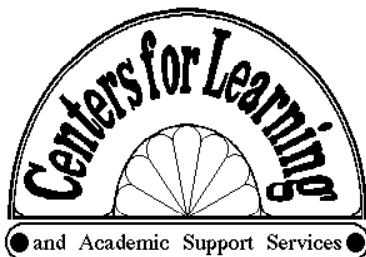


Memory Strategies

Okay, okay...I know it's 'i' before 'e', except after 'c' or when..No,no,no that's not right, is it 'i' before 'e' or sometimes 'y'???



Presented by The Advising Center
Southwick 308, x2936 &
O'Leary 3rd floor, x2948

HOW DO WE REMEMBER?

More than just storage - Scientists who study thought processes believe that we remember in stages, and that our memory is not simply a huge storage tank filled with information. In fact, millions of bits of data enter our brains every second, yet we can recall little of what has occurred. Every day we forget nearly half of what we read. After one week, we can recall less than 30% of what we've read.

The Stages of Remembering:

- Encoding
- Storage
- Retrieval

Encoding - Our senses take in stimuli from all around us all the time - sights, sounds, smells, tastes, and touches - then our mind sorts through all this information and chooses what is important and what isn't.

Exercise - Think about all the sounds you're hearing, what you're smelling, etc. as you read this. Think about what things are being ignored, and what you're "concentrating" on. The things we concentrate on are thrown into our short-term memory.

Why is it...? Did you ever wonder why your Social Security Number has "chunks" of numbers separated by dashes and isn't simply one long nine digit number? The reason for doing this is because our brain can remember small groups of numbers easier than one large group.

Exercise - Think about this number: 51732984. See if you can remember it one minute from now. Now read the numbers as groups; for example: fifty-one, seventy-three, twenty-nine, eighty-four. Do the groups seem easier to remember? The way we encode information determines how well we store it.

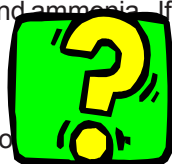
Recoding - Say you're at the grocery store and you've forgotten your list of things to buy. You call home and ask your housemate to read the items from the list. He/She rattles off: eggs, carrots, bleach, oranges, laundry detergent, milk, onions, yogurt, dish soap, cheese, plums, and ammonia. If the list were "recoded", you could sort these items into more easily remembered categories:

Dairy

Eggs, Milk, Cheese,
Yogurt

Produce

Carrots, Onions,
Oranges, Plums



Cleaning Supplies

Laundry Detergent,
Dish Soap, Ammonia

Taken from Study and Thinking Skills in College by Kathleen T. McWhorter

FROM SHORT-TERM TO LONG-TERM

Storing What You Need - Everything we concentrate on will be encoded into our short-term memory. Unfortunately, without transfer to our long-term memory, these short-term memories will be lost forever. To keep this from happening we can use three techniques:

- 1) Rote Learning
- 2) Recoding
- 3) Rehearsal

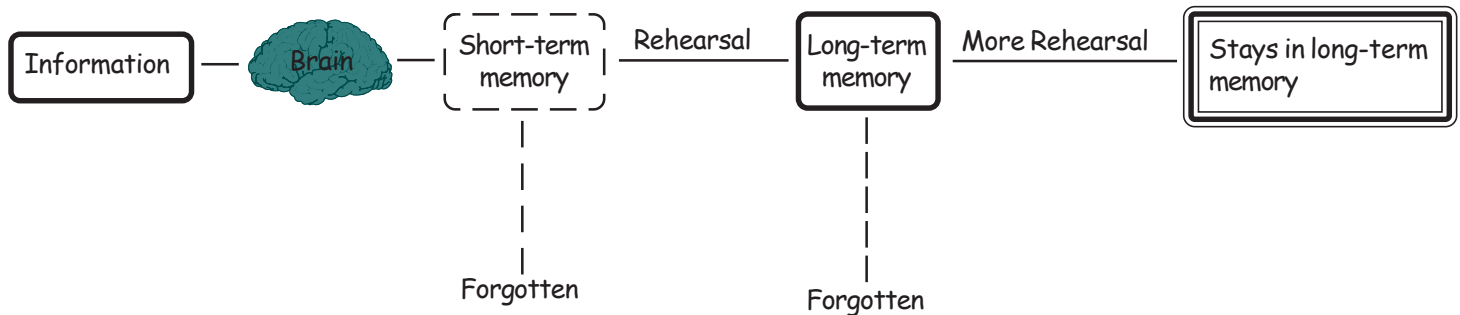


Rote Learning - is the traditional form of learning; a repetition of material over and over, like the spelling or definition of a word or repeating a formula. This is the least effective way of memorization.

Recoding - is the reorganizing of information into categories, like the example of regrouping the grocery list into dairy, produce, and cleaning supplies. Outlines, diagrams, and summaries are ways of recoding that reorganize material into memorable "groups".

Rehearsal - uses both rote learning and recoding for the most effective way of transferring information into the *long-term memory*. Psychologists believe that information that is rehearsed well is actually imprinted onto the

cerebrum of our brains in what they call a neural trace. Without this rehearsal however, information can return back into the short-term memory where it is forgotten. The graph below shows how scientists believe the brain remembers.



Rehearsal to Keep Information in Long-Term Memory

- Study for short periods, (25-50 minutes) with short breaks in between.
- Study dissimilar subjects in succession to avoid confusion.
- Review material a couple of days after rehearsal and at least 3 times before examination.
- Use the SQ3R system of concentrated reading - Survey - Question - Read - Recite - Review.
- Some forgetting is unavoidable - **BUT!** - Reviewing makes relearning old material much easier!

Taken from [Integrating College Study Skills](#) by Peter Elias Sotiriou

MNEMONIC STRATEGIES

1. Mnemonic Sentences

To remember the order or sequence of something, invent a sentence in which the first letters of each word match the first letters of the words you are trying to remember. Music students trying to remember the notes of the treble clef know them as E G B D F. To remember the notes, they think of the phrase: **Every Good Boy Deserves Fudge**. Sometimes sillier sentences are easier to remember!



2. Acronyms

Acronyms are words formed by the first letters of each word in a group of words. The word L A S E R is an acronym for:



Light Amplification by Stimulated Emission of Radiation

You can invent your own acronyms to help you remember terms or phrases.

3. Abbreviations

Abbreviations are made up of the first letter of the words in a phrase, but they don't spell a word. The letters A. S. A. P. are an abbreviation for the term: as soon as possible.

4. Gimmicks

Gimmicks are word games or short phrases you can use to help trigger a memory. For example, if you have trouble remembering the difference between **principal** the person and **principle** the moral standard, you can think of a **principal** as a person who is your **pal**. Songs or rhymes are other gimmicks you can use to remember information. A popular rhyme for remembering the number of days in each month is:

Thirty days hath September,
April, June and November.
All the rest have thirty-one;

Except for February,
Which has twenty-eight.

To remember the rules for different word spellings, (like *friend* and *receive*) many people say this rhyme:

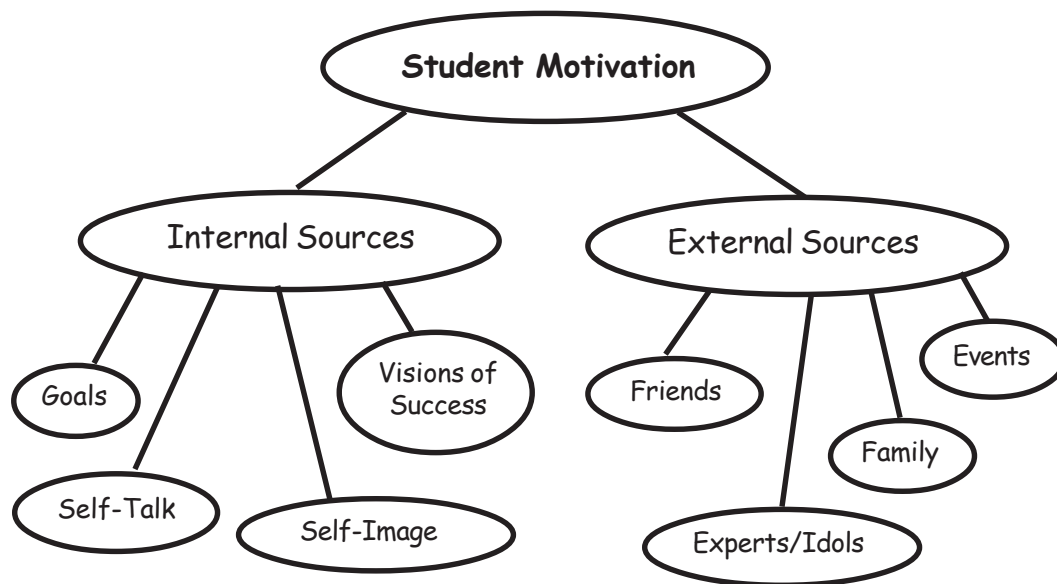
It's *i* before *e*,
Except after *c*,
Or when pronounced like *a*,
As in neighbor or weigh

Taken from [Integrating College Study Skills](#) by Peter Elias Sotiriou

5. Mind Mapping

Mind mapping is fun, quick, and gives your brain a way to hook together several related pieces of material. It is very helpful when you need to learn how several pieces of material are related. To map, start by graphing out pieces of information on paper, using lines or arrows to link them to the central idea. Maps can be different shapes, like the spokes of a wheel or branches of a tree. See the sample of a mind -map shown below.

Source of Student Motivation



6. Visual Associations

Visualization is attaching something you need to learn to something you can visualize in your mind. This strategy is very helpful when trying to remember unrelated pieces of information. An example of visual association is the exercise attached: One is a pen, two is a swan, three is buns, etc.

Taken from [The Successful Student's Guide to College](#) by Amos & Downes

USING VISUAL ASSOCIATION

If you have a list of terms or phrases to remember, try using **visual association** to learn them. Look at the Visual Association exercise sheet and notice how the numbers 1 through 10 each resemble different pictures.

Try the Visual Association exercise!

Here's an example of how the visual association exercise works. Suppose you were asked to learn:

VISUAL ASSOCIATION EXERCISE

Number 1 - Pen



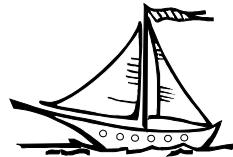
Number 2 - Swan



Number 3 - Buns



Number 4 - Sailboat



Number 5 - Hook



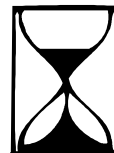
Number 6 - Golf Club



Number 7 - Cliff



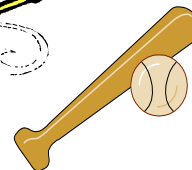
Number 8 - Hourglass



Number 9 - Pipe



Number 10 - Ball and Bat



"Five Ways to Get the Most Out of Study Time"

1. **Don't get too comfortable**
2. **Study difficult or "boring" subjects first**
3. **Avoid scheduling marathon study sessions**
4. **Avoid noise distractions**
5. **Use waiting time**



For the first item, "**Don't get too comfortable**", try to associate the number "1" with a **pen** and then create an scene in your mind about how sitting on the point of a **pen** would not be very **comfortable**. Absurd or silly images are okay, they're easier to remember!

For the second item, "**Study difficult or 'boring' subjects first**", visualize the swan and imagine that you are a swan trying to do a swan dive, thinking about how difficult that would be.

"**Avoid scheduling marathon study sessions**" is the third item on the list. Imagine yourself eating a pack-age of cinnamon buns and then trying to run the **Boston Marathon**.

Just continue creating images inside your mind. If you have several things to remember, you can categorize and associate color instead. **Be creative!** You will be surprised at your amazing ability to recall all the items on your list!



12 MEMORY TECHNIQUES



1. **Learn from the general to the specific** - Start by looking at a broad outline of the material before you concentrate on the details.
2. **Make it meaningful** - Relate what you're studying to your goals; you will learn more effectively if it has meaning.
3. **Create associations** - Relate new material to something you're already familiar with.
4. **Learn it once, actively** - Keep your body in an alert state - try standing or walking as you recite material out loud. Use your body's energy to learn new information. Stay relaxed, but in an alert state.
5. **Create Pictures** - Take out the colored pencils and make drawings of concepts to help your mind visualize what's really going on. Have fun with it and let it relax you.



6. **Recite, Repeat, Rewrite** - To prove to yourself you can remember something, recite it aloud, repeat it often and keep writing it, using multiple senses to learn with different parts of the brain.
7. **Go to Sleep!** - Researchers have found that sleeping immediately after studying stimulates the sub-conscious thought processes to continue to rehearse material.
8. **Overlearn** - Learning more than you have to will make you more confident and relaxed about the material, instead of studying "just enough".
9. **Be Aware of Your Attitude** - a negative attitude about a subject may hinder the way you remember the material. A self-defeating attitude can be overcome by remembering that difficult or boring courses will be beneficial to your field of study.

10. Distribute Learning - *Marathon study sessions are not effective!*

Divide your study time into smaller blocks of 30 to 50 minutes for each subject, with 5 minute breaks in between to relax and absorb the material.

11. Remember Something Else - If you're "stuck" during an exam and can't remember a specific detail, try to remember a related detail. Often, "brainstorming" about related material can trigger your brain to remember what you couldn't before.

12. Combine Different Techniques - Try a few of these techniques and find the ones that work best for you. Apply them to your studying and memorization of new material.

Adapted from Becoming a Master Student by David B. Ellis