

Disciplinary Literacy: Just the FAQs

Timothy Shanahan and Cynthia Shanahan

Here's what educators need to know about teaching students to read in the disciplines.

One of the most misunderstood parts of the Common Core State Standards is the section on "Standards for Literacy in History/Social Studies, Science, & Technical Subjects" (National Governors Association & Council of Chief State School Officers, 2010). An understanding of these disciplinary literacy standards has universal value for educators—not only to those in states that have signed on to the Common Core, but also to those in other states that have their own disciplinary literacy standards. Indeed, such an understanding is important to all educators who want to teach their students how to read content-area texts effectively and appropriately. We offer the following responses to Frequently Asked Questions to help reduce some of the lingering confusion about standards for disciplinary literacy in the content areas.

Why does the Common Core include disciplinary literacy standards?

Over several decades, an extensive body of research has accumulated showing that literacy differs across the disciplines (Shanahan & Shanahan, in press). To meaningfully study a discipline, students must understand how literacy is used in that discipline and how they themselves can create and critique knowledge in that discipline (Moje, 2008).

Historians, for example, read different kinds of texts than scientists do, and they read them in a different manner. The nature of arguments and evidence differs across those fields of study, placing different demands on a reader or writer. The same could be said about math or literature, as well as various subdisciplines (biology, chemistry, physics, and so on).

Obviously, vocabulary words differ from subject to subject, but so does the nature of the vocabulary that matters (Shanahan & Shanahan, 2012). In social studies, for instance, words may be ideological in nature (*affirmative action, reverse discrimination, Civil War, War Between the States, economic value, human capital*). Just as important as these words' definitions is the information they convey about the perspectives of those who use them. Mathematicians and scientists, on the other hand, avoid such ideological meanings and rely heavily on Greek and Latin combining forms. For example, the term *monosaccharide* is made up of two parts: *mono* ("alone," "single," or "one") and *saccharide* (sugar), so a *monosaccharide* is a simple sugar. It is not enough for students to master new technical terms; they also should gain an appreciation of the nature of the words and definitions on which a discipline focuses.

Even the grammar of sentences varies systematically across disciplines. Linguistic studies, for instance, reveal that science writing tends to have fewer verbs and more nouns, attributive adjectives, and prepositional phrases (for example, "gradually expanding cumulative effect") (Biber & Gray, 2011, p. 229). Sentence reading is consequently a different experience in a science class than in a literature class. Students often require instructional support in reading science texts, as well as an understanding of why scientists write the way they do.

The use of graphic information also varies in different disciplines. In social studies texts, images are often included for illustrative purposes, to make the pages livelier, or to set a historical mood (for example, John Trumbull's painting of the signing of the Declaration of Independence) (Klein, 2011). In contrast, scientists use graphic elements to increase the precision of the information beyond what words alone can describe (Lee, West, & Howe, 2016). Understanding how to move among prose, equations, diagrams, tables, plots, and photos is an essential

science reading skill. Disciplinary literacy instruction aims at fostering an awareness of such specialized text features as well as an ability to negotiate them successfully.

So English teachers are supposed to teach kids to read like scientists or historians?

No, the idea is to teach these skills in content-area classes—math teachers should teach students to read math texts in the ways mathematicians would read such texts, and so on. Disciplines use literacy differently because professionals in these fields of study create and critique different kinds of knowledge by different methods. Learning these approaches separately from the content and inquiry methods of those fields would be akin to Steve Martin's quip that "talking about music is like dancing about architecture." The teaching of disciplinary literacy should be embedded in disciplinary study, not as some kind of decontextualized adjunct.

But don't disciplinary subjects have their own standards already?

Yes, each field of study has its own standards specifying the content to be learned. However, disciplinary literacy standards add an important dimension to the content specifications. A good explanation of this relationship comes from the Next Generation Science Standards (NGSS). The [NGSS](#) website states that these standards "lay out the disciplinary core ideas, science and engineering practices, and crosscutting concepts that students should master in preparation for college and careers," whereas the Common Core disciplinary literacy standards "were written to help students meet the particular challenges of reading, writing, speaking, listening, and language in their respective fields—in this case, science. The literacy standards do not replace science standards—they supplement them."

Why don't the elementary standards include disciplinary literacy?

Although the Common Core elementary standards don't include disciplinary literacy, they do underscore the importance of having students read and learn from content-rich texts starting in the earliest grades. That's a reasonable approach given that texts for younger children—even texts about historical events or scientific phenomena—tend to report information in general ways rather than promoting scientific or historical thinking. Not until about middle school do texts become technical and specialized enough to profit from a disciplinary approach.

Still, the standards assume that it's never too early to start building children's knowledge about the social and natural world through reading (Hirsch, 2016). The absence of specific disciplinary standards for grades K–5 should not dissuade teachers or parents from having kids reading about science, history, geography, art, music, athletics, and hundreds of other topics. But teaching students to deal with the specialized properties of disciplinary texts can be deferred until the students are reading texts that have such properties.

If teachers in science, social studies, and other subjects are teaching disciplinary literacy, what are English teachers doing?

English teachers take responsibility for general literacy and language skills—knowledge and abilities that can be applied across disciplines. They teach fundamental vocabulary and reading comprehension, grammar, spelling, mechanics, and the like; tools that need to be applied in all domains.

Of course, English teachers also have disciplinary literacy teaching responsibilities. Literature is a discipline; novels, short stories, and poems construct a unique and valuable body of knowledge that communicates its

insights in specialized ways that students are unlikely to confront in science, math, or social studies. Metaphor, symbolism, allusion, theme, and similar concepts are the stuff of disciplinary literacy in literature.

Content-area reading has been around for a long time. Isn't disciplinary literacy just old wine in new bottles?

Disciplinary literacy is not a new name for content-area reading. They are different concepts, and both have value.

Reading teachers have long recommended content-area reading instruction. Such instruction could be characterized as teaching kids how to comprehend and study subject-matter texts (Shanahan & Shanahan, 2012). The teaching methods recommended by content-area reading experts have varied, but the fundamental proposition has stayed the same: There are literacy skills that can be applied usefully to learning in all the disciplines. Whether someone is trying to memorize the names of the 13 original American colonies in a history class or the bones of the human foot in an anatomy class, he or she will likely rely on the same kinds of effort.

Teaching students how to locate and memorize information is a general literacy skill of wide utility. In contrast, a disciplinary literacy skill, such as comparing multiple accounts of an event, is of specific value in the study of a specific discipline—in this case, history (Wineberg, 1991). Knowing how to read and evaluate alternative perspectives will help someone read history critically, but it has less value in math or science.

So what's the proper balance between content-area reading and disciplinary literacy?

If the purpose of instruction is simply to ensure that students grasp the content of the text they read, then content-area reading strategies make sense (Buehl, 2008). For example, if we want students to gain information from a textbook chapter about the Great Depression, we might have them use Cornell notes: recording the key ideas of a text, usually through paraphrasing; constructing questions relevant to the text information; and summarizing the content in their own words.

But what if our purpose is to apprentice students into the disciplinary literacy of historians by teaching them to compare and contrast treatments of the same topic in several primary and secondary sources? Then it might be better to guide students through the process of analyzing multiple texts, including eyewitness accounts of the Dust Bowl, editorial cartoons from the period, and speeches of President Roosevelt, along with some later historical analyses, perhaps including that textbook chapter.

It would also seem wise to teach students the skill of *sourcing*—evaluating and weighing evidence by considering its source. In the study of history, it's just as important to ask questions about the source (Who wrote this? Who was the audience? What was the author's purpose? Is this source reliable?) as it is to determine what the documents say. Rather than balancing content-area reading and disciplinary literacy activities, it makes more sense to think about our instructional purposes and to select the approaches best aligned with those purposes.

Our English teachers are trying to support content in the other disciplines through specific works of literature. Does that count as disciplinary literacy?

English teachers have often proffered such help—for example, after reading *The Hunger Games*, math students could study the probability of Katniss's or Prim's name being drawn during the reaping (Saunders, 2014). But just because literature can be matched to a subject doesn't mean that it should be.

Whatever the benefits of this approach—and we're skeptical about those benefits—it's definitely not what disciplinary literacy is about. When considering what disciplinary experts really do (Shanahan, Shanahan, & Misischia, 2011), we'd be hard-pressed to find mathematicians who turn to poetry to figure out theorems, or scientists who read short stories to gain insights into global warming. Students need opportunities to read authentic texts, including textbooks, from all the major disciplines. Transforming the beauty and power of literature into an alternative source of content information is not appropriately respectful of the intellectual work of those other fields, nor does it promote the true value of literary thought.

Who is responsible for ensuring that disciplinary literacy is taught?

The most immediate responsibility for disciplinary literacy belongs to classroom teachers themselves, across the entire curriculum. However, because these standards are separate from the content standards, teachers are often unaware of this responsibility. Curriculum directors, principals, and department heads need to foster such awareness, and then these leaders need to provide sufficient professional development, text resources, and planning time for disciplinary literacy to be taught successfully.

To Learn More about Disciplinary Literacy

Educators can draw on a range of resources to enhance their instruction in disciplinary literacy, including free materials, courses, and videos. Here's a small sampling.

Six exemplary units for teaching disciplinary literacy in history, literature, and science in secondary schools, produced and field-tested by the [Southern Regional Education Board](#).

The Reading Like a Historian curriculum developed by [Stanford University](#). View a set of five videos showing the curriculum in action on the [Teaching Channel](#).

Curated collections of materials on disciplinary literacy in various content areas: [Reading in the Disciplines](#); and the Wisconsin Department of Public Instruction's [Literacy in All Subjects](#).

Free, high-quality professional development opportunities: The Montana Office of Public Instruction's self-directed course to familiarize teachers with the [basics of disciplinary literacy instruction](#); and the Friday Institute at North Carolina State University's [MOOC "Disciplinary Literacy for Deeper Learning."](#)

EL Online

To read about a spectrum of approaches to literacy in the content areas, see the online article "[Three Directions for Disciplinary Literacy](#)" by Rachael Gabriel and Christopher Wenz.

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Timothy Shanahan is a distinguished professor emeritus at the University of Illinois at Chicago. He blogs at www.shanahanonliteracy.com. **Cynthia Shanahan** is a professor emerita at the University of Illinois at Chicago and formerly associate dean of academic affairs and director of teacher education.

Disciplinary Literacy is about to go from theory to game plan—taking students from superficial understanding to deep content expertise. And guess what? ReLeah Lent’s big secret lies in highlighting each content area’s differences—advancing a discipline-specific model in which literacy is used as a tool for strategic thinking, reading, writing, and doing within each field. That’s right—no more reading strategies used uniformly across the curriculum. Instead, This Is Disciplinary Literacy helps content-area teachers put into action the key literacies of their specialties. Teaching science? [Stude 30 FAQs about disciplinary issues](#). Why do we need a written disciplinary procedure? I've heard there is an Acas Code of Practice on Disciplinary and Grievance procedures. Can I just sack them? What do we do if an employee claims a rule is unreasonable. An employee says they don't want their manager to conduct either an investigation or any disciplinary hearing. This is very inconvenient - can we just ignore them? An employee has had warnings before. How many do we have to give before we can dismiss them?