CHAPTER 1

What Is Comprehension and What Should Teachers Know about It?

GUIDING QUESTIONS

1. What is comprehension?
2. What does the research say about how to teach adolescents to be better readers?
3. Does reading ability matter in disciplines other than English Language Arts?

"You know they're not going to read that, right?" Dr. Perch and his colleague are planning an upcoming unit in their biology class. Dr. Perch has selected a chapter from the textbook to cover the standards, but his colleague is dubious about their students' motivation to read. "Honestly, I don't even bother assigning the chapters anymore," she says. "I just link to some good videos and go over it in class. Kids today just don't read."

Kids today just don't read. How many times have we heard this from colleagues, news reports, and even students themselves? Is this true? Are students of today simply not reading? And what does that mean for teachers? The research indicates that this statement might be true. Students in grades 6–12 are spending an average of 10 minutes a *day* with their eyes on text—actually reading–across English language arts (ELA) *and* social studies classes (Swanson et al., 2016). That's total, not 10 minutes in each class. Students spend about 7.5 hours at school each day, and they are reading for 10 minutes. And, to make matters worse, approximately half of ELA and social studies teachers are spending *far less*, if any, time reading.

If you have picked up this book, you, like us, might be concerned about the lack of reading in middle and high school settings. Reading is part of the foundation of

an education and one of the critical ways we learn. Reading is one of the ways that we become informed citizens, learn about great scientific contributions to society, and know and appreciate the craft of storytelling. How can our society continue to learn from our historical achievements and mistakes, invent new technology, appreciate good literature, learn about various aspects of the human experience, and stay apprised of national and international events without reading? The answer is that we can't. To provide a humanistic education that our children need and deserve, we must empower them with deeply meaningful knowledge of language and the printed word. We cannot allow only AI or video to convey knowledge and deprive our children of engaging with great voices from the past and present. Our students need the opportunity to learn—and think about what they are learning—directly from the sources that have shaped our society, rather than hearing someone else's interpretation of it. Written language *is* power, and our students need it.

You are likely wondering about how you can support your students in reading and learning from texts across content areas, particularly with challenging texts (looking at you, *Canterbury Tales).* We know how hard it can be to not only support students in understanding the complex and varied challenges of texts across ELA, science, and social studies, but also to recognize how difficult it can be to motivate students to *want* to read and learn from these texts.

How do we know? We've done it! Between the three of us, we (Sarah, Dan, and Christine) have 26 years of teaching experience with elementary, middle, and high school students all over the United States and even across the globe, including Arizona, Washington, D.C., Virginia, Louisiana, Ohio, Texas, Illinois, Pennsylvania, New York, Tennessee, and Istanbul, Turkey. Collectively, we have also worn many hats: We have taught ELA, Writing, Creative Writing, Journalism, English as a New Language, and ACT/SAT preparation, and we have served as reading specialists, literacy coaches, and administrators. Today, we continue to teach, but within our college classrooms as we prepare the next generation of teachers. Now, we're also researchers working to find solutions to the challenges teachers and students face with reading in everyday classrooms.

We came together to write this book based on a simple observation: Across our classrooms and our research studies throughout the years, we have observed some of our former students, although brilliant thinkers, struggle to make sense of written texts, not only in their ELA classes, but also in their other classes. We have taught adolescents (even in high school) who lacked complete knowledge of letters and sounds and struggled to sound out words. We have taught students who could read words beautifully, fluently, and quickly, but when we asked them about what they read, they couldn't tell us a thing. We've taught students who could understand literal ideas from a text, but when asked to think more deeply about what they read or to develop more complex interpretations, they froze. We've even taught students who were learning English *and* learning how to read for the first time. Some of those students were also taking chemistry, and U.S. History, *while* being asked to read Shakespeare in their ELA class. If you, like us, have had a difficult time supporting your readers in learning from texts in ELA, science, history, or another other subject, you are not alone (Biancarosa & Snow, 2006; Moje, 2008).

Thankfully, much research has been done to support teachers in helping their students successfully read and learn from texts across the disciplines. In fact, there is enough information from the research about supporting older readers in learning from texts to fill this entire book. The goal of this book is to share research-based practices to support readers of varying abilities to learn from—and even enjoy—texts across their school day. Our book is intended to serve as a guide to help 6–12 science, social studies, and ELA teachers ensure that all students have access to rigorous, grade-level curriculum because *all* students can engage in (and benefit from) rigorous, grade-level text-based learning. We call the process of supporting readers as they access and engage with grade-level texts *scaffolding.*

We define *scaffolding* as any temporary instructional support that helps students eventually achieve a learning goal on their own or to learn more fully than they otherwise would without the scaffold (Pea, 2004; Wood et al., 1976). This includes *planned scaffolding*, which is designed before the learning experience; and *scaffolding in action*, which refers to the in-the-moment choices teachers make while the students are in the midst of reading and learning from texts (Athanases & de Oliveira, 2014; Hammond & Gibbons, 2005).

HOW TO USE THIS BOOK

There are many ways you can use this book. One way is to read it cover to cover. Reading it this way will help you understand the bigger picture of how to scaffold and build your overall knowledge about various factors influencing students' ability to learn from texts. We don't think supporting reading consists of just tossing a graphic organizer or a reading strategy at a text—or worse, simply reading everything out loud to students or simplifying everything into a slide deck. Rather, scaffolding takes place at every step of the planning process, and we have organized this book to support teachers along the way. First, teachers must build their own understanding of what comprehension is really about (covered in this chapter) and what makes texts tough (Chapter 2). Next, we explain how to uncover and leverage students' strengths to support their emerging comprehension of those tough texts (Chapter 3). A discussion about supporting readers is not complete without considering how to design purposeful activities that support readers' learning from texts (Chapter 4). We also think that scaffolding can occur in the text selection process so that we can use texts themselves as supports (Chapter 5). We continue to show how to address specific challenges students face in the text, including how to support students in interpreting texts dense with complex ideas and meaning (Chapter 6), understanding texts with high background knowledge demands (Chapter 7), and supporting comprehension of texts that have complex text structure (Chapter 8) or unfamiliar vocabulary (Chapter 9). We also include ideas for helping students who can't sound out the words in the text (Chapter 10). Lastly, we end with how to put it all into action and support students in the moment while teaching (Chapter 11).

However, if you don't want to read the whole book, you can also just jump in at any point. Perhaps you want to simply look for scaffolds that address a particular

challenge your students face in the text? Well, dive right into the chapter about that challenge.

In this chapter we will begin by describing the process of comprehension and how you can teach it. We will then explore how comprehension practices vary across content areas.

WHAT IS COMPREHENSION?

While we have spent time with teachers in schools, we have often observed the myths that comprehension is either (1) a black-and-white process—you either do or don't comprehend—or (2) oversimplified to a set of skills related to the standards. For example, we have observed lessons with the objective of finding the main idea of a text or identifying supporting details or the author's purpose. Often these lessons are disconnected to the experience of *learning from* a text, and these standards are seen as the goal of comprehension. But comprehension is so much more. In order for teachers to understand how to support their readers and help them truly learn from a text, all teachers need to have a deep understanding of the comprehension process and what happens in students' brains as they make sense of texts (Lupo et al., 2022).

Research shows that *comprehension* is a dynamic literacy process that happens in three layers (Kintsch, 1986, 2013). Figure 1.1 shows how these three layers work. The first is the literal layer of comprehension, which includes the readers' ability to recall key facts or details from a text. For example, in the textbook excerpt below from a history textbook chapter entitled *The First Americans: The Olmec*, readers can literally understand that Mesoamerican cultures existed from present-day north Panama to central Mexico, believed in multiple gods, and made jewelry out of jade.

> Mesoamerica is the geographic area stretching from north of Panama up to the desert of central Mexico. Although marked by great topographic, linguistic, and cultural diversity, this region cradled a number of civilizations with similar characteristics. Mesoamericans were polytheistic; their gods possessed both male and female traits and demanded blood sacrifices of enemies taken in battle or ritual bloodletting. Corn, or maize, domesticated by 5000 BCE, formed the basis of their diet. They developed a mathematical system, built huge edifices, and devised a calendar that accurately predicted eclipses and solstices and that priest-astronomers used to direct the planting and harvesting of crops. Most important for our knowledge of these peoples, they created the only known written language in the Western Hemisphere; researchers have made much progress in interpreting the inscriptions on their temples and pyramids. Though the area had no overarching political structure, trade over long distances helped diffuse culture. Weapons made of obsidian, jewelry crafted from jade, feathers woven into clothing and ornaments, and cacao beans that were whipped into a chocolate drink formed the basis of commerce. The mother of Mesoamerican cultures was the Olmec civilization (OpenStax, n.d.).

Next is the *inferential* layer of comprehension, which we think of as "reading between the lines." This layer gets a lot of attention in schools. Several state literacy standards, including those specific to science and social studies, highlight important aspects of

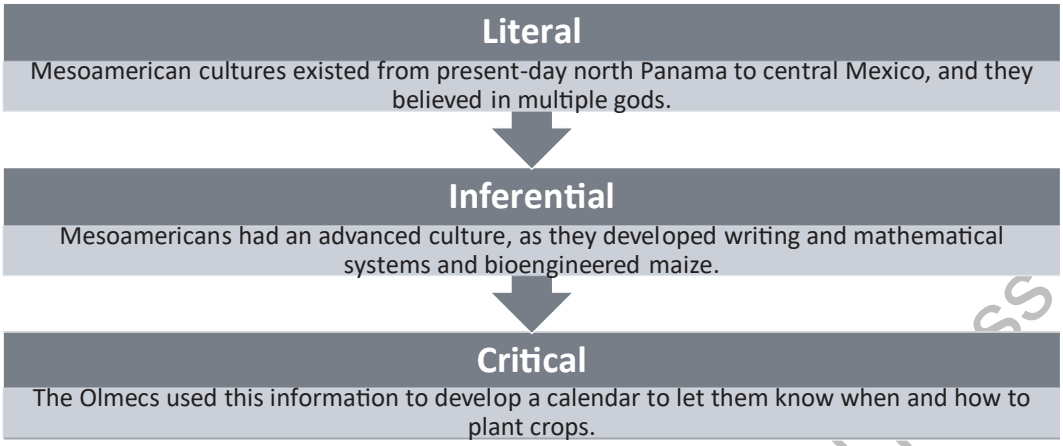

FIGURE 1.1. Layers of comprehension.

this process. For example, one state standard indicates that students should learn to "identify aspects of a text that reveal an author's point of view or purpose" (National Governors Association Center for Best Practices & Council of Chief State School Officers, 2010). Similarly, another standard states that sixth graders should learn to be able to "explain the relationships . . . between two or more individuals, events, ideas, or concepts in a historical . . . text" (National Governors Association Center for Best Practices & Council of Chief State School Officers, 2010). At this layer, students are able to use their background knowledge to infer things about the texts that the author did not directly say. For example, from the Olmec excerpt above, a reader may infer that the Mesoamericans had an advanced culture, as they developed writing and mathematical systems, bioengineered maize, and created a complex calendar to predict seasons for planting and harvesting their crops.

However, inference and analysis of a single text are not enough to support students' learning from texts. We need the critical layer of comprehension in which readers go beyond making inferences and are able to critically and thoughtfully evaluate a text to determine if what the author is saying is true, or whether it is complete. They are also able to look across multiple texts and synthesize information, deal with conflicting information, and make sense of that information as they synthesize what they're learning across text sources. For example, a student reading this textbook excerpt about the Olmec excerpt might also read *Before Columbus: The Americas of 1491* by Charles Mann (2009) and synthesize ideas across both works. Students can compare texts to see that *Before Columbus* discusses not only particular technological advances of Mesoamerican culture similar to the previous text, but also how that knowledge contrasts with popular stereotypes about Indigenous persons as simple bands of people with unsophisticated societies.

Most importantly, at the critical layer of comprehension, readers *integrate* the knowledge they are learning in a text with their own knowledge to grow their

knowledge base. This integration process allows readers to apply this knowledge to a novel situation. For example, perhaps a reader might approach the Mesoamerican textbook passage with the knowledge that some North American Indigenous tribes planted corn, beans, and squash together as a regular agricultural practice (knowledge that is often taught to U.S. children during initial explorations about Thanksgiving). Then, from the text they learn that the Olmec calendar would have determined when and what to plant, thus integrating their prior information with new information. This helps the readers advance toward the larger goals of not only learning facts about the Olmecs, but also deeper understandings of the precise and calendar-driven scientific and agricultural practices of Indigenous peoples of North America. Ultimately, the critical layer of comprehension helps readers understand not only what's said or suggested in a text, but also how the content of a text relates to bigger ideas in the content areas and the world.

So, what does all this mean for teachers? It means that as we use texts as a tool for learning content, the goal is to help students achieve a critical level of textual understanding. As displayed in Figure 1.2, to achieve this goal, students must read multiple texts about a topic, including different *genres*, or kinds of texts, and also read various perspectives on a topic. Also, when necessary, they should read texts that provide conflicting information so that they can learn to synthesize information across texts and evaluate sources for the quality and reliability of their information.

Along these lines, the *quality* of the text is crucial. We need texts that have interesting and engaging ideas that are worthy of students' time. We also need texts that align with learning goals and that convey accurate information in engaging and interesting ways. For example, Sarah's children's history textbook includes accurate and relevant information in which the author has integrated stories to depict the historical

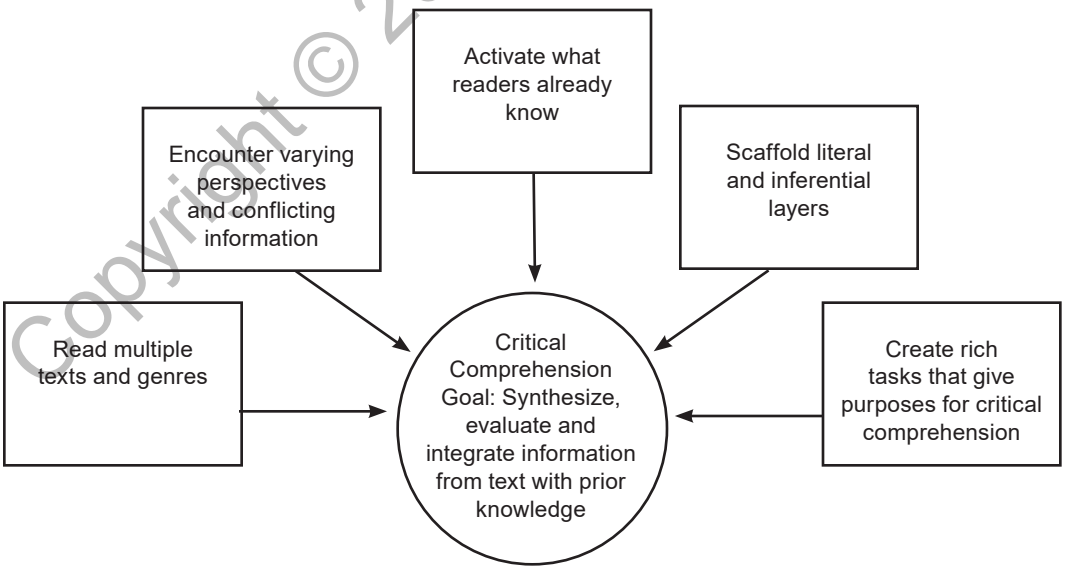

FIGURE 1.2. Key elements of instruction.

information in a way that children enjoy. It's a far cry from the dry history textbook that puts its readers to sleep—or worse—a textbook with incomplete or inaccurate information that support myths and misconceptions.

Additionally, to foster knowledge integration, it is essential for teachers to activate what students already know about the topic (more on this in Chapter 7). Lastly, instruction around content-area texts must include tasks that allow students to recall what they are reading to help them store the information in their memory, evaluate and synthesize information across texts, and, when possible, apply what they are learning to a novel situation (more on this in Chapter 4). For example, students might read about a contemporary debate about Indigenous and U.S. government law (such as recent Supreme Court decisions in *McGirt v. Oklahoma* in 2020, *Oklahoma v. Castro-Huerta* in 2022, and *Haaland v. Brackeen* in 2023) and consider how historical perceptions of Indigenous peoples are shaping contemporary public and judicial opinions.

WHAT ABOUT LITERACY STANDARDS?

You may notice that although this book centers on building students' literacy skills, we do not begin with the literacy standards. Do the standards even matter? To that question we answer a resounding "yes!" However, we view the standards in literacy differently from the standards in science or social studies (as many of the authors of the standards have assured us they did, too). Although many English teachers—often under the tutelage of the administrators who guide them—treat the literacy standards as the *goal* of reading, we view the standards instead as the *vehicle* to comprehension. For example, using the text excerpt above, perhaps a teacher might consider the goal of reading to learn key information about the Olmec people in order to better understand their cultural practices. Thus, the teacher may then select the standard "determine two or more main ideas of a text and explain how they are supported by key details" as a focus standard for the lesson. By helping students identify the main ideas of a text using supporting details, the students would better *learn* the information about the Olmec people. If students stop at the literal layer of comprehension—as in a lesson focused on just finding the main idea of a single passage—students might only recite some facts about the Olmec. But students who are guided to the critical layer of comprehension will have deeper and more lasting understanding of Indigenous history.

ANOTHER WAY TO UNDERSTAND COMPREHENSION

An educator once described understanding texts as a field of daisies (Wix, 1927). One reader may walk through the field and pick one daisy. Another may pick a handful of daisies. A third may come out with a bunch of daisies. All three of these readers understood the text. But they took away different—and differing amounts of—information. This view of comprehension emphasizes *what* students understand rather than whether they do or don't. The teacher's role, then, is to provide scaffolds to help readers pick their own daisies. Teaching comprehension is about teaching

students what and how to pay attention to texts as they read. It's not mastering strategies (although strategies that help students pay attention while reading have been shown to help) or standards.

CAN SOME ADOLESCENTS REALLY NOT READ?

We have also seen readers' abilities often pinned to a particular "grade level," with the misunderstanding that readers who "read at a fifth-grade level" cannot comprehend texts at the ninth-grade level without simplified texts or only lectures with bullet-point slides. This is a myth about reading and learning from texts. Remember the daisy metaphor? Children who pick one daisy, rather than a bunch, still understood the text, even if they did not take away as much information as students who collected a bunch of daisies. Comprehension is not black and white. And picking one daisy from a quality, but complex, grade-appropriate text is a stepping stone to being able to pick a bunch of flowers and building a beautiful bouquet.

Why is it a myth that some adolescents "can't read"? It boils down to a misunderstanding about how to read test scores. When students take a norm-based test, such as the Northwest Evaluation Association (NWEA) MAP assessment or the Woodcock-Johnson, the test will produce a grade-equivalent (GE) score. GE scores are not reading levels. This score does not indicate that students will struggle with *content* at that particular grade band. Rather, GE scores simply show that a student *reads* similarly to others at that grade level. For example, John, an eighth grader, took a norm-based comprehension assessment and his GE score was 12th grade. In other words, although he is 13 years old, his reading skills are similar to those of 12th graders. Does that mean he can tackle the mature content of the texts an 18-year-old might read? The reading test doesn't measure that skill, but we can assume not, based on the developmental level of a typical middle-schooler. On the other hand, Alice, an 11th grader, received a GE score of fifth grade, thus indicating that her reading skills are more similar to those of fifth graders. This does not mean that she cannot read texts typical for 11th graders. Rather, the GE score Alice received is an indicator that she may need *significant* support to read texts typical for her grade level.

What is key is identifying *why* grade-appropriate texts are so challenging for Alice and providing supports that will help her overcome those specific challenges. In this book, you will learn how to analyze texts for the challenges they present and how to understand your students so that you know what might be difficult for them. This will allow you to adequately support their understanding of the text, even if their GE scores are far below their current grade. This will ultimately help students be able to pay better attention and pick more daisies.

WHAT DOES THE RESEARCH SAY ABOUT HOW TO TEACH ADOLESCENTS TO BE BETTER READERS?

Before we dive into "the research" on comprehension, let's define what we mean by *research*. We wrote this book in part to quench educators' thirst for teaching

approaches grounded in research and evidence. However, we have noticed that the word "research" has been used so much in education that it has nearly lost its meaning. We have also noticed that it means different things to different people.

What Is Research?

We define educational research as the scientific body of evidence that has examined the processes or efficacy of teaching approaches. We draw on many kinds of research for this book. We value both quantitative studies, which use statistical methods to determine what works, and qualitative studies, which rely on narratives, interviews, observations, or other data to systematically explore how and when and under what conditions certain teaching approaches have worked. Drawing from both quantitative and qualitative studies *humanizes* research by highlighting what it looked like *with real people.* In addition to empirical studies, we rely on theoretical papers, and all of the research we cite has been published in peer-reviewed journals, which means that they have undergone a review by experts in that area and have been deemed trustworthy. Periodically, we will also refer to other types of research, which include policy or foundation reports or meta-analyses that sum up previously conducted studies, because they can tell us what the research says about certain approaches across multiple studies. We also draw from another body of research that we refer to as *practitioner pieces*, which are books or journal articles that share teaching approaches specifically for an audience of teachers, rather than researchers. However, we read and choose practitioner pieces carefully to ensure that the approaches shared are grounded in relevant studies and theories. And, as always, we make sure they have been peer-reviewed.

We believe that all of these works are necessary to provide you with the most complete picture of how to support adolescents in reading challenging texts. Additionally, we primarily draw from research conducted with adolescents because we know that research conducted with younger students does not always work for older readers.

A Research Model for Understanding Scaffolding

Understanding the dynamic nature of comprehension, and what happens in readers' heads as they read, is the first step in understanding how to *support* students. A great model for helping teachers understand *how* to scaffold readers' comprehension is called the RAND model (RAND Reading Study Group [RRSG], 2002), which explains that reading is an interaction between three key factors: the text, the reader, and the activity, which are situated within the context of the instructional environment.

Text. We define *texts* broadly to include "[a]ny representational resource or object that people intentionally imbue with meaning" (Siebert et al., 2016). These can be traditional written texts, as well as pictures, maps, videos, or even games (more on games in Chapter 5). As we mentioned earlier, the quality of the texts matter too, and may play an influential role on readers' long-term comprehension ability. Texts that contain rich and precise language, complex syntax structures, and interesting, challenging, and engaging ideas are more likely to provide the necessary exposure to elements of challenge that readers need to grow their literacy skills.

Furthermore, text types can vary across subjects. For example, in science students may need to read research articles, material lists, or detailed procedures for an experiment. In social studies, students may read primary source documents, such as letters from historical figures, journal entries, as well as secondary source accounts, such as textbooks. ELA texts are broader, but may include poems, short stories, scripts, and various subgenres of novellas and novels as well as nonfiction texts, such as biographies, articles, and narrative nonfiction.

Activity. The *activity* in an academic setting includes tasks that the teacher creates in order to successfully comprehend and learn from the text(s). These tasks include summative or culminating assessments that occur at the end of a unit, as well as the smaller daily activities that occur throughout the unit. For example, in a unit on Mesoamerican cultures, one large task may be for students to read across several texts to construct a timeline. This summative assessment is a purposeful task that will align with the overarching goals of the unit. The teacher may also plan several smaller tasks for students to complete as they read each individual text. These smaller tasks may include *scaffolds* that the teacher might put in place, such as small-group or whole-class discussions and brief writing opportunities—for example, journaling to connect prior knowledge to what they are learning; and other formative assessments. In Chapter 4 we present an in-depth description of the tasks teachers create to give their readers purposes for reading.

Reader. This element of the RAND model includes everything that the person reading the text brings to the reading experience: notably, their background knowledge and experiences that relate to the topic of the text, their motivation (or lack thereof) to read, the purpose they have set for reading that particular text, their skills for reading various types of texts, the vocabulary words they know, and much, much more. We will discuss a strengths-based approach for leveraging these assets students bring to the reading experience in Chapter 3.

Reading is situated in a particular context. As you can see from this model, reading comprehension is a dynamic process, meaning that these three elements (text, activity, and reader) *interact* to influence readers' comprehension within the larger *context* in which the reading experience is happening. The context refers to the literacy beliefs and practices of the classroom, as well as to how literacy is valued in the school and local community. This means that the environment and context for learning matter. Throughout this book we will provide examples of how to ensure that the context for learning supports students' ability to learn from texts in your classroom.

What we love about the RAND model is that it demonstrates how much power teachers have to facilitate successful reading experiences. While you can't change what your readers bring to the text, you *can* select the texts, activities, and tasks (including scaffolds), and create a classroom environment conducive to reading. As a result of the positive reading successes of these interactions, over time the reader can develop more literacy skills and with them, perhaps a more positive attitude toward reading that may lead to . . . more reading! We believe this challenging work is the powerful art and craft of creating great content-area and literacy learning.

Thus, the RAND model supports the idea that scaffolding is key to helping readers understand texts. As we mentioned earlier, scaffolds are instructional techniques

that teachers can employ to support students in their efforts to better understand a text and should help students attain the critical level of comprehension. As such, scaffolding should consider all elements of the interaction: the reader, the text, and the task.

Consequently, scaffolding is not just "simplifying" the text or lowering the bar of the learning goals. Nor is scaffolding popcorn reading (teacher calling on one student at a time to read aloud for the class), simply reading the text aloud, or removing reading from the curriculum by covering everything with lecture slides and videos. While occasional read-alouds can be useful, the task of reading must eventually be turned over to students. We caution that it is certainly possible to *over-scaffold* (Daniel et al., 2016). For example, if the teacher does too much of the reading, then the students are not reading. If the teacher is directing every point of a class discussion, students are not responding to each other's ideas. If the teacher creates a graphic organizer for every reading, students never have to discern the structure of the text. We cannot emphasize enough that for students to become better readers (and writers) they must be doing the work of reading and thinking about what they have read.

DOES READING ABILITY MATTER IN SUBJECTS OTHER THAN ELA?

One thing we hear a lot is, "I don't need to teach reading because I am teaching science or social studies." That mindset raises the question, "Does reading ability really matter across different subjects?" To help illustrate why comprehension matters, we want to explore what this looks like in a real classroom. Read below as we introduce you to a science teacher, Dr. Perch. As you read, consider whether or not reading ability matters in his science classroom.

Dr. Perch is a 10th-grade biology teacher in a rural northern Ohio district, serving 75% white students and 25% Latinx immigrant students. Next week he begins his third year of teaching biology; however, prior to teaching he was a scientist for nearly two decades. During the past two years, Dr. Perch has struggled to engage his students in the subject matter and has found vocabulary a particular challenge. Additionally, many of his students seem to struggle with reading and writing in general. At times, Dr. Perch wanted to use his textbook to help students build knowledge about a topic before beginning an inquiry-driven lab investigation. But his quizzes revealed that his students hadn't mastered the concepts after reading a section of the textbook.

As a result, many of his students performed poorly on their end-of-course state biology assessment, which, unfortunately, is a requirement for graduation. Dr. Perch is at a loss. He wonders what he is missing that will help him engage his students. He also wonders why his students struggle to read the texts he presents them or engage in the writing tasks and what his role should be in helping them develop their literacy skills. Overall, as a biology teacher, he feels unprepared to support his students' immense literacy needs.

Dr. Perch decided to meet with his school's reading specialist. In that meeting, the reading specialist presented data about students' comprehension abilities that changed how he viewed their literacy skills. Three times a year, all students in the

school take a standardized benchmark comprehension assessment, which produces a norm-based reading level for each student indicating how they perform related to other students at that grade level.

Additionally, every year Dr. Perch's students take the required state biology assessment, which consists of multiple-choice questions that gauge students' grasp of various aspects of biology such as evolution, heredity, cell structure, and ecology. Dr. Perch often felt confused when he saw his students' test results because some of his students whom he *knew* had mastered a great deal of the content in his course performed poorly, while others, whom he knew did not master as much biology material scored well. When the reading specialist at his school shared the results of the comprehension assessment alongside his end-of-year biology assessment (see Figure 1.3), a lightbulb went off.

Dr. Perch saw how many of his students who had grasped the science content during class discussions were unable to show what they learned on his biology assessment. For example, Caleb has a deep knowledge of, and passion for, biology. He knew more about how genetics, cell mutation and cell reproduction processes

Name	Benchmark Reading Level	Percent Correct on Year-end Standardized Biology Assessment
Huda	2.9	*35% (not passing)*
Jesus	4.9	*45% (not passing)*
Nasli	4.1	*46% (not passing)*
Ena	3.9	*51% (not passing)*
Caleb	5.7	*58% (not passing)*
Arthur	4.9	*63% (not passing)*
Susan	6.2	65% (passing)
Patience	7.1	68% (passing)
Xavier	9.1	70% (passing)
Aysa	5.9	75% (passing)
Celia	6.2	76% (passing)
Jeff	6.9	85% (passing)
Alex	8.1	88% (passing)
William	7.1	89% (passing)
Anastasia	10.5	90% (pass advanced)
Annabelle	9.4	91% (pass advanced)
Jacob	11.2	93% (pass advanced)
Nasli	12.1	95% (pass advanced)
Oliver	11.5	100% (pass advanced)
Clara	12.1	100% (pass advanced)

FIGURE 1.3. Dr. Perch's reading comprehension and biology assessment data.

than anyone else in his class. However, he did not receive a passing grade (58%) on the state test.

Dr. Perch also observed how a few of his students who had not necessarily grasped the biology content, but who were strong readers, were able to score well despite their lack of science knowledge. For example, Xavier had exhibited poor attendance throughout the year, and when he did come to class, he was often unengaged. Xavier is a strong reader, however, and was able to eke out a passing grade on the assessment, despite his limited knowledge of biology.

So, did reading ability matter in Dr. Perch's classroom? We resoundingly say "YES!" His students' reading skills were preventing them from being able to accurately show what they knew on the assessments and for Dr. Perch to draw from the full repertoire of teaching tools he needed to help students learn biology content. Reading and writing are critical for learning information, and without access to these two learning modes, Dr. Perch's teaching repertoire was limited. Thus, we believe that even though Dr. Perch is a biology teacher, he needs to understand—and support—reading comprehension to enable his students' learning success.

YES, STUDENTS CAN READ DIFFICULT TEXTS . . . WITH SMART SCAFFOLDING

Teachers have powerful influence over whether their students can comprehend texts in their subject, regardless of the skills and attitudes of the readers entering their classrooms. An essential key to supporting readers is to believe that *all* students are capable of reading and engaging with texts across the disciplines—when provided with appropriate support. This book is designed to help you scaffold text-based instruction to support your readers to *learn* from texts in your discipline. It is our hope that by deepening your understanding of how to scaffold text-based learning, you will increase your students' content knowledge and literacy skills in your subject.