

20 MEMORY TECHNIQUES

Experiment with these techniques to make a flexible, custom-made memory system that fits your style of learning. The 20 techniques are divided into 4 categories, each of which represents a general principle for improving memory.

Briefly, the categories are:

1. **Organize it.** Organized information is easier to find.
2. Use **your body**. Learning is an active process; get all your senses involved.
3. Use **your brain**. Work with your memory, not against it.
4. **Recall it.** This is easier when you use the other principles to store information.

The first three categories, which include techniques #1 through #16, are about storing information effectively. Most memory battles are won or lost here. To get the most out of this article, survey the following techniques by reading each title. Then read the techniques. Next, skim them again, looking for the ones you like best. Mark those and use them.

ORGANIZE IT.

1. Learn from the general to the specific.

Imagine looking at a new painting this way. Blindfold yourself. Put a magnifying glass up to your eye. Move your face within inches of the painting. Now, yank the blindfold off and begin studying the painting, one square inch at a time. Chances are, even after you finished "looking" at the painting this way, you wouldn't know what it is.

Unfortunately, many students approach new courses and textbooks just this way. They feel driven to jump right in and tackle the details before they get the big picture.

Here is a different approach. Before you begin your next reading assignment, skim it for the general idea.

You can also use this technique at the beginning of a course. Ask someone who has taken it to quickly review it with you. Do a textbook reconnaissance of the reading assignments for the entire course. This technique works best at the beginning of a term, but it's never too late to use it.

If you're lost, step back and look at the big picture. The details might make more sense.

2. Make it meaningful.

A sky diver will not become bored learning how to pack her parachute. Her reward for learning the skill is too important. Know what you want from your education, and then look for connections between what you want and what you are studying. If you're bogged down in quadratic equations, stand back for a minute. Think about how that math course relates to your goal of becoming an electrical engineer.

When information helps you get something you want, it's easier to remember. That is one reason it pays to be specific about what you want.

3. Create associations.

The data already stored in your memory is arranged according to a scheme that makes sense to you. When you introduce new data, you can recall it more effectively if you store it near similar or related data.

Say you are introduced to someone named Greg. One way to remember his name would be to visualize another person you know named Greg. When you see the new Greg, your mind is more likely to associate him with a Greg you already know.

USE YOUR BODY.

4. Learn it once, actively.

According to an old saying, people remember 90 percent of what they do, 75 percent of what they see, and 20 percent of what they hear.

These percentages might not be scientifically provable, but the idea behind them is sound. Action is a greater memory enhancer. You can test this theory for yourself by studying with the same energy you might bring to the dance floor or the basketball court.

When you sit at your desk, sit up. Sit on the edge of your chair, as if you were about to spring out of it and sprint across the room.

Try standing up when you study. It's harder to fall asleep in this position. Some people insist their brains work better when they stand.

Pace back and forth and gesture as you recite material aloud. Use your hands. Get your whole body involved in studying.

These techniques also are great ways to battle boredom. Boredom puts memory to sleep. Wake it by using your arms and legs as well as your eyes, ears, and voice.

Learning can be deceptive. Most learning, especially in higher education, takes place in a passive setting. Students are sitting down, quiet and subdued.

Don't be fooled. Learning takes energy. When you learn effectively, you are burning calories, even if you are sitting at a desk reading a textbook.

5. Relax.

When we're relaxed, we absorb new information quicker and recall it with greater accuracy. Some courses in accelerated and "whole mind" learning teach relaxation techniques.

Part of this is common sense. Students, who can't recall information during a final exam, when they are nervous, often can recite the same facts later, when they are relaxed.

This idea might seem to contradict technique #4, but it doesn't. Being relaxed is not the same as being drowsy, zoned out, or asleep. Relaxation is a state of alertness, free of tension, during which our minds can play with new information, roll it around, create associations with it, and apply many of other memory techniques. We can be active and relaxed.

Many books, tapes, and seminars are available to teach you how to relax. In addition, relaxation exercises are included in this book. Experiment with the exercises and apply them as you study. "Mellowing out" might do more than lower your blood pressure; it might help you succeed in school.

6. Create pictures.

Draw diagrams. Make cartoons. Use them to connect facts and illustrate relationships. Relationships within and among abstract concepts can be "seen" and recalled easily when they are visualized. The key is to use your imagination.

For example, in physics, Boyle's law states the pressure of a quantity of gas is inversely proportional to the volume the gas occupies. That is, if you cut the volume in half, you double the pressure. To remember this concept, you might picture someone "doubled over" using a bicycle pump. As she increases the pressure in the pump decreasing the volume in the pump cylinder, she seems to be getting angrier. By the time she is "boiling" (Boyle-ing) mad.

Another reason to create pictures is that visual information is associated with a different part of the brain than verbal information. When you create a picture of a concept, you are anchoring the information in two parts of your brain. This increases your chances of recalling that information.

To visualize relationships effectively, create action, such as the person using the pump. Make the picture vivid too. The person's face could be bright red. Make her ready to "boil". And involve all your senses. Imagine how cold the metal of the pump would feel and

how she would sound as she struggled and grunted with it. (She'd have to struggle. It would take incredible strength to double the pressure in a bicycle pump, not to mention a darn sturdy pump.)

7. Recite and repeat.

When you repeat something out loud, you anchor the concept in two different senses. First, you get the physical sensation in your throat, tongue, and lips when voicing the concept. Second, you hear it. The combined result is synergistic, just as it is when you draw pictures. That is, the effect of using two different senses is greater than the sum of their individual effects.

The "out loud" part is important too. Reciting silently, in your head, can be useful—in the library, for example—but it is not as effective as making noise. Your mind can trick itself into thinking it knows something when it doesn't. Your ears are harder to fool.

The repetition part is important too. Repetition is the most common memory device because it works. Repetition blazes a trail through the pathways of your brain, making the information easier to find. Repeat a concept out loud until you know it, then say it five more times.

Recitation works best when you recite concepts in your own words. For example, if you want to remember, "The acceleration of a falling body due to gravity at sea level equals 32 feet per second per second," you might say, "Gravity makes an object accelerate 32 feet per second faster for each second that it's in the air at sea level." Putting the concept in your own words forces you to think about it.

Have some fun with this technique. Recite by writing a song about what you're learning. Sing it in the shower. Use any style you want ("Country, jazz, rock, or rap, when you sing out loud, learning's a snap!").

Or imitate someone. Imagine your textbook being read by Bill Cosby, Madonna, or Clint Eastwood. ("Go ahead, punk. Make my density equal mass over volume.")

Recite and repeat. It's a technique you can use anywhere.

8. Write it down.

This technique is obvious, yet easy to forget. Writing a note to yourself helps you remember an idea, even if you never look at the note again.

You can extend this technique by writing it down not just once, but many times. Let go of the old images of being in elementary school and being forced to write, "I will not throw paper wads" 100 times on the chalkboard after school. Used with items that you choose to remember, repetitive writing is powerful technique.

Writing engages a different kind of memory than speaking. Writing prompts us to be more logical, coherent, and complete. Written reviews reveal gaps in knowledge that oral reviews miss, just as oral reviews reveal gaps that mental reviews miss.

Another advantage of written reviews is that they more closely match the way we're asked to remember materials in school. During your academic career, you'll probably take far more written exams than oral exams. Writing can be an effective way to prepare for tests.

Finally, writing is physical. Your arm, your hand, and your fingers join in. Remember, you remember what you do.

USE YOUR BRAIN.

9. Reduce interference.

Turn off the stereo when you study. Find a quiet place that is free from distraction. If there's a party at your house, go to the library. If you have a strong attraction to food, don't torture yourself by studying next to your refrigerator.

Two hours of studying in front of the television might be worth 10 minutes of studying where it is quiet. If you have two hours and want to study and watch television, it's probably better to study for an hour and watch television for an hour. Doing one at a time increases your ability to remember.

10. Use daylight.

Study your most difficult subjects during daylight hours. Many people can concentrate more effectively during the day. The early morning hours can be especially productive, even for people who hate to get up with the sun.

11. Overlearn.

One way to fight mental fuzziness is to learn more than you intended. Students often stop studying when they think they know the material well enough to pass the test. Another option is to pick a subject apart, examine it, add to it, and go over it until it becomes second nature.

This technique is especially effective for problem solving. Do the assigned problems, and then do more problems. Find another text and work similar problems. Make up your own problems and work those. When you pretest yourself in this way, the potential rewards are speed, accuracy, and greater confidence at exam time.

12. Escape the short-term memory trap.

Short-term memory is different from the kind of memory you'll need during exam week. For example, most of us can look at an unfamiliar seven-digit phone number once and remember it long enough to dial it. Try recalling that number the next day.

Short-term memory can decay after a few minutes, and it rarely lasts more than several hours. A short review within minutes or hours of a study session can move material from short-term memory into long-term memory. That quick mini-review can save you hours of study time when exams roll around.

13. Distribute learning.

Marathon study sessions are not effective. You can get far more done in three two-hour sessions than in one six-hour session.

For example, when you are studying for your American history exam, study for an hour or two, and then wash the dishes. While you are washing the dishes, part of your mind reviews what you studied.

Return to American history for a while, and then call a friend. Even while you are in deep conversation, part of your mind will be reviewing history.

You can get more done if you take regular breaks, and you can use them as mini-rewards. After a productive study session, give yourself permission to make a short phone call, listen to a song, or play 10 minutes of hide-and-seek with your kids.

There is an exception to this idea. When you are engrossed in a textbook and cannot put it down, when you are consumed by an idea for a term paper and cannot think of anything else — keep going. The master student within you has taken over. Enjoy the ride.

14. Be aware of attitudes.

People who think history is boring tend to have difficulty remembering history. People who believe math is difficult tend to have difficulty recalling mathematical formulas. All of us can forget information that contradicts our opinions.

This is not the same as fighting your attitudes or struggling to give them up. Simply acknowledge them. Notice them. Your awareness can deflate an attitude that is blocking your memory.

One way to befriend a self-defeating attitude about a subject is to relate it to something you are interested in. For example, consider a person who is fanatical about cars. She can rebuild a motor in a weekend and considers that good time.

From this apparently specialized interest, she can explore a wide realm of knowledge. She can relate the workings of an engine to principles of physics, math, and chemistry. Computerized parts in newer cars lead her to data processing. She can now study how cars have changed our cities and help create suburbs, a topic that includes urban planning, sociology, business, economics, psychology, and history.

We remember what we find interesting. If you think a subject is boring, remember, everything is related to everything else. Look for connections.

15. Choose what not to store in memory.

We can adopt an "information diet". Just as we choose to avoid certain foods, we can choose not to retain certain kinds of information.

Decide what's essential to remember from a reading assignment or lecture. Extract the core concepts. Ask what you'll be tested on as well as what you want to remember. Then apply memory techniques to those ideas.

16. Combine memory techniques.

All of these memory techniques work even better in combination with each other. Choose two or three techniques to use on a particular assignment. Experiment for yourself.

For example, after you take a few minutes to get an overview of a reading assignment (# 1), you could draw a quick picture to represent the main point (#6). Or you could overlearn that math formula (#11) by singing a jingle about it (#7) all the way to work. If you have an attitude that math is difficult, you could acknowledge that (#14), then you could distribute your study time in short, easy-to-handle sessions (#13).

Combining memory techniques is combining sight, sound, and touch when you study. The effect is synergistic.

RECALL IT.

17. Remembering something else.

When you are stuck and can't remember something you know you know, remember something else that is related to it.

If you can't remember your great-aunt's name, remember your great-uncle's name. During an economics exam, if you can't remember anything about the aggregate demand curve, recall what you know about the aggregate supply curve. If you cannot recall specific facts, remember the example the instructor used during her lecture. Information is stored in the same area of the brain as similar information. You can unblock your recall by stimulating that area of your memory.

A brainstorm is a good memory jog. When you are stumped in a test, start writing down lots of answers to related questions and —pop!—the answer you need is likely to appear.

18. Notice when you do remember.

Everyone has a different memory style. Some people are best at recalling information they've read. Others remember best what they've heard, seen, or done.

To develop your memory, notice when you recall information easily and ask yourself what memory techniques you're using naturally. Also notice when it's difficult to recall information. Let go of the temptation to judge yourself. Instead, be a reporter. Get the facts, and adjust your learning techniques. And remember to congratulate yourself when you remember.

19. Use it before you lose it.

Even information stored in long-term memory becomes difficult to recall if we don't use it regularly. The pathways to the information in our brains become faint with disuse. For example, you can probably remember your current phone number. What was your phone number 10 years ago?

This points to a powerful memory technique. To remember something, access it a lot. Read it, write it, speak it, listen to it, apply it—find some way to make contact with the material regularly. Each time you do that, you widen the neural pathway to the material and make it easier to recall the next time.

Another way to contact the material is to teach it. Teaching demands mastery. When you explain the function of the pancreas to a fellow student, you discover quickly whether you really understand the pancreas.

Study groups are especially effective because they put you on stage. The friendly pressure of knowing you'll teach the group helps to focus your attention.

20. And remember you never forget.

You might not believe that an idea or thought never leaves your memory. That's OK. In fact, it doesn't matter whether you agree with the idea or not. It can work for you anyway.

Test the concept. Adopt an attitude that says, "I never forget anything. I may have difficulty recalling something from my memory, but I never really forget it. All I have to do is find where I stored it."

Many people use the flip side of this technique and get the opposite results. "I never remember anything," they say over and over again. "I've always had a poor memory. I'm such a scatterbrain." That kind of negative self-talk is self-fulfilling.

An alternative is to speak more positively, or at least more accurately. Instead of saying, "I don't remember," you can say, "I don't recall right now." The latter statement implies that the information you want is stored in your mind and that you can retrieve it, just not right now.

We can also use affirmations that support us as we develop our memories. Possibilities include: "I recall information easily and accurately" and "My memory serves me well."

Or even "I never forget!"

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