Helping Students Read Difficult Texts

Whenever teachers discuss problems with student writing or critical thinking, they inevitably turn also to problems of student reading. Just as speaking and listening skills are intertwined, so too are writing and reading skills. Many of today’s students are inexperienced readers, overwhelmed by the density of their college textbooks and baffled by the strangeness and complexity of primary sources and by their unfamiliarity with academic discourse. Armed with a yellow highlighter but with no apparent strategy for using it and hampered by lack of knowledge of how skilled readers actually go about reading, our students often feel overwhelmed by college reading assignments. The aim of this chapter is to suggest ways that we can help students become stronger readers, empowered by the strategies that we ourselves use when we encounter difficult texts.

Causes of Students’ Reading Difficulties

Before we can help students improve their reading skills, we need to look more closely at the causes of their reading difficulties. Our students have, of course, learned to read in the sense of achieving basic literacy. Except for an occasional student with a reading disability, college students do not need to be taught reading in this ordinary sense. Rather, they need to be taught to read powerfully. In the words of a sociology professor...
collaborating with a reading theorist (Roberts and Roberts, 2008), students need to become “deep readers,” who focus on meaning, as opposed to “surface readers,” who focus on facts and information. Drawing on cognitive research in reading, Judith and Keith Roberts (2008) explain that deep reading is processed in “‘semantic memory’ (rooted in meaning) as opposed to ‘episodic memory’ (tied to a specific joke, gesture, episode, or mnemonic to aid recall)” (p. 126). Deep readers, they claim, interact with texts, devoting psychological energy to the task:

A good reader forms visual images to represent the content being read, connects to emotions, recalls settings and events that are similar to those presented in the reading, predicts what will happen next, asks questions, and thinks about the use of language. One of the most important steps, however, is to connect the manuscript [they] are reading with what [they] already know and to attach the facts, ideas, concepts, or perspectives to that known material [p. 126].

The question we face as educators is how to teach and foster this kind of “deep reading.” In this section I identify eleven contributing causes of students’ reading difficulties.

1. A School Culture That Rewards Surface Reading

Roberts and Roberts (2008) make a powerful case that our current school culture, which allows savvy students to get decent grades for minimal effort, cultivates surface reading. They argue that the prolific use of quizzes and other kinds of objective tests encourages “surface learning based in . . . short-term memorization for a day or two . . . rather than deep learning that is transformative of one’s perspective and involves long-term comprehension” (p. 127). Moreover, they argue, many students don’t value a course’s “big ideas” because deep learning isn’t needed for cumulating a high GPA. (They cite evidence that nearly half of college students spend less than ten hours per week on out-of-class study, including time for writing papers and studying for exams.) Students like multiple choice tests, the authors say, because most objective testing allows students “to skim material a few days before an examination looking for the kinds of facts, definitions, concepts, and other specific information that the particular instructor tends to stress in examinations” (p. 129). When students apply a cost/benefit analysis, they see, quite rationally, that deep reading “may be an unwise use of valuable time if there are no adverse consequences” (p. 129). In short, unless we as teachers evaluate student performance at the levels of analysis, synthesis, and evaluation, “reading at that
deeper level will not occur” (p. 129). (For an in-depth critique of school cultures that promote surface learning, see Weimer, 2002.)

2. Students’ Resistance to the Time-on-Task Required for Deep Reading

Roberts and Roberts rightly identify students’ desire to avoid the deep reading process, which involves substantial time-on-task. When experts read difficult texts, they read slowly and reread often. They struggle with the text to make it comprehensible. They hold confusing passages in mental suspension, having faith that later parts of the text may clarify earlier parts. They “nutshell” passages as they proceed, often writing gist statements in the margins. They read a difficult text a second and a third time, considering first readings as approximations or rough drafts. They interact with the text by asking questions, expressing disagreements, linking the text with other readings or with personal experience.

But resistance to deep reading may involve more than an unwillingness to spend the time. Students may actually misunderstand the reading process. They may believe that experts are speed readers who don’t need to struggle. Therefore students assume that their own reading difficulties must stem from their lack of expertise, which makes the text “too hard for them.” Consequently, they don’t allot the study time needed to read a text deeply.

3. Teachers’ Willingness to Lecture over Reading Material

Once students believe that a text is too hard for them, they assume that it is the teacher’s job to explain the text to them. Since teachers regularly do so, the students’ reading difficulty initiates a vicious circle: Teachers, frustrated by their students’ poor reading comprehension, decide to lecture over the assigned texts (“I have to lecture on this material because students are such poor readers”). Meanwhile, teachers’ lectures deprive students of the very practice and challenge they need to grow as readers (“I don’t have to struggle with this text because the teacher will explain it in class”).

4. Failure to Adjust Reading Strategies for Different Purposes

Inexperienced readers are also unaware of how a skilled reader’s reading process will vary extensively, depending on the reader’s purpose. Sternberg (1987) argues that college students—facing enormous amounts of reading—must learn to distinguish among different reading purposes and adjust their reading speed accordingly. Some reading tasks require only skimming for gist, while others require the closest scrutiny of detail. Sternberg
gave people a reading comprehension test consisting of four passages, each of which was to be read for a different purpose—one for gist, one for main ideas, one for detail, and one for inference and application. He discovered that good readers varied their reading speed appropriately, spending the most time with passages they were to read for detail, inference, and application. Poor readers, in contrast, read all four passages at the same speed. As Sternberg puts it, poor readers “do not discriminate in their reading time as a function of reading purpose” (p. 186). The lesson here is that we need to help students learn when to read fast and when to read slowly. Not every text requires deep reading.

5. Difficulty in Adjusting Reading Strategies to Different Genres

Besides adjusting reading strategy to purpose, students need to learn to adjust reading strategy to genre. Students tend to read all texts as if they were textbooks—linearly from first to last page—looking for facts and information that can be highlighted with a yellow marker. Their tendency to get either lost or bored results partly from their unfamiliarity with the text’s genre and the function of that genre within a discourse system. Learning the rhetorical function of different genres takes considerable practice as well as knowledge of a discipline’s ways of conducting inquiry and making arguments. Inexperienced readers do not understand, for example, that the author of a peer-reviewed scholarly article joins a conversation of other scholars and tries to stake out a position that offers something new. At a more specific level, they don’t understand that an empirical research study in the social or physical sciences requires a different reading strategy from that of a theoretical/interpretive article in the humanities. These genre problems are compounded further when students are assigned challenging primary texts from the Great Books tradition (reading Plato or Darwin, Nietzsche or Sartre, or an archived historical document) or asked to write research papers drawing on contemporary popular culture genres such as op-ed pieces, newspaper articles, trade journals, blogs, or websites.

6. Difficulty in Perceiving the Structure of an Argument as They Read

Unlike experts, inexperienced readers are less apt to chunk complex material into discrete parts with describable functions. They do not say to themselves, for example, “This part is giving evidence for a new reason,” “This part maps out an upcoming section,” or “This part summarizes an opposing view.” Their often indiscriminate, almost random use of the
yellow highlighter suggests that they are not representing the text in their minds as a hierarchical structure. To use a metaphor popular among composition instructors, these students are taking an ant's-eye view of the text—crawling through it word by word—rather than a bird's-eye view, seeing the overall structure by attending to mapping statements, section headings, paragraph topic sentences, and so forth.

7. Difficulty in Reconstructing the Text's Original Rhetorical Context

Inexperienced readers often do not see what conversation a text belongs to—what exigency sparked the piece of writing, what question the writer was pondering, what points of view the writer was pushing against, what audience the writer was imagining, what change the writer hoped to bring about in the audience’s beliefs or actions—why, in short, the writer put pen to paper or fingers to keyboard. They have difficulty perceiving a real author writing for a real reason out of a real historical moment. Also, inexperienced readers often fail to appreciate the political biases of different magazines and newspapers or the theoretical biases of different academic journals and presses. These problems are closely related to the following one.

8. Difficulty Seeing Themselves in Conversation with the Author

Possibly because they regard texts as sources of inert information rather than as arguments intended to change their view of something, inexperienced readers often do not interact with the texts they read. They don’t ask how they, as readers in a particular moment in time, are similar to or different from the author’s intended audience. They don’t realize that texts have designs upon them and that they need to decide, through their own critical thinking, whether to succumb to or resist the text’s power.

9. Difficulty in Assimilating the Unfamiliar

Developmental psychologists have long noted the “cognitive egocentrism” of new college students who have trouble walking in the shoes of persons with unfamiliar views and values (Kurfiss, 1988; Flavell, 1963). No matter what the author really means, students translate those meanings into ideas that they are comfortable with. Thus, to many of our students, a philosophic Idealist is someone with impractical ideas, whereas a Realist is praiseworthy for being levelheaded. The more unfamiliar or more threatening a new idea is, the more students transform it into something from their own psychological neighborhoods. The insight of cognitive psychology here is that these problems are related neither to stupidity nor
to intellectual laziness. To use language from brain research, learners must build new concepts upon neural structures already in their brains, and sometimes older structures need to be dismantled before new ones can be built (Zull, 2002).

10. Lack of the “Cultural Literacy” Assumed by the Text’s Author

In the jargon of reading theorists, students do not have access to the cultural codes of the text—background information, allusions, common knowledge that the author assumed that the reading audience would know. Knowledge of cultural codes is often essential to making meaning of the text. (See Willingham, 2009, pp. 25-52, for a review of cognitive research on reading comprehension and background knowledge.) So significant is this cause that E. D. Hirsch has tried to create a national movement promoting “cultural literacy,” lack of which he claims is a prime source of students’ reading difficulties in college (Hirsch, 2006; Hirsch, 1988; Hirsch, Kett, and Trefil, 1987).

11. Difficulties with Vocabulary and Syntax

Inadequate vocabulary hampers the reading comprehension of many students. Using a dictionary helps considerably, but often students do not appreciate how context affects word meanings, nor do they have a good ear for irony or humor. Moreover, the texts they read often contain technical terms, terms used in unusual ways, terms requiring extensive contextual knowledge, or terms that have undergone meaning changes over time. Additionally, students have difficulty tracking complex sentence structures. Although students may be skilled enough reading syntactically simple texts, they often have trouble with the sentence structure of primary sources or scholarly articles. When they are asked to read a complex sentence aloud, their errors in inflection reveal their difficulty in chunking grammatical units; they have trouble isolating main clauses, distinguishing them from attached and embedded subordinate clauses and phrases.

Suggested Strategies for Helping Students Become Better Readers

Having examined these various causes, we recognize that reading skills, like writing skills, develop slowly over time as students develop better study habits, as they move upward intellectually on William Perry’s developmental scale, as their vocabularies expand, as they grow in cultural
literacy, as they increase their repertoire of reading strategies, and as they move from novice toward expert within their majors. Although we cannot teach reading directly, we can create learning environments that nurture reading growth. What follows are numerous suggestions for creating such an environment.

**Develop a Course Design, Assignments, and Grading Methods That Require and Reward Deep Reading**

If we want to address the causes of students’ reading difficulties, we must try to change academic cultures that reward surface learning. The key is to change the homework dimension of a course to require reading for meaning. Increasing the homework demands does not necessarily mean adding more readings to a course (indeed, perhaps we’ll need to assign fewer), but to develop homework tasks that require deep rather than surface processing. The last section of this chapter shows different kinds of possible homework tasks that promote deep reading. The more teachers can build these tasks into the homework dimension of a course, the more students will have to take responsibility for reading for meaning.

In the pedagogical literature, sociologist David Yamane (2006) provides a powerful example of a teacher who no longer needs to lecture over readings because he has changed the homework dimension of his course. Yamane developed a series of “course preparation assignments (CPAs)” which require students to come to class already prepared for an opening small group task. Completing the CPA requires understanding of the day’s readings. Here are extracts from one of his example CPAs:

| **Objective [for the day’s class]:** To describe and analyze the causes of racial inequality in the contemporary United States |
| **Background:** Consider the following data from the U. S. Census Bureau [attaches statistics on median family income for Whites versus Blacks] |
| **Assignment:** |
| 1. Read Chapter 12 of the textbook on racial inequality to familiarize yourself with its forms, causes, and consequences. |
| 2. Generate at least five testable hypotheses you believe might account for the differences in income given above. In other words, the differences in income are your dependent variables. What are the independent variables? (247–248) |

On this day, Yamane’s students come to class having carefully read Chapter Twelve (necessary in order to do the CPA) and ready to share their testable hypotheses. Whereas in an earlier teaching life, Yamane might
have lectured over Chapter Twelve, he has now upped the ante, pushing students to use their understanding of the reading to address a problem that teaches sociological thinking. (For another example of a teacher’s changing the homework dimension of a course to promote reading for understanding, see the story of history professor John R. Breihan in Walvoord and McCarthy, 1990.)

Changing course design to promote deep reading may depend on our taking actions like the following.

**Not Using Quizzes to Motivate Reading**

Although there are occasions where reading quizzes may be appropriate, Roberts and Roberts (2008) make a persuasive case that quizzes tend to promote surface rather than deep reading. Quizzes encourage students to extract “right answers” from a text rather than to engage with the text’s ideas, and they don’t invite students to bring their own critical thinking to bear on a text’s argument or to enter into conversation with a text’s author.

**Not Lecturing Over Readings**

Lecturing over readings initiates the vicious reading cycle mentioned earlier: Teachers explain readings in class because students are poor readers; meanwhile, students read poorly because teachers explain the readings in class. Of course, teachers still need to help students with difficult portions of a reading, clarify confusions, and so forth. But teachers should send the signal that becoming an engaged reader is part of a student’s homework component of a course.

**Making Students Responsible for Texts Not Covered in Class**

This strategy signals to students that all learning in a course does not have to be mediated through the instructor. Not only does this strategy allow instructors to include content material without feeling rushed to lecture over it—or even to discuss it in class—but it also sends a powerful message about the importance of reading for lifelong learning. When students know they will be tested on material not explained in class, they are forced to a deeper level of struggle.

**Empower Students by Helping Them See Why Texts Are Difficult**

I’ve found that students often gain confidence and hope if I say in class something as simple as this: “Of course, you are going to struggle with this reading. You aren’t its intended audience. I’m going to be happy if
you understand 50 percent of it. There are passages in it that I don’t fully understand myself.” When an economics colleague at my university asks his undergraduates to read Federal Reserve publications, he says, “Hey, you’re running with the big dogs here. These pubs are aimed at Ph.D. economists” (see Robertson, Peterson, and Bean, 2007).

My point is that without encouragement from the teacher, students often feel incompetent, even stupid, when they fail to understand a text. Simply knowing that they aren’t members of the text’s intended audience—that they don’t possess the background knowledge, cultural codes, and genre awareness needed for complete understanding—gives them a way of proceeding. If you can get students to say, “I had trouble with this text because I’m an outsider” rather than “I had trouble with this text because I’m a poor reader,” you will have provided powerful help. (See my attempt to make this point in Exhibit 9.2, my reading guide for a first-year seminar.)

**Explain to Students How Your Own Reading Process Varies**

Students appreciate learning how their professors read and study. You might take some class time to discuss with students your own reading processes. One approach is to create research scenarios to help students see how and why your reading strategies vary according to purpose and genre. When you do your own research, for example, when do you skim texts? When do you read for gist but not for detail? When do you read carefully? Under what circumstances do you take notes on a text or write in the margins? What different kinds of genres do you read for your research? (In some disciplines primary data come from laboratory and field research—the task of reading may be primarily reserved for the review of the literature section of an article. In other disciplines primary data come from texts themselves, ranging from literary works to archived historical documents to political blogs.) When you read a primary source text—say, a philosopher reading Hegel or a new media specialist reading fan literature on a website—how do your reading practices differ from when you read a scholarly article in your field? When you read a complex theoretical article, how much do you reread and why? When in your reading are you influenced by the credentials of an author? How much does the prestige level of a scholarly journal or the political bias of a magazine or newspaper affect the way you read a text? The fifteen or twenty minutes it takes for such discussions can sometimes have a powerful influence on students’ reading strategies.
Show Students Your Own Note-Taking and Responding Process

Just as it helps students to see a skilled writer’s rough drafts, it helps them to see a skilled reader’s marked-up text, marginal notations, and note-taking system. Bring in a book or article full of your own marginal notes and underlinings, along with entries you made in your note system. Show them what sorts of things you write in the margins. Explain what you underline and why. If your reading is part of a scholarly project, show them how you take notes and how you distinguish between what the author is saying and your own reflections on the material.

Help Students Get the Dictionary Habit

Students should keep a dictionary in the room where they study. They need to learn strategies that work for them when they encounter unfamiliar words. One strategy is to make small ticks in the margins next to words they are unsure of and to look them up later when they come to an appropriate resting place in the text. After they have looked up a word, they can briefly review the parts of the text in which it occurred before tackling the next portion.

Teach Students “What It Says” and “What It Does”

A helpful way to teach students to understand structural function in a text is to show them how to write “what it says” and “what it does” statements for each paragraph (Ramage, Bean, and Johnson, 2009; Bean, Chappell, and Gillam, 2011; Bruffee, 1993). A “what it says” statement is a summary of the paragraph’s content—the paragraph’s stated or implied topic sentence. A “what it does” statement describes the paragraph’s purpose or function within the essay: for example, “Provides evidence for the author’s first main reason,” “Summarizes an opposing view,” “Provides statistical data to support a point,” or “Uses an analogy to clarify the idea in the previous paragraph.” Here are examples for the paragraph you are now reading:

Says: Instructors can teach students about structure by having them write “what it says” and “what it does” statements.

Does: Gives another strategy for helping students become better readers.

Asking students to write out “what it says” and “what it does” statements for each paragraph in a scholarly article in your field will ensure not only careful reading of the article but also increased awareness of structure. Exhibit 9.1 shows one of my “Says/Does” assignments for a first-year seminar on the nature/nurture controversy in gender identity.
### EXHIBIT 9.1

**Low-Stakes Assignment for a First-Year Seminar on Nature/Nurture Controversy in Gender Identity**

**Making Says /Does Statements to Promote Reading for Meaning**

For Monday’s class we will discuss psychologist Steven Pinker’s argument in support of Lawrence Summers’ controversial speech about why so few women hold tenured positions in math, physics, and engineering at top research universities. As models, I have made says/does statements for the first five paragraphs. As preparation for the discussion, make says/does statements for the remaining paragraphs in Pinker’s article. Bring your says/does statements to class, where I will collect them.

<table>
<thead>
<tr>
<th>Para</th>
<th>Says</th>
<th>Does</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Since the 1970s the proportion of women in many scientific fields has increased significantly, and it would be morally wrong and hurtful to science to turn back the clock.</td>
<td>Introduces the subject of gender difference and presents author’s assurance that he respects and values women scientists.</td>
</tr>
<tr>
<td>2</td>
<td>Although Summers was not trying to turn back the clock, many prominent scientists and engineers protested vehemently against his speech.</td>
<td>Makes transition to Summers’ case and lists examples of negative reaction against Summers.</td>
</tr>
<tr>
<td>3</td>
<td>Summers never claimed that women have inferior math abilities; rather, he attributed women’s underrepresentation in science and engineering to three factors: possible discrimination; possible biological gender differences; and women’s reluctance to sacrifice family and child-rearing to time-intensive jobs.</td>
<td>Rejects the popular press’s misrepresentation of Summers by summarizing Summers’ actual argument.</td>
</tr>
<tr>
<td>4</td>
<td>Anyone who has seen men talking about gadgets can understand why women might not be attracted to engineering; however, we must turn to science to help us determine to what extent gender differences are biological.</td>
<td>Supports the reasonableness of Summers’ argument and asserts importance of using science to help determine whether gender differences are biological or cultural.</td>
</tr>
<tr>
<td>5</td>
<td>The negative consequences of overestimating discrimination against women include falsely charging innocent people of sexism, proposing harmful remedies such as quota systems, and diverting attention from university policies on timing of tenure that hurt women during the childbearing years.</td>
<td>Shows the negative consequences of overestimating discrimination against women as the cause of women’s underrepresentation in science and engineering.</td>
</tr>
</tbody>
</table>

**YOU DO THE REST.**
composed the says/does statements for the first five paragraphs of an article and asked students to do the same for the rest of the article.

**Awaken Students’ Curiosity About Upcoming Readings**

Students’ reading comprehension increases if they are already engaged with the problem that a reading addresses or are otherwise interested in the subject matter. The trick is to arouse students’ interest in a text before they read it so that they are already participating in the conversation that the text belongs to. For example, prior to assigning Plato’s *Crito*, the teacher could present the following problem:

In the *Crito*, Socrates has been sentenced to death and waits for his execution. The state, perhaps embarrassed by its decision to kill Socrates, has made it easy for him to escape from prison. In this dialogue, Socrates’s friend Crito urges Socrates to escape and go into exile. Socrates argues that he should stay in prison and accept execution. Try to predict the arguments that both Crito and Socrates will make. Give at least three good reasons for escaping and three good reasons for staying and dying.

Having role-played the dialogue in advance (as either an at-home thinking piece or an in-class group task), students will be interested in comparing Plato’s actual arguments to the ones they predicted.

**Show That All Texts Reflect the Author’s Frame of Reference**

Students often become more interested in scholarly works, even textbooks, when they realize that all authors necessarily distort their subjects, thereby opening up their work to interrogation and analysis. No textbook or scholarly work can give readers the “whole truth” about subject X, only the author’s version of the truth—a version necessarily framed by the author’s own selectivity, emphasis, and writing style. Teachers can awaken interest in these issues by comparing the coverage of subject X from competing textbooks or other scholarly works and by having students explore the differences between them. An excellent example of this strategy is provided by Swartz (1987), who contrasts two anthropological analyses of the role of women in the !Kung society in the African Kalahari. One anthropologist implies that !Kung women live a life of second-class drudgery, whereas the second anthropologist, observing the same data, casts !Kung women as “a self-contained people with a high sense of self-esteem” (p. 114). Class discussion of the differences in two accounts of the same subject helps students better understand the concepts of point of view, frame of reference, and authorial bias. Once students realize that all texts filter reality...
by privileging some aspects of X while censoring others, they tend to read more actively, more alert to point of view and to the persuasive power (and distortion) of metaphor, style, and narrative arrangement.

**Show Students the Importance of Knowing Cultural Codes**

Many students do not realize that a passage from a text can be baffling not because the reader is unskilled but because he or she does not know its cultural codes. An author assumes that readers have a certain background knowledge. If that knowledge is absent, the reader can quickly get lost.

To illustrate the importance of cultural codes to students, I have developed the following strategy. I project several cartoons on a screen and ask why persons new to U.S. culture might not see what’s funny. One of my favorites is an old *Far Side* cartoon showing a group of partying dogs hoisting drinks inside a doghouse. One dog is speaking to another; the caption says, “Oh, hey! Fantastic party, Tricksy! Fantastic! . . . Say, do you mind telling me which way to the yard?” Understanding this cartoon requires a surprising amount of cultural knowledge:

That dogs in middle-class America frequently live in doghouses (and often have names like “Tricksy”)
That at middle-class parties, people stand around holding drinks
That bathrooms are often hard to find in middle-class homes, so guests have to ask the host discreetly where they are located
That middle-class homes have backyards
That dogs relieve themselves in the yard

Written texts require similar kinds of background knowledge. After discussing a few cartoons, I distribute a brief news article from the Cold War era, requiring reconstruction of cultural context. The article refers to NATO, to Reagan and Gorbachev, to ballistic and antiballistic missiles, to neo-isolationism, and to the way that America’s nuclear arms threw the Marxist-Leninist engine of history off its tracks. Few of my students know what NATO is, understand the difference between ballistic and guided missiles, or appreciate the historical events and American attitudes that are packed into the term *neo-isolationism*. Fewer still can explain the “engine of history” metaphor. A discussion of this article quickly clarifies for students how knowledge of cultural codes facilitates comprehension of a reading. One way to help students reconstruct a text’s cultural codes is to create reading guides, as described later in this chapter.
Help Students See That All Texts Are Trying to Change Their View

This strategy relates closely to the preceding one. Students tend to see texts as conveyors of inert information rather than as rhetorically purposeful messages aimed at effecting some change in the reader’s view of the subject. If students become more aware that texts are trying to change their views in some way, they can interrogate texts more actively, trying to decide what to accept and what to doubt. A useful exercise to help students appreciate the rhetorical nature of a text is to ask them to freewrite responses to the following trigger questions:

1. Before I read this text, the author assumed that I believed . . . [fill in].
2. After I finished reading this text, the author wanted me to believe . . . [fill in].
3. The author was/was not successful in changing my view. How so? Why or why not?

Create “Reading Guides”

Teachers can assist students by preparing “reading guides” that steer them through particularly difficult readings. Typically, these guides define key terms with special disciplinary meanings, fill in needed cultural knowledge, explain the rhetorical context of the reading, illuminate the rhetorical purpose of genre conventions, and ask critical questions for students to consider as they progress through the text. By requiring students to write their responses to several of the guide questions, teachers can use exploratory writing to encourage reflection. Exhibit 9.2 shows a reading guide I

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EXHIBIT 9.2
Reading Guide for a Scientific Article for a First-Year Seminar on Nature/Nurture Controversy in Gender Identity

Reading Guide

**Background:** This article can’t be fully understood by nonspecialists (you and me) because we aren’t its intended audience. The authors are writing for clinical biochemists and experimental psychologists who do their research on gendered behaviors. As nonexpert readers, we can’t understand either the biochemistry or the complex methods of statistical analysis. However, we can understand the main gist of their research. This short reading guide will help you understand the article’s big picture and offer strategies for reading any complex scientific article.
1. Look at the six-column reference list at the end. These articles have been closely read by the researchers and constitute the current state of knowledge that the researchers want to add to. Much of the introduction reviews the important ideas of these articles, identifying what is currently known and still unknown. Each of the articles in this huge list is explicitly mentioned in the article.

2. Read the title of the article and the abstract. The title lets us know that this article attempts to measure the effect of fetal testosterone on two variables: social relationships and restricted interests in children. The abstract gives you a big picture overview of the whole article.

3. Read the introduction—pages 198–200—trying to understand the basic gist of each paragraph. This introduction reviews the previous research literature (hence all the bibliographic references in parentheses) and explains the general theory behind their research. **Question 1: If you could read one of the research studies reviewed in the introduction, which would it be and why?**

4. Basically, the researchers are going to correlate the amount of fetal testosterone in each mother’s amniotic fluid (taken when the child was in utero) with each mother’s answers for her child on the Children’s Communication Checklist (CCC) when the child was four years old. Read carefully the research hypothesis at the top of page 201, left column (last sentence in introduction). **Question 2: Restate the hypothesis in ordinary rather than scientific language. Make the hypothesis understandable to your kid brother.**

5. Under METHODS (starting on page 201) read the first two sections: participants and Outcome Variable: the Children’s Communication Checklist. Look carefully at Table 1, which gives sample items from the Children’s Communication Checklist. The range indicates the possible highest and lowest scores for each part of the checklist. The impairment column shows the score below which the child shows an abnormal or “impaired” score. The sample items column gives examples of questions on the CCC for each part. **Question 3: Based on these sample items, what do you think is meant by “restricted interests”? How are restricted interests related to autism?**

6. Skim the rest of METHODS and all of RESULTS. Focus only on what you can understand; don’t worry about what you don’t understand. These sections are aimed at insiders with expert knowledge of experimental design and statistical methods. Note: I probably can’t understand any more than you can and perhaps less than some of you majoring in science.

7. Read carefully the DISCUSSION section on pages 205–206 to see the scientists’ discussion of whether their data supported their initial hypotheses. **Question 4: Based on this study, how would a baby exposed to high levels of fetal testosterone differ in behavior from a baby exposed to lower levels of testosterone, regardless of whether the baby was male or female? In general, how did boys differ from girls with regard to social relationships and restricted interests?**

8. Here are two statements from the DISCUSSION section:
   
   • “[Our research] indicates that in both boys and girls, higher FT levels are associated with poorer quality of social relationships” (205).
   
   • “[Our research] indicates that in both boys and girls, higher FT levels are associated with more restricted interests” (205).

   For each of these results, draw a line graph showing the indicated relationship. (You don’t need to plot the exact coordinates, just the general shape of the curve.) Label the axes for clarity to an outside reader and then create a title for your graph that explains what the graph shows. Before drawing your graph, consider these questions:
   
   • What goes on the x axis? What is the unit of measurement?
   
   • What goes on the y axis? What is the unit of measurement?
prepared for my first-year seminar on the nature/nurture controversy in gender identity. I wanted students to read a complete scientific paper bearing on the biology/culture question. Additionally, I wanted to assure students that it was okay to understand only, say, 20 percent of the article and to recognize why the other 80 percent was accessible only to experts.

Teach Students to Play the “Believing and Doubting Game”

The “believing and doubting game” (Elbow, 1973, 1986) teaches students the reader’s double role of being simultaneously open to texts and skeptical of them. When playing the believing game, students try to listen empathically by walking in the author’s shoes, mentally joining the author’s culture, seeing the world through the author’s eyes. By stretching students toward new ways of seeing, the believing game helps students overcome their natural resistance to ideas and views different from their own. In contrast, the doubting game asks readers to play devil’s advocate, raising objections to the writer’s argument, looking for its weaknesses, refusing to be taken in by the text’s rhetorical force. To help students practice believing and doubting, the instructor can design exploratory writing tasks, in-class debates, or small group tasks that can encourage students to see both strengths and weaknesses in any author’s stance.

Elbow’s believing and doubting game is similar to what Paul (1987) calls “dialogical thinking” or “strong sense critical thinking.” For Paul, the crucial habit that strong sense critical thinkers must develop is the active disposition to seek out views different from their own: “If we do not have informed proponents of opposing points of view available, we have to reconstruct the arguments ourselves. We must enter into the opposing points of view on our own and frame the dialogical exchange ourselves” (p. 129). Thus, according to Paul, students must be taught “to argue for and against each and every important point of view and each basic belief or conclusion that they are to take seriously” (p. 140). (For an application of methodological belief and doubt to a political science course, see Freie, 1987; see also “Pro and Con Grid” in Angelo and Cross, 1993, pp. 168-171.)

To apply this strategy to the teaching of reading, instructors need to emphasize that scholarly articles and other assigned readings are voices in a conversation that students need to join. For students, writing in the margins or otherwise responding to texts will begin to make sense when they see their responsibility to imagine and consider alternative points of view and thus to evaluate an author’s thesis, reasons, and evidence.
Developing Assignments That Require Students to Interact with Texts

To conclude this chapter, let’s consider ways that teachers can use informal or formal writing assignments to help students become more active and thoughtful readers. When assigned as homework, brief write-to-learn tasks can have a powerful effect on the quality of students’ reading. Some of the following strategies are cross-referenced in Chapter Seven as widely used methods of assigning exploratory writing.

Marginal Notes Approach

Many teachers report success simply from forbidding students the use of underlining or yellow highlighters. Instead, they insist on copious marginal notations on the borders of the text itself. (If students plan to resell their texts or are reading library books, they can take marginal notes on separate pages keyed to the book page.) “Every time you feel the urge to highlight or underline something,” the teacher can advise, “write out in the margins why you wanted to underline it. Why is that passage important? Is it a major new point in the argument? A significant piece of support? A summary of the opposition? A particularly strong or particularly weak point?” The teacher can then exhort the students: “Use the margins to summarize the text, ask questions, give assent, protest vehemently—don’t just color the pages.” The goal here is to get students to carry on lively dialogue with the author in the margins. The instructor can occasionally start class discussions by asking a student to read his or her marginal notations next to a certain passage.

Reading Logs

Like an open-ended journal, a reading log requires that students write regularly about what they are reading but gives them freedom in choosing what to say. Students can summarize the text, connect it to personal experience, argue with it, imitate it, analyze it, or evaluate it. Often teachers are interested in how a reading affects students on the personal level. They therefore encourage personal response in the reading log. Readers can describe their emotional, intellectual, or philosophical responses to the text and call into consciousness the hidden memories and associations the text triggers. The reader answers questions such as “What does this text mean to me?” and “What effect does this text have on my values, my beliefs, my way of looking at the world?” You can ask students to make these responses regularly in their reading log or occasionally in a more formal reflection paper.
Exploratory Writing Prompted by Teacher-Posed Questions

Another effective technique is to devise critical thinking questions that require students to respond thoughtfully to a text and then to build these into the course as part of a reading guide or a guided journal. (The guided journal is explained in Chapter Seven, pages 126–129 and 134–135.) By providing questions for students to respond to, you can get students to focus on points in the readings you find particularly important. You can often begin class discussions by having one or two students read their responses to one of your questions. Here is an example of a “thinking piece” task I posed in my first-year seminar on nature/nurture controversy in gender identity. (This was the first homework task of the seminar.)

Thinking Piece #1: Read Lawrence Summers’ speech addressing the question of why there aren't more female professors in math, science, and engineering at Harvard. Summarize Summers’ three possible explanations for the underrepresentation of women; then explore your reactions to Summers’ speech based on your own critical thinking and experiences. (This should be a one-page, single-spaced thinking piece as explained in the syllabus.)

Summary Writing Approach

If one prefers a low-stakes microtheme approach, as opposed to exploratory writing, a powerful way to promote reading skills is to ask students to write a summary of an assigned article (Bean, Drenk, and Lee, 1986; Bean, 1986). An assigned summary can be as short as one sentence or as long as a page; the typical length is 150–250 words. Summary writing requires that the reader separate main ideas from supporting details, thereby providing practice at finding the hierarchical structure of an article. Moreover, it requires that readers suspend their own egocentrism, leaving out their own ideas in order to listen carefully to the author. An added bonus for the teacher is that summaries—submitted as microthemes—are easy to grade quickly. (For an example of how an economics professor uses a series of summary assignments to teach argumentation in economics, see Cohen and Spencer, 1993. See also the discussion of summary writing in Chapter Eight, page 157.)

Summary/Response or Double-Entry Notebooks

A summary/response notebook (see also “double-entry notebooks” in Chapter Seven, page 135) is a slightly more structured version of a reading log. It requires students to make two opposing responses to a text: first to
represent the text to themselves in their own words and then to respond to it. The following instructions are typical:

For each of the readings marked with an asterisk on the syllabus, you will write at least two pages in your notebooks. The first page will be a restatement of the text’s argument in your own words. You can write a summary, make an outline, draw a flowchart or a diagram of the reading, or simply take careful notes. The purpose of this page is to help you understand as fully as possible the structure and details of the author’s argument. This page should help you recall the article in some detail several weeks later. Your next page is to be your own personal reflections on or reactions to the article. Analyze it, illustrate it through your own experience, refute it, get mad at it, question it, believe it, doubt it, go beyond it. I will skim your notebooks looking for evidence of serious effort and engaged thought.

Imagined Interviews with the Author

A change-of-pace strategy is to ask students to write dialogues in which they interview the author or otherwise engage the author in arguments. (My inspiration for this strategy is Francoz, 1979.) The student asks the author tough questions and then has to role-play the author in answering the questions, forcing the student to adopt the author’s values, beliefs, and world view. The student can also be urged to play devil’s advocate by arguing against the author’s position. Students generally enjoy the creativity afforded by this assignment, as well as the mind-stretching task of role-playing different views. Some teachers ask groups to conduct mock panel discussions in which one group member plays the author of the article and others play people with different views.

Graphic Organizers

For some students, representing a text visually is more powerful than representing it through marginal notations, traditional outlining, or even summary writing. Graphic organizers can take the form of flowcharts, concept maps, tree diagrams, sketches, or drawings. Roberts and Roberts (2008) give their students choices in how they want to represent their deep reading of a text (on a given day students might submit a summary, a page of notes, or even a song) but they particularly recommend graphic organizers. Exhibit 9.3 shows how one of my students in a Renaissance drama course represented an article on Jonson’s Volpone (Marchitelli, 1991).

Writing “Translations”

A final strategy is to ask students to “translate” a difficult passage into their own words (Gottschalk, 1984). According to Gottschalk, “Creating the translation can help the reader see why a passage is important, or
EXHIBIT 9.3
Student's Graphic Organizer for “Desire and Domination in Volpone”

Thesis: Volpone's sadistic domination of Mosca and Celia subverts the will of the King through the market economy of the theater

Describes Issue

Introduction

1. Shows how the autonomous self finally collapses

2. Volpone produces his own "heirs" without women

3. Shows how Volpone is connected to the market economy

4. Shows how the master/servant relationship works in a liquid market environment without love

5. Shows how Cella serves as a medium of exchange in this homosocial world

6. Cella changes direction of the play

7. Shows how Lady Would-Be is an autonomous woman

Therefore she has no exchange value

Homosocial culture produces desire between males or autodesire

Mosca in love with his own clear self

Reproduction happens without women

"zany" world where

troublesome, and come to terms with its difficulties or significance” (p. 401). This is a particularly useful way for students to practice deciphering syntactically complex prose. The act of close paraphrasing also focuses students’ attention on precise meanings of words.

Conclusion: Strategies Teachers Can Use to Help Students Become Better Readers

Exhibit 9.4 summarizes teaching strategies that address the reading problems discussed in this chapter.
### EXHIBIT 9.4

#### Teaching Strategies

<table>
<thead>
<tr>
<th>Students' Problem</th>
<th>Helping Strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor reading process</td>
<td>Show students your own reading process.</td>
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<td></td>
<td>Require marginal notes.</td>
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<td></td>
<td>Give tests on readings that you don’t cover in class.</td>
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<td></td>
<td>Assign summary writing.</td>
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<td></td>
<td>Require students to freewrite in response to critical thinking problems about</td>
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<tr>
<td></td>
<td>texts (reading logs, summary/response notebooks).</td>
</tr>
<tr>
<td>Failure to reconstruct</td>
<td>Assign summary writing.</td>
</tr>
<tr>
<td>arguments as they read</td>
<td>Have students make outlines, concept maps, flowcharts, or other diagrams of</td>
</tr>
<tr>
<td></td>
<td>articles.</td>
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<td></td>
<td>Help students write “gist statements” in margins summarizing main points as</td>
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<tr>
<td></td>
<td>reading progresses.</td>
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<td></td>
<td>Go through a sample text with students, writing “what it says” and “what it</td>
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<tr>
<td></td>
<td>does” statements for each paragraph.</td>
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<tr>
<td>Failure to assimilate</td>
<td>Explain this phenomenon to students so that they can watch out for it; point</td>
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<tr>
<td>the unfamiliar;</td>
<td>out instances in class when students resist an unfamiliar or uncomfortable</td>
</tr>
<tr>
<td>resistance to</td>
<td>idea; draw analogies to other times when students have had to assimilate</td>
</tr>
<tr>
<td>unfamiliar or</td>
<td>unfamiliar views.</td>
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<tr>
<td>disorienting views</td>
<td>In lectures or discussions, draw contrasts between ordinary ways of looking</td>
</tr>
<tr>
<td></td>
<td>at the subject and the author’s surprising way.</td>
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<td></td>
<td>Emphasize the “believing” side of Elbow’s “believing and doubting game.”</td>
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<tr>
<td>Limited understanding</td>
<td>Create reading guides that include information about the author and the</td>
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<tr>
<td>of rhetorical context</td>
<td>rhetorical context of the reading.</td>
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<tr>
<td></td>
<td>Through lectures or reading guides, set the stage for readings, especially</td>
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<td></td>
<td>primary materials.</td>
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<td></td>
<td>Train students to ask these questions: Who is this author? Who is the</td>
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<td></td>
<td>intended audience? What occasion prompted this writing? What is the</td>
</tr>
<tr>
<td></td>
<td>author’s purpose?</td>
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<tr>
<td>Failure to interact with</td>
<td>Use any of the response strategies recommended in this chapter—reading</td>
</tr>
<tr>
<td>the text</td>
<td>logs, summary/response notebooks, guided journals, marginal notations,</td>
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<tr>
<td></td>
<td>reading guides.</td>
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<tr>
<td>Unfamiliarity with cultural codes</td>
<td>Create reading guides explaining cultural codes, allusions, historical events,</td>
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<tr>
<td></td>
<td>and so forth.</td>
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<td></td>
<td>Show students the function of cultural codes by discussing the background</td>
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<td>knowledge needed to understand cartoons or jokes.</td>
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<td>Unfamiliar vocabulary</td>
<td>Urge students to acquire the habit of using the dictionary.</td>
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<td></td>
<td>Create reading guides defining technical terms or words used in unusual</td>
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<td></td>
<td>ways.</td>
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</tbody>
</table>

(Continued)
<table>
<thead>
<tr>
<th>Students' Problem</th>
<th>Helping Strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Difficulty with complex syntax</td>
<td>Have faith that practice helps.</td>
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<tr>
<td></td>
<td>Refer students who have trouble decoding texts (perhaps they have a learning or reading disability) to a learning assistance center.</td>
</tr>
<tr>
<td></td>
<td>Have students “translate” complex passages into their own words; also have students practice rewriting particularly long sentences into several shorter ones.</td>
</tr>
<tr>
<td>Failure to adapt to different kinds of discourse, genres, and purposes</td>
<td>Explain your own reading process: when you skim, when you read carefully, when you study a text in detail, and so forth.</td>
</tr>
<tr>
<td></td>
<td>Explain how your own reading process varies when you encounter different genres of text: how to read a textbook versus a primary source, how to read a scientific paper, how to read a poem, and so forth.</td>
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</tbody>
</table>