickly students can call up words. This word retrieval fluency supports vocabulary diversity when writing, essentially varying word choices (Bourke, 2003).

Transcription

Transcription is the physical act of putting words on paper or keyboarding. More than just hand strength or motor control, transcription taps *working memory*, which aids students in pulling up letter images and holding sequences in mind. They must also *inhibit* (block out) other shapes (Salas & Silvente, 2020) or incorrect hand movements (Oshchepkova et al., 2023) and remain *cognitively flexible* (Lê et al., 2021; Stievano et al., 2016) while thinking about sounds, forms, sequencing, and ideas. Likewise, spelling taps into *inhibition* (Salas & Silvente, 2020; Soto et al., 2021), *cognitive flexibility* (Lubin et al., 2016; Vadasy et al., 2022), and *working memory* (Berninger et al., 2010). Turning words into correctly punctuated and ordered sentences draws on *visual attention* (noting capitals or periods), *working memory*, *self-monitoring*, and *inhibition* (Cordeiro et al., 2020; Ibbotson & Kearvell-White, 2015; Puranik et al., 2019).

Integrate Instruction: Teach All Levels of Writing Together

Before moving on to look next at the executive skills students use when they write, it is important to mention that these five main areas of writing should be taught and practiced together. Do not wait for areas such as transcription skills or sentence complexity to fully develop before having students compose connected-text discourse, as in short

paragraphs. While it is important to break down the needed skills in these five areas and target and teach each of them separately, they have been shown to all rise together simultaneously, or in close proximity, from the earliest grades (Harris et al., 2023; Klein et al., 2024; Saddler & Graham, 2005). Imagine a visual of pillars that represent all the areas growing upward together. Paragraphs grow longer, links between ideas become clearer, sentences become more detailed, and spelling improves as our lessons target and allow students to learn and practice these together.

Note to Early Childhood Educators

Even if only learning to transcribe (i.e., form letters, spell), students can still practice composing connected text (i.e., short paragraphs) orally via dictation. This dictation would mean that students “compose” orally or “in the air” in preparation for producing new text in writing as their transcription skills emerge. Unfortunately, this kind of early composing instruction is often underutilized in the early grades despite its importance (Kent et al., 2014; Pinto et al., 2015; Rodriquez et al., 2024; White, 2013).

Teaching handwriting, word spelling, sentence syntax, and text composing areas separately but close in time in a lesson is more effective for creating a functional writing system than working on a single writing skill for a full lesson or in isolation for an extended time. First, handwriting and spelling contribute to transcription skills (Fayol et al., 2012). Next, syntax and text construction contribute to translation of cognition and ideas into written language. All along, teaching children self-regulation strategies (executive functions) helps them coordinate these transcription and translation skills as they write to achieve different writing goals and across genres (Altemeier et al., 2007). For examples of lessons that teach these cascading levels of language close in time, see Berninger and Abbott (2020).

In essence, teaching the five areas of writing and practicing them together supports transfer (Berninger et al., 2017; Harris et al., 2023; Olive, 2014). Students learn right away how to strategically shift between the varied levels of language (Berninger et al., 2017) and to coordinate using their executive skills together as they do so. That is to say, students must draw on and integrate multiple levels of language whenever they write, from sounding out spellings to monitoring whether their sentences make sense and flow from one idea to the next.

Teaching writing via isolated skill exercises (think of worksheets or an exclusive focus on one area such as sentences for an extended time) removes the language and larger meanings that can bootstrap learning and mastering basic writing skills. Having students write paragraphs (or essays) about content that they are interested in, such as science topics, while teaching the skills and strategies needed to write about this content (Harris et al., 2023) makes learning to write easier and more motivating. Students become intrinsically driven by their desire to learn and to communicate.

In addition, content knowledge acquisition happens faster when related ideas are presented in connected paragraphs that students read—rather than in isolated lists of

individual sentences (Chilton & Ehri, 2015). Likewise, students better learn content when they compose a paragraph about a topic rather than make a list of sentences about it. Think of a short story or article about birds in contrast to a list of facts about them. Students likely learn more about the topic when they create a cohesive paragraph about birds rather than making isolated lists of practice sentences. Learning and writing at the paragraph level eases working memory. The connectors within and between sentences (conjunctions, pronouns, synonyms) encourage learning. These offer repetition and create connections that deepen understanding of the topic far more so than churning out individual, isolated sentences on a topic would.

While reading, students will flex between the vocabulary words and words that refer back to them such as pronouns, referents (*that, those*), or synonyms. These offer repeated, varied exposures to the terms and the underlying concepts behind them. Learning words in cohesive paragraphs also aids inhibition since students don't need to filter out irrelevant information in an integrated paragraph as they might when reading disconnected sentences in a list (Chilton & Ehri, 2015). Likewise, coordinating the different levels of language (words, sentences that include connectors, paragraphs) and using them together to create writing that holds together is important (Berninger et al., 2017), and this approach likely supports faster learning of the material, as it does with reading.

When students learn and compose at the connected-text level, they see writing as something functional—something they are motivated to do for a purpose (Berninger et al., 2017). To make this clearer, I'll share a metaphor.

A Bike-Riding Metaphor for the Importance of Integrated Instruction

Think back and remember when you learned to ride a bicycle. Someone broke out and taught you every small action. Yet, they also showed you how to manage and coordinate them together from the start. Now, thinking about each small step would get in the way of riding smoothly. You automatized them all quickly and now naturally use them together.

Along these lines, some teachers may hesitate to break down all the subskills and the steps in the writing process, teach each one, and practice them together. They may be concerned that this could take away from the natural, fluent experience of writing. However, had you not been taught how to hold the handlebars, move your feet, and maintain your balance all together and in coordination, you would not have become the proficient biker you now are. We did need to teach each skill individually and provide integrated practice.

Or, on the other hand, teachers may want to break down the skills and spend time teaching each in isolation. Yet equally important to providing instruction for each skill is to teach how to orchestrate using all of them together. What if you had practiced peddling alone, but not along with balancing at the same time? This would have drawn out the learning process and the smaller skills might not have transferred easily. Breaking up writing skills to work on areas such as sentences in isolation without also showing how to use everything in coordination has not resulted in gains in writing quality (Graham & Perin, 2007).

Taking the metaphor a step further, you persevered because you wanted to get somewhere on your bike. Would you have persevered if you had to do an hour of skill practice of moving the handlebars in isolation? Likewise, writers write because they are motivated by a desire to discover and clarify what they think or to share an idea. They galvanize all the lower and higher language and executive skills needed because they are driven to communicate. Teach each skill but also apply them in short pieces at first, in an “and/both” way.

Writing Instruction That Supports Executive Skills Is Magic Pixie Dust

In the previous section, we broke down writing and explored why all levels of writing should be taught and practiced together. The next section breaks down executive skills. However, between these sections, I offer a personal note on my *why*.

Writing was something I always loved to teach. For the first 10 years of my career, I taught writing in structured ways. In a way, I was serving as the executive skills for my students. My students with executive skill challenges flourished with this structure. However, I did not understand that I could not only support executive skills but also teach them directly. My game-changer moment came when I road-tested teaching strategies that support executive skills (Graham et al., 2012). When I did, my students' writing improved (Laud & Patel, 2008). Over the next few years, I also discovered more systematic ways to support language skill development at the vocabulary and sentence level (Haynes et al., 2019).

Then, something unexpected happened. My students began to self-regulate. I felt taken aback at the speed at which their writing improved, when the adjustments to my instruction were so simple and minimal. At first, I did not have words to understand what I was seeing, but I knew it was special. I saw the “on” button click for my students, and they began engaging in far more effortful and self-directed ways. I remember hearing a tapping noise as a student wrote his essay and asking him why he was doing that. “I want to meet my correctly spelled words goal when I finish this essay,” he told me. I was floored to see him suddenly able to coordinate so many levels of language as he drafted his piece.

When I began sharing these approaches with colleagues, in workshops and then through large-scale research studies I have led, I saw the same phenomenon repeat. Every spring, I'd hear from teary-eyed educators that their entire class used the scrap paper when taking the state assessments. Their students filled the page with encouraging reminders to themselves to do their best along with creating self-drawn detailed organizers. They too had never seen students self-regulate to this extent before. We discovered how to launch independent, skilled writers. Every single time it happens feels like a fresh miracle. In a moment of levity, the idea of magic pixie dust came to mind as a way to describe what we observed when using these new ways to teach writing. Teachers would follow up to share that their classes made the greatest growth on state assessment ever, and special educators would tell me that every child on their case-load received proficient scores, which had never happened before. But the greatest joy

was always seeing students who previously felt defeated become empowered. Indeed, research has consistently found that not only does writing quality grow as a result of instructional strategies that support executive skills but also student confidence and enjoyment of writing grow as well (Harris et al., 2015; Limpo et al., 2013b). Let's move on to what these skills are.

Executive Skills Used When Writing: Breaking It Down

Now that I have defined executive skills and demonstrated what they look like in action in our school, let's look more closely at how they work when we write. Executive skills are interconnected cognitive processes that originate in the frontal lobe, prefrontal cortex, and related areas of the brain (Friedman & Robbins, 2022; Miller & Wallace, 2009; Otero & Barker, 2014). See Figure 1.2 and, for more on how these brain areas support literacy, see Cartwright (2023). When writing, students recruit their executive skills to exert conscious control as they initiate (*figure out what's being asked*), coordinate (*create and adjust plans*), direct (*compose*), monitor their writing processes, and draw on all the needed subskills (Harris et al., 2018). When they do not, we see the impact in the quality of writing they produce, but we may not understand the cause.

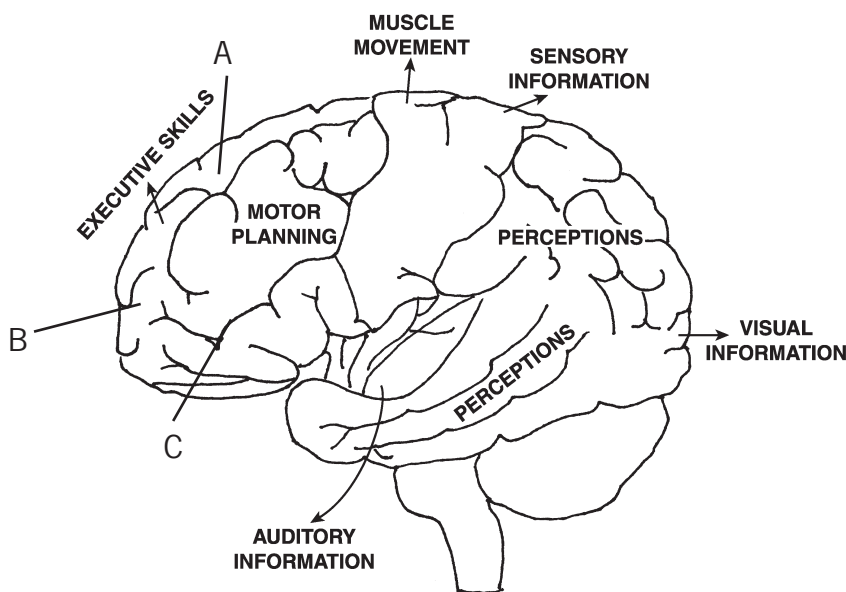


FIGURE 1.2. The human brain, with the approximate locations of major functions. A, dorsolateral prefrontal cortex; B, orbitofrontal cortex; C, ventrolateral, ventromedial, and medial prefrontal cortex. From Dawson and Guare (2010). Copyright © 2010 The Guilford Press. Adapted by permission.

To learn how we can best help our students, we need to step back and look at what is happening in the brain. Table 1.1 explains what these brain-based executive skills do as we write. Next, Figure 1.3 on page 13 depicts how the higher-order executive skills relate to and draw on the lower-order skills (Cartwright et al., 2023). Note that the lower skills, closer to the bottom, happen with less conscious awareness than those above. We don't usually think about how to direct our working memory, but we do make a conscious choice to engage our planning or organizing executive skills. Moving up in the flow chart, our instruction can, therefore, support the lowest executive skills and teach students how to consciously direct the higher ones.

Cold and Hot Executive Skills

Executive skills can also be broken into two larger categories: cold and hot. Cold refers to the more cognitive aspects of executive skills, while hot refers to more emotional, motivational, or self-regulatory processing (Diamond, 2013). Capacities such as working memory, cognitive flexibility, or inhibition would fall primarily under cold executive functions. On the other hand, social understanding or theory of mind (Zelazo & Carlson, 2012) and being able to self-regulate emotions have more hot, emotional, or motivationally laden components. The same cold skills become hot when they work to support self-regulation, such as using self-speech to encourage oneself when writing or to inhibit feelings of self-doubt. Both have been found to be surprisingly malleable, or easy to support (Zelazo & Carlson, 2012).

Unity and Diversity in Executive Skills

While executive skills work together in unified concert, there is diversity among these as well. They can be broken out into different capacities, but keep in mind that there is always overlap and coordination when students use them, often termed “unity and diversity” (Miyake et al., 2000). They could operate in isolation but usually do so together and in pursuit of achieving a goal (Doebel, 2020).

Integrate Reading and Writing

Before wrapping up, it would be remiss of me not to share a further word about the importance of leveraging the synergistic reading and writing connection (Kim & Zagata, 2024). Teaching these together strengthens both skill sets and better supports executive skills. For example, learning to form letters improves early decoding skills (Ray et al., 2021). Identifying elements in peer-written exemplars such as a compelling opening or ending helps students attend to and reproduce these (Graham et al., 2012, 2016). When reading, students can mimic the language, reasoning, and structures they see when taught to engage their working memory to help them analyze it and to make a plan for how they could use what they notice. Essentially, reading is “breathing in” and writing is “breathing out” (Allyn, n.d.).

TABLE 1.1. Executive Functions

Skill	Example	How it impacts writing
Working memory	We may learn about how an octopus can swim 50 mph. We hold this fact in working memory temporarily. We integrate it with other known facts such as the existence of predators in the sea. We juggle thinking about how being fast helps it escape harm. This allows us to integrate new information with what we know, like a mental scratch pad. (There is natural variation in how much capacity each child has on their scratch pad, and this executive skill is limited for all. However, the exciting part is that we can help students use it more efficiently.)	Working memory impacts every level of writing, from learning letter formation, spelling, and grammar to holding onto and sequencing a critical insight when constructing essays. Broadly, it helps us hold the overall text structure and big idea in mind as we write. This allows us to maintain coherence, which in simpler terms is the main thread that connects our ideas together.
Inhibition	Letter formation is aided when students subvocalize directions that they can follow and that help them stay on track and ignore distractions such as “I will start at the top of the line and go straight down.” When reviewing which facts to include in a piece on octopuses, students might filter out an impulse to describe a turtle that was in a tank next to an octopus they saw at an aquarium.	Inhibition allows us to sustain attention to the task at hand and relevant information when competing thoughts come to mind.
Cognitive flexibility	When spelling, a student might consider two options and reflect on each. When composing sentences, a sentence may pop into a writer’s mind, but before using it, the student might pause and consider other ways to structure the ideas. Essay writers might consider multiple pieces of evidence and choose the most effective, rather than sticking with the first that comes to mind. When writing multiple types of texts, inflexible writers might cope by writing about each separately rather than synthesizing information (Garner, 1987; Stromse et al., 2003; Wineburg, 1991).	Flexibility allows us to move between different ideas and consider alternatives ranging from when we spell to how we synthesize ideas across texts.
Goal-directed planning	When writing an essay, students must also hold the goal in mind, then find and generate ideas and choose which to use.	Writers must be goal driven, generate ideas, and then select which to use to meet their goals.
Organization	After picking ideas but before writing, students will put their ideas into groups and decide how to order them. When writing the letter <i>m</i> , students need to use correctly sequenced steps. When writing sentences, they organize words in grammatically conventional ways.	Organization involves putting components or ideas into groups and sequencing these in a logical fashion.

(continued)

TABLE 1.1. (continued)

Skill	Example	How it impacts writing
Self-monitoring	At the earliest phases, this might include circling the letter that they think they wrote most neatly. Later, this could mean reviewing their writing for spelling conventions or looking over an organizer to ensure it includes all their ideas. At the revision phase, this relies on having a deep understanding of the features of effective writing and the ability to compare one’s own to these.	Students must step back and self-monitor themselves all through the writing process, particularly when revising.
Social understanding	When students give feedback on one another’s writing, this allows them to empathize, consider another writer’s perspective, communicate effectively, and navigate the social levels involved. Another example is when student writers need to think about who their audience is and whether they are expressing their ideas appropriately to reach it.	Social understanding impacts the ability to infer and understand perspectives, motives, emotional states, thoughts, and feelings of others and respond appropriately. Also termed <i>theory of mind</i> , it includes an understanding that others may think and feel differently from us (Premack & Woodruff, 1978). See Cartwright (2023) for a fuller explanation of this skill.

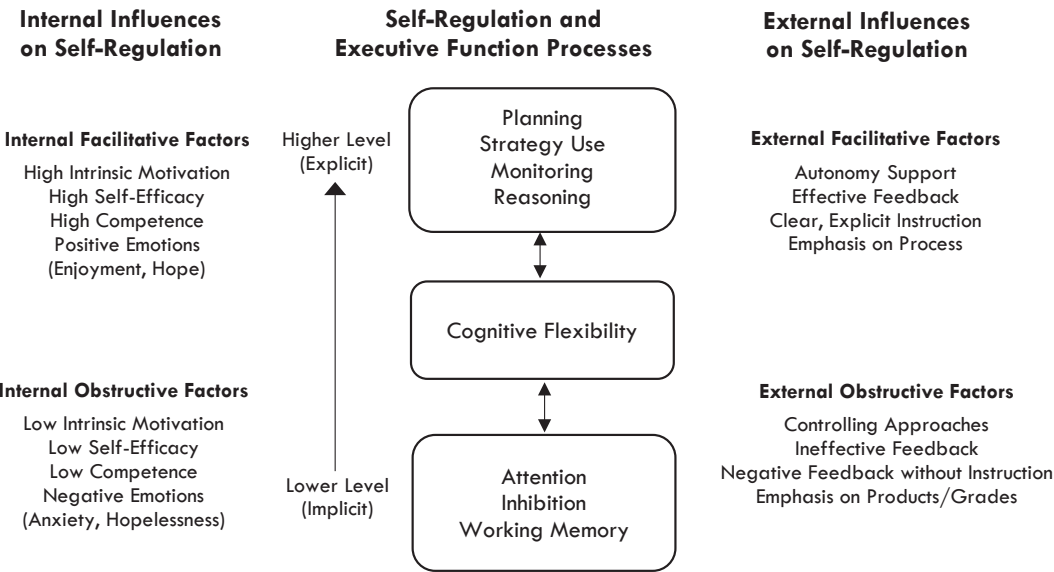


FIGURE 1.3. Processes involved in self-regulation. From Cartwright et al. (2023). Copyright © 2023 Taylor & Francis. Reprinted by permission.

Even more, research shows that writing about what we read builds knowledge and provides writers with a more thorough comprehension of a text (Graham et al., 2011), especially for those who struggle (Shanahan et al., 2024). In the past, I emphasized personal narrative as well as opinion “writing from head” (i.e., Should students have to wear school uniforms?). However, I found that these kinds of writing did not allow students to internalize the vocabulary, syntax, and reasoning present in academic language to the same extent that responding to complex sources does. While there is a place for this kind of writing, responding to sources offers greater promise toward closing gaps because of how it enables students to draw on, mimic, and internalize the academic language they encounter in the complex texts they respond to. To enhance the impact of our writing instruction and reach Hammond’s (2014) vision of agentic, empowered, and critical thinkers, we need to teach writing with evidence-based practices. These practices include connecting reading with writing to build academic language and teaching in ways that support the invisible executive skills that can make learning these together more synergistic.

So, Why Did I Write This Book?

I wish I had known how important executive skills are to writing, and how to teach in ways that acknowledged this sooner. Many well-intended educators teach writing by primarily assigning and correcting, perhaps passing out organizers and offering lessons on spelling, sentence construction, or linking ideas. While teaching these language skills is necessary, it is not sufficient. Language development and executive skills overlap in some ways but are also independent (Gooch et al., 2016). Teaching only one will not build the other. Direct instruction in executive skills that occur within writing and support for these is also necessary.

Organization of This Book

We do not yet have a teacher-friendly book that offers evidence-based writing instruction, foregrounds attention to executive skills, and offers an easy road map for getting started (coming soon in Chapter 2!) that has been shown to have high impact in real classrooms (Hansford et al., 2024). Current practitioner books focus on the “what” to teach but leave the reader still needing to figure out how to integrate what they learn with their daily instruction. These books offer an important foundation and should all be part of our regularly visited professional bookshelves. What this book adds is a comprehensive, stepwise instructional framework that focuses primarily on supporting the most neglected and yet most powerful lever for supporting students’ developing writing—executive skills.

As you read, I suggest you try out using writing, and the executive skill of organization, to further your own learning. You may want to keep a notepad nearby. Jot the name of each chapter and its subheadings down the side of one page. This will help you create and hold on to an organized mental model of this book’s contents. Take notes

on each chapter on your “outline-like” page. Rather than only summarizing, add your own thinking and realizations as you go. Doing so will aid your learning. You can begin by jotting down the following chapter topics and leaving space between each to fill in as your learning journey unfolds.

Chapter 1 has introduced executive skills, explained what writing is, and recommended integrating instruction in multiple levels of language while composing. It has also made the case for having students write about what they read.

Chapter 2 overviews the science of writing and research on models of writing instruction that emphasize the importance of executive skills. It then introduces simple yet comprehensive guidance for teaching writing with these skills in mind.

Chapters 3 to 8 are structured the same way. Each includes a definition of an executive skill, a visit to classrooms to see it in action, a sample lesson with the skill highlighted all through and then debriefed, and a wrap-up summary of key action steps you can take in your classroom tomorrow. One practical way you can use this book is to deliver each of the lessons in these chapters over about a week to understand the full approaches more deeply. Or you can try out each strategy or skill instructional focus, one at a time, adopting many if not all in a step-by-step way over time.

Chapter 3 dives into the first executive skill of planning and presents ways to teach students to plan before writing. It describes the essential components of planning—or the “what” to teach—and explains why instruction in how to plan before writing supports and harnesses executive skills. Each following chapter focuses on a specific executive skill that supports each phase in the writing process.

Chapter 4 moves forward to organizing, as students learn to use text structures to organize their ideas before writing, another higher-order capacity.

Chapters 5 and 6 discuss translating and transcribing one’s thoughts into words when writing. Chapter 5 focuses on cognitive flexibility in the realm of language and delves into the language areas of word choice, sentence development, and cohesion (connecting ideas while writing), exploring how the executive skill of cognitive flexibility supports these areas. Teachers will learn about the unique demands that vocabulary and sentence composing make on executive skills, and how instruction can be delivered to develop and to scaffold these skills with concrete supports. Both vocabulary and sentence composing are capacities that can be front-loaded and directly taught, as well as scaffolded with tools such as vocabulary boxes and sentence frames.

Chapter 6 shifts from focusing on language development over to written transcription and the executive skill of working memory while looking at transcription. Specifically, this chapter addresses grip, spacing, letter formation, spelling, and sentence punctuation and overviews how the executive skill of working memory supports these processes.

Chapter 7 dives into how to teach revision, with a focus on the executive skills of self-monitoring and inhibition. Related to these, it also touches on the powerful force of goal setting, including how this fosters self-regulation in writers. Teachers learn how to instruct students to self-score their writing before revising it. The chapter shows ways to put students in the driver’s seat by helping them to use self-monitoring to build their understanding of both the features of effective writing and the processes (i.e., planning, revision) they need to use to attain these features. This kind of

self-evaluation is a challenging skill that draws on multiple hot and cold executive skills, which are explored.

Chapter 8 looks at theory of mind, audience awareness, social skills, and writers' communities as it moves from self-scoring and goal setting. This includes looking more deeply at peer collaboration and keeping one's audience in mind. It focuses on how peer feedback can spark and deepen awareness or perspective taking, and how this can be taught and developed. Leveraging this kind of peer feedback and discussion in ways that support executive skills benefits students as they reach to write about higher-order complex concepts and insights.

A Note to Primary-Grades Educators

You may want to skip ahead to Chapter 6, which covers early transcription skills, since you front-load these skills in your work with your students. The upper grades reinforce these skills and can follow this book sequence. For upper-grades teachers, if your students already transcribe efficiently, you might even skip this chapter. However, even if students do not have documented special needs, many still struggle with handwriting, spelling, and transcription, so the chapter includes tips for older students as well.

Following the eight chapters and a brief epilogue, you will find an Appendix of Resources and Reproducibles, designed to support your own executive skills to make it easier for you as you plan how to bring these ideas you learn to your own classroom. The Appendix is organized in five sections. The first group (Appendices A–C) provides a bird's-eye view of the recommended scope and sequence, the skills to teach at each grade level, and a progression guide of writing tools. The second group (Appendices D–H) includes materials that help you identify a preassessment and create writing assignments. The next three groups of appendices provide materials that support and strengthen the executive skills of planning and organizing (Appendices I–N), working memory and cognitive flexibility (Appendices O–R), and inhibition and self-monitoring (Appendices S–Y).

In all, I hope this book (1) illuminates for you what executive skills are and how they support writing; (2) provides you with tangible, concrete steps you can take in your classroom to better support these skills; (3) deepens your understanding of what the science of writing tells us works and *why* it works; and (4) inspires a vision for how students can become skilled and self-regulating writers. My fourth goal may be the most important.

In my 35 years of teaching, there is one clear career-defining before/after moment. Before using these approaches, I saw my role as imparting skills and strategies. Afterward, I revamped and developed a new goal—to teach in ways that enable my students to independently drive their own learning. When I did, their writing performance soared. I watched them literally “learn how to learn.” The concrete and doable strategies in this book provide an evidence-based and easy roadmap to help you get your students there, too.