CHAPTER 5

Formal Writing Assignments

Part Two of this book focuses on the design of problem-based assignments to promote critical thinking and active engagement with course subject matter. The present chapter concerns the design of formal writing assignments, which calls for finished prose. Formal writing usually requires multiple drafts and is thus distinguished from equally important informal, exploratory writing aimed at generating, developing, and extending thinking on a subject. (How to use informal exploratory writing in your courses is the subject of Chapter Six.)

Formal writing can range from lengthy research papers to short (one- or two-paragraph) microthemes. The chapter's initial focus is on thesis-governed academic writing, but the concluding section surveys alternative kinds of assignments that let students write in a more personal voice in a variety of modes and styles.

The Traditional Method of Assigning Writing

In American universities, the traditional way to assign writing goes something like this: "There will be a term paper due at the end of the semester. The term paper can be on any aspect of the course that interests you, but I have to approve your topic in advance." About halfway through the term, students submit proposals for topics—usually stated as a topic area rather than as a research question or tentative thesis. The instructor either approves

the topic or advises that it be narrowed, sometimes giving preliminary advice for bibliographic items. In many cases, no further contact between teacher and student occurs. At the end of the term, the teacher collects and grades the papers. Some teachers mark the papers copiously; others make only cryptic end comments. Much to teachers' disappointment, many students never pick up their papers from the teacher's office.

Alternative Approaches to Assigning Writing

As one of many alternative approaches, consider the method used by finance professor Dean Drenk (Drenk, 1986; Bean, Drenk, and Lee, 1986), who requires a series of short essays, each of which must support either the positive or the negative side of a thesis on a controversial question in finance. The theses, which Drenk sequences from easy to difficult, are constructed to cover various key issues in the field such as the following:

> The market is/is not efficient in strong-form, random-walk terms.
>
> Bonds are/are not more risky investments than stocks.
>
> Random diversification is/is not more reliable than selective diversification.

Each thesis support assignment requires students to understand and use key course concepts while simultaneously practicing the methods of inquiry, research, and argumentation in finance. Students must use library research skills to find relevant data on their assigned issues, analyze the data, develop reasoned positions, and produce empirically supported arguments. Drenk requires students to meet minimal standards on each thesis support essay before progressing to the next and encourages students to rewrite their essays for higher grades, thus stimulating revision. He provides feedback through an evaluative checksheet focusing on the quality of critical thinking, the clarity of writing, and the adequacy of empirical support.

Traditional and Alternative Methods Compared

The first of these methods—the traditional one—can be excellent for skilled upper-division students who have already learned the conventions of inquiry and argumentation in a discipline. At some point in their undergraduate careers, we want to turn students

loose and say, "Okay, now talk and write like a new member of this discipline. Go find your own topic and do something interesting with it."

But for many college writers, such freedom is debilitating. Not yet at home with academic writing or with the discourse conventions of a new discipline, these students are apt to produce wandering "all about" papers rather than arguments or quasi-plagiarized data dumps with long, pointless quotations and thinly disguised paraphrases. Even worse, students may resort to outright plagiarism. Because the traditional term paper assignment does not guide students toward formulating a problem and developing a thesis, it often does not stimulate the complex thinking (and hence the need for multiple drafts) that teachers desire. In addition, traditional term papers often do little to enhance learning of course content. They supplement a course but do not focus students' mental energies on the most important or most difficult course concepts or issues.

In contrast, Drenk's thesis support assignments focus directly on course concepts and teach thesis-governed argumentation in the discipline. In investigating a series of issues in finance, students see that knowledge in this discipline is not a collection of inert principles and data but rather an arena for inquiry and argument. Moreover, because Drenk's thesis support essays are short (one to two pages), students can rework them through multiple revisions and transfer what they have learned from one essay to the next. Furthermore, Drenk's emphasis on standards, combined with his allowing of rewrites, often leads to a surprisingly high level of student work. "Although doubts always accompany teaching," Drenk says, "I know that I am successful as a teacher when students confess that they learned more through my writing assignments than through any other academic activity" (Drenk, 1986, p. 55).

The Effect of Slight Variations in Assignment Design

When designing formal writing assignments, instructors should consider carefully the kind of writing they hope for and the processes they want students to follow. Sometimes slight variations in the way an instructor designs a writing task can cause significant differences both in students' writing and thinking processes and in their final products. Consider my informal experiment with faculty in writing-across-the-curriculum workshops at three different institutions. Prior to each workshop, I wanted participants to read and react to an article on expressive writing by Randall Freisinger of Michigan Technological University (see

Freisinger, 1980). I asked faculty to write, as homework, an essay in response to any one of the following four options:

Option 1: Write a two- to three-page critical review of the Freisinger article. Here is your chance to write an essay illustrating what professors really want when they ask students to do an article or book review.

Option 2: Write a two- to three-page critical review of the Freisinger article, but structure it in the following way: part one should be a two-hundred-word abstract that simply summarizes Freisinger's essay without injecting any of your own ideas or opinions. Part two should answer the following question: "What do you consider to be the strengths and weaknesses of Freisinger's views?"

Option 3: One day you receive the following letter:

Dear Professor X:

I am in the process of collecting and reprinting major articles that have influenced the writing-across-the-curriculum movement in the past two decades. Your name has been recommended to me because of your participation in a recent writing-across-the-curriculum workshop.

One of the articles that has been nominated for my collection is Randall Freisinger's "Cross-Disciplinary Writing Workshops: Theory and Practice." Since you were asked to read this article for one of your workshops, I am very interested in your reaction to it. Did you think it was an important article? What impact did it have on you? Would you recommend that other people interested in writing across the curriculum read this article? Any information you could give me on your reactions to this article would be most appreciated.

Sincerely,
Snavely Snodgrass

Write a letter to Snavely responding to his questions.

Option 4: Write a mini-play in which two or more faculty members get in an argument over Freisinger's article. Choose any setting you would like for your play, such as a faculty lounge or a local tavern. If you want, you can have Freisinger himself make a cameo appearance in your play. Your goal here is to have at least one person who enthusiastically supports Freisinger's view of writing and language get in an argument with at least one person who thinks Freisinger is wrong. You can have as many other persons as you wish in the play.

What this experiment revealed is that the writing process reported by workshop participants differed significantly depending on which option they chose. Of the approximately sixty faculty who have responded to this assignment, only three chose option 1,

whereas nearly half chose option 2. Perhaps surprisingly, the more prescriptive of the first two assignments was the more popular. Apparently a large proportion of faculty, as well as of students, prefer assignments with some guiding constraints.

The other frequently chosen option—about 40 percent of faculty—was option 3, the informal letter. But the difference in process between writers of option 2 and option 3 is revealing. Option 2 people reported spending two or three hours on the assignment and writing at least two drafts. They also reported a careful rereading of the Freisinger article in order to compose the abstract. Option 3 people, however, usually reported spending less than an hour on the assignment. (In fact, many say they chose option 3 because it seemed to require less work.) Most option 3 writers composed their letter in one sitting. Few reported revising their letters or rereading the Freisinger article prior to writing. Despite less time on task, however, the option 3 people often wrote more lively, provocative, and interesting pieces than the option 2 people.

What is the lesson here? I hypothesize that an option 2 assignment encourages careful planning (including, in this case, rereading of the article) and formal top-down organizing. An option 3 assignment encourages more personality, voice, energy, and spontaneity. In my own courses, I try to give students opportunities for both kinds of writing. My experiment with option 3 has led to the occasional "thought letters" I often require of my students as part of their exploratory writing for my courses (see Chapter Six). But I use assignments like option 2 to encourage thoughtful study of difficult material and to teach structured, analytical reading and response.

The last assignment—the mini-play—was chosen by only a handful of workshop participants, but their engagement with the assignment was intense. They "got into it," often reporting six or seven hours of work. In several instances, their plays evolved into humorous satires of their own institutions. Whereas the other writers wrote out of duty, the option 4 people wrote for their own pleasure. (In the jargon of composition specialists, the assignment became "self-sponsored.") The task become a creative project like writing the script for a banquet roast. Proud of their work, option 4 people wanted to go public, and at one institution they even insisted on performing their play as a workshop finale.

My point is that instructors can influence the thinking and writing processes of their students by varying such aspects of the assignment as the audience, the rhetorical context, the writer's assumed role, the purpose, or the format. When planning assignments, therefore, teachers need to consider not only the learning goals they have set for their courses but also the thinking and writing processes that they want to invoke in their students as learners.

The remaining sections of this chapter focus on issues of planning, designing, and giving formal writing assignments.

Review of Course Goals as Preparation for Designing Assignments

Designing critical thinking tasks works best if teachers focus their assignments on their main teaching goals for the course. Prior to designing assignments, teachers can inventory their course goals by considering answers to the following questions:

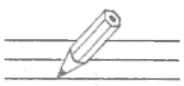
1. What are the main units or modules in my course? (For example, two weeks on X, four days on Y, and another two weeks on Z.)
2. What are my main learning objectives for each of these modules and for the whole course? What are the chief concepts and principles that I want students to learn in each unit or module?
3. What thinking skills am I trying to develop within each unit or module and throughout the whole course? (Such skills include ways of observing, habits of mind, questioning strategies, use of evidence—whatever thinking processes are important in your course or discipline. To put it another way, what ways of thinking characterize a historian, an accountant, a chemist, a nurse, and so forth?)
4. Based on previous students' experience, what are the most difficult aspects of my course for students?
5. If I could change my students' study habits, what would I most like to change?
6. What difference do I want my course to make in my students' lives—in their sense of self, their values, their ways of thinking? What is my unique stamp on this course? Ten years later, what do I want them to remember most about my course?

Of course, it is impossible to design assignments that have an impact on every facet of a course. But teachers can put together a combination of formal and informal writing assignments and other kinds of critical thinking tasks that will help students meet many of the teachers' course goals. (For a more detailed approach to articulating course goals, see "The Teaching Goals Inventory" in Angelo and Cross, 1993, pp. 13–23.) In designing formal assign-

ments, teachers have numerous options. We turn first to short "write-to-learn" assignments focusing on specific course concepts or thinking skills.

Designing Short Write-to-Learn Assignments

Although writing to learn is often associated with informal, exploratory writing such as journals or learning logs (the subject of Chapter Six), teachers can also design formal assignments that help students learn important concepts in a course. In the following cases, consider how a physics professor and a psychology professor developed assignments focusing on key course concepts. The physics professor identified acceleration and velocity as difficult concepts for beginning physics students, while the psychology professor identified operant conditioning. Having identified these concepts, the professors then developed the following write-to-learn assignments (the physics assignment is drawn largely from Bean, Drenk, and Lee, 1986, p. 35).



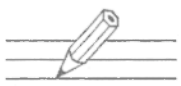
You are Dr. Science, the question-and-answer person for a popular magazine called *Practical Science*. Readers of your magazine are invited to submit letters to Dr. Science, who answers them in "Dear Abby" style in a special section of the magazine. One day you receive the following letter:

> Dear Dr. Science:
>
> You've got to help me settle this argument I am having with my girlfriend. We were watching a baseball game several weeks ago when this guy hit a high pop-up straight over the catcher's head. When it finally came down, the catcher caught it standing on home plate. Well, my girlfriend told me that when the ball stopped in midair just before it started back down, its velocity was zero, but its acceleration was not zero. I said she was stupid. If something isn't moving at all, how could it have any acceleration? Ever since then, she has been making a big deal out of this and won't let me kiss her. I love her, but I don't think we can get back together until we settle this argument. We checked some physics books, but they weren't very clear. We agreed that I would write to you and let you settle the argument. But, Dr. Science, don't just tell us the answer. You've got to explain it so we both understand because my girlfriend is really dogmatic. She said she wouldn't even trust Einstein unless he could explain himself clearly.
>
> Sincerely,
> Baseball Blues

Can this relationship be saved? Your task is to write an answer to Baseball Blues. Because space in your magazine is limited, restrict your answer to what can be put on a single five- by eight-inch card. Don't confuse Baseball and his

girlfriend by using any special physics terms unless you explain clearly what they mean.

Here's the psychology assignment.



Consider the following problem:

> In the morning, when Professor Catlove opens a new can of cat food, his cats run into the kitchen purring and meowing and rubbing their backs against his legs. What examples, if any, of classical conditioning, operant conditioning, and social learning are at work in this brief scene? Note that both the cats and the professor might be exhibiting conditioned behavior here.

You and some fellow classmates have been discussing this problem over coffee, and you are convinced that the other members of your group are confused about the concepts. Write a one- to two-page essay that sets them straight.

These assignments require students to apply the target concepts to new situations and to articulate their thinking processes clearly to a new learner. Assignments like these can prompt intense, purposeful rereading of textbooks and class notes while stimulating out-of-class discussions among students. Furthermore, students report that the act of writing often alerts them to gaps in their understanding. In the operant conditioning problem, for example, students reported in interviews with me that it was easier to explain how the professor conditioned the cats than how the cats conditioned the professor, yet it was in their contemplation of the latter case that the concept of a learned behavior became most clear.

From a teacher's perspective, these assignments—because they are short—have the additional benefit of being easy to grade. They use what we might call the principle of leverage: a small amount of writing preceded by a great amount of thinking. Such short assignments, or microthemes, can be very effective at maximizing learning while minimizing a teacher's grading time. (For a discussion of how to grade microthemes using "models feedback" rather than writing comments on the essays, see Chapter Thirteen, page 236.)

Using Short Write-to-Learn Assignments for Formative Assessment

In designing write-to-learn assignments, we obviously hope that they will help students learn the desired concepts. Often—to our disappointment and chagrin—this is not the case. What many students' reveal in their microthemes is the depressing variety of

ways that they can misunderstand the very concepts we hoped they would learn.

Nevertheless, students' errors, mistakes, and misunderstandings can give us valuable insights into their thinking processes and provide clues about how to redesign and sequence instruction. As recent work in formative assessment has demonstrated (Angelo and Cross, 1993), teachers who regularly assess their students' understanding of concepts as a course progresses can adjust instruction to improve the quality of learning. For assessing students' learning, short write-to-learn assignments are particularly effective because they provide direct windows into students' thinking processes.

Consider three student responses to the physics microtheme on acceleration versus velocity. The teacher graded the microthemes on a 1 (lowest) through 6 (highest) scale using the grading rubric shown in Chapter Fifteen (page 263). The following microtheme received a top score of 6:

> Ask your girlfriend's forgiveness because she is absolutely right. An everyday definition of acceleration means speeding up. But the scientific meaning is more precise. It means the rate at which *speed* or *direction* changes over a certain period of time—two things really.
>
> Thus it is indeed possible for the ball to still be accelerating even when it has zero velocity. If the baseball had no acceleration when it stopped in mid air, it would float in the air where it stopped forever.
>
> A baseball can accelerate in either of two ways. It can change its speed or it can change its direction of travel. If it does either or both of these things over a period of time it has accelerated. As the baseball stopped in midair its speed—or velocity—became zero. Yet the acceleration was not zero because, like a stretched out spring, gravity was pulling at it. As you noticed, it soon turned around from going up and came thundering straight down toward the catcher's mitt. During any given interval of time, it was changing direction or speed (velocity). Because of this, its acceleration (a measurement taken over a period of time) was never zero.

In giving this microtheme a 6, the instructor felt that the student both understood the concept accurately and explained it well in his own words to a new learner.

In contrast, the following microthemes were rated in the 1 to 2 range because their writers failed to apply the concepts accurately. But the significantly different patterns of thinking in these low-success microthemes helped the teacher understand each writer's difficulty.

Student A's Microtheme

> Acceleration is defined as the ratio of the change in velocity to the time over which this change occurs. When the pop-up left the hitter's bat it had a certain acceleration in the upward direction. This

acceleration soon became deceleration (a decrease in speed with time) as the downward pull of the earth became strong enough to decrease upward acceleration to 0. This force is called gravity and by definition accelerates a free falling body at 32 ft./sec.^{2} in the downward direction. When the ball paused at the peak of its flight, before beginning its descent, the upward acceleration and the downward acceleration were equal, even though the ball was stationary.

Student B's Microtheme

It makes me sad to hear that you have lost your girlfriend over such a trivial problem. I have some good news for you, though. You are right. An object cannot have 0 velocity and have acceleration too. I hope that with the arguments I lay forth in the next few paragraphs you two can reconciliate.

First, velocity is defined as how far an object moves during a certain time. If an object is moving then, in any direction, it has velocity. An airplane is a good example of this. It flies at a certain velocity such as 160 miles per hour, which means it covers 160 miles every hour it is in the air. Next we need a definition of acceleration. This is simply the change in velocity over a certain period of time. If you have an object that is moving at a constant velocity, and covers the same amount of distance during each time period, then it cannot have any change in velocity and thus any acceleration. Going back to the airplane we see acceleration when it speeds up or slows down.

Now we can use these two above concepts to give an answer to your question. If you have an object having no velocity it can have no change in that velocity, thus it cannot be accelerating. If this is still not clear think of the airplane sitting in its hangar. It has no velocity just sitting there, right? Therefore it cannot be accelerating or it would run through the side of the building! The baseball is the same way. I hope that the explanation above will help your girlfriend to see the light.

Student A's microtheme reveals a problem-solving strategy commonly encountered among novices to any discipline—what one of my colleagues calls "text-parroting." Unsure of the answer, the student uses the textbook as a crutch, attempting to imitate its authority by creating a dense, academic-sounding style complete with impressive technical data ("This force is called gravity and by definition accelerates a free falling body at 32 ft./sec.^{2} in the downward direction"). To nonspecialist readers, this strategy is often successful—what students in my part of the country call a "snowjob." When shown student A's microtheme, beginning physics students (and many faculty members outside of science) often give it a top-ranking score of 5 or 6. When it is pointed out that student A never actually answers the question (is the girlfriend right or wrong?), the weakness of this microtheme starts to emerge. To help text-parroters make progress on their next

microtheme assignment, the instructor can urge them to replace their current strategy ("When in doubt, sound like the textbook") with a more productive one in which they explain the answer in their own words. (To see how a history professor helps students overcome text-parroting, see Walvoord and McCarthy, 1990, pp. 97–143.)

In contrast, student B writes admirably in his own voice but is led astray by his inability to transfer his own private analogy (the airplane sitting in the hangar) to the problem of the baseball in midair. The microtheme's structure records the student's thinking process as he proceeds systematically from what he knows to what he is trying to learn. Despite his misunderstanding by the end (the middle paragraph shows a correct understanding of velocity and acceleration when applied to the simple example of the airplane in flight), the student may be only a few moments away from an "aha!" experience. A few probing questions from the instructor might make the concept snap into place for the student. By discussing microthemes such as this one, the instructor can review the concepts of acceleration and velocity while helping the class see where and how analogies can be helpful or break down.

My point here is that short write-to-learn assignments, though not guaranteeing student learning, nevertheless provide a window into students' thinking that allows the instructor to monitor student progress, to readjust instruction, and to develop teaching strategies that reach different kinds of learners. (For a detailed account of how a mathematics professor analyzes and responds to learning problems revealed in student writing, see Keith, 1989, pp. 141–146.)

The Process of Giving a Formal Writing Assignment

Whether you assign microthemes, two- to three-page essays, or long research papers, how you present the assignment to the class can affect your students' success.

Preparing a Student Handout for a Formal Writing Assignment

Students appreciate handouts explaining each writing assignment. Although some teachers give their writing assignments orally or place general explanations in their course syllabi, putting assignments on separate handouts has several advantages: (1) it meets the needs of sensing or concrete learners (as identified by personality inventories such as the Myers-Briggs), who comprise, according to Schroeder (1993, p. 22), perhaps 60 percent of our entering

students and who seem paralyzed by vague assignments that do not specify what the teacher wants; (2) it gives all students something to refer to late at night when their class notes no longer seem so clear; (3) if your institution has a writing center, it helps writing consultants understand what the professor is looking for prior to a tutoring session; and (4) most importantly, it helps the professor identify potential problems with the assignment and thus clarify its purpose and focus. Explanations of assignments for formal essays—as worded for students—should usually include the following elements:

Task. Explain what the student is supposed to write about. The instructor often presents the task as a problem or a question for the student to address, a thesis to support, or a rhetorical mode or form to follow.

Role and audience. Generally, ask students to write from a position of power to audiences who know less about the topic than the writer or whose views on the topic differ from the writer's (for example, "Address your paper to students who missed last week's classes," or, "In your argument on old-growth forests, address your essay to the group that opposes your position—either the logging industry or Earth First," or, "Address your essay to peer-scholars in this discipline who are interested in your proposed question and will look forward to reading your findings and analysis"). Asking students to address the teacher, who typically knows more about the topic than the student, places the writer in an unnatural rhetorical position.

Format. Specify expected length, manuscript form, and similar details. Sometimes an assignment also specifies a certain organizational pattern: "Place your thesis statement prominently near the end of your introduction," or, "Use the standard scientific report format."

Expectations about the process to be followed. Specify a time schedule for completion of first drafts, peer review workshops, revisions, and so forth. Ask students to save all doodles, notes, outlines, and drafts and to submit these along with the final essay. (This requirement encourages students to follow the recommended process and effectively discourages plagiarism.)

Criteria for evaluation. Explain how the final product will be graded. Will you grade essays holistically with a single letter grade? If so, what are the criteria for an A? Or will you grade analytically by weighing different features sepa-

rately? If so, how much weight will be given to ideas? To organization and development? To sentence style and readability? To mechanics, appearance, and manuscript form? (See Chapter Fifteen for a discussion of grading.)

Here is an example of an effective assignment handout for an upper-division business course.

The Situation

You have recently been hired as a research assistant to business consultant Wilbur Jones, who has just taken on a new consulting project for Steamboat Beer, a growing regional firm that hopes to go national. One morning, Wilbur sends you the following memo:

> Before my meeting next week with the Steamboat people, I need information on beer companies that have recently lost market share. I want you to find out what went wrong with Pabst. Pabst Blue Ribbon was a major company when I was in college. Now you hardly even hear about it. Get back to me with an analysis ASAP. What happened at Pabst and why?

You have heard that Wilbur likes his reports succinct and to the point, with meanings highlighted up front. He is a "scan reader" who wants to get the gist of a report quickly.

Your Task

After reading, studying, and analyzing the assigned case materials on the Pabst Brewing Company, prepare your report for Wilbur. Make sure that it has two parts: (1) a brief chronological narrative showing what happened at Pabst, and (2) an analysis of what went wrong.

Process Stages for the Assignment

1. Read the case materials on Pabst.
2. Analyze case materials in small groups (we'll do this in class).
3. Write rough drafts; complete out-of-class peer reviews.
4. Submit "executive summaries" to instructor.
5. Rewrite drafts after peer review and comments on executive summaries by instructor.
6. Submit final product.

Grading Criteria

Quality of narrative (brief but clear picture of what happened at Pabst): 10 points

Quality of causal analysis (clearly stated causes, good support, plausible and convincing argument based on data): 30 points

Readability (top-down organization, good use of headings, clear sentences with no confusing passages): 20 points

Grammar and correctness: 10 points

Having a Colleague Critique Your Assignment Handout

A good way to fine-tune an assignment is to ask a colleague to read it and role-play a student, trying to predict how students would react. Then discuss with your colleague questions such as the following:

1. Is the assignment clear? Might a student misread the assignment and produce something not anticipated? Is its purpose clear? Will a student see how it fits into course goals?
2. Does the assignment seem interesting and challenging? From a student's perspective, how difficult is this assignment? How much time will it require?
3. What kinds of students would this assignment particularly appeal to? What kinds of students might not like this assignment?
4. Does the assignment specify or imply a suitable audience? Are the grading criteria clear?
5. Are the mechanics of the assignment clear (due dates, expected length, manuscript form, other particulars)?
6. Is the process I want students to follow as explicit as possible? Should I build checkpoints into the assignment (submission of a prospectus, abstract, peer review dates, and so forth)?
7. How easy or difficult will this assignment be to coach and grade?

Such discussions with colleagues may help you see ways to revise the assignment to make it both stronger and clearer.

Giving the Assignment in Class

When giving the assignment in class, allow plenty of time for student questions. No matter how clearly you think you have explained the assignment, students will ferret out ambiguities. If possible, show students an A paper from a previous class on a slightly different but related topic. Even better, if you can afford the class time, pass out a set of representative essays, strong and weak, and ask students to grade them for themselves in an in-class collaborative session. (See Chapter Nine, pp. 158–159, for a discussion of group scoring sessions.) You can then explain how you would grade the papers in order to clarify your expectations. Be prepared for a lively discussion!

Designing Assignments That Lead to Top-Down, Thesis-Governed Writing

Chapter Two and part of Chapter Three provide a rationale for top-down, thesis-governed writing—the prototypical structure of academic prose. Such writing begins with the presentation of a problem to be addressed; near the end of the introduction, after the writer has presented the problem, the writer states his or her thesis, often accompanied by a purpose statement or a blueprint statement that gives the reader an overview of the whole essay. The body of the paper then supports the thesis with appropriate arguments and evidence. Because thesis-governed writing does not come naturally to students, teachers need to encourage it. They can do so by structuring their assignments in one of three ways.

1. Present a Proposition (Thesis) That Students Are Supposed to Defend or Refute

Using this method, the teacher asks students to defend or attack a controversial proposition or to defend one of two opposing propositions. The teacher's task is to develop arguable propositions that cover major concepts in the course. When students are asked to support or attack an assigned thesis, their mental energies, from the start, are channeled toward analysis and argumentation and away from chronological or "all about" writing.

This proposed bridge design does/does not meet the criteria set forth by the city in its request for proposal. [Civil engineering]

"The path to holiness lies through questioning everything." Agree or disagree. [Religious studies]

Based on the attached case, the nurse supervisor should/should not honor the husband's request that his wife (a stroke victim) be assigned a new nurse. [Nursing]

Schizophrenia is a brain disease./Schizophrenia is learned behavior. [Psychology]

Mercury amalgam fillings are/are not safe. [Research project for a course in scientific argument]

Global warming is/is not a significant environmental threat at this time. [Environmental biology course]

An alternative is to present a controversial thesis but to ask students to take a position or approach that you specify.

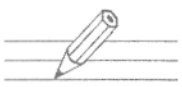
Write a letter to the editor against the sales tax on the grounds of it being a regressive tax. Explicitly use ratio and proportion to explain to the uninformed reader the meaning of *regressive tax.* [Mathematics]

Upon arriving home for Christmas, you discover your father writing a letter to his representative in Congress urging the passage of legislation limiting beef imports from Argentina. He argues that such imports put ranchers out of business, cause U.S. packing houses to close, and generally make this country poorer. You, on the basis of your brilliant performance in Economics 105, engage your father in a spirited discussion (in other words, a heated argument). Write the argument that you use to convince him of the error of his position. Your father doesn't understand economic jargon, so any jargon you use must be explained. [Economics]

Thesis-support writing, as exemplified in these assignments, works best when students are urged to consider opposing views and to sift and weigh evidence on all sides. Teachers can help students consider opposing views by showing them how to add an "although clause" to a thesis statement along with appropriate qualifiers: "Although there is some evidence to suggest that schizophrenia is a learned behavior, the preponderance of current research favors the theory that schizophrenia is a brain disease." In addition, teachers can allow students to revise the provided thesis to represent their own arguments more accurately. (For further examples of thesis support assignments, see Chapter Seven, page 124; see also, in Chapter Nine, the "believing/doubting" strategy, pages 156–157; and the "evidence-finding" strategy, pages 157–158.)

2. Give Students a Problem or Question That Demands a Thesis Answer

A second way to encourage thesis-governed writing is to give students a question calling for a thesis statement answer. Often you will need to give background information and provide a context for the problem. The key to this kind of assignment is to sum up the problem in a one-sentence question, telling students that their thesis statements should be one-sentence answers to this question. Here are some examples (in each case, the instructor's focusing question is italicized):



Write an essay of no more than two double-spaced pages answering the following question: *Is a skilled trout fisherman on a variable interval or a variable ratio schedule of reinforcement?* Imagine that you are writing to a classmate who has missed the last week of lectures and finds the textbook explanations of "variable interval" and "variable ratio" confusing. [Psychology]

Gauss's law relates the field at the surface to the charge inside the surface. But

surely the field at the surface is affected by the charges outside the surface. *How do you resolve this difficulty?* [Mullin, 1989, p. 207] [Physics]

Choose a question that Plato answers in one way and Aristotle answers in a different way (for example, "How do things change?"). Then, in the first part of your paper, explain to your reader the differences in these two theories. In the second part of your paper, evaluate the two positions, arguing that one position is stronger than the other. In this section, specifically answer the following question: What situation or thing does one theory explain well that the other cannot explain adequately? [Philosophy]

Note that some teachers, in an understandable effort to guide students' thinking, provide a whole series of interrelated questions instead of a single focusing question. My experience suggests that this practice confuses students more than it helps.

Confusing

> In the graveyard scene of Hamlet, Shakespeare alters his sources by adding the clownish gravediggers. How does the presence of the gravediggers influence your interpretation of the scene? Do you think they are funny? Absurd? Blasphemous? How does Hamlet's attitude toward the gravediggers affect the scene? Do you think it is appropriate to sing while digging a grave? What about the jokes they tell? Do you think that Yorick was more like the gravediggers or more like Hamlet? Do you think it is appropriate to have a lighthearted moment like this in the middle of a tragedy? Is the scene really lighthearted?

Although the instructor probably thinks of these questions as helpful probes, students often feel overwhelmed by them. Because the questions seem parallel rather than hierarchical, students are apt to produce a series of short answers, addressing each question in turn, rather than a unified essay.

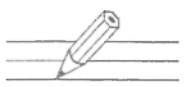
Better

> In the graveyard scene of Hamlet, Shakespeare alters his sources by adding the clownish gravediggers. How does the presence of the gravediggers influence your interpretation of the scene?

Phrased as a single question, the assignment now forces the student to frame a single answer as a thesis statement for the essay.

3. Ask Students to Follow an Organizational Structure That Requires a Problem-Thesis Pattern

> The most open-ended way of assigning thesis-governed writing is to give students complete choice of topic but to require that they follow a problem-thesis structure. Such a "generic" assignment guides students with surprising effectiveness toward thesis-governed writing.



Write an essay of X pages on any topic related to this course. Use the introduction of your essay to engage your reader's interest in a problem or question that you would like to address in your essay. Show your reader what makes the question both significant and problematic. The body of your essay should be your own response to this question made as persuasive as possible through appropriate analysis and argumentation, including effective use of evidence. Midway through the course, you will submit to the instructor a prospectus that describes the problem or question that you plan to address and shows why the question is (1) problematic and (2) significant.

Using the generic assignment has a number of advantages. First, for teachers who like to give students as much freedom as possible, the generic assignment permits free choice of topics while guiding students toward thesis-governed prose that addresses a real problem. By requiring that the introduction set forth a problem, the assignment implies both an audience and a purpose, thus helping inexperienced writers overcome their tendency toward "all about" papers, "and then" narratives, or unfocused data dumps. Second, in its focus on question asking, the assignment encourages teachers to discuss the process of inquiry in their disciplines. By teaching question asking in a discipline, teachers help students become active learners. Finally—and this is an advantage not to be taken lightly—the assignment is easy to coach. Well before the assignment due date, students can be asked to submit a prospectus explaining and focusing the question to be addressed (the prospectus later serves as a rough draft of the introduction). In responding to the prospectus, the instructor can guide the student toward an appropriately delineated question and thesis.

For shorter assignments, an even simpler method of screening is possible: teachers can ask students to submit two sentences—their introductory question and their thesis statement, which can be quickly checked for focus and direction. Conceptual problems noted at this stage can often be solved through individual or group conferences or through referral of the student to a teaching assistant or writing center consultant. (See Chapter Thirteen for further discussion of this screening technique.)

The Generic Assignment Adapted to Science and Engineering: The Scientific Report

The typical research report in the physical and social sciences or engineering follows the structure of the generic assignment in that the body of the report addresses a question or problem set forth in the introduction. But the body itself has a conventional structure

that students need to learn. The following explanation of the scientific report serves as a generic assignment for the sciences.

The Formal Scientific Research Report

A formal scientific research report is a piece of professional writing addressed to other professionals who are interested in the investigation you conducted. They will want to know why you did the investigation, how you did it, what you found out, and whether your findings were significant and useful. Research reports usually follow a standard five-part format: (1) introduction, (2) methods, (3) results, (4) discussion of results, and (5) conclusions and recommendations.

Introduction. Here you explain briefly the purpose of your investigation. What problem did you address? Why did you address it? You will need to provide enough background to enable the reader to understand the problem being investigated. Sometimes the introduction also includes a "literature review" summarizing previous research addressing the same or a related problem. In many scientific disciplines, it is also conventional to present a hypothesis—a tentative "answer" to the question that your investigation will confirm or disconfirm.

Methods. This is a "cookbook" section detailing how you did your investigation. It provides enough details so that other researchers could replicate your investigation. Usually, this section includes the following subsections: (a) research design, (b) apparatus and materials, and (c) procedures followed.

Results. This section, sometimes headed "Findings," presents the empirical results of your investigation. Often, your findings are displayed in figures, tables, graphs, or charts that are referenced in the text. Even though the data are displayed in visuals, the text itself should also describe the most significant data. (Imagine that the figures are displayed on a view graph and that you are explaining them orally, using a pointer. Your written text should transcribe what you would say orally.) Your figures and tables must have sufficient information to stand alone, including accurate titles and clear labels for all meaning-carrying features.

Discussion of results. This is the main part of the report, the part that will be read with the most care by other professionals. Here you explain the significance of your findings by relating what you discovered to the problem you set out to investigate in your introduction. Did your investigation accomplish your purpose? Did it answer your questions? Did it confirm or disconfirm your hypothesis? Are your results useful? Why or why not? Did you discover information that you hadn't anticipated? Was your research design appropriate? Did your investigation raise new questions? Are there implications from your results that need to be explored? The key to success in this section is to link your findings to the questions and problems raised in the introduction.

Conclusions and recommendations. In this last section, you focus on the main things you learned from the investigation and, in some cases, on the practical applications of your investigation. If your investigation was a pure research project, this section can be a summary of your most important findings along with recommendations for further research. If your investigation was aimed at making a practical decision (for example, an engineering design decision), here you recommend appropriate actions. What you say in this section depends on the context of your investigation and the expectations of your readers.

More Personal Forms: Alternatives to the Top-Down, Thesis-Governed Essay

The foregoing discussion has emphasized top-down, thesis-governed writing, which typifies most academic discourse in most disciplines. In Chapters Two and Three, I discussed the benefits of assigning top-down, thesis-governed writing while also raising some theoretical and pedagogical objections to it (see especially pages 46–50).

For the kinds of reasons discussed in Chapter Three, a teacher may be wary of thesis-governed writing, or weary of it, or simply more attracted to more personal forms of writing that privilege the subjective, creative, personal voice of the writer. One alternative is a strong emphasis on journals and other kinds of informal, exploratory writing (the subject of Chapter Six). But there are also many ways to assign formal, finished-product writing that is not thesis governed: exploratory essays, reflection papers, personal narratives, myths, dialogues, letters, poems or short stories, magazine-style articles for popular audiences, advertisements, satires, parodies, and so forth. What follows are examples of alternative assignments.

Formal Exploratory Essays

An academically oriented alternative to thesis-based writing is an exploratory essay, which we might define as a *thesis-seeking* essay rather than a *thesis-supporting* essay (see Zeiger, 1985; Spellmeyer, 1989). The assignment typically asks students to propose a problem and then to write a narrative of their own thought processes in trying to think through the problem. Here is a sample assignment handout, easily adaptable to any discipline.

Write a first-person, chronologically organized account of your thinking process as you explore possible solutions to a question or problem related to this course. Begin by describing what the question is and how and why you became interested it. Then, as you contemplate the problem and do research, narrate the evolving process of your thinking. Your exploratory essay should include both external details (what you read, how you found it, who you talked to) and internal mental details (what you were thinking about, how your ideas were evolving). For this essay, it doesn't matter whether you reach a final position or solve the problem; your reader is interested in your process, not your final product. Show us, for example, your frustration when a promising source turned out to be useless. Show us how new ideas continually led you to reformulate your problem through expansion, narrowing, shifting of focus, or whatever. Make your exploratory essay an interesting intellectual detective story—something your readers will enjoy.

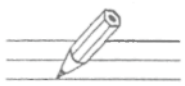
I often assign a formal exploratory essay as an intermediate stage in a research project leading ultimately to a thesis-governed

term paper. To have content for the exploratory essay, students need to read widely, confronting the problem's complexity by wrestling with disagreements among the experts and so forth. Because the subject matter of the exploratory essay is *the student's thinking process*, the essay encourages and rewards critical thinking while giving teachers wonderful insights into the intellectual lives (and study habits) of their students.

Another version of the exploratory paper is used by Berlinghoff (1989) in teaching mathematics. Berlinghoff asks each student to write a paper focusing "on the *process of solving* a particular problem" (p. 89, emphasis in original). He begins the course by teaching students a number of problem-solving tactics such as "check the definitions," "restate the problem," "draw a diagram," "argue by analogy," "solve a similar problem," and "reason backward from the desired conclusion." He then gives each student a challenging mathematical problem to try to solve and asks the student to write a paper about his or her process. "The student is asked to describe," Berlinghoff explains, "how he or she used these problem-solving tactics to attack a particular question. Thus, there is always something to write about, regardless of whether or not the student can 'solve' the problem. Even a dead end is worthwhile, provided the path to it can be described. Moreover, by paying careful attention to the problem-solving tactics (because they provide a guaranteed source of material for their papers), students often succeed in doing a lot more mathematics than they think they can" (p. 90).

Reflection Papers

A popular assignment for many teachers is a "reflection paper," sometimes called a "reader-response paper" or a "personal reaction paper." Although this genre seems to vary considerably in its meaning from teacher to teacher, in most cases it evokes writing that is more exploratory, tentative, and personal than the standard top-down academic essay. Its essential nature is the exploration of the connections between course material and a person's individual life or psyche. Reflection papers are often assigned to elicit students' responses to complex, difficult, or troubling readings and invite the writer to "speak back" to the reading in a musing, questioning, and probing way. Here is how one philosophy professor assigns a reflection paper:

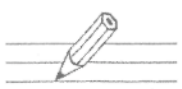


In a two- to three-page reflection essay, consider the following statement by Aristotle (*Ethics* II, 2) with respect to your own life:

> We are not studying in order to know what excellence is, but to become good, for otherwise there would be no profit in it. . . . [We must therefore] consider the question of how we ought to act.

Are you studying in order to become good? Explain what you think Aristotle is getting at and then explore your own response.

(For further discussion of ways to encourage responses to readings, see Chapter Eight, pages 143–146.)



A Potpourri of Other Kinds of Alternative Formal Assignments

Many other variations remain. What follows, in no particular order, is a potpourri of ten different kinds of alternative assignments.

1. A psychology professor asks his students to write a poem from the perspective of a schizophrenic. The teacher claims that students learn a great deal about schizophrenia in their attempt to walk in a schizophrenic's shoes. The best poems are moving and memorable (Gorman, Gorman, and Young, 1986).

2. A religious studies professor asks students to write a dialogue.

Write a dialogue between a believer (in God) and an unbeliever, in which the main issues that we have raised in class are debated. Each participant will be a spokesperson for a whole range of ideas and arguments, whatever serves to advance his or her basic position. As you write the dialogue, draw on the strongest ideas and arguments for each side that we have seen in this course. Wherever relevant, include your own responses or arguments. The point of this dialogue is not to have a clear victory for one side or the other; rather, the point is to engage the issues in an active and critical manner.

(For further examples of dialogue assignments, see Chapter Seven, pages 129–130)

3. A literature teacher has students rewrite the ending to a short story or to retell a story from the perspective of a different narrator; a history teacher asks students to rewrite a historical narrative from a different point of view.

4. A social psychologist requires students to interview someone who has a job, lifestyle, or worldview very different from the student's and then to write a "profile" of the person interviewed. The idea is for the student to encounter an "other" whose sphere of experience differs extensively from the student's.

5. A women's studies professor asks students to create myths or parables to express their personal understanding or vision of the role of the feminine.

6. A mathematics professor asks students to write their own "math autobiography" in which they reflect on their past math history and experiences. She reports getting very useful insights into the mathematical anxieties and learning problems of her students (as well as the causes of many of these problems).

7. A history of religions professor asks students to write essays from the perspective of different persons—an exercise in decentering, seeing the world from a different context.

Write a brief letter back to Paul, as if you were a member of the Corinthian community, responding to his letter. You may choose any point of view you wish—arguing back from the point of view of a faction, repenting the error of your ways, or any other option you can think of.

(For further examples of role-playing assignments, see Chapter Seven, pages 127–128.)

8. A history and sociology teacher (Bateman, 1990) asks students to do an ethnographic paper on another culture. The trick is to find a local subculture "where views and language and beliefs are just different enough to make their study fascinating" (p. 120). Bateman's solution? To have students explore subcultures right in their midst: the subcultures of paper carriers, kindergartners, Winnebago grandpas, root beer drive-in carhops, cheerleaders, formal wear distributors, and so on.

9. A mathematics teacher has students write their own story problems relating mathematical concepts to real-world concerns. According to Rose (1989, p. 19), "When students write their own problems, they often choose situations from their own experience and thus see how mathematics applies to their own lives, giving them more confidence to read and solve word problems from the textbook. In addition, writing word problems demands clear, specific, and complete instructions, which requires good understanding of the mathematical concept underlying the problem. This activity also provides a break in the monotony of traditional mathematical tasks."

10. A sociologist teaching an environment course asks students to write personal narrative essays about their encounters with the natural world, taking as their models such nature writers as Loren Eisely, David Quammen, Annie Dillard, and Lewis Thomas. In part, this course juxtaposes study of academic *articles* about nature and personal *essays* about nature. Students talk about what can and cannot be said in each genre.

Conclusion: Writing Assignments in the Context of the Whole Course

Developing high-quality writing assignments is one of the best ways for professors to improve student writing across the curriculum. A good writing assignment deepens students' engagement with course material, promotes critical thinking, and helps them

learn the discipline's discourse—its characteristic methods of inquiry, analysis, and argumentation. This chapter has considered ways to design short assignments (microthemes) to promote the learning of key course concepts and to provide a useful means of formative assessment. It has also looked at three methods for assigning top-down, thesis-governed prose: giving students a thesis to defend, asking a question that demands a thesis answer, and requiring a problem-thesis structure. Finally, it has surveyed a variety of ways to assign alternatives to thesis-governed essays.

The next chapter focuses on informal, nongraded writing aimed at helping students generate and explore ideas, deepen their thinking, and make personal connections between their courses and their lives.