

# Chapter 3:

# GENERATING

# QUESTIONS FROM

# LECTURE NOTES

Are you often bored by your instructors' lectures? Do you watch the clock in class? Talk to your friends? Fall asleep?

Why are you bored? Because sitting in a lecture is a passive situation. But you *can* turn this into an active learning process by using questioning techniques—by having a kind of internal dialogue with the speaker.

The ideal teaching situation uses the Socratic method, where the teacher and student are engaged in a question/answer dialogue. Of course, this ideal situation doesn't exist in a lecture class with one teacher and 30 or 300 students. But you can approach this ideal by creating an *internal dialogue* where you *ask yourself questions* and look to confirm or deny your guesses while you listen.

By generating questions from lecture notes, you'll be able to turn a passive situation into a kind of video game of the mind—where instead of sitting passively, you're reacting quickly, seeing if you can guess the next step, “get” what's coming next.

The skills you'll learn in this chapter will help you *predict exam questions*. You'll learn to distinguish between relevant and irrelevant information and think analytically. And you'll learn to externalize your thinking—to be aware of your thoughts and think “outside the box” of conventional rote learning. This ongoing internal dialogue will help you solve problems in and out of school.

## Questioning —the Key to Learning

In Chapter 2 we talked about four natural learning skills used by all successful learners—which are used by *everyone* in the informal learning situations of everyday life. The most important natural learning skill is *questioning*—something you do when you cross a street, shop in a grocery store, or listen to another person.

Questioning is a central part of the way people respond to the world around them. It shows that they are curious, helps them take initiative, adapt to the environment, and adjust their responses to changing conditions.

Often people are not aware that they're using this questioning process. Many things go by so quickly that you can hardly "hear yourself think." For example, when you drive a car and quickly avert an accident, a very quick internal set of questions-and-responses occurs.

In this chapter, you'll learn to externalize and become more aware of your thinking by asking yourself questions. You'll begin to understand both your instructors' objectives and the questions that are central to the fields you're studying. Using LTL questioning skills will help you:

- ◆ *predict exam questions* from your lecture notes;
- ◆ *quickly review information*;
- ◆ *listen with better understanding*; and
- ◆ *become an active learner*—looking for the answers to your own questions as you listen to a lecture.



### Student Voices

Ronan Bayles

*For me, the most important thing I learned from LTL was time management. I was a big-time procrastinator, and that doesn't work when you're trying to do well and you have a lot on your plate. My grades were suffering, and I needed to find a way to get things started—to get what I needed done, and still have time to hang out watching a basketball game.*

*I didn't know how to set and reach goals, and I think without LTL I would have called it quits, not been able to do what I need to do academically.*

*Also, I like the LTL methods for reading to answer questions. There was a course I was having trouble with that had a huge amount of reading. But using LTL, because I asked the questions myself, I was about to pull out the main concepts and find exactly what I needed. I wound up getting an A in the course.*

*Bottom line, it's pretty simple: LTL gives you a foundation for how to study and how to be successful.*

# STUDENT SAMPLE

Here's a page of lecture notes taken by a student before she began LTL instruction.

## Before Learning to Learn®

| Political Pref. | 1   | 2   | 3   | 4   | 5   | 6   |
|-----------------|-----|-----|-----|-----|-----|-----|
| Left            | 11% | 30% | 40% | 55% | 24% | 87% |
| Other           | 8.9 | 20  | 20  | 45  | 26  | 13  |

- possible to classify pol. systems in other ways - gave ex. - helpful - scheme pointed to certain aspects of pol. syst.

Lecture - 1-15-70 Thursday

## French Political System

Hard to draw parallels between diff. developing pol. systems  
political conflicts can merge out of the past as well as contemporary times.

- French past subdivided chart / Quad. 1 - pol. dev. stable  
changes can occur along horizontal lines - within quadrants - change of Rules.  
2nd, 4th & 5th rep - diff sets of rules - but all accept competition  
Vichy - didn't accept competition  
Political development attainment of satisfactory.

## Rules & Institutions

- weakness diff. between dev. countries in past & dev. countries today.  
1. in past - devel. countries had usually reached economic development first.  
today - reach pol. stability first.
- France - nation state: 19th Century national loyalties stronger.
- France - bureaucracy - things could be carried out.
- parties Russian, Chinese etc. weren't around in past.

There's a lot of information here, but it's hard to see what it's about.

## STUDENT SAMPLE

Now glance at the notes below, which the same student took while using LTL skills. These are the notes of a successful student.

### After Learning to Learn®

|                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Where does competition begin?                  | <p>legal and factual<br/>competition within Comm party for leadership<br/>Invented by Lenin</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| For what purpose was the party organized?      | <p>Party organized before revolution to make<br/>revolution (MARCH 1917 - Collapse, Nov. Revolut.<br/>Then converted into control after Revolution<br/>(In spite of small #s were successful.<br/>No opposition but legitimate (Mex. leg. but none)</p>                                                                                                                                                                                                                                                                                              |
| What is the connection between party and Revl? | <p>Ideology - "party directs and orients"<br/>"increasing objective historical law etc"<br/>(FROM NEWSPAPER)</p>                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| What are the basic parts of Marx's philosophy? | <p>Party is ideological, part because system<br/>emerged out of Revolution<br/>Men who made Bolshevik Revol were<br/>inspired by an ideology (MARXISM)</p>                                                                                                                                                                                                                                                                                                                                                                                           |
| What additions did Lenin make?                 | <p>Marxism</p> <ol style="list-style-type: none"> <li>1. private property divided men into classes</li> <li>2. in Capitalist dom. people own property</li> <li>3. if abolish private property - abolish class structuring - abolish of state</li> </ol> <p>Lenin's Additions</p> <ol style="list-style-type: none"> <li>1. after Bolshevik's take over - Repression will be in the interest of the people</li> <li>2. to reorganize the society (iron discipline leading role of the party.</li> </ol> <p>Function of Ideology (to justify rule)</p> |

In the "after" notes, the student generated questions from her notes.

This student earned a 1.7 her first semester—before LTL—and a 3.5 her second semester. With LTL, she learned how to predict exam questions.

How did this student get from before to after? We'll show you in the next few pages.

# TAKING LECTURE NOTES

## *Steps for Taking Notes*

1. **Draw a line for a 3-inch wide left-hand margin.**<sup>1</sup> A wide margin will give you a place to write your questions later.
2. **Take notes on the right-hand side of the page.** Take your notes on the wide side of the page, to the right of your 3-inch margin line.
3. **Take notes as a “recorder.”** Take as many notes as you comfortably can, but don’t worry about getting every word. (If you write as much as you can, you’ll have more information to write questions from. Writing questions will help you predict exam questions—and will actually improve your listening skills.)
4. **Use blank lines ( \_\_\_\_ ) to mark missed information.** Blank lines are cues for writing in missing information later.
5. **Use asterisks (\*) to mark points of confusion.** Asterisks will help you remember to ask for information to clear up your confusion later.
6. **Leave the left-hand page blank.** You can use this page later to insert your own variations of the information presented, “What if...?” and Creative Questions, Question Charts, and Key Word Diagrams.
7. **Abbreviate words.** Abbreviations help you write more in less time.

### *Hints:*

- ◆ Don’t stop writing in an effort to understand the lecture. Your understanding will come later, when you begin to write questions from your lecture notes.
- ◆ Don’t worry if your notes look messy or some words are misspelled the notes are only for you.

<sup>1</sup> If your college is located near a law school, buy law-ruled notebooks or notebook filling paper for lecture notes. This kind of notebook paper has a 3-inch margin on the left side of the page.

## USING ABBREVIATIONS

Some instructors may talk too quickly for you to write down what they're saying. Using abbreviations for terms that are often repeated can help you solve this problem.

Here are some commonly used abbreviations:

*writing* = *wrtg* (leave out vowels: reduce “-ing” to “-g”) and *= + with* = *w /*

One method of abbreviating calls for dropping off the ends of long words:

*abbreviation* / *abbreviated* = *abbrev*<sup>2</sup>

*organization* / *organized* = *organ*

Most fields have terms that are used over and over again. For example, if you looked through a page of notes from an accounting course, you might find that the following words are often repeated:

*depreciation*    *corporation*    *compensation*    *revenue*

You might abbreviate these words as follows:

*depreciation* = *deprec*    *compensation* = *comp*

*corporation* = *corp*    *revenue* = *rev*

This process is more than simply a way of abbreviating lecture notes. Finding repeated terms to abbreviate will draw you to the key terms of the field. When you notice key terms repeated in a given field, you're effortlessly *identifying some of the important ideas in that field*.

These key-term abbreviations can also help your learning. When you look over your notes, your eyes will be automatically drawn to the abbreviated terms. You'll see the key words at a glance—reinforcing your learning of these concepts.

### *Steps for Using Abbreviations*

1. Review your notes, looking for words that are often used.
2. Circle these words and make up your own abbreviations of them.

### *Assignment*

1. Look through your notes from classes you're taking.
2. Find repeated words which you can abbreviate.
3. Begin a “dictionary” of these words in your notebook.
4. Add to this list when you come across more terms that are often used in your courses.

Bring your abbreviation lists to class.

<sup>2</sup> The actual ending—whether you mean a noun or verb form—will be clear from the context.

## *Questions About Taking Notes With LTL*

***I never use my notes for studying.***

***Why should I bother to take notes in class?***

With LTL, you'll learn how to *predict exam questions* from your lecture notes. These questions will be the key to how you learn—and they'll help you see what's important.

***Should I copy over my notes?***

No. Your notes will improve in appearance, organization, and clarity when you generate questions from them. If you write questions from your notes after class, before long you'll find that you listen in a more organized way in class. And your notes will "automatically" improve.

***Should I try to listen and not write when I don't understand something?***

No. Keep writing so that you miss as little as possible. If you have lots of information in your notes, you'll be able to "work" with them later, generating questions and seeing what you still don't understand.

***What if I can't write as fast as my instructors talk?***

That's why you should insert blank lines when you miss information, and use abbreviations as often as you can. As you practice these note-taking methods, you'll miss less and less. For now, ask a friend or your instructor about the information you missed.

***I don't seem to understand much in class if I just keep taking notes.***

***What should I do?***

Your listening skills will improve when you become aware of the kinds of questions your instructors are raising. You'll start anticipating, listening for implied questions as your instructor changes topics.

***What if I can't read my notes after class?***

Whenever your notes are unclear to you, try reading them aloud. If you look at your notes after class, reading them aloud will help trigger your memory, so you can fill in what you missed.

***Should I take notes in seminar classes? What about discussions among students in class?***

It's true that you learn something in every class you attend. Some of what you learn will be on exams. But the main pay-off will be that what is said in seminars can provide an occasion for your own response—a stepping stone for expressing your own ideas, perhaps in a paper you plan to write. Take abbreviated notes in seminar classes—notes that will help you recall the key points under discussion—so you can "play" with the information later.

# GENERATING QUESTIONS FROM LECTURE NOTES

## *Playing Jeopardy*

Have you ever played the game “Jeopardy?” In this game, players are given answers—and the winner comes up with the matching question. Using LTL, you’ll get a lot of practice with “Jeopardy.” You’ll look at the information presented in class as a series of answers to questions. By asking these questions, you’ll understand a lot about what’s important in the field and to your instructor: You’ll learn to ask yourself the questions raised by the fields you are studying. Nobody knows all the answers in any field. What the professional knows is to ask the relevant questions—and where to find the information. You’ll acquire these skills—and approximate the behavior of professionals in the fields you’re studying.

## *Asking Mirror Questions*

When you generate questions from lecture notes, you’re playing the Jeopardy game—writing questions that were answered by the information in the notes. We call these Mirror Questions—since they *reflect* the facts and ideas in lectures. Mirror Questions will help you practice the *prediction game*—changing a passive environment into an active one. They’ll help you stay awake in class—and *predict exam questions*.

## *Steps for Writing Mirror Questions*

As soon as possible *after* the lecture,

1. *Write questions that are answered by the information in your notes.*
2. *Write your Mirror Questions in the 3-inch, left-hand margin of your notes.*
3. *Write complete questions.*
4. *Write 4–5 questions for every page of notes.*

## *In Your Words:* **Seeing the Patterns of Questions**

Write questions from your lecture notes in one of your academic courses for a week. Then look back at your questions and see if you can find a *pattern* of questions. What are some of the *key questions* asked in that course?

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*Questions About Writing Mirror Questions  
From Lecture Notes*

*How many questions should I write for an average page of notes?*

Most handwritten note pages have 4–5 major new ideas, or short “sections”—so you’ll usually need 4–5 questions for a page of notes.

*How can writing Mirror Questions from notes help me take tests?*

You’re predicting exam questions. To improve your memory of information for exams, cover the “answer” side of your notes and test yourself on the questions you’ve written. Later on, we’ll show you how to predict both essay and objective test questions. (See Chapter 6.)

*Should I write my questions in complete sentences?*

It’s a good idea to start by writing questions in complete sentence form—this will help you think with questions. After a while, you can use abbreviated questions—but always use some form of question (e.g., “Why...?”). Your memory of information will improve when you get into the habit of asking yourself questions about the material you’re learning.

*What if I can’t think of questions for all of my notes?*

If you can’t find a question for part of your notes, you probably didn’t understand part of the notes; or you weren’t able to write enough down. Write a question mark (?) in the margin of your notes opposite this section. Ask a friend or your instructor about this information later.

*I don’t want to change the way I take notes. Why should I use this technique?*

This technique will help you predict exam questions. It’s also the basis of the LTL system—all the other LTL skills build on it. **Try this experiment:** Use this method for two courses—and don’t use it for two other courses with a similar level of difficulty. Or make your own variations on this method. Make your decision based on the results: What are your final grades like in these courses? How much did you have to study for them?

*Should I generate questions from notes taken in a seminar class?*

Sure. Generating questions will help you think about what was said—and how it’s connected to the rest of what you’re learning in that class.

***In Your Words:***

**The Mirror Question Exercise**

Working with another student, write Mirror Questions based on your notes from a page of lecture notes from a content course.

# SUMMARY QUESTIONS

## *What is a Summary Question?*

A Summary Question sums up the theme, or main idea, of the notes.

## *Steps for Writing Summary Questions*

1. Write a question that
  - summarizes your Mirror Questions for the lecture, or
  - asks about the theme for that lecture.
2. Write your Summary Question at the top of the first page of the day's lecture notes.

### *Hint:*

- ◆ If you get stuck—and can't come up with a Summary Question – connect Mirror Questions by using “and,” and form one large sentence. Then polish it into a Summary Question.

## *A Question About Summary Questions*

### *What if I can't think of a Summary Question?*

Ask yourself: What is the connection between my Mirror Questions? What is the topic of the lecture? Can I write this topic in a question form?

### *In Your Words:*

#### **Writing a Summary Question**

Working with another student, write a Summary Question based on the notes you just used for writing Mirror Questions.

*Use the space below for your work.*

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### *Assignment*

When you finish writing your lecture note questions each day, write a Summary Question for the lecture as a whole.

# WRITING HIGHER-LEVEL QUESTIONS

To predict exam questions, it's important to ask *good* questions—the kind of questions your instructors—and other professionals—ask about the material you are studying.

For example, if most of your questions start with “What is...” you’ll miss the more complex, interesting connections.

In the student samples below, three freshmen started writing simple, “What is?” Questions. They nearly failed their first hourly exam.

When they began writing higher-level questions, these students saw more significant relationships in the information—and earned high grades in the course. (They earned a D on the first exam—and a B in the course.)

## STUDENT SAMPLES

### Writing Higher-Level Questions

The following questions were generated from lecture notes by three students who were just beginning to apply LTL skills to their work in an oceanography course:

Student A: *What is a mid ocean ridge? What is the speed of continental drift?*

Student B: *What is a delta? What is turbidity current?*

Student C: *Name and describe the four types of dams. What is isostatic balance?*

These students were asking “What is?” Questions—questions too simple for oceanography. By writing higher-level questions from notes and books, their questions—and grades—got much better:

Student A: *Contrast water hitting hard rock with waves rolling up on a beach of sand.*

Student B: *How does the theory of “plates” relate to the age of the sea floor?*

Student C: *How do we use knowledge of the earth’s magnetic field reversal to explain sea floor drift?*

## ASKING GOOD QUESTIONS

*I'm just a student. Won't I ask unimportant questions? How can I ask myself the kinds of questions that my instructor thinks are important?*

It's true that asking good questions is a *process*: It doesn't just happen automatically. You have to make a conscious effort. But using the steps below, you won't have a problem.

Here are some things you can do to improve the quality of your questions—so that you really *will* predict exam questions.

### *Steps for Writing Good Questions*

1. Only ask "What is...?" Questions when you're *defining new terms*. (e.g., "What is a 'normative statement'?")
2. Ask questions beginning with *Why/How* for most other information.
3. *Write 4–5 questions* for a page of lecture notes.
4. Write a *Summary Question* about the topic of the day's lecture.
5. *Write 50-point questions*—as in the exercise below. These questions will help you see the "big picture", combine important ideas you're learning about—and predict essay-exam questions.

### ***In Your Words:***

#### **Writing 50-Point Questions**

Imagine that you're an instructor for one of the academic courses you're taking now. You're making up a 50-point essay question. Look through your lecture notes for that course, and write the question in the space below.

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## IMPROVING LISTENING SKILLS

When you're first taking notes, don't try to write down only "important" information. You'll think so much about what's more or less important that you won't really listen well. Instead, write down as much as you can, so you have something to write questions from.

If you generate questions from your notes every day, after a couple of weeks, you'll find that you're listening for the questions being raised by your instructor as he/she talks. That is, the question-generating process will help you naturally hear what's really important. You'll become a better listener because you'll be using your natural critical thinking skills as you listen and take notes.

## ASKING SUBJECT-RELEVANT QUESTIONS

As you begin the process of generating questions, it's important to keep in mind another aspect of asking good questions: Your questions should be relevant to the fields you are studying.

### *In Your Words:*

#### **Asking Subject-Relevant Questions**

In the chart below, match question types with fields. What kinds of questions do you think each of these fields most often asks? Working with another student, discuss and fill out the chart below. (Add a field of your choice in the "etc." column.)

|                                                 | <i>Electronics</i> | <i>Accounting</i> | <i>Psychology</i> | <i>Etc.</i> |
|-------------------------------------------------|--------------------|-------------------|-------------------|-------------|
| <i>What is the relation between... and ...?</i> |                    |                   |                   |             |
| <i>Define...</i>                                |                    |                   |                   |             |
| <i>How does X work?</i>                         |                    |                   |                   |             |
| <i>What was the effect of...?</i>               |                    |                   |                   |             |
| <i>What is the structure of...?</i>             |                    |                   |                   |             |
| <i>What is the function of...?</i>              |                    |                   |                   |             |
| <i>Compare and contrast...</i>                  |                    |                   |                   |             |

## USING MIRROR QUESTIONS TO PREPARE FOR EXAMS

Writing questions can really help you study for exams if you practice **self-testing**.

*Spend 5–10 minutes a night testing yourself on your lecture note questions.*

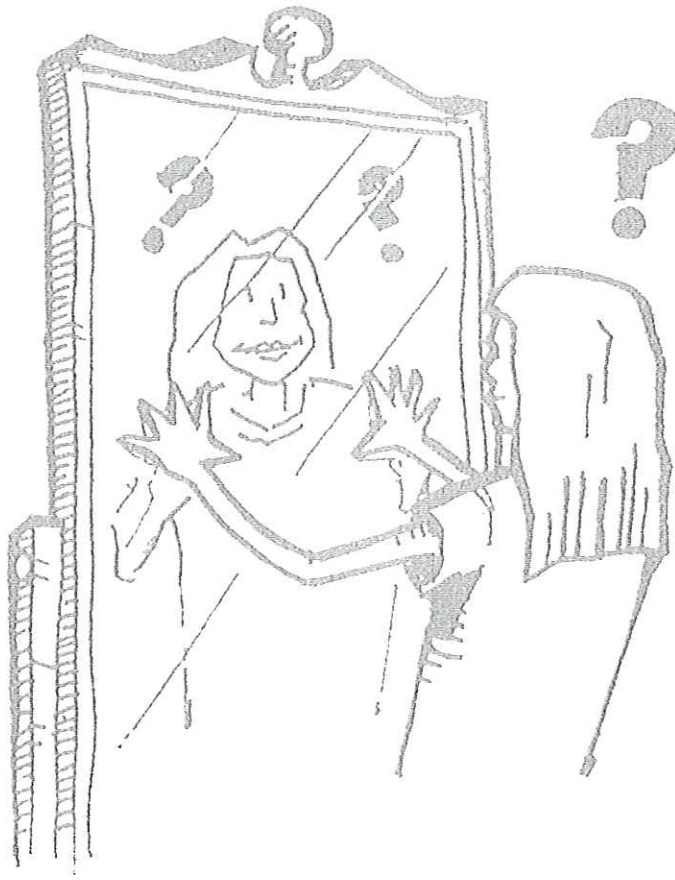
You might be great at predicting exam questions. But real learning—the kind you can use in a creative way when you need to—happens over time. Testing yourself for a few minutes every day can make a big difference on an exam.

*When testing yourself:*

- ◆ Cover your answer notes, and see how much you can remember.
- ◆ Test yourself in an *active* way: Say the answers aloud to yourself, or write down a few key words or phrases from your answers.

### *Assignment*

Write questions from your notes for two of your academic courses and bring these notes to your freshman seminar class next time.



## GOING BEYOND THE INFORMATION GIVEN:

### "What if...?" and Creative Questions

#### *What are "What if...?" and Creative Questions?*

"What if...?" and Creative Questions help you think imaginatively about whatever you are learning. *They are not Mirror Questions* that directly reflect the information given. Instead, they go beyond the information given.

#### *Where do I write my "What if...?" and Creative Questions?*

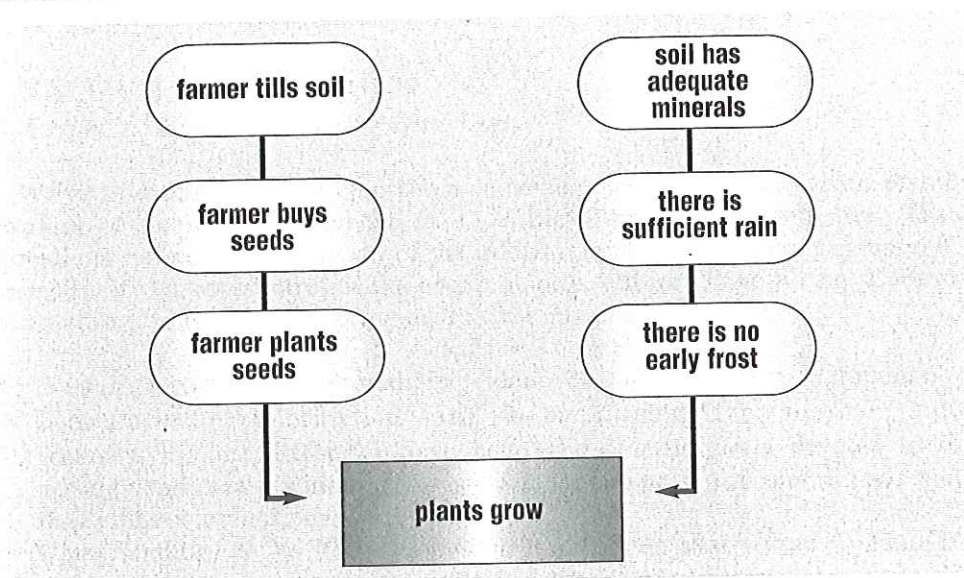
Write these questions on the left-hand page of your notebook—the page we asked you to leave empty for charts, examples—and for "What if...?" and Creative Questions.

### "WHAT IF...?" QUESTIONS

"What if...?" Questions are most important to anyone learning math-based material. If you don't make variations of the problems given in class, you won't be prepared for new problems presented on exams.

When you ask "What if...?" Questions, you're asking the kind of question experts in the field ask themselves.

Drawing a simple diagram will help you see the consequences implied by "What if...?" Questions. The example below shows two series of events affecting a farmer's harvest. One set of events relates to the farmer's actions. The other relates to weather conditions.



*What if* any of the factors change? There could be a very different result.

#### *Steps for Writing "What if...?" Questions*

1. Imagine a change in facts or ideas presented.
2. Write a "What if...?" Question about that change.
3. If helpful, draw a simple diagram that shows the facts or ideas that might change.

### ***In Your Words:***

#### **Writing "What if...?" Questions**

Working with another student, write "What if...?" Questions from your notes for one course. Draw a simple diagram that shows the steps or events that might change.

*Do your work here:*

## CREATIVE QUESTIONS

Creative Questions ask about facts and ideas that were not presented. They are questions you ask when you become curious about a topic.

### *Steps for Writing Creative Questions*

1. After writing your Mirror Questions, ask yourself questions that were not answered by the material.
2. Write your questions on the empty, left-hand page of your notebook.

### *In Your Words:*

#### **Writing Creative Questions**

Writing with another student, write a few Creative Questions from your notes for one academic course. Write your questions in the space below.

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## EVALUATIVE QUESTIONS

### *—A Special Kind of Creative Question*

We've said that Creative Questions go beyond the information given. Asking *evaluative questions* is important in college—and throughout life. These questions reflect your *judgment* of the information presented. For example, not everything you read is true. Like everyone else, authors have a bias. Here are some things to look for in asking evaluative questions:

- ◆ Does the lecturer present credible evidence to support his/her arguments?
- ◆ Does important information seem to be missing? (For example, until recently, history textbooks have been almost exclusively devoted to the accomplishments of white men—as if women and people of color did not make important contributions.)
- ◆ When reading, notice if the author uses language that shows a bias. (For example, look at the descriptive adjectives used. Does the author use positive descriptions of one group, and not of another?)
- ◆ Do you agree with the priorities suggested by the way the information was presented? Can you think of a different order of priorities? Is it better? If so, why?

Can you see ways to use evaluative questions elsewhere in your life—beyond your classes?

*Questions About "What if...?"  
and Creative Questions*

*Where should I write my "What if...?" and Creative Questions?*

The empty left-hand page of your notebook is a good place for these questions.

*I'm supposed to learn new information. How can I be expected  
to go beyond it and ask "What if...?" Questions?*

"What if...?" Questions ask you to make variations in the information you're given. In writing these questions, write down the "facts" as you're learning them, and change one part.

*How often should I ask myself "What if...?" Questions?*

There are no "rules" for this. For example, if you're learning about facts and ideas in a field where change is prevalent, like computer science, you'll need to ask more "What if...?" Questions.

*What if my Evaluative Questions show that I disagree  
with my instructor?*

The exchange of ideas is what higher education is all about. If writing Evaluative Questions leads to an area where you don't agree with your instructor, bring up your ideas in class or during your instructor's office hours. College teachers love to exchange ideas which might result in important, interesting discussions. But be prepared to give reasons for your disagreement. This kind of interchange will open up a whole new area of experience and opportunity for you.



## *Empower Yourself*

### Asking Good Questions Beyond College

We've talked about the role of Mirror Questions in helping you predict exam questions. But Mirror Questions can be used in many other ways—in and out of school. Asking Mirror Questions can help you correctly interpret new information you receive, either orally or in writing. For example, imagine that you have a new job, and your boss has just given you a complicated set of instructions. If you misinterpret the instructions, you'll have a hard time solving the problem at hand. Asking Mirror Questions will help you focus on the information given and check your understanding of it.

Creative and "What if..." Questions can help you head off problems by anticipating them. Creative Questions will help you see problems in a new way; and "What if..." Questions will help you think of solutions for changed circumstances.

#### *In Your Words:*

#### Asking Good Questions Beyond College

We've talked about asking better questions from notes, and you've learned about the importance of asking good questions—questions asking "How?", "Why?", "Compare...", "What if...?", and Creative Questions. But of course, *asking good questions is also a key problem-solving skill*. Working with another student, identify a personal, school, or job-related problem you face.

- ◆ Brainstorm "How?" and "Why?" questions to clarify the parts of the problem;
- ◆ Ask yourself "What if...?" Questions to anticipate new scenarios; and
- ◆ Ask yourself Creative Questions to arrive at problem solutions.

Begin this process by using the space below:

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#### *Assignment*

The next time you receive complex directions—from an instructor, a friend, or from your boss—stop a moment and jot down the question(s) the directions imply. Ask Mirror, Creative, and "What if..." Questions. Do you have clearer idea of the directions? Do you need more information?

# CLASSROOM ISSUES

Most college classes have either a *lecture* or a *seminar* format. Some combine both formats.

## LECTURE CLASSES

In lecture classes, you are expected to show up on time for classes and take notes. Here are some things you should be aware of:

- ◆ Show respect for your instructors. Don't antagonize your instructors by showing up late for class or by talking during class.
- ◆ Don't eat during class.
- ◆ Raise your hand to ask questions if you don't understand a point being made.

Many instructors value students' classroom participation—and even grade students on their participation in class.

Do you feel uneasy about raising your hand in class? Do you think you might not say what you mean to say? Or that you might phrase your question poorly? *Try writing your question down before you ask it.* Your "What if..." and Creative Questions will help you think of interesting questions to ask in class.

## SEMINAR CLASSES

Classes which have a seminar format are designed to be supportive and caring environments, where students can feel free to express new ideas.

If you view a seminar class as an open environment, you will help make the seminar interesting for yourself and others. What does that mean? It means that you'll be cooperative and participatory instead of competitive; it means that you'll offer constructive, positive feedback when commenting on others' ideas. An open environment is a growth environment, and you can allow yourself ten mistakes for every good idea and no mistake is fatal to your self-image. You'll help create a stimulating environment where students view each other as resources.

On the other hand, if you view your classmates as competitors, and always try to win attention for yourself at other students' expense, you'll help foster a closed, negative environment—where people help each other fail.

*How would you use the Four LTL Thinking Tools to solve problems you have in this area? If this is an area where you'd like to make some changes, turn to the Four LTL Thinking Tools exercise at the end of this chapter.*

# GETTING TO KNOW YOUR PROFESSORS

One of the main differences between high school and college is how students are expected to relate to instructors.

In high school, the best teachers are also counselors. They help you through the rough times. They know about your personal circumstances. They've probably met your parents. If you have difficulty with a particular assignment, they'll try to help you with it.

College is more like the real world. Your relationships with your instructors will be more formal. For example, unless your instructor is a graduate student, it's customary to address college instructors as "**Professor**" Smith or (if the instructor has a Ph.D.) as "**Dr.**" Smith.

While available for help, college teachers will be less accessible than your high school teachers were. For example, college teachers are usually able to meet with students only during scheduled office hours. Classes are often very large—particularly in the first two years of college—and classroom participation may be very limited. In fact, some of your professors may not recognize you outside the classroom.

You may establish a warm relationship with one or more of your college teachers, but this is not the norm. College teachers have many responsibilities other than teaching. They must write publications in their area of expertise; participate in departmental and other professional meetings; and serve on a wide variety of college committees.

Because your college teachers have busy schedules, it's useful to be specific and goal-directed when you see them. For example, if you're confused about solving a proof in a math class, *don't* ask, "How do you do this kind of problem." The explanation will be too long; and you won't remember it anyway. Instead, work through the kind of problem you're having difficulty with before meeting your instructor. When you meet with your instructor, say:

*"I can do this problem until this part. Here's where I get stuck."*

While relationships between college teachers and students are highly structured, college teachers can have a lasting impact on your life. (In my case, three college professors made a big difference in my life. I'm still in touch with one of them—thirty years later. The other two have long since forgotten me. They were important to me *by example*—not because they knew me personally.)

### *Self-Evaluation Checklist for Generating Questions From Lecture Notes*

Throughout this book we'll provide self-evaluation checklists to help you monitor how well you're using this skill in your content classes.

- |                                                                                                                                             |        |
|---------------------------------------------------------------------------------------------------------------------------------------------|--------|
| 1. Is there material for which you have not written questions?                                                                              | Yes/No |
| 2. Have you written a summary question for each lecture or meeting?                                                                         | Yes/No |
| 3. Do most of your questions ask "How?" or "Why?" —not "What is...?"                                                                        | Yes/No |
| 4. Do you leave the left page of your notebook paper blank, and later add questions that interest you, but that were not answered in class? | Yes/No |
| 5. Do you draw a blank line ( ____ ) where information was missed, and later try to fill in the missing material?                           | Yes/No |
| 6. What level of question do you ask? Do your questions appear to be "automatic," or do they thoughtfully mirror the material?              | Yes/No |
| 7. Have you developed a system of abbreviations for commonly-used terms in each course?                                                     | Yes/No |
| Do you have a glossary of these abbreviations and the words they represent?                                                                 | Yes/No |

#### **For technical courses**

See Chapter 7, Learning Technical Information  
(math, science, engineering, computer science)

#### **For all courses**

- |                                                                                                                                     |        |
|-------------------------------------------------------------------------------------------------------------------------------------|--------|
| 1. Do you test yourself for 5–10 minutes after you've written questions from a lecture?                                             | Yes/No |
| 2. Have you shown your lecture note questions to your content-course instructors so they can tell you if you're on the right track? | Yes/No |

If you do these things on a regular basis, you'll be on your way to being a very successful student.

# THE PREDICTION GAME

Your instructor will ask your class to form teams of 3–4 students. Each team will compete for “prizes” determined by the class. The members of each team will try to predict exam questions. The team that predicts the highest number of *actual mid-term exam questions* wins.

*What’s the best way to predict exam questions?*

- ◆ Generate questions from your lecture notes and textbooks.<sup>1</sup>
- ◆ Ask questions starting with *Why... How... and What if...*
- ◆ Make up “mock” exams—as if you were your course instructor.
- ◆ Practice breaking down past exam questions into component sub-questions.
- ◆ Combine Mirror Questions from lecture notes and books into 50-point questions, and compare these questions to essay exam questions from previous years.

## *Assignment*

Generate questions from your lecture notes, and bring these course notebooks to your freshman seminar class.

## *Discussion and Review*

How do this chapter’s LTL skills illustrate the Four LTL Thinking Tools?

### The LTL Journal

Continue your journal of your thoughts and feelings. How can asking questions help you see your life more clearly?

<sup>1</sup> You’ll learn how to generate questions from textbooks in Chapter 4.

# Chapter 4:

# READING

# TO ANSWER

# QUESTIONS

Have you ever found yourself reading and re-reading a passage, and not getting much out of it? Do you just want to get to the end of a chapter—whether or not you understand or remember any of it?

When you're assigned a reading, you have no idea if it will be interesting or relevant. As in lectures—where you have no control over format—you have no control over the content of your assigned readings. With LTL you'll use *active* learning, where the *process* will take you beyond rote learning. You'll learn to develop your own point of view and come up with original thoughts in discussions, papers, and exams—in the same way generating questions from lecture notes helped you become an *active listener*.

This will accomplish two things: It will make the *process* more enjoyable—and the *pay-off* will be a lot greater.

In this chapter, you'll continue the prediction game. You'll learn how to read to answer questions in a variety of assigned readings—including textbooks, readings without headings, and supplemental readings. We'll show you how to make speed reading work, by combining it with reading to answer questions. Reading for Examples will show you how to learn new terms without using rote memory. Finally, you'll learn some techniques for reading literature and poetry

For technical courses—computer science, engineering, science and math textbooks, see **Chapter 7, Learning Technical Information**.

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# READING TEXTBOOKS

## *Steps for Reading Textbooks*

1. Glance over the headings, subheadings, and illustrations in the chapter.
2. Write questions from headings, subheadings, pictures, and charts.
3. Read for answers, underlining key words and phrases.
4. Revise your questions if needed.

### *Hints:*

- ◆ There is no “best” question. Just write a question that gives *you* a direction for reading.
- ◆ The headings, subheadings, and illustrations are the cues that will trigger your memory. They’re also the best starting point for writing questions—to test your memory.
- ◆ Write several questions from the headings. Or write a question that combines ideas from several headings—whichever is most useful to you to start the process.



### ***In Your Words:***

#### **Writing Questions From Headings**

1. You've been assigned a chapter called "The Healthy Heart" for a nutrition class. Here are the chapter's major headings and subheadings:

##### ***Diet for a Healthy Heart***

*The role of vitamins*

*Trace Minerals*

*Caution—fats, sugar, salt*

##### ***Exercise***

*A daily exercise program*

*Dangers of over-exercise*

##### ***Important Dos & Don'ts***

*Smoking—how it can damage your heart*

*The relaxation response—how it can help your heart*

Write an essay-type question that will cover the chapter's main points.

#### ***Hint:***

- ◆ If you have a problem writing this question, use "and" to connect the topics.

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2. Turning to one of your textbooks, write questions from the chapter's title and major headings and subheadings.

#### ***Hint:***

- ◆ Write questions in the margins of your textbook, so that you can easily refer back and forth between questions and answers when you're reviewing for an exam.

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## STUDENT SAMPLE

Notice the *What produces the mood extremes that are characteristic of affective disorders?* in the margin—the student used key words from *all four headings and subheadings* in this question.

### NOTE:

Your aim is understanding—and finding cues to trigger what you've learned for later recall. You'll read to find and **underline** *key word answers*—so you can easily access your questions and answers for later use. You *won't* highlight whole passages—turning pages into yellow, blue, or whatever the color of your highlighter is. (You'll never find a use for a whole passage—and even if you do, you won't be able to repeat it.)

#### AFFECTIVE DISORDERS

*How do genetic & biochemical factors contribute to affective disorders?*

#### ORGANIC FACTORS

What produces the mood extremes that are characteristic of affective disorders? According to one view, some of these conditions—especially the bipolar variety—are *endogenous*, that is, produced by some internal, organic pathology.

#### GENETIC COMPONENTS

The belief that such an organic pathology exists is based on several considerations. As in schizophrenia, there is the rather specific therapeutic effect of certain drugs (described below). And again, as in schizophrenia, there is good reason to suppose that at least some forms of the disorder have an important hereditary component. This is almost certainly true for the bipolar condition. The average concordance for identical twins of whom one suffers from bipolar affective disorder is 67 percent, while the comparable figure for fraternal twins is 16 percent (based on Slater and Cowie, 1971). The evidence suggests that the genetic factor is much weaker or perhaps altogether absent in unipolar cases.

#### BIOCHEMICAL HYPOTHESES

The genetic evidence is a strong argument for the view that there is some biological factor that underlies bipolar affective disorders. This view is further bolstered by the fact that in bipolars, the switch from one mood to the other is generally quite divorced from external circumstances. The most plausible interpretation is that there is some internal, biological switch.

One hypothesis is that the disorder is based on a biochemical defect that involves the supply of various neurotransmitters, specifically, the *catecholamines*, at certain critical sites in the brain. When there is an oversupply, there is mania; when there is a shortage, there is depression (Schildkraut, 1965). Some evidence comes from the study of certain therapeutic drugs. Drugs which deplete various catecholamines lead to mood depressions in normal persons. Conversely, drugs which increase the available amount of these transmitters act as *antidepressants*. An example is *imipramine*, a drug widely used in the treatment of depression. Imipramine leads to an increase in the available supply of certain catecholamines.

### ***In Your Words:*** **Reading Textbooks**

Apply the steps for Reading Textbooks to the passage on the next page.

#### *Steps for Reading Textbooks (Review)*

1. Glance over the headings, subheadings, and illustrations in the chapter.
2. Write **Combined-Heading Questions** from headings, subheadings, pictures, and charts.
3. Read for answers, underlining key words and phrases.
4. Revise your questions if needed.

#### ***Hints:***

- ◆ Remember that there is no one “best” question.
- ◆ Use words from 2–3 headings, subheadings, or illustrations for each *Combined-Heading Question*.
- ◆ If you need more information, read the first sentence under each main heading.



#### **Student Voices**

**Marionette Peavy**

*Learning to Learn has helped me in many ways, in school and out of school. I'm not only using the techniques in school, but also I'm using them outside to take care of personal business. Using LTL, I understand myself much better and my organization is great.*

*As far as my future, well, I always had the feeling that I wanted to be a lawyer, but I never liked reading. I hated reading. And to become a lawyer you have to read. So I'd always say, "Okay, I want to be a lawyer, but I can't stand reading, so I'll be something else." But once I got into Roxbury Community College, and took the Learning to Learn program, I feel that I can be a lawyer, a doctor. I can be anything I want. I can read with understanding now. I can understand exactly what's going on, and say, "Okay, I can take care of this. I understand this."*

*Write your  
questions here:*

## **Developing Capable People**

### **Glenn's theory**

Stephen Glenn identified three perceptions and four skills needed for developing capable people. By perception, he means a belief a person has about himself—one that will affect the person's performance. For example if I perceive (believe) that you're interested in what I have to say, I'll be encouraged by that. As a result, I'll do a better job. But if I suspect that you're not interested in my ideas, I won't have confidence and may do a poor job. People's perception affects their performance. Glenn defines skills as abilities, strengths, and talents that can be improved.

### **The three perceptions of capable people**

1. **Personal capability:** Personal capability is the belief that I can achieve my goals. If I believe that I'm capable, I'll try to solve problems, take risks. I'll have a positive attitude about my prospects for success.
2. **Personal significance:** Personal significance is the belief that I'm needed; that I'm not replaceable; that I'm a unique person; that I count; that if I'm not here, I'll be missed; that I'm worthy of respect; that my opinions are worthwhile.
3. **Personal control over events:** Control over events is the belief that I'm the maker of my destiny, that I can affect my future, that I'm not just subject to fate. If I don't think I have personal control, I'll blame my mistakes on others, on fate, on my upbringing, etc.

### **The four skills of capable people**

1. **Intrapersonal skills:** Intrapersonal skills help people control their emotions, and to discipline themselves. For example, if I'm a morning person, I'll schedule my most important jobs for the morning. If certain social situations are not good for me, I'll avoid them.
2. **Interpersonal skills:** Interpersonal skills help people work with others, to get along with others, to cooperate, communicate, negotiate, share, and listen. The more I can improve these skills, the more willing others will be to accept my ideas.
3. **Systemic skills:** The systemic skills are understanding cause and effect, being responsible, adaptable and flexible. If I have strong systemic skills, I'll understand that my actions have consequences, and that if I act a certain way I'll obtain certain results. I'll see that I can adapt to different situations in order to control them.
4. **Judgmental skills:** Judgmental skills help people choose to do the right thing at the right time. Good judgmental skills will help me act in an unselfish way that benefits those around me.

Written by Dr. Michael L. Brooke.

## *Questions About Reading Textbooks*

### *What if I ask a question that was not answered by what I'm reading?*

This is not a wasted effort: What's important is that you were actively reading for information. If you then revise your question, it will serve as a memory cue when you test yourself for pre-exam review.

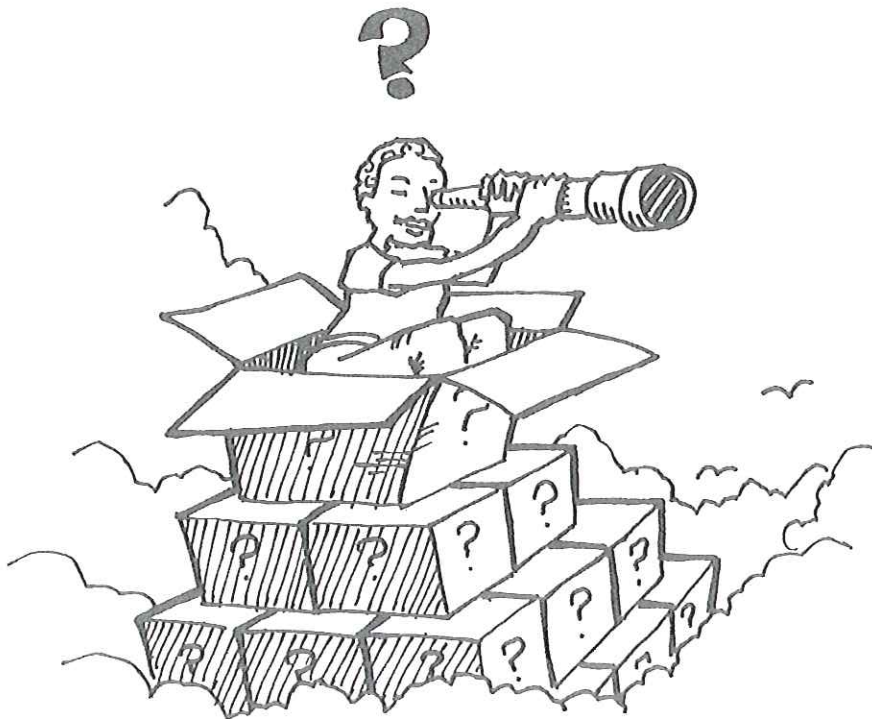
### *Why should I combine a heading and subheadings in making up a Combined-Heading Question?*

Writing **Combined-Heading Questions** is better than writing a question for each heading. With fewer questions, there's less busywork, a new level of understanding—and a bigger pay-off.

- ◆ Combined-Heading Questions will help you see the *connections* between the ideas in headings and subheadings. The connections suggest what will be in the next heading or subheading. So you'll see the author's ongoing argument—how the trees add up to a forest.
- ◆ Combined-Heading Questions help you understand the author's ideas as you read. You'll be able to read larger "chunks" of information with understanding—which will make your reading not only rewarding—but also more likely to continue.

### *What if there isn't enough information in the headings to write a question?*

Try reading the first sentence under each heading for clues to writing Combined-Heading Questions.



# READING WITHOUT HEADINGS

## *What if I'm reading material without headings?*

This method is similar to what happens when there's not enough information in the headings. It's a structured approach to finding key words—generating your own “headings.”

Make up a question combining a couple of key words from the first sentences of 3–4 paragraphs. *For example:*

### Flying Cars: A Dream That Never Got Off the Ground

The auto-airplane never took flight with the buying public. Although several models were in daily use during the 1950s and one amazing model got close to full production, the problems of nationwide distribution could not be overcome. Federal agencies curled up in horror at the thought of hundreds of thousands of amateur pilots meeting daily over major cities. The design of a good airplane, which stresses light weight and high power, clashed with the ideal qualities of an automobile: sturdy, cheap, and roomy.

The flying car, which may now seem only a wild fling in our romance with the automobile, peaked during a postwar love for anything with wheels, especially four wheels. It was a time of garish models shaped to grab front-page photographs: two Ford offerings of the mid-'50s were the bubble-topped Lincoln Futura and the torpedo-like Ford FX-Atmos, a car with fins big enough to shame a shark. General Motors replied with the titanium-bodied, gas-turbined Firebird II. But progress sidestepped them all and left them as prey for collectors and museums.

A flying car seemed so useful that it was dreamed of before there were even cars or aircraft—a gliding carriage was built in 1808. Many schemes followed, and the first car to really fly arrived not long after Orville Wright touched down on the sands of Kitty Hawk. In 1917 the Curtiss Autoplane, an aluminum-framed car with three wings, appeared at the Pan-American Aeronautical Exposition in New York City. It wasn't for the Model T crowd: a pilot-chauffeur sat in front and two passengers basked in their own velvet-curtained and leather-lined compartment. It did fly, though not briskly. American inventor Glenn Curtiss dropped the idea with the nation's entry into the European war.

The second-cut, circled key words chosen by the learner were:  
*never took flight; public; flying car; postwar; useful*

Three possible questions from these key words are:

1. *Why did the flying car, which seemed so useful during the post-war era, never take flight with the public?*
2. *Why did the public reject the flying car, even though its usefulness was obvious during the postwar era?*
3. *If the flying car was useful, why did the public reject it, and why did that happen during the postwar era?*

### *Steps for Reading Without Headings*

1. Read only the first sentence of each paragraph.
2. Underline 3–4 key words in each first sentence.
3. Circle the key words that seem most important.
4. Write your question.
5. Read to answer your question.

### ***In Your Words:***

### **Reading Without Headings**

*Write your  
question here:*

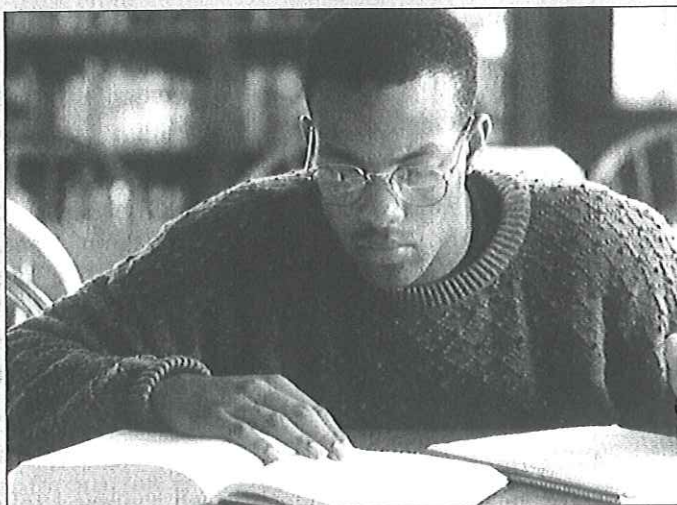
*Apply these steps to the reading below:*

Since ancient times, the family, not the individual, has been the central unit in the Chinese peasant village. Each family was run like a small autocracy, with the principal power residing in the father. The father controlled all family income and property and arranged the marriage of his children.

Even in old age, the father retained the authority, since wisdom of the elderly was highly respected. While the culture produced very strong bonds of affection between parents and children, by law, parents had absolute authority over their offspring; the father was entitled to sell his children into slavery or execute them for disobedience.

As age had authority over youth in ancient China, so men dominated women. Girls' marriages were arranged.

A young Chinese wife had few rights in her new home. She was dominated both by her husband and by her husband's mother. She also had few personal rights. Her husband might take a second wife or discard her entirely if she produced no male heir. In addition, the Chinese peasant woman had no economic freedom. She rarely owned property and could not earn income from housework—the only work available to her.



While she may have had a fine natural intellect, she was kept totally illiterate. In addition, until the 20th century, Chinese women were forced to endure the crippling custom of foot-binding. This meant that, from the age of five, Chinese girls were forced to bind their feet tightly so as to prevent normal growth of the feet. The "lily feet" produced through this custom broke the arches of the feet of growing young women, whose adult feet were no longer than a child's.

The rights, duties, and patterns of authority and subordination were carefully ordered for all members of the extended Chinese peasant family. Husbands ruled over wives; sons were viewed as superior to daughters; and mothers were subordinate to their sons. Everyone had an exact place and set of expectations. The wives of the oldest son knew their roles and responsibilities, as did the children of the youngest son.

# SUPPLEMENTAL READINGS

*What if I'm asked to read several small paperbacks in addition to my textbook?*

## 1. Reading for a General Overview:

Reading books with several related concepts

*(Examples: Paperbacks assigned for marketing or psychology courses.)*

Most assigned readings without headings are of this type:

The author has a few important points to make, and a lot of the book is made up of examples illustrating these key points. If you are assigned this kind of reading, use variations of the following method:

### *Steps for Reading Books with Several Related Ideas*

- a. Read the first paragraph of a chapter, a paragraph in the middle of the chapter (chosen at random), and the last paragraph of the chapter.
- b. Underline key words in each of the paragraphs. Write an essay-type question that includes key words from all three paragraphs. Read to answer that question.
- c. You're reviewing the book as it relates to your goal—its place in the course you're taking.

## 2. Reading for Details:

Reading complex material

- a. Look for an overview of the chapter.
- b. Mark off 3–4 paragraphs with a pencil.
- c. Use the steps for Reading Without Headings for each “chunk” of 3–4 paragraphs that looks important. (See page 77.) This method will allow you to look for details when you find information that looks important.
- d. Don't underline whole lines or highlight passages—that just makes it harder to find the answers to your questions later on, when you review for tests.

### *Assignment*

For each of your non-math-based courses,<sup>1</sup> take the list of assigned readings and label them 1 (general overview) or 2 (details) for the level of question-asking you think you'll need for each kind of reading assignment.

<sup>1</sup> You'll learn how to read math-based textbooks on pages 150–154.

# SPEED READING

## READING 100 PAGES AN HOUR OR, HOW DO I READ 10 BOOKS FOR A COURSE?

### *Is speed reading hard to learn?*

No. Anyone can learn to read faster by practicing. Reading at normal reading speed (less than 600 words per minute), you've trained your eyes to read word by word, line by line. Speed reading simply means training your eyes to operate at their full potential. Instead of reading every word separately, your eyes will be able to take in groups of words at a time. As with any new skill, the key to successful speed reading is practice. To train your eyes to scan written words more quickly, you'll have to develop new reading habits.

### *Steps for Reading 100 Pages an Hour*

Your goal is to read 100 pages an hour, or 25 pages every fifteen minutes.

1. Select the section you want to read, and mark off 100 pages with a paper clip.
2. Generate a pre-reading question from the first, a middle, and the last paragraph in the section.
3. Make sure there is a clock in the room so you can time yourself.
4. Sit at a desk, in a straight-back chair.
5. Pace yourself by moving the pen across each line more quickly than usual, and try to keep your eyes moving with it.
6. Remember, you want to get to the paper clip before 15 minutes are up.
7. Check yourself: As you were reading, did you have fragments of visual images that related to the content you were reading?

#### Hint:

- ◆ Don't worry about your comprehension. This is primarily an exercise in visual scanning and hand-eye coordination. Your initial goal is to train your eyes to read faster—not to remember every detail, but to have a general idea of what you're reading.

### *Questions About Speed Reading*

#### *How can I understand the information if I read so quickly?*

When you read less than 600 words per minute, you have the sensation of "hearing" the words as you read. Through long habit, you interpret that as understanding. So you're reading slightly faster than you might read aloud.

But you *know* that you can process information more quickly than you can "hear" words in your head. For example, if you're driving a car, you can react and adjust to new information faster than you could describe what you're doing.

At low reading speeds, the information is processed through your auditory cortex. When you're reading faster than 600 words per minute, you process the information directly through the visual cortex.

#### *Which courses should I use speed reading for?*

Try assigned readings in the humanities and social sciences. With science, engineering, and math courses, slow down and work through the material as you read. (See Chapter 7, Learning Technical Information)

## READING FOR EXAMPLES

*Arthur's introductory psychology textbook includes a lot of new terms. The formal definitions are always italicized. Arthur highlights the definitions with a yellow magic marker, and memorizes them, word by word, before exams. But he still can't define new terms on exams. He thinks, "Do I have to memorize the whole textbook word for word?"*

### EXAMPLE

Imagine that you're reading a psychology textbook that's full of new terms. The term "*regression*" is defined like this:

*Regression is the display of earlier, less mature behavior after more mature behavior has been learned.* Regression appears to be both a return to habits learned in childhood and a primitive, irrational response to the environment. In general, it is a dysfunctional reaction to a frustrating or fearful situation.

Regressive behavior is often found in young children facing emotionally distressing situations. For example, a child who is lost at a carnival or one who is anxious at the birth of a sibling might regress to crying, talking baby-talk, and displaying other infant-like behaviors. Regression is not limited to children. Frequently one hears of movie stars having childish fits of anger over minor difficulties. Or, someone who comes down with a slight cold, and who enjoys being pampered might regress to childlike behavior.

Like most students, you'd probably underline the formal definition given in the first sentence. This, however, is not likely to help you learn the term. You'll have to know the term in a way that allows you to recognize it in another context and define it by example. You need to learn to read for examples. Here's how to do that:

- ❖ Ignore the technical language.

It won't help you until you know what you're reading about. (Some technical terms in passage above are "*primitive, irrational response*," or "*dysfunctional reaction*.")

- ❖ Look for a non-technical word or expression that stands out because it's used in ordinary conversation.

(For example, "*carnival*," "*baby talk*," and "*movie stars*" fall into that category here.) Concrete nouns are good to look for.

- ❖ Read the sentence or sentences immediately surrounding the example.

Here's what you might read in the passage above:

*"For example, a child who is lost at a carnival or one who is anxious at the birth of a sibling might regress to crying, talking baby-talk, and displaying other infant-like behavior."*

Now you know that *regressive behavior* means acting in a childlike way. And you know it in a way that's likely to stick with you, since you can "see" the example in your mind.

**Note:** You don't need to find all of the examples to use this method. Any of the examples—like "*carnival*" or "*movie star*"—would have pointed you in the right direction.)

### *Steps for Reading Examples*

1. When you come to a passage defining a new term, glance through it very quickly. Look for and underline the example-words. Do not read the whole passage yet.
2. Read only the sentence immediately surrounding example-words.
3. Generate your own example of the term.
4. For confirmation, read through the passage.
5. Keep your own "dictionary" of new terms, with a few vivid key words, like carnival—lost—crying to remind you what it means.

#### *In Your Words:*

#### **Reading for Examples**

Working with another student, write "What if...?" Questions from your notes for one course. Draw a simple diagram that shows the steps or events that might change.

1. *Generalization occurs when one responds to similar situations in the same way.* For example, if a dog was once kicked by a garbage collector, he may growl every time someone comes to the house to collect garbage. Or, a child frightened by lightning during a thunderstorm may cry when it threatens to rain. Sometimes generalization is shown in very complex behaviors. For example, someone who tries to please everyone—peers, teachers, strangers on the street—may be generalizing from early attempts to please his parents. Or, someone who fears heights may be generalizing from a childhood experience of falling from a tree. The process of generalization can be very helpful in learning. For example, a child who burns his hand on a hot stove will be less likely to touch another stove.

Write your own example of *generalization*.

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Write a sentence using your example of *generalization*.

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2. *Fixation is a tendency to reject alternatives in favor of a specific goal or object.* When a person often finds a given object to be satisfying, he or she may come to prefer—in fact, to demand—that object, regardless of whatever other possibilities exist. For example, a small child may go through a period when he will eat only peanut butter sandwiches. Or, a young woman might develop a fixation for tall men if she once had a crush on a basketball player. Examples of fixation can be found in every aspect of life: in a preference for a certain kind of clothes, a fascination with a particular kind of entertainment, and so on. What distinguishes fixation from simple choice is one's inability to regard similar objects as having value equal to the object of one's fixation. In this sense, fixation is the opposite of generalization.

Write your own example of *fixation*.

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Write a sentence using your example of *fixation*.

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3. *Extinction occurs when a positive consequence is systematically withheld after a given action is performed.* For example, if you put quarters in your corner newspaper box and always lost your money, you'd stop using that newspaper box. Or, if meetings at work always started late, you'd stop coming to the meetings early. In each case, extinction decreased your behavior.

Write your own example of *extinction*.

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Write a sentence using your example of *extinction*.

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#### *Assignment*

1. Apply this method to the textbook passage on the next page.
2. Find new terms in one of your texts and use this technique with them.

## Reading for Examples: Textbook Passage

**Conversion Disorders** Conversion disorder gets its name from the fact that the anxiety and stress faced by the person are converted into physical symptoms. These symptoms may be wide-ranging. For example people may go blind or become deaf although there's nothing wrong with their eyes and ears. Motor symptoms, too, are not uncommon, such as wobbling, shaking, twitching, and collapse. Again, there's nothing physically wrong that should cause these symptoms. Visceral symptoms are also common, such as headache, choking, coughing, and nausea. The visceral symptoms of a conversion disorder can appear very real. Cases of conversion disorder have been known to mimic acute appendicitis, malaria, tuberculosis, although no organic pathology was present. Cases of pseudopregnancy have even been reported, in which the menstrual cycle ceases, the abdomen swells, and morning sickness begins. No actual pregnancy is involved; the symptoms are the result of conversion disorder.

The reasons a conversion disorder develops are usually fairly clear. Conversion disorders typically serve the purpose of helping people escape from something they'd rather not do. For example, conversion disorders were very common among pilots during World War II. Pilots who flew night missions often had a conversion disorder of night blindness, while pilots who flew day missions often had other kinds of visual disturbances which caused them to be grounded. Most people who suffer from conversion disorders have at one time or another expressed the wish to become sick to avoid what they had to do. This wish is usually repressed, and when the conversion disorder symptoms begin the sufferer is genuinely unaware that this is not a real physical disease.

Since conversion disorder can mimic so many real illnesses, it's often very difficult for physicians to distinguish it from physical illness. Nonetheless, there are some general guidelines for identifying conversion disorder. In Figure 15.1 you see an example of "glove anesthesia." The entire hand has become paralyzed and immobile, numb all over. If you've ever had novocaine at a dentist's office you know how one side of your lip can be numb while the other side is not. This localized numbness occurs because the nerve beds are laid down lengthwise, not crisscross. Consequently, real neural damage to the hand typically results in paralysis of only one lateral portion (again see Figure 15.1). To a neurologist, glove anesthesia is a dead giveaway of conversion disorder.



Figure 15.1 Because of the organization of the human nervous system, a full glove anesthesia (a) without the arm being affected is impossible as a function of only physiological causes. Real nerve damage is more likely to result in a loss of feeling similar to that shown in (b). For this reason, a symptom such as glove anesthesia is an indication of physiological problems.

# READING LITERATURE AND POETRY

There are two levels of reading literature and poetry in college classes:

1. Reading for personal meaning, and
2. Reading for recall and literary understanding.

Both are important.

To begin with, use a variation of *Reading Without Headings* as a pre-reading activity for reading novels, plays, or poems.

- ◆ *If you're assigned a novel*, read the first, a middle, and the last paragraph of each chapter, except for the last chapter. (To appreciate the suspense in the novel, read this chapter as written, beginning to end.) Ask yourself questions about the plot and the relationships between the characters. Then read to see if your questions were on target. See if you can *predict what happens next*.
- ◆ *If you're reading a play*, try to guess what will happen in each scene. Then read the scene to see if you guessed correctly.
- ◆ *When reading poetry*, read the first, middle, and the last line of the poem. Try to visualize the poem, and imagine what it means. Then read it to fill in the spaces in your picture.

After pre-reading, read the piece through from beginning to end.

## *Reading for Personal Meaning*

What's important to you? You might view reading assigned fiction and poetry as a drag—an exercise in getting the “right” answer.

But you can bring something new to your reading of fiction and poetry—your own unique experience and the sensory imagery that forms how you see and hear the world. For example, a student who plays classical piano brought a unique, personal view to her reading of James Joyce's short story, “The Dead.” She “heard” the music in Joyce's language, and wrote a very personal critique of the story for her English class.

If you recall and repeat a known answer, you'll do pretty well in literature classes. You'll get “B” grades. But if you come up with a new response, you're likely to get “A.” You'll also get more out of these classes—and personally, you'll have a greater feeling of self-worth. When you bring your own unique experience to reading, you discover something new. That's a totally different pleasure.

## READING FICTION

While there are almost as many ways to read fiction as there are works of fiction, there are five main parts of any piece of fiction—character, time and place, style, and tone.

### Character

- ◆ Imagine that you enter the story as a friend of the central character. What advice would you give him or her? How would you warn him or her of the difficulties in the story?
- ◆ What are some of the interesting, smart—or not—things the central character does? What would you do differently if you were in the same situation?
- ◆ Imagine the character is someone you know. What problems would he or she have? What skills would he or she bring to difficult situations?

### Plot

- ◆ Stop reading half-way through the work and ask yourself, “What will happen next? How will all this turn out?”
- ◆ Imagine that the work ended differently. What other endings seem possible? How would they affect the central characters of the work? Why does the author’s ending fit—or not fit—the work and its characters?
- ◆ How would the work have ended if you had been one of the central characters?
- ◆ Can you think of other ways to make variations on the plot?

### Time & Place

- ◆ What changes in the plot would occur if the work happened today—or 100 years ago?
- ◆ If the story happens in the country, imagine how it would change if it were in a city?
- ◆ If you had written the work, where and when would it take place?
- ◆ By thinking about these changes, do you see a connection between the time and place of a work of fiction and the ending—or could these things be changed without affecting the ending?

### Style

- ◆ An author’s style is what makes him or her different from other writers. What is style? Choice of words, tone, length and complexity of sentences and paragraphs, use of imagery, how much and what kinds of descriptions and dialogue are used, how much the author explains the characters’ motives, etc.
- ◆ There is no such thing as a “best” style. It’s a matter of personal taste. Next time you read a work of fiction, look to see what you think is beautiful or ugly. Check this list at a later time. Does your taste change over time?

### Tone

- ◆ A writer’s tone expresses a wide range of feelings and attitudes. A writer may show such emotions as playfulness, happiness, irony, sadness, and anger through his or her choice of words. For example, T.S. Eliot reveals feelings of despair in these lines from “The Wasteland”:  
*This is the way the word ends/This is the way the world ends/Not with a bang, but with a whimper.*
- ◆ Look for sections in the next work of fiction you read where words are used to set a tone.

*Reading for Recall and Literary Understanding*

Question Charts (see Chapter 6) will help you organize and remember information in literature and poetry classes. For example, here's the outer "shell" of a Question Chart you might build to compare and contrast three poems. Your questions would come from questions you generated from your lecture notes—that is, the kinds of questions raised by your instructor in class.

*Robert Frost's  
"Mending Wall"*

*Carl  
Sandberg's  
"Chicago"*

*Emily  
Dickinson's  
"I'm a  
Nobody"*

|                                                     |  |  |  |
|-----------------------------------------------------|--|--|--|
| <i>How are metaphor<br/>and simile used?</i>        |  |  |  |
| <i>How is sensory<br/>imagery used?</i>             |  |  |  |
| <i>How is alliteration<br/>used?</i>                |  |  |  |
| <i>What is the central<br/>message of the poem?</i> |  |  |  |
| <i>What does the poem<br/>mean to you?</i>          |  |  |  |
| <i>Other questions?</i>                             |  |  |  |

Or, you might compare the major characters in the novel, *The Lord of the Flies*, in a Question Chart that asks questions like:

- ◆ *What aspect of human personality does each character represent?*
- ◆ *How did their actions reflect their personalities?*
- ◆ *What events occurred as a result of each character's actions?*
- ◆ *How did each character view "The Beast?"*

### *Identifying the "Voice" in Literature*

On exams, students in literature and poetry classes are often asked to identify an author or literary character, given a short passage or speech. Why is this kind of exercise considered so essential? It shows that you recognize a "voice" in literature—that you can see what makes the voice of this author or character distinctive.

Do you have to memorize literary passages in order to succeed at this exercise? Not at all. When learning anything new, people see large distinctions before they see small ones. Applying this principle to identifying a literary voice will help you do well in literature and poetry classes—and it will help you enjoy and recognize the unique qualities of these voices.

### *Steps for Identifying "Voices" in Literature*

Start by identifying authors, then literary pieces; then characters within a given piece. For example, suppose you're taking a course on modern American playwrights:

1. Read 2–3 consecutive speeches from a play by one playwright. Then read 2–3 speeches from another playwright. Ask yourself questions about what makes them sound different from each other. Anything you notice is fine—just turn back and forth between the two playwrights until you have a "feeling" for the sound of the playwright's voice.
2. Do the same exercise between two plays written by a given playwright.
3. Within a given play, read three speeches, randomly chosen, from different characters in a scene. What do you hear? Visualize? Go back and forth until you get a sense of the "voice" of each character. You'll understand what you're reading more clearly—and you'll be able to identify which character is talking in a speech that appears on an exam.

### *Assignment*

If you're taking a literature or poetry course, apply these strategies to your assigned readings.

## *Self-Evaluation Checklists*

### **Reading Textbooks**

1. Did you scan the chapter by reading the headings, subheadings, and other clues to create our overview question? Yes/No
2. Did your first question relate to the chapter title? Yes/No
3. Do your Combined-Heading Questions use ideas from all the headings and subheadings in each section? Yes/No
4. Did you guess at the answers to your overview and combined-heading questions? Yes/No
5. Did you read to answer your questions? Yes/No
6. Did you revise and add questions as needed? Yes/No

### **Reading Without Headings**

1. Did you read the first paragraph, a middle paragraph, and the last paragraph of the article or report? Yes/No
2. Did you write 1–2 questions from information in these paragraphs? Yes/No
3. Did you read to answer your questions? Yes/No
4. Did you revise your questions as needed? Yes/No

### **Supplemental Readings**

#### **When Reading for a General Overview,**

1. Did you read the first paragraph of a chapter, a paragraph in the middle of the chapter, and the last paragraph of the chapter? Yes/No
2. Did you underline key words in each of the paragraphs? Yes/No
3. Did you write an essay-type question with key words from all three paragraphs? Yes/No
4. Did you read to answer that question? Yes/No
5. Did you review the book in relation to the course you're taking? Yes/No

### **Reading for Detail**

#### **When Reading for Detail,**

1. Did you read the first sentence of 3–4 paragraphs? Yes/No
2. Did you underline, then circle, a few key words in each first sentence? Yes/No
3. Did you write a question using key words from each first sentence? Yes/No
4. Did you read to answer your question, and underline key words of the answer? Yes/No
5. Did you revise and add questions as needed? Yes/No

### Speed Reading

- |                                                                                                             |        |
|-------------------------------------------------------------------------------------------------------------|--------|
| 1. Did you sit at a desk, in a straight-back chair?                                                         | Yes/No |
| 2. Did you use a paper clip for every 25 pages, and time yourself?                                          | Yes/No |
| 3. Did you generate a pre-reading question from the first, a middle, and the last paragraph in the section? | Yes/No |
| 4. Did you pace yourself by moving the pen across each line, keeping your eyes moving with it?              | Yes/No |
| 5. Did you get to the paper clip within 15 minutes?                                                         | Yes/No |
| 6. Did you "see" fragments of visual images that related to the content you were reading?                   | Yes/No |

### Reading Literature and Poetry

- |                                                                                   |        |
|-----------------------------------------------------------------------------------|--------|
| 1. Did you use a variation of Reading Without Headings as a pre-reading activity? | Yes/No |
| 2. Did you use Questions Charts to read for recall and literary understanding?    | Yes/No |
| 3. Did you compare speeches and authors, looking for the distinctive "voice?"     | Yes/No |

## THE COST/BENEFIT GAME: WRITING QUESTIONS IN TEXTBOOKS

So you think you'll sell your books for \$10.00 more if you don't write questions in them. You're probably right. If you're taking 5 courses, that's \$50.00 a semester.

Form 2 teams, and ask yourselves the following questions:

- ◆ How much are you spending for each course?
- ◆ What's your tuition for a semester in college? A year in college?
- ◆ What difference would getting a C or an A or B mean you applied to law school?
- ◆ Do you have other questions?

The team that comes up with the most detailed, "real-life" answers in the shortest period of time wins the game.

### Discussion and Review

How do this chapter's LTL skills illustrate the Four LTL Thinking Tools?

### The LTL Journal

Continue your journal of your thoughts and feelings. How can the skills in this chapter help you solve life skills problems?