

How to Study

Like many teachers, I hear hundreds of excuses why students haven't done well on a test. Occasionally, students will admit outright, "I just didn't study." But more often, they will say, "I really *studied* for that test. I can't understand why I did so poorly." A common problem is waiting until the last minute to study for a test. But in many instances, students just don't know *how to study*. Whether you fall into this category or not, chances are you could improve your studying habits by applying one of the time-honored methods of studying explained below.

THE PQ4R METHOD

The PQ4R method gets its name from the six overlapping stages for studying material such as a textbook chapter—preview, question, read, reflect, recite, and review (Thomas & Robinson, 1972). Extensive experience has shown that this method can improve your understanding and memory, and thus your test performance.

PREVIEW

It's a good idea to look over the chapter as a whole before you begin it. When you read a novel, you usually start at the beginning and read straight through so as not to spoil the surprise ending. But with concepts and factual material, it's just the opposite. Here, it's important to get an idea of the material as a whole so you can put the details in context as you read.

- * First, look over the table of contents.
- * Next, skim through the chapter, looking at the headings and subheadings.
- * Then, read the chapter summary.
- * Finally, decide how much you want to read at a sitting.

QUESTION

Once you've looked over the chapter, you may be curious about the material. A helpful technique is to ask yourself questions about the material. Then read the chapter with the aim of finding the answers to your questions. One way to do this is to turn each bold-faced heading and subheading into a question. For example, the first major heading and subheading in Chapter 5, Stress, are shown below.

UNDERSTANDING STRESS

Meaning of Stress

Common Stressors

Personal, Situational Factors

Now use these heading and subheadings to think up some questions. Here are some examples: What does the term stress mean? Does stress refer to external forces or to something within? What are the most stressful events in our lives? Why do some individuals find the same event more stressful than others? Your use of such questions may prove even more effective if you jot them down, and then, as you read, write down your answers.

READ

Make it a point to understand what you are reading, digesting the material in one section before proceeding to the next. Skimming through material without comprehending it leads to superficial understanding at best, but more often, to downright confusion. In contrast, when you take the time to understand what you read, you'll also retain it better. If you're not clear about the meaning of a word, check the glossary of terms on the page margins in the text or the glossary index at the end of the book. If you can't find the word in the glossary, look it up in one of the better dictionaries such as *Webster's New World Dictionary*. Also, feel free to make explanatory notes to yourself in the margins of the pages of your textbook.

REFLECT

A good way to improve your understanding of something is to pause periodically and reflect on it. Ask yourself: Do I really understand this material? Could I explain it to someone else? If the answer is no, reread the material.

It's also helpful to mark or underline key passages in the chapter. This makes you an active participant in reading and provides you with key passages to review for tests. Some students prefer to mark or underline as they read. Others prefer to read through the material, and then to go back and highlight the most important points. I prefer the latter approach, because I usually have a better idea of the key passages after I've read through the material. Here are some suggestions for marking or underlining:

- * Read through each section before marking and underlining.
- *Mark only key passages or ideas.
- *Use a marker or pen. Pencil often smears

RECITE

Perhaps you've had this experience: You look up someone's telephone number, but no sooner have you closed the phone book than you've forgotten the number. You reopen the book and find the number again. But this time as you close the book, you repeat the number to yourself, either silently or audibly. You're improving your memory through recitation—the act of repeating or speaking aloud.

Recitation improves your memory in several ways. First, by focusing your attention on the page a bit longer, you can encode the material better, thereby insuring accurate storage of the

material. Repeated practice may also help you to retrieve the material when you need it.

There are several ways to improve recitation. First, the act of reflection, or asking questions about the material, mentioned above, is itself a form of recitation. Second, you may also recite by closing the book and mentally rehearsing what you've just read. A third way is to recite aloud, either by discussing the material with a classmate, or by sharing your reactions or asking questions about it in class. A fourth way is to make a written outline of what you've read. I highly recommend this method because it forces you to select the main ideas in the material. Occasionally, students attempt to escape the thinking process by simply copying down the headings and subheadings, including little else. Others include too much detail, which becomes distracting. Instead, be selective. You should be able to outline an entire chapter of this book in just several written pages, depending, of course, on how large you write. The entire process of selecting the major ideas and writing them down is an excellent form of recitation. It also provides you with a handy guide to review for the test.

The amount of time spent on recitation depends on the material covered. When you're trying to remember isolated bits of information, like names or numbers, up to 80 percent of your time should be spent in recitation. But when you are learning ideas or concepts that are highly meaningful and well organized, perhaps, you would spend only 20 percent of your time in recitation. Personal experience will help you to determine which method of recitation works best for you.

REVIEW

When you're ready to review reread the summary at the end of the chapter to give yourself a sense of the material as a whole. Then look back over the material in the chapter, paying special attention to the key ideas you've marked or underlined under each heading and subheading. If you've made a written outline of the chapter, review this, too. Ideally, you should review the material periodically, to offset the rapid decline in retention once you've learned something. It's recommended that you review the material within 24 hours of the initial reading, and then again 72 hours later. After this, it's a good idea to review the material about once a week until you're tested on it.

When you're ready, do the self-test at the end of the chapter (if provided). Then check your responses against the list of correct answers provided in this book. When you miss a question, it's important go back and look up the correct answer. Otherwise, you may make the same mistake again. You may observe that the order of test items parallels the sequence of material in the chapter, thus facilitating your use of the self-test for study purposes. Also, you might be interested to know that all the items in the self-tests are included in the test bank provided for the instructor, but are worded differently. Consequently, mastering the self-test items is a good way of preparing for the classroom test, provided, of course, that your instructor uses the test items in the instructor's manual, as most instructors do.

WHERE AND WHEN TO STUDY

Once the semester is underway, you're ready to plan your study schedule. Consider your class schedule, the workload in each course, and other commitments, such as a part-time job or family responsibilities. Be realistic. Don't try to study too much material at one time.

First, it's important to find a place to study, which is free from distractions. Then use this place only for studying. In this way, you'll develop a set of associations that will strengthen your study habits. When you find yourself daydreaming or worrying about something else, take a short break, and return when you're ready to study. When you finish studying, leave this place. By consistently doing this, you'll associate this place with studying and feel more like studying there.

It's also important to set aside particular times for study. You may wish to study for a given block of time and quit at the end of this period regardless of how much you've read. Or, you may want to study until you've covered a certain amount of material. Either way, it's best to study in reasonable blocks of time, about 1 to 3 hours. After a long stretch you may have difficulty concentrating on the material at hand. That's why it's a good idea to take a short break at least once an hour, or even on the half-hour when you're covering very difficult material. Also, you might select other things you enjoy doing, and make them contingent on completing your study goal for a given time slot. For instance, if you'd like to call up a friend or watch television, do your studying first. Then make your call or watch TV as a reward to yourself.

Above all, don't procrastinate. Distribute your study times realistically so you don't try to absorb too much material at a time. For instance, if you must cover four chapters in this book for a test, plan to read no more than one chapter in a given time slot. Spacing out your study time cuts down on boredom and fatigue. Also, your mind may continue absorbing the material in the intervals between study periods. This is especially important to keep in mind when you're learning complex or difficult material.

Finally, you can improve your study methods by learning from your test results. If your instructor goes over the test in class, make it a point to attend that day. Find out what you missed, and equally important, why. Were the questions different from what you expected, requiring, say the understanding of concepts rather than factual information? If you didn't do well on an essay test, ask your instructor how you can do better next time. Try not to waste time making excuses or blaming your instructor or yourself. Find out what you need to do in order to improve your test performance next time. Then modify your study methods.

Thomas, E. L., & Robinson, H. A. (1972). *Improving memory in every class: A sourcebook for teachers*. Boston: Allyn and Bacon.