

CHAPTER 1

Mentoring Students in Disciplinary Literacy

Essential Question: *Why is there a significant need for disciplinary literacy instruction?*



How would you describe yourself as a reader? That you are a reader is a given—you are reading this chapter, for example. So, if you talked about yourself as a reader, what kinds of things would you say?

Some of your comments might be related to *what* you read: “I have several magazines I enjoy.” “I never miss the sports section in my newspaper.” “I prefer biographies.” “I do a lot of on-the-job professional reading.” “I have some favorite authors of popular fiction.” “I am online several times a day, tracking the postings in some favorite blogs and websites.” “I’m never without a book.”

Some of your comments might concern *where* and *when* you read: “I read in bed every night before I go to sleep.” “I always have something to read when I am traveling.” “I read constantly throughout the school day.” “I like to relax and do some reading with a cup of coffee when I get home from work.” “I catch up on my leisure reading during the summers.”

Some of your comments might detail *how* you read: “I get completely lost when I am reading something that really grabs me.” “I have always been a slow reader.” “I am one of those people who have to mark up a text when I need to do careful reading.” “I am quite critical as a reader and tend to talk back to an author in my head.” “I am a very methodical reader, pausing frequently to ponder what I have understood so far.”

Some of your comments might express *why* you read: “I am very conscious of keeping up with the most recent findings in my discipline.” “It is important to me to follow what is going on in the world each day.” “I usually have a lot of student work to read.” “I find that reading helps me unwind after a stressful day.” “I would be bored if I did not have

something with me to read.” “Reading is just central to who I am. I cannot imagine my life without reading.”

Reading and Identity

Your personal what, where, when, how, and why descriptions represent your reader profile. Obviously, when we talk to each other about our personal reading, we reveal reader profiles that may perhaps share some elements but differ dramatically with others. Let me use myself as an example. Recently, I embarked on a rather ambitious reading project: Francis Parkman’s monumental seven-volume *France and England in North America*. It took Parkman nearly his entire adult life to recount the unfolding drama between the two European superpowers as they vied for supremacy on the North American continent. It looks like it will take me most of a year—reading Parkman interspersed with a variety of novels, periodicals, informational books, and professional material—to arrive at the climactic resolution in 1759 on the Plains of Abraham, as Volume 7 takes me to the decisive battle of Québec.

Does spending extended hours with a 19th-century historian who strived to contribute to our understanding of a critical but little known period of North American history sound interesting? Or, to ask it another way, would *you* choose to read a work such as this? And if so, why?

For me, the Parkman history allows me once more to slip into one of my identities, that of historian. I majored in history as a university undergraduate and began my career in education teaching high school social studies. I have always been an avid reader of history, even back to my years as an elementary school student, when I would page through volumes of the family *World Book Encyclopedia*, skipping everything but the entries that dealt with historical events and people. As a preteen, I checked out from our school and community libraries pretty much all of the Landmark series of histories written for adolescents (I was apparently about the only reader of some of them). I also was constantly on the lookout for articles that featured historical themes as I leafed through newspapers and magazines. By the time I was in high school, I had accumulated a personal library of several shelves of paperbacks on topics ranging from the genius of Hannibal to the grimness of Verdun.

I currently have an entire wall in my home devoted to my history hardcovers—but there I go, talking about myself as a reader.

Of course, my reader profile encompasses many other identities in addition to historian. For example, sometimes what, when, and why I read is sparked by my identity as a public school teacher. In addition, I have an identity as a literacy educator, which leads me to target the subset of texts written within the educational profession that emphasize reading and writing instruction. I have an identity as a voracious reader of fictional literature, with my tastes running from classical to contemporary works. Additional identities that intersect with my reading would include baseball fan, humorist, moviegoer, home improvement practitioner, traveler, adult male, family member, baby boomer, political liberal, and global citizen, to name a few.

Literacy theorist Gee (2000) describes identity as being “a certain ‘kind of person’” (p. 99). Because we all display multiple identities, it can be helpful to elaborate a bit more on who we are. Gee subdivides identities into four categories:

1. Identities that are part of our *nature* and over which we have little control (e.g., I am white, European American, an adult male, and an oldest son)
2. Identities that are related to *positions* that we have attained and that may be confirmed by various groups or institutions (e.g., I am a college graduate, public school teacher, married person, U.S. citizen, and Wisconsin resident)
3. Identities that reflect personal *traits* or characteristics that others recognize in us and that define us as individuals (e.g., I have a good sense of humor, am handy with woodworking, and listen to classical music)
4. Identities that we share with others through our *associations* with them or through group memberships (e.g., I am a Milwaukee Brewers fan, Democrat, adolescent literacy advocate, and International Reading Association member)

My various identities very much influence my personal profile as a reader. Because of these identities, my reading profile includes the daily

New York Times, Yahoo! sports postings, Ward Just political novels, e-mails from family, *Newsweek* magazine, museum circulars, teacher union newsletters, the *Journal of Adolescent & Adult Literacy*, a myriad of other texts, and yes, histories like Francis Parkman's seven volumes. My reading is an extension of who I am, and my abilities as a reader allow me to extend who I am.

REFLECTION INTERLUDE

The term *reader* often presumes a connotation of book reader. Yet you can see that my reader profile encompasses a wide range of texts (that yes, do include books). Consider for a moment your profile as a reader, and the identities that most govern what, when, and why you read (see Figure 1.1).

Figure 1.1. What's Your Reader Profile?

Identity	So I read...

Our shared identities as teachers mark us as members of a community whose personal reader profiles often coincide. For example, we are all readers of the variety of texts encountered on the job in our schools, from e-mails to district directives. We all tend to read educationally relevant items in newspapers, magazines, and online. We all read materials that guide our professional growth, such as this book. We have examined standards documents, policy statements, and educational proposals, theories, and ideas. We read student work regularly in our role as classroom instructors. Our shared identity makes it likely that we have read, continue to read, and are interested in reading similar things.

Yet, obviously at many points, our identities diverge. Within the educational profession, some of you share an identity as mathematicians,

scientists, language teachers, fitness experts, musicians, or technology specialists, as well as other identities. Your profiles as readers will look markedly different from mine and from each other’s.

Fostering Academic Identities

Of course, not everything that I have read over the years has necessarily been a matter of choice. Like all of us, I have read many texts that I felt obligated to read. Sometimes, I felt personally obligated. For example, I recently felt obligated to carefully read the directions for assembling a table saw, obviously for pragmatic reasons. Sometimes, others have obligated me. Frequently, I am asked to read something to satisfy workplace expectations, such as material distributed at a faculty inservice meeting. Additionally, like our students, I have been obligated to read numerous nonchoice texts in my role as learner in school and college contexts.

REFLECTION INTERLUDE

Pause for a moment and revisit your personal reader profile. What are the arrays of written texts, from formal to informal, that you have read? Which of these would you call choice texts—things that you desired to read—and which would you consider obligation texts—things that you, or someone else, felt you needed to read. Next, reflect on your experiences reading obligation texts as you progressed through your years of education (see Figure 1.2).

Figure 1.2. Revisiting Your Reader Profile: Choice Texts Versus Obligation Texts

Choice Texts (I wanted to read...)	Obligation Texts—Personal (I felt obligated to read...)	Obligation Texts—Others (Someone else obligated me to read...)

It becomes increasingly clear that as readers, we do not read all texts with equal competence, need, interest, and enthusiasm. Obligation texts, in particular, can be problematic for us. What happens to us as readers when we are obligated to stray outside our identities to tackle texts that do not reflect our preferred ways of thinking and interacting with the world?

Student Identities

Coping with obligation texts is no different for our students than it has been for us. Consider the various identities that our students might bring to the classroom and how these identities could affect their personal reading profiles. First, like us, many of the students' identities do not necessarily seek out the kinds of reading that is expected in school and within academic disciplines. To use Gee's four identity categories, we will meet young people who have nature identities as teenagers, adolescent boys, African American females, Latina immigrants, students with learning disabilities, or English learners. Second, these young people occupy roles and positions in society that include identities as diverse as dependent children, high school sophomores, talented and gifted individuals, persons living in poverty, licensed drivers, restaurant employees, children of divorced parents, or adjudicated juveniles. Third, in terms of traits and characteristics, we will meet young people who see themselves, and are recognized by others, as the kinds of persons who text, listen to hip-hop, are shy, are athletic, are not good readers, are skilled at working with their hands, are vegetarians, aspire to be popular, are rebellious, and on and on and on. Finally, we will meet students who identify with others and display association identities as widespread as soccer teammates, Twilight readers, Spanish speakers, video game players, Comedy Central watchers, taggers, Lutherans, school band musicians, Facebook friends, gang members, and community volunteers.

During the past decade, researchers have been intrigued by the out-of-school literacies employed by young people (e.g., Alvermann, 2002; Alvermann, Hinchman, Moore, Phelps, & Waff, 2006). For example, students communicating through text messaging and online social networking, such as MySpace and Facebook, are displaying a host of literacy behaviors that may represent a significant segment of the students' personal reader profiles. Some researchers (e.g., Hagood, Alvermann, & Heron-Hruby, 2010) have suggested that educators need to explore ways to

factor in the breadth and volume of reading and writing practices that are central to the reader profiles of many of our students, based on their out-of-school identities.

However, the emphasis in this book is on the honing of in-school, or academic, literacies. As literacy researcher Moje (2008) so cogently observes,

Although literacy educators and researchers acknowledge the value and power of the knowledge, practices, and texts young people bring to school, it is also critical that we work to expand youth knowledge, practices, and texts as a function of education. Young people do not need to go to school to learn what they already know; content literacy instruction can help youth gain access to the accepted knowledge of the disciplines, thereby allowing them also to critique and change that knowledge. (p. 97)

Very likely, only a modest number of our students will have articulated association identities, such as future historian, future mathematician, or future scientist. A number of students will exhibit more vague inclinations as traits identities: the type of person who is good in math, likes science, is interested in history, enjoys reading fiction, or has a talent in art. Most students will articulate aspirations to more general and careerist position identities (e.g., “I am going to be a [doctor, business person, construction worker, computer technician, elementary school teacher, or police officer]”), tentative identities that may shift relatively frequently.

Identities and Literacy

Clearly, students’ academic identities matter a great deal when we consider students’ abilities and willingness to meet the literacy demands inherent in learning within content disciplines. As Moore and Onofrey (2007) conclude, “Students who enact claims as insiders to classroom reading and writing, who assert membership in particular classroom literacy communities, have an academic advantage” (p. 287). Some academic identities can empower students as learners: “I am the kind of student who likes to learn things.” “I am the kind of student who gets my work done.” “I am the kind of student who will be successful if I make the effort.” “I am the kind of student who is a good reader.” Other academic identities can undermine academic performance: “I am the kind of student who does not do homework.” “I am the kind of student who does not get math.” “I am the

kind of student who probably will not understand even if I try.” “I am the kind of student who avoids reading.” “I am the kind of student who hates school.”

As teachers, we can play a significant role in these dynamics of identity formation. Academic identities can be fluid rather than static, and the instructional context can make a dramatic difference for developing and shaping students’ conceptions of themselves as readers and writers (McCarthy & Moje, 2002). Gee (2001) labels as discursive what I have referred to as traits identities because of the crucial role of language and dialogue in their development and maintenance: They are the things we tell ourselves about ourselves but are also the things others tell us about ourselves. Others can reinforce or challenge what we say about ourselves.

Our role as teachers and mentors is especially critical for developing students as readers, writers, and thinkers in the different academic disciplines studied in middle and high school classrooms. In *Choice Words: How Our Language Affects Children’s Learning*, Johnston (2004) extensively examines the powerful relationships between what we as teachers tell students, the language we use, and the emerging academic identities of our students:

Building an identity means coming to see in ourselves the characteristics of particular categories (and roles) of people and developing a sense of what it feels like to be that sort of person and belong in certain social spaces. As children are involved in classroom interactions, they build and try on different identities....Teachers’ comments can offer them, and nudge them toward, productive identities. (p. 23)

Teachers may unintentionally reinforce problematic identities, such as “I am not any good at doing this,” or “I am not a science person.” Or, teachers can directly through their language encourage the creation of new identities: “As a person thinking like a scientist, what might you suggest?” “What did you notice as a reader when you read that passage?” Both of these statements explicitly position students as individuals who are perceived as scientist types and as readers. Ultimately, academic identities that empower learning begin to emerge: “I am able to do things I could not do before.” “I can learn things by reading about them.” “I am able to handle challenges in math.”

Reading in Academic Disciplines

As teachers, each of us has academic identities that have evolved over our years of schooling and that have eventually centered on specific disciplinary preferences. Obviously, my interests in and experiences with reading history-themed material have led me to approach such texts with confidence and purpose. I certainly gravitate toward reading history as choice texts, but I have also been receptive, and frequently eager, to undertake the reading of history as obligation texts, even when such texts were difficult or not particularly motivating.

Over the years, I have internalized how to read history texts. When I read through a historian lens, I automatically shift my thinking in certain characteristic ways to examine what an author is saying. Questions occur to me that parallel what historians might want to know and care about: What does this author say happened and how did the author find out? Why does the author believe this happened? Why does the author think this matters? I track indicators of the author's personal beliefs, perspectives, and points of view as I weigh the author's explanations and conclusions. I focus on how this knowledge can inform my insights into who we are and how we have gotten to this point. Reading through a historian lens helps me prioritize what to look for and provides me with a mental template for cutting to the gist of a message and constructing the big picture of what an author is saying. Thinking this way as a reader comes naturally to me now. I just do it.

Personally, I also recognize that my historian lens has often been my default mode for many of the texts that I read. As a result, I might read, say, a newspaper article and come away with a take on what an author was saying that contrasts with what a colleague has understood. In our conversations, we discover that we read through different lenses; perhaps she read the article more like a scientist or focused on the literary qualities of the writing. Consequently, we may have asked ourselves different questions, noticed different aspects of the message, drew on different background knowledge, organized our thinking in different ways, and arrived at somewhat different conclusions. Yet we both read with comprehension.

I realize that there are times when reading through a scientific lens, a literary lens, a mathematical lens, or others is more appropriate for organizing my thinking and reaching understanding. As a learner,

it became readily apparent to me that reading like a historian would not suffice when tackling an algebra textbook or studying chemistry chapters. Although mathematic or scientific modes of thinking may not be my preferred interaction with the world and with texts, I have over the

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Readers engage in distinct thinking processes, colored by the human enterprises and habits of mind that shape academic disciplines.

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—Greenleaf, Cribb, Howlett, & Moore, 2010, p. 291

years learned to adjust my thinking to match these needs as a reader more directly. I have developed the capacity to comprehend a range of texts that sometimes fall outside my immediate comfort zone. It may not always be my choice, but I can do it.

Our students face these same challenges every time the bell rings during a typical school day.

Like you, some students' academic identities may lean toward some disciplines, such as science or math, and away from others, such as history or literature. Yet, for many students, none of these academic identities predominate. Instead, students may enter our classrooms convinced that science is hard, social studies is boring, algebra is something they will never use, and the assigned novels are uninteresting and irrelevant to them. Some will have identities more geared to artistic, musical, hands-on, technological, athletic, or other directions. For some students, out-of-school identities will be more significant to them than their academic identities. As a result, the reading that students are asked to do in some classes will more closely approximate their strengths, interests, and personal outlooks than the reading they encounter in other courses. Yet, ultimately, our students are expected to develop as competent readers, writers, and thinkers in *all* academic disciplines.

A Model of Disciplinary Literacy

What, then, does it mean to be a reader in middle and high school content classrooms? Increasingly, researchers are referring to these more specialized applications of reading and writing as disciplinary literacy (Lee & Spratley, 2010; Moje, 2008; T. Shanahan & Shanahan, 2008). With instruction and guided practice, students gradually develop the capacity to read disciplinary-specific texts through an insider perspective (Buehl, 2009c). In other words, students need to be mentored to read, write, and think in ways that are characteristic of discrete academic disciplines.

Mentoring students as insiders means they gain the ability to talk the talk of an academic discipline; they can access communications in particular subject areas through reading and listening, and equally important, they develop the facility through writing and speaking to communicate in the ways that insiders such as historians, mathematicians, biologists, musicians, or accountants do. Students begin to develop personal disciplinary lenses for reading within different academic disciplines.

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Each academic discipline or content-area presupposes specific kinds of background knowledge about how to read texts in that area, and often also requires a particular type of reading.

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—Lee & Spratley, 2010, p. 2

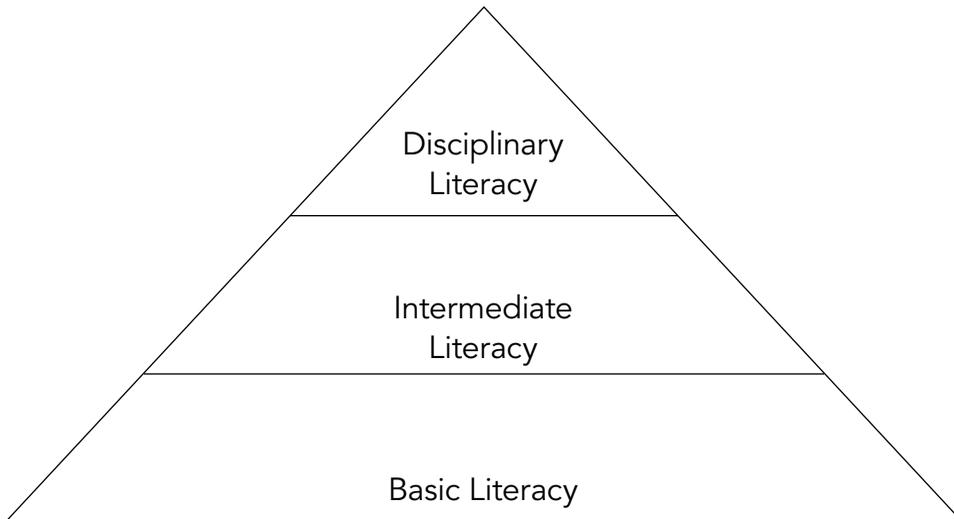
Basic Literacy

Shanahan and Shanahan (2008) have offered a model that envisions literacy instruction as progressing in three phases (see Figure 1.3). During the initial phase of instruction, basic literacy, teachers of the primary grades work with beginning readers to build the foundation for reading and writing. Students learn to decode words, recognize high-frequency words from spoken language, understand conventions of print, and attend to meaning. Typically, when middle and high school teachers talk about reading instruction, they are visualizing this basic literacy phase, which happens, say, in a first-grade classroom. When teachers of adolescents are urged to integrate reading instruction into the teaching of content areas, the teachers often respond apprehensively that they were not trained to teach reading. Of course, most middle and high school teachers are obviously unprepared to deliver basic literacy instruction to students needing this foundational phase of development.

Intermediate Literacy

The middle phase of instruction, intermediate literacy, is emphasized as students move along from primary to upper elementary grades. This is a streamlining and multitasking phase of development, as students orchestrate their thinking routines to juggle several facets of reading at once. Students improve their reading fluency, expand their vocabularies, and encounter increasingly more sophisticated texts. Comprehension strategies become increasingly important, and students are exposed to a greater variety of text structures. Although teachers of adolescents

Figure 1.3. The Increasing Specialization of Literacy Development



Note. From "Teaching Disciplinary Literacy to Adolescents: Rethinking Content-Area Literacy," by T. Shanahan and C. Shanahan, 2008, *Harvard Educational Review*, 78(1), p. 44. Copyright 2008 by the President and Fellows of Harvard College.

generally encounter very few students still developing basic literacy, teachers do encounter struggling readers who are continuing to grow their capacities in this intermediate phase: students who are not automatic word decoders, read very slowly and perhaps word by word, read the words without difficulty but do not have satisfactory comprehension, or have limited vocabularies. Some of these students would benefit from literacy interventions taught by reading specialists that provide additional practice and instruction. Yet most of these struggling readers would be effectively served by classroom support, scaffolded lessons, and differentiated instruction. In a number of districts, literacy coaches assist disciplinary teachers in planning instruction that meets the needs of struggling readers still growing intermediate literacy.

Disciplinary Literacy

The third phase of literacy instruction, disciplinary literacy, predominates as students enter middle school and move on to high school. Students

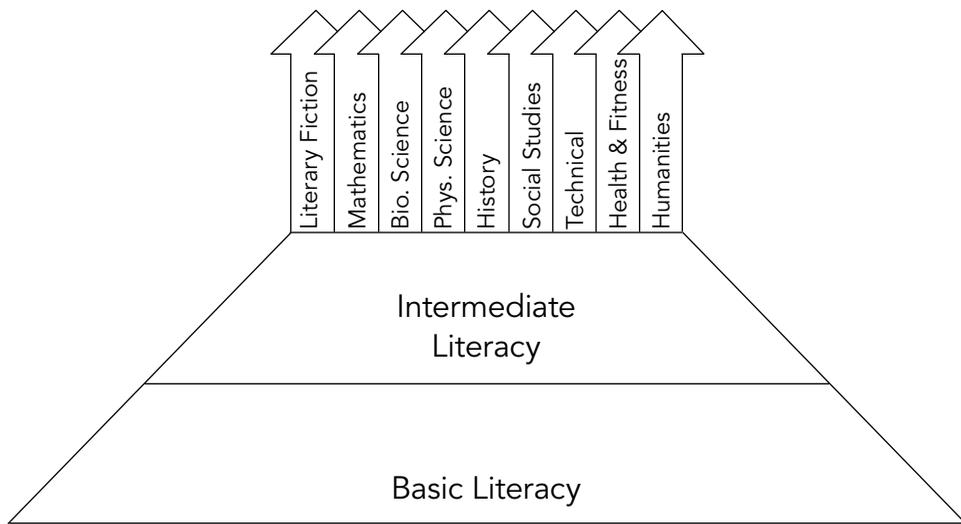
must navigate a curriculum that features arrays of texts from disparate and increasingly distinct academic disciplines. As learners, students are expected to fine-tune generic comprehension strategies to accommodate the demands of each of these different subject areas. As Heller and Greenleaf (2007) note,

To become competent in a number of academic content areas requires more than just applying the same old skills and comprehension strategies to new kinds of texts. It also requires skills and knowledge and reasoning processes that are specific to particular disciplines. (p. 10)

Disciplinary literacy necessitates that we conceptualize reading and writing as contextually dependent practices; students are expected to become many different kinds of readers and writers (Gee, 2000). As a result, a student might be quite comfortable reading fictional works in a literature class, be less proficient reading biological texts, and feel helpless understanding the algebra textbook.

Figure 1.4 displays the complicated challenges facing adolescents as learners in different academic contexts. Unlike the foundational phase

Figure 1.4. The Contextualized Nature of Disciplinary Literacy

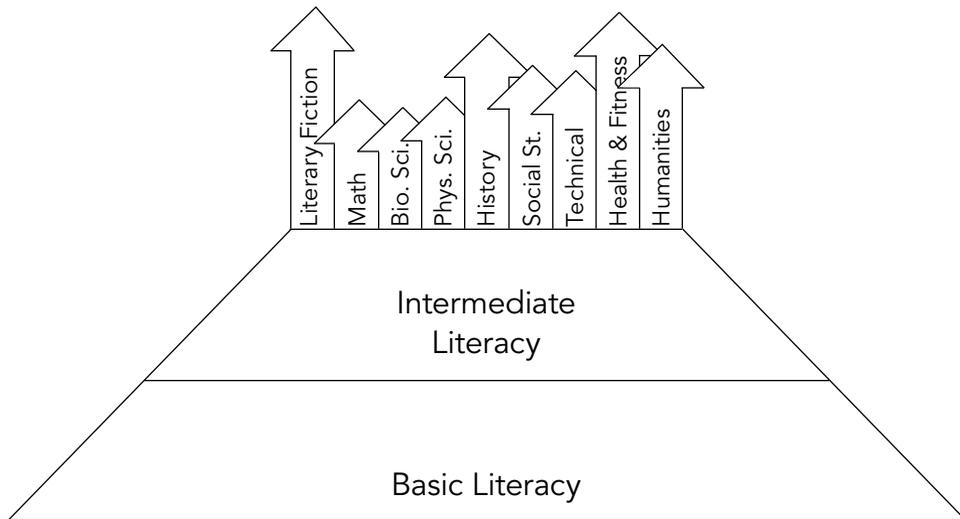


of basic literacy, and the continued general development during the intermediate literacy phase, disciplinary literacy is not one thing but many. Students are expected to gradually grow their capacities in each of the areas represented by the arrows in the figure. If, for example, students received rich literacy instruction in their English language arts classes, then we could expect them to become more competent readers of the materials emphasized in the English language arts curriculum, primarily literary fiction, such as novels and short stories, and to a lesser extent, some literary nonfiction, such as autobiography and essay. Yet what about their growth in the other towers of literacy represented in the figure? Because disciplinary literacy is contextualized, students will need similar rich literacy instruction within the disciplinary settings where other types of texts are emphasized: mathematics, biological science, physical science, history, other social studies (e.g., geography, civics, economics), technical texts, health and fitness, and humanities (e.g., art, music). In short, instruction that guides students in reading through a literary lens when interacting with authors of fiction will not prepare students to read an algebra chapter, an earth science passage, a segment of an auto mechanics manual, a recipe, a section of the U.S. Constitution, online software instructions, or information on using a heart rate monitor.

The reality is that for all of us, the figure's arrows in the disciplinary literacy phase would reveal an uneven, jagged profile, with some of the disciplinary arrows much higher than others (see Figure 1.5). All of us are more confident as readers in some disciplines and regard ourselves as less effective in others. The goal is not for all these disciplinary arrows to grow to equal heights. We know that our personal academic profiles lead us toward some disciplines and perhaps away from others. Instead, the goal is to mentor students so that they can access communications effectively in all disciplines, regardless of their personal preferences and interests. Otherwise, students' abilities to learn within a discipline become stalled, and students must rely on being told or shown what they need to know because they have not developed the capacity to independently access this knowledge as readers within the discipline.

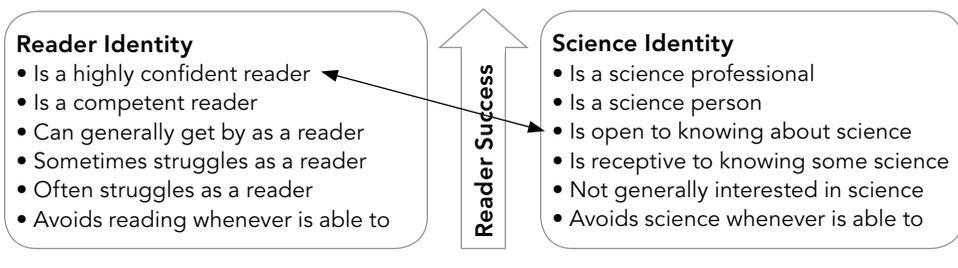
I related earlier that I have a personal identity as a history-type person and that I am very comfortable reading texts within the discipline of history. I also have an identity as the kind of person who is a highly confident reader. Think about how these two identities intersect when

Figure 1.5. Example of a Disciplinary Literacy Profile



I am reading history texts and the likelihood that I would have a successful reading experience. I do not bring the same profile to my reading of science texts. Although I am still a highly confident reader, I am more of a science outsider and am less comfortable reading within the discipline of science. So, although I am receptive to learning about science, I may be less effective as a reader of science. Figure 1.6 displays the interplay between these two identities, with the arrow representing how they intersect for me personally. Where would you draw your arrow? Obviously, the most powerful scenario would be an arrow that extends straight across at the top, between “Is a highly confident reader” and “Is a science professional.” The more your arrow dips downward one direction or the other, the more likely you will encounter struggles as a science reader. We could of course develop the same profile comparisons between reader identity and identity in any discipline (e.g., history, mathematics, literature, technical subjects). Where would many of our students draw their arrows, and what kinds of instruction would students need to support their success as readers in different disciplinary contexts?

Figure 1.6. Profile of a Science Reader



REFLECTION INTERLUDE

What is your disciplinary reader profile? Which disciplines are you most confident and accomplished in as a reader, and which are you least? Are there disciplines in which you do not feel that you are a particularly competent reader? Are there disciplines in which you would avoid reading if you could? Are there certain types of texts that you struggle with as a reader? Try your hand at creating your personal disciplinary literacy profile in Figure 1.7. Draw your “towers of literacy” that correspond to where you would place yourself as a reader in each of these disciplinary contexts.

Figure 1.7. What Is Your Profile as a Disciplinary Reader?

	Literary Fiction	Mathematics	Physical Science	Biological Science	History	Social Studies	Technical	Health & Fitness	Humanities
Highly Confident									
Generally Competent									
Can Get By									
Sometimes Struggles									
Often Struggles									
Avoids at All Costs									

The Need to Address Disciplinary Literacy

It is this third phase, disciplinary literacy, the goal of middle and high school literacy development, that is most neglected in our instruction. The RAND Corporation report on adolescent literacy (McCombs, Kirby, Barney, Darilek, & Magee, 2005) adopts deLeon’s description of disciplinary literacy as an “orphaned responsibility” (p. iii); nobody takes care of it. As Shanahan and Shanahan (2008) conclude, “Although most students manage to master basic and even intermediate literacy skills, many never gain proficiency with the more advanced skills that would enable them to read challenging texts in science, history, literature, mathematics, or technology” (p. 45).

This concern about the lack of instruction at the disciplinary literacy level has been echoed again and again over the past decade by a series of influential research reports and policy documents. Historically, research investigations, policy initiatives, and public attention have targeted basic literacy instruction at the elementary school level. The prevailing attitude toward literacy development followed what some observers have termed an inoculation mentality: Provide excellent instruction to beginning readers, and they will be inoculated as readers, able to subsequently withstand increasingly more complex reading challenges without help or explicit teaching. The need to provide the necessary literacy instruction that supports students as readers and writers in academic disciplines was virtually ignored, as sporadic and short-lived efforts to teach reading in the content areas came and went. The decade since 2000 has witnessed an unprecedented shift in this attitude. As Frost, an advisor to the Clinton Administration’s Department of Education, admits in the National School Boards Association (2006) policy statement on adolescent literacy, “We thought teaching every child to read well by the end of third grade would take care of the problem, but we were wrong” (p. 1).

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The need to guide adolescents to advanced stages of literacy is not necessarily the result of any teaching or learning failure in the preschool or primary years; rather, it is a necessary next step in normal reading development.

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—McCombs et al.,
2005, pp. 2-3

A Shift Toward Disciplinary Literacy

Because disciplinary literacy has muddled along beneath the radar of public attention and policy concern, middle and high school teachers

might be surprised to learn about the avalanche of recent action documents with unambiguous recommendations that have been released and are currently influencing education decision makers. The voices are an amazingly diverse assemblage, but the conclusions in policy document after document are in striking agreement: Middle and high school teachers need to integrate literacy practices into the instruction of their disciplines (see Table 1.1). What is most remarkable is that few of these organizations had previously regarded disciplinary literacy to be a significant policy concern.

Table 1.1. U.S. Policy Statements on Adolescent Literacy

Organization	Policy Statement
American College Testing Program	"Not enough high school teachers are teaching reading skills or strategies and many students are victims of teachers' low expectations. Another likely reason that high school students are losing momentum in readiness for college-level reading is that reading is simply not taught much, if at all, during the high school years, not even in English courses." ^a
Alliance for Excellent Education	"The idea is not that content-area teachers should become reading and writing teachers, but rather they should emphasize the reading and writing practices that are specific to their subjects, so students are encouraged to read and write like historians, scientists, mathematicians, and other subject-area experts." ^b "All content area teachers should know what is distinct about the reading, writing, and reasoning processes that go on in their discipline; they should give students frequent opportunities to read, write, and think in these ways; and they should explain how those conventions, formats, styles, and modes of communication differ from those that students might encounter elsewhere in school (Pearson, 1996)." ^c
Carnegie Corporation of New York	"Because of this need for ongoing literacy development, adolescent students need explicit instruction in reading and writing all the way through grade 12, as well as comprehensive forms of assessment and rigorously aligned standards detailing what they need to know and what they must be able to do both <i>within</i> and <i>across</i> content areas." ^d

(continued)

Table 1.1. U.S. Policy Statements on Adolescent Literacy (Continued)

Organization	Policy Statement
International Reading Association, in collaboration with National Council of Teachers of English, National Council of Teachers of Mathematics, National Science Teachers Association, and National Council for the Social Studies	"Middle and high school teachers need help to understand how they can develop content knowledge at the same time that they improve student literacy; that in fact, effective teaching in their subject areas will be boosted by complementary literacy instruction related to the texts (and the other communication demands) characteristic of their subjects." ^e
National Association of Secondary School Principals	"It becomes even more critical that secondary content area teachers better understand and teach specific literacy strategies to help students read and extract meaning from the written material used to teach the course content." ^f
National Association of State Boards of Education	"The importance of connecting reading and writing across the curriculum has never been more clear. Indeed, comprehension instruction that promotes strategic behaviors to encourage active and purposeful reading and writing (something which most struggling readers have trouble) should not only be taught explicitly, it should be incorporated into content area teaching, beginning in the early grades and continuing through high school." ^g
National Center for Education Evaluation and Regional Assistance	"Adolescent literacy is a complex concept because it entails more than the scores that students achieve on standardized reading tests. It also entails reading to learn in subjects that present their ideas and content in different ways. Students need to be able to build knowledge by comprehending different kinds of texts, mastering new vocabulary, and sharing ideas with others." ^h
National Council of Teachers of English	"In middle and high school, students encounter academic discourses and disciplinary concepts in such fields as science, mathematics, and the social sciences that require different reading approaches...(Kucer, 2005). These new forms, purposes, and processing demands require that teachers show, demonstrate, and make visible to students how literacy operates within the academic disciplines (Keene & Zimmermann, 1997; Tovani, 2000)." ⁱ

(continued)

Table 1.1. U.S. Policy Statements on Adolescent Literacy (Continued)

Organization	Policy Statement
National Governors Association Center for Best Practices	"Students need instruction beyond third grade to learn...how to employ reading strategies to comprehend complex texts about specialized subject matter. All students need such instruction, not just those who are struggling readers and writers." ^j
National School Boards Association	On students who meet state proficiency standards in literacy: "They can read simple texts such as newspapers or instruction manuals, but often can't understand specialized or academic materials. Researchers say these students desperately need help comprehending academic language and often benefit dramatically from having literacy instruction embedded in courses ranging from physical education to calculus." ^k
RAND Reading Study Group	"Research has shown that many children who read at the third-grade level in grade 3 will not automatically become proficient comprehenders in later grades. Therefore, teachers must teach comprehension explicitly, beginning in the primary grades and continuing through high school." ^l

^aFrom *Reading Between the Lines: What the ACT Reveals About College Readiness in Reading* (p. 9), by ACT, 2006, Iowa City, IA: Author.

^bFrom *Reading Next—a Vision for Action and Research in Middle and High School Literacy: A Report to Carnegie Corporation of New York* (p. 15), by G. Biancarosa and C.E. Snow, 2004, Washington, DC: Alliance for Excellent Education.

^cFrom *Literacy Instruction in the Content Areas: Getting to the Core of Middle and High School Improvement* (p. 27), by R. Heller and C.L. Greenleaf, 2007, Washington, DC: Alliance for Excellent Education.

^dFrom *Time to Act: An Agenda for Advancing Adolescent Literacy for College and Career Success* (p. 18), by Carnegie Council on Advancing Adolescent Literacy, 2010, New York: Carnegie Corporation of New York.

^eFrom *Standards for Middle and High School Literacy Coaches* (p. 2), by International Reading Association (with National Council of Teachers of English, National Council of Teachers of Mathematics, National Science Teachers Association, and National Council for the Social Studies), 2006, Newark, DE: Author.

^fFrom *Creating a Culture of Literacy: A Guide for Middle and High School Principals* (p. 1), by National Association of Secondary School Principals, 2005, Reston, VA: Author.

^gFrom *Reading at Risk: The State Response to the Crisis in Adolescent Literacy* (Rev. ed., p. 5), by National Association of State Boards of Education, 2006, Arlington, VA: Author.

^hFrom *Improving Adolescent Literacy: Effective Classroom and Intervention Practices: A Practice Guide* (NCEE 2008-4027, p. 6), by M.L. Kamil, G.D. Borman, J. Dole, C.C. Kral, T. Salinger, & J. Torgesen, 2008, Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education.

ⁱFrom *A Call to Action: What We Know About Adolescent Literacy and Ways to Support Teachers in Meeting Students' Needs* (para. 3), by National Council of Teachers of English, 2004, Urbana, IL: Author.

^jFrom *Reading to Achieve: A Governor's Guide to Adolescent Literacy* (p. 7), by National Governors Association Center for Best Practices, 2005, Washington, DC: Author.

^kFrom *The Next Chapter: A School Board Guide to Improving Adolescent Literacy* (p. 1), by National School Boards Association, 2006, Alexandria, VA: Author.

^lFrom *Reading for Understanding: Toward an R&D Program in Reading Comprehension* (p. xii), by C. Snow, 2002, Santa Monica, CA: RAND.

Middle and high school teachers tend to assume that if students have had adequate basic and intermediate literacy instruction, then they will automatically and on their own develop disciplinary literacy skills at that time when reading branches out into dramatically dissimilar texts during the learning of content subjects. Students are expected to comprehend texts dealing with complex concepts—and that are more abstract, ambiguous, and subtle—by applying sophisticated literacy skills that “are rarely taught” (T. Shanahan & Shanahan, 2008, p. 45). In its 2009 policy statement on adolescent literacy, the Southern Regional Education Board summarized these concerns:

Few teachers have been asked to teach the reading skills that students need in each subject. They consider themselves responsible for teaching their subjects only—not for teaching students reading skills. Some teachers in various subjects have resisted efforts to incorporate reading instruction into their courses for fear that they are being asked to become “reading teachers.” But asking a teacher to become a *reading teacher* is distinctly different from asking a teacher to *help students master texts within the teacher’s own field*.

In fact, subject-area teachers are best qualified to help their students master texts in each course. Subject-area teachers should not be expected to teach basic reading skills, but they can help students develop critical strategies and skills for reading texts in each subject. (p. 5)

The current Common Core State Standards Initiative reflects this significant shift in policy attention toward disciplinary literacy. A collaboration of the National Governors Association Center for Best Practices (NGACBP) and the Council of Chief State School Officers (CCSSO; 2010c), the Common Core State Standards for English Language Arts and Literacy were released in 2010 and adopted by the vast majority of states as their new state standards. For the first time, literacy expectations for teachers extend beyond solely English language arts. Emphasizing that the literacy development of students is a shared responsibility, the standards state,

Just as students must learn to read, write, speak, listen, and use language effectively in a variety of content areas, so too must the Standards specify the literacy skills and understandings required for college and career readiness in multiple disciplines. Literacy standards for grade 6 and above are predicated on teachers of ELA, history/social studies, science, and technical subjects using their content area expertise to help students meet the

particular challenges of reading, writing, speaking, listening, and language in their respective fields. (para. 5)

For the first time, 10 reading standards for instruction by social studies teachers are explicitly articulated in the Common Core State Standards for Literacy in History/Social Studies for grades 6–12. Teachers of science, mathematics, and other subjects also are provided with 10 reading standards in the Common Core State Standards for Literacy in Science and Technical Subjects for grades 6–12. In addition, the Common Core State Standards include 10 writing standards for instruction by teachers of history/social studies, science, and technical subjects for grades 6–12. (The Common Core State Standards are available at www.corestandards.org/the-standards.)

Literacy Performance of Adolescents

There is a wealth of dispiriting assessment data that reveals that adolescents are not continuing to grow their capacities as readers and writers as they move through the middle and high school curricula. The National Assessment of Educational Progress (NAEP) has tracked reading progress since 1971, and while performance by fourth graders has achieved steady and impressive gains during this time period, eighth graders have shown only slight gains, and 12th graders' scores have declined 4 points since 1992. The 2009 NAEP data (National Center for Education Statistics, 2010a, 2010b) are illustrative: About three quarters of all eighth graders were able to handle general comprehension tasks, such as locating information, identifying main ideas, making some inferences, and interpreting word meanings. However, only one third were able to perform at a proficient level involving more sophisticated disciplinary comprehension expectations, and only 3% scored advanced. The 2009 NAEP results for 12th graders showed only 5% scoring at advanced levels, able to read specialized and complex texts. International studies, which compare students in the United States with their international counterparts, confirm this alarming trend. Fourth-grade U.S. students performed among the best in the world, but eighth graders scored considerably lower, and 10th graders ranked among the lowest of the nations studied. As the Carnegie Council on Advancing Adolescent Literacy (2010) concludes,

During the last twenty years our nation's educational system has scored some extraordinary successes, especially in improving the reading and writing skills of young children. Yet the pace of literacy improvement has not kept up with the pace of growth in the global economy, and literacy gains have not been extended to adolescents in the secondary grades. (p. 1)

In an extensive and much-cited study, the American College Testing Program (2006a) reveals similarly disturbing results. It concludes that the longer students were in school, the more they lost ground developing disciplinary literacy:

Only 51 percent of 2005 ACT-tested high school graduates are ready for college-level reading—and, what's worse, more students are on track to being ready for college-level reading in eighth and tenth grade than are actually ready by the time they reach twelfth grade. (p. 1)

Particularly significant about the American College Testing Program analysis is the pinpointing of reading problems experienced by students beyond the basic and intermediate literacy levels and who have educational ambitions beyond high school. The report's lead recommendation is bluntly stated: "All courses in high school, not just English and social studies but mathematics and science as well, must challenge students to read and understand complex texts" (p. 23).

College Readiness

Finally, disciplinary literacy concerns are underscored by data on college readiness and success (Clark, 2009). Almost half of the 3 million people in the United States who start their first year of college will drop out before they earn their degree, and 30% will drop out after their first year. The problem is even more evident at the community college level, where out of 6 million students, 1 million will take remedial courses. Furthermore, college students who take remedial courses are highly likely to drop out. The College Board issued similarly disappointing findings in *The College Completion Agenda: 2010 Progress Report* (Lee & Rawls, 2010). The report notes that only 56% of students in the United States who enter institutions with the intention of earning a bachelor's degree persist to graduate in six years or less, and only 59% of those students entering a two-year college make it into their second year. Inadequate preparation is repeatedly cited as a central factor in the disappointing college success rates at two-year and four-year institutions.

The convergence of multiple, well-researched policy documents regarding adolescents and disciplinary literacy has dramatically shifted the landscape for middle and high school teachers. National, state, and local district conversations at these levels are transitioning from “what should teachers in the elementary grades be doing” to “what should we be doing.” Although it may feel somewhat unsettling that so many varied constituencies are now “talking about us,” it is also an opportunity to intensively explore effective practices for supporting and developing students as readers, writers, thinkers, and learners within our disciplines.

Apprenticing Readers, Writers, and Thinkers in Disciplinary Literacy

At this point, it would be useful to deconstruct the term *mentor* and examine how it can apply to instruction in disciplinary literacy. What images come to mind when you think of mentoring someone: an adult who is recruited to be a role model for youngsters in the community, an experienced hand who is assigned to be a mentor to a new employee, or an individual who is credited by a celebrity for providing help and encouragement on the way to the top? Who have been the significant mentors in your life?

For me, one person in particular stands out. Robert Hanson was the sawmill operator at a woodshop where I was employed for several summers during my college years. Although a sawmill was (at least for me) a fascinating place to spend my hours, my role as a tail sawer was quite unromantic. I was the person who guided the freshly sawed planks off the blade and onto the rollers and then lugged them to be stacked. I was the summer help who could be easily replaced. Robert was the craftsman.

As I worked alongside Robert, I observed him plying his trade. I learned how a master sawyer goes about his business: how to wield a cant hook, how to set the dogs into a log on the carriage, and how to feed boards into the edger. I could watch Robert’s actions, of course, but I would have had to infer what he might be thinking as he made his decisions. Luckily for me, Robert was a garrulous man, determined to share the fine art of sawing logs with anyone who cared to listen. He talked as he worked, but mainly he explained his thinking: how to figure

a series of cuts in advance to avoid waste, how to position a log for the most efficient first cut, and so forth. He would solve problems out loud and include me in the conversation. He would solicit my ideas and then provide feedback: why he would or would not act on my suggestions, what he would do instead, and why.

So, not only was I able to observe what a sawyer did, but I was also able to track the kind of thinking necessary to do this trade well. I realized that Robert had every cut figured even before a log hit the blade, had factored in exactly how much would be lost to sawdust each time the blade passed through a log, and had tallied in advance how many boards each log would yield. It may have seemed like magic to an onlooker, but Robert was a thinking man, and I was privileged to be treated like his apprentice.

After a couple summers, Robert would occasionally allow me to manipulate the controls and saw a log myself. It could be dangerous work, but he stood close by, offering supportive commentary and encouragement. Always, I would have to explain what I was planning and why. Also, when I had finished, we would always debrief. Maybe I would admit that my cuts resulted in too much waste that would be lost to the slab pile. Why, he would ask, did that happen? What had I misfigured or miscalculated? What should I have done differently?

Gradually, Robert ceded more opportunities to me to do some of the sawing. I might be allocated the last batch of logs of the day as my share, with Robert receding increasingly into the background. However, the conversation never ceased. We constantly conferred and always evaluated. Could I have gotten more out of that log? How might I have sawed it better?

The last summer I worked at the mill, I returned home from college to discover a new sawyer; Robert had moved on. The new man was injured in a mill mishap my first week on the job, leaving me as the only individual with any experience around a sawmill. The owner delegated me as the sawyer for that summer, a role I undertook with much trepidation. Yet, I soon discovered that the mentoring I had received over the years had positioned me, even though I had not realized it, as an individual capable of doing this work independently. So, I performed that summer as the sawyer, with Robert no longer nearby as my support and security blanket.

I have related this experience in some detail because the stages I went through as a learner were each significant and are often missing from our

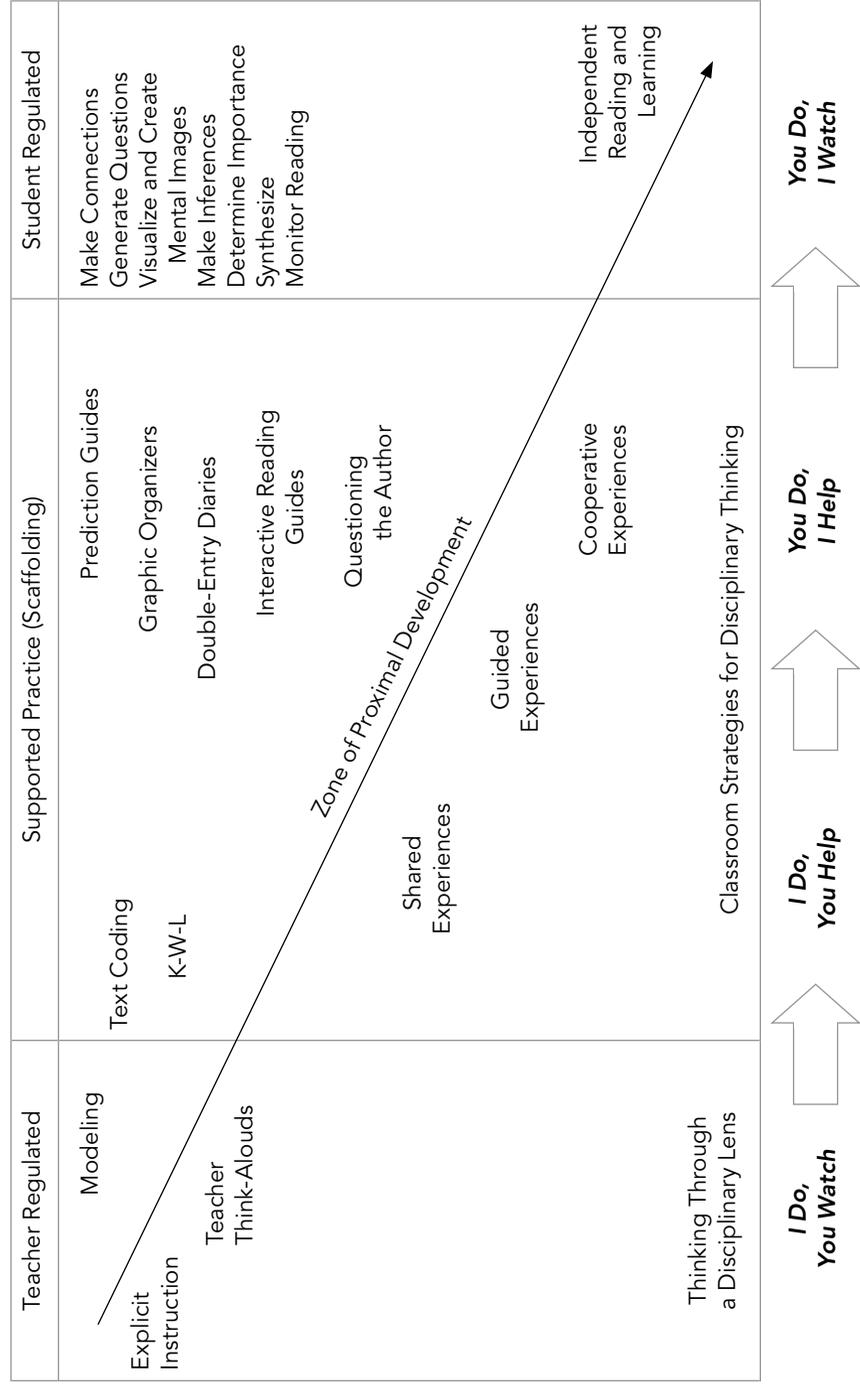
classroom instruction. Consider similar experiences that you have had in learning in the home, on the job, and while mastering a skill. Much of the most important learning that we have achieved in life—whether it is baking pastries, fishing for walleyes, driving a vehicle, learning to play a musical instrument, or throwing a pot on the wheel—has been in the role of apprentice to a master craftsman, an expert, an accomplished veteran. We learned by witnessing the expert engaged in an activity, we were invited to try our hand at doing it, and as we collaborated and received feedback on our performance, we gradually moved from novice status to independence. Notice how critical identity is to this process of growth. I could have easily assumed the identity of temporary employee. Instead, I was lifted to a different identity: apprentice sawyer. Each day, I was treated as the kind of person who is capable of doing this work alone. I am proud to say that in addition to all those identities I listed earlier in the chapter, I can add this one: sawyer.

Gradual Release of Responsibility

I realize now that during those summer days, under Robert’s guidance and tutelage, I was being mentored in accordance with the classic model of learning theory attributed to the great Russian psychologist Vygotsky and articulated as the Gradual Release of Responsibility model by Pearson and Gallagher (1983). As you examine Figure 1.8, notice that the model envisions three phases of development, from a high-profile teaching phase, through an extended period of supported practice, to eventual independence with the student in charge. This model outlines an apprenticeship dynamic to literacy instruction (Schoenbach, Greenleaf, Cziko, & Hurwitz, 1999).

Modeling. The teacher-regulated phase assumes that many students do not know what doing a specific task well looks like, and they need explicit instruction to guide their thinking. For the purposes of this book, we are talking about what it means to read, write, and think through a disciplinary lens. This phase of mentoring means that students are provided with modeling and access to how experts think in order to build their own mental models of disciplinary thinking. When a history teacher engages in a think-aloud that talks through how historians interact with an author as they read, say, a primary document, the teacher is letting

Figure 1.8. Gradual Release of Responsibility Model



Note. Parts of this figure adapted from *Strategic Reading: Guiding Students to Lifelong Literacy*, 6–12, by J.D. Wilhelm, T.N. Baker, and J. Dube, 2001, Portsmouth, NH: Boynton/Cook. Adapted from *Classroom Strategies for Interactive Learning* (3rd ed., p. 9), by D. Buehl, 2009, Newark, DE: International Reading Association.

the students in on the secret, so to speak, of reading through a historian lens. When a mathematics teacher thinks out loud about how to carefully deconstruct sentences on a page of a geometry textbook, the teacher is demonstrating reading through a mathematics lens. When an English teacher publicly grapples with understanding a poem, the teacher is modeling reading through a literary lens. The most profound facet of this model is that students have access to something they cannot readily observe: thinking.

Teachers, of course, recognize this phase and will likely comment, “We already do this.” Of course, we will find elements of such explicit instruction in many forms in classrooms, but we will rarely find it connected to mentoring students as readers and writers in disciplinary contexts. Students are given reading and writing assignments not reading and writing instruction. Again, the prevailing assumption tends to be that instruction from previous years is sufficient for students who must adjust to new disciplinary reading, writing, and thinking demands.

Scaffolding. The supported practice phase engages students in test-driving this thinking as they confront tasks of a discipline. This phase assumes that many students will not be particularly good at the task and that they will need extended practice, lots of support, and feedback from the expert and, most important, collaborators. Most of us prefer to have the assistance of others when we are doing something that we do not yet do well, especially when we might fumble around at times, fail perhaps regularly, and experience frustration and confusion. During this supported phase of learning, students need to be frequently granted what television quiz shows sometimes call a lifeline, someone students can work with as they try to resolve a challenging situation. Again, teachers will recognize this practice phase and note that “this is what homework is for.” However, homework is predicated on independent behavior; when students are asked to independently do a task when they are not yet accomplished, they will likely fail. Of course, some students do have lifelines at home: parents, siblings, or friends who can help with homework that the students have not yet developed the ability to accomplish independently. Yet many of our students do not have access to such homework lifelines in their out-of-school lives.

This middle phase is where literacy strategies come into play. Researchers refer to these strategies as scaffolding: temporary instructional supports that guide students in their thinking as they strive to build their competency. The research is emphatic on this point: Students are not provided with adequate instructional scaffolds when they read disciplinary texts. When such texts are assigned, students are usually on their own and usually expected to read on their own outside of school and without support and feedback. Students are rarely engaged with collaborators as readers and writers, teamed to solve problems together to make sense of challenging disciplinary texts. Although we frequently conceptualize reading as a solitary act, researchers are increasingly examining the critical role that dialogue between students and also with the teacher plays in reading comprehension (Wilkinson & Son, 2011). Hence, an essential facet of scaffolding is fostering productive classroom student collaborations (Frey, Fisher, & Everlove, 2009). Vygotsky (1978) terms the scaffolding phase of learning as the zone of proximal development. Teaching in the zone is often the missing link in mentoring students as readers, writers, and thinkers through various disciplinary lenses in middle and high school classrooms.

Independent Reading and Learning. The third student-regulated phase, independence, is the condition that many middle and high school teachers expect: students who will arrive already able to read disciplinary texts independently. This phase involves readers confidently applying the fundamental processes of comprehension, which is discussed more thoroughly in Chapter 2. Many of our students, even those who have achieved basic and intermediate literacy, do not develop independence in reading disciplinary texts, not because these students are incapable but because they never received the appropriate instruction from appropriate mentors—disciplinary experts, the teachers who are accomplished readers, writers, and thinkers through their chosen disciplinary lenses.

PARTING THOUGHTS AND TALKING POINTS

- Disciplinary literacy refocuses attention at the middle and high school levels from “how well do you read?” to “what are you able to read well?”

- Teachers need to invite their students to expand the identities they bring to the classroom to include academic and specific disciplinary identities.
- Mentoring students as readers, writers, and thinkers is an integral and essential component of instruction within a discipline, enabling students to become increasingly more independent in accessing the communications of different academic disciplines.
- Disciplinary literacy instruction, embedded into the daily flow of the teaching of an academic subject, develops students' capacities to adjust their reading and writing so that they can engage an expanding array of different disciplinary lenses for thinking and comprehending.
- Disciplinary literacy is perhaps in many respects a reconceptualization of what it means to teach an academic subject. Disciplines are organized ways of thinking about the world, and learning within a discipline involves more than becoming merely knowledgeable. Learning must also encompass how scientists, mathematicians, historians, and others read, write, and think. This is the difference between covering a subject and teaching a discipline.