Memory Improvement

IMPROVING YOUR MEMORY SKILLS

"I've never had a good memory." "I'm lousy at memorizing." If you believe this, you'll be glad to know that a "good memory" is not something you are born with. Memory skills can be developed by using a combination of attention techniques and rehearsal study strategies.

ATTENTION TECHNIQUES. Attention is your memory gate keeper, selecting the information which is most important for you to focus on and filtering out distractions not important to your learning process.

All of us have had the experience while driving of arriving at our destination without remembering how we got there. *"Did I run a red light?" "What road did I take to get here?"* This happens when our attention is focused on things other than our main task of driving to our destination. We missed important details, so we arrived but don't remember the journey!

A similar situation happens when you finish attending a lecture or reading your text book, and a short time later you can't recall what you heard or read. You were physically present, but not paying attention or concentrating on what information was most important for you to remember.

BEFORE LECTURE

Be familiar with the material for each lecture so you will know what to expect and can focus your attention during class.

- Look at your syllabus before each class to identify the topic for the lecture.
- Read your text book chapter summary before you go to class.
- Download the professor's PowerPoint slides or note taking outline and review them before class.
- Develop an interest in your class/subject. Can you remember lines from a favorite movie? Probably, because it is easier to remember information that you find interesting and relevant. With effort, it is possible to find something meaningful about any class so that you are involved enough to relate to and remember the information.

DURING LECTURE

When you lose concentration, take a minute to refocus.

- Stop taking notes and just listen.
- Think about why the information is important to you.
- Ask yourself a question. This is a very simple task you can do during any lecture.
  Question: How does this material relate to something I already know?
  During an Econ 1500 lecture, you are introduced to the concept of supply and demand. Ask yourself: *How does this relate to something I already know?* You think of buying gas that morning and how the price keeps going up. Relating economics concepts to something in your life increases your interest and attention and makes it more likely you will remember the information.

AFTER LECTURE

- List the terms or concepts that were confusing.
- Write down questions about information that didn't make sense to you.
  These will focus your attention on items you need to follow up with when you study that evening or that you need to clarify with your professor.

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STUDY TIME

Many students have good intentions to study but spend time ineffectively going through notes or mindlessly flipping through a chapter. If this sounds like you, there are solutions to help focus your attention.

- Make a specific study goal. Identify exactly what you need to accomplish in the time you have available to study, whether it's 30 minutes or two hours. When you set specific study goals, your attention is directed to achieving concrete, observable results.
  - *I'm going to study Biology 1010 this afternoon.* (poor study goal; not specific)
  - *I need to read Chapter 9 for my Biology 1010 test next week because Dr. M. said there would be test questions on the material. I have 2 hours from 2:30-4:30 p.m. before I have to go to work. I'll read the chapter summary and chapter questions, then I'll take notes on the first 10 pages and review them. (*specific study goal that will keep you focused)

- Location, location, location! Keep your work space clean and organized to minimize distractions. Study in an area similar to the test environment, which means at a desk or table in a quiet area with minimal distractions, not your couch or bed. Avoid cell phones, computer, TV - whatever is not necessary to complete your study goal.
- Take brief breaks to refocus. Take a five minute break and write down all that is on your mind to "download" your distractions so they stop getting in your way. Review your study goal to refocus your attention.
- Evaluate your study session.
  - What things worked well? What things distracted or prevented you from studying?
  - Was your location a good study environment? What needs to change if it wasn't?
  - Did you meet your study goal? What goals do you need for your next study session?

REHEARSAL STUDY STRATEGIES. Rehearsal is the ability to organize and review information in a way that you can truly understand and remember it. Actors rehearse their scripts in varied and deep ways to create award-winning performances. College students must also rehearse information to create learning and good grades.

> Think of rehearsal like a swimming pool with shallow and deep ends. In the shallow end, you get wet but cannot dive or swim well. In the deep water, you can dive and perform more complex swimming

Many students use shallow rehearsal strategies such as verbal repetition and flash cards. You absorb some information (like getting wet in one foot of water), but it is unlikely you learned deeply the more complex information you need to know to do well on tests. Using shallow rehearsal strategies creates the "*Six Hour D"* when you study for many hours but still do poorly on a test because. Using the rehearsal strategies that follow will improve your learning and memory.

Summarize lecture notes. Creating summaries is a very powerful memory tool. Within 24-48 hours of each lecture, review your notes and write a brief summary of the main ideas you learned. Imagine telling a friend what you learned in class, because the key is to put all of the information into your own words. Summaries can be paragraphs, outlines, or even diagrams or charts.

Biology 2420 Human Anatomy: a basic diagram of how blood is oxygenated
Sociology 1010: a chart comparing the four types of family systems
Psychology 1010: a paragraph describing the origins of behavioral psychology

Create visual organizers. Organizing information visually makes a strong impression that you remember longer. Visual organizers such as charts allow you to easily see relationships among concepts. Diagrams and concept maps are invaluable when you must learn a process or a cycle (e.g., how rocks are formed; the sleep cycle). For examples of visual organizers, refer to the Creating Study Guides Idea Sheet at *www.usu.edu/arc/idea_sheets/pdf/creating_stdy_guides.pdf*

Prepare your own Question/Answer Study Guide[1]. Not all professors provide study guides, so create your own. Using lecture notes and assigned reading, create multiple choice and short answer questions. Create "deep water" questions that start with *how* and *why* and are similar to the type your professor asks on tests.

Use Reciprocal Questioning[1]. This strategy requires a study partner. The "teacher" asks a question from your study guide, lecture notes, or text book. The "student" answers. If the student answers incorrectly, the teacher provides hints to guide him/her to the correct answer. Reciprocal Questioning is an excellent rehearsal strategy because it requires you to actively learn by using multiple senses, monitoring your learning, and using your own words. All of these activities result in understanding and remembering more information.

Make concept cards[1]. This is a flash card on steroids! Using a 3x5 card:

1. Write the key concept that you want to learn on the front of the card.
2. Write the organizing term or phrase in the top right-hand corner. The organizing term is the category under which the key concept is grouped.
3. On the back of the card, write the information you want to learn about the concept – in your own words. Use pictures and diagrams to make the information easier to remember.

Front of Concept Card

Digestive System (stomach)
organizing term

Gastric Juice
concept

Chapter 22 – p. 491
where info. is in textbook

Back of Concept Card: Which example would be more effective in helping you remember?

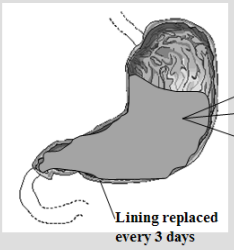
1

Def. A digestive fluid that mixes with food; secreted by the cells that line the inside of the stomach.

- consists of strong acid, digestive enzymes, and mucus; acid is actually hydrochloric acid; very concentrated; also contains pepsin that helps digest proteins;
- protective coating of mucus keeps acid in gastric juice from destroying stomach; timing also a factor; only released when food is in stomach
- stomach lining is replaced – once every 3 days!

2

Gastric Juice: a digestive fluid that mixes with food and secreted by cells inside stomach



APM: acid, pepsin, mucous

Develop mnemonics. Mnemonics are memorization techniques that are effective for learning specific bits of information such as terms and names. Mnemonics are not effective for "deep water" learning.

Acronym: An invented combination of letters with each letter acting as a cue to information you need to remember.

FOIL is a math acronym for the procedure for multiplying two binomials. (x + 3)(x + 2) = ?

Multiply the **F**irst terms, then **O**utside terms, **I**nside terms, **L**ast terms.

Acrostic: An invented sentence where the first letter of each word is a cue to information you need to remember.

"*Old Charlie Foster Hates Women Having Dull Clothes"* is an Human Anatomy acrostic for the function of blood.
Oxygen (transport), **C**arbon dioxide (transport), **F**ood, **H**eat, **W**aste, **H**ormones, **D**isease, **C**lotting

Practice chunking. Group information in a meaningful way to reduce the amount you need to store in memory and to make it easier to remember. Phone numbers are an example of chunking. If you only had ten seconds to remember the following information, which line would you rather be tested on?

NB-AUS-U-PB-SFB-I NBA-USU-PBS-FBI

Both lines contain the same letters in the same order, but it is easier to remember the second line. Often it is not your ability but your memorizing strategy that makes the difference.

ONE MORE SECRET FOR LASTING MEMORY… The biggest thief of memory is time, also known as "memory decay". The "spacing effect" prevents memory decay, so eliminate cramming behavior and make the following suggestions your permanent study habits.

- Study for shorter durations over several days. Studying in small sessions increases concentration and strengthens memory. Rather than spending one day studying for 3 to 5 hours, study each subject for 20 to 30 minutes for five days.

- Studying across subjects helps to increase memory. For example, study for your math class in the morning, history in the afternoon, and back to math at night. This gives your memory more time to download the information for permanent storage.

[1] Holschuh, J.P. and Nist, S.L. Effective College Learning, 2007. Pearson Longman, NY.