

MEMORIZATION TECHNIQUES

Memory, once created, can be an elusive thing. Assuming you have had more than one phone number, what was your first phone number that you learned? Can you still rattle it off without hesitation? How is it you that you forgot it? Once upon a time, you knew it as well as your ABCs.

Did you know your phone number as well as your ABCs? Both were part of your inventory of actual knowledge.¹ Both were so well known as to be susceptible to self initiated recall as opposed to being dependent upon external prompts and being merely recognizable. Often, memory is a use-it-or-lose-it thing. Also, quite likely it was much easier to learn your phone number than it was to learn you ABCs, in part because your ABC teachers strove for loooong term memory and you merely wanted long-term memory of your phone number.

With respect to the law material I, of course, believe you should establish loooong term memory, but I understand you may seek no more than long-term memory. Short-term memory typically proves inefficient in courses that use comprehensive exams. Also, I can assure you, based on my experience with thousands of students, that short-term memory is likely to generate *insufficiently* self-initiated recall to achieve the course grade you desire.²

By no means am I an expert on developing and sustaining memory, but I do have a moderate exposure to the required skill sets. (Accordingly, I invite and welcome suggestions to improve this document.) A few lead off comments are in order. These are lead off comments because you can not change these, you can merely work around them.

- [1] Some items will be easy to learn and other items will be difficult.
- [2] Sometimes, but not always, this difference in ease and difficulty is genetic and/or reflects hardwiring in your brain due to prior experience.
- [3] Your ability to create a relevant context will aid your development of memory.
- [4] Ease of committing to memory is reflected by the frequency characteristics of required repetitions.

¹ **Knowledge** exists along a continuum. The continuum of knowledge the law uses has actual knowledge at one end and reason to know at the other end, with receipt of notice in between.

Actual knowledge is subjective, while both receipt of notice and reason to know are objective. Subjective exists within you. Objective is what a reasonable third person can see. For example, when others see you handed a copy of a document, you have **receipt of notice** of that document. (Assuming, of course, you can read the language in which the document is written.) **Reason to know** is objective because it springs from our experiences. Not all actual knowledge is equal. Some actual knowledge is so well known that you can self-initiate recall. In contrast, you may be only able to retrieve other actual knowledge when externally prompted; sometimes yielding no more than mere recognition. Lastly, some knowledge is in long-term memory (e.g., months can pass with no decay of recall) while other knowledge is in short-term memory (e.g., decays to mere recognition or to **ignorance** within hours).

² Grades are a short-term goal rather than a long-term goal. Appropriately focused, a college student does not have grades as a goal at all. Rather than a goal, grades are metric of success with incremental steps on that journey of 1,000 miles. Grades objectively indicate whether the reasonably expected uptake of information has occurred coupled with an ability to download that information in relevant contexts. The long-term goal is life long learning in support of critical thinking. Towards that end, I suggest you consult the **Reasonable Expectations** and the **Critical Thinking** handouts.

<http://cba.unomaha.edu/faculty/mohara/web/ReasonableExpectations06a.pdf>

<http://cba.unomaha.edu/faculty/mohara/web/CriticalThinking06a.pdf>

[1] Some items will be easy to learn and other items will be difficult.

Rarely is it impossible for a person to memorize --a-- particular thing. However, for all individuals memorizing can be extraordinarily difficult with respect to *some* things. For example, I have great difficulty memorizing names of people. When I teach a dog class, I always learn the dog's name before the owner's even though I use the owner's name more than the dog's. In stark contrast, my mother's mother was renowned for her ability to walk through a room containing over 1,000 people exchanging chitchat with strangers and then, two months later, at a chance meeting, was able to immediately recall not only a stranger's name but also the names of all of the children. My wife's family has a facility for music recall; while my music facility never has exceeded recognition.

[2] Sometimes, but not always, this difference in ease and difficulty is genetic and/or reflects hardwiring in your brain due to prior experience.

Songbirds are born with the genetic instinct to sing, but which song? The bird's genetic impulse is confined to the species' song list, with each sub-species distinguished by the differences in their songs. If a member of one sub-species never hears "its" sub-species' song during a critical period of brain development, then depending upon whether that bird heard the song of a related sub-species or did not hear any related sub-species' song, then that bird will sing the song of the related sub-species or will sing a unique blend of the songs of *all* of the related sub-species. The maximum range of a human being's hearing and speech *abilities* reflect similar imprinting effects.

[3] Your ability to create a relevant context will aid the development of memory.

Random items are far more difficult for everyone to memorize. Organized items are far easier for everyone to memorize. However, what is "organized" often is idiosyncratic. Part of the "trick" of memorizing items is finding the organization structure that makes memorizing as easy as possible for you personally. For example, see section #4[F] below on Mnemonics.

[4] Ease of committing to memory is reflected by the frequency characteristics of required repetitions.

To memorize, except for those with a photographic memory, repetition is required.³ How many repetitions, how closely spaced in time, how isolated from other stimuli, etc., all vary with the ease of memorization. There is one mistake made by students that is most frequent and largest. Students make the mistake of believing they have achieved self-initiated recall of actual knowledge when they only have achieved externally-prompted recognition of actual knowledge. As a consequence, a student terminates repetition too soon.

³ You should not necessarily desire "photographic memory" since, most frequently, it is literally just that: a static photograph. Most often, photographic memory can not interact fully with a continually changing context of use. The purpose of knowledge is to guide future decisions. Often, a person with a photographic memory can not extrapolate to the non-identical future context.

Now let's examine some memorization techniques.

- [A] Use one sequence.
- [B] Use your fingers.
- [C] Repeat your repetitions.
- [D] Stop lying to yourself.
- [E] Avenues of input matter.
- [F] Mnemonics.
- [G] Increase the complexity.

[A] Use one sequence.

The ABCs that you know so well have 26 letters. Can you recite them in reverse order as swiftly as you can recite them forwards? Almost certainly, "No." Would you have learned your ABCs faster if you had been required to sing them forward and then sing them backward and then sing them odd and even? Again, almost certainly, "No." *If you use multiple sequences of a string of elements, then you are increasing the number of things you must memorize.* Use one sequence of the elements. In addition to making the initial memorization task easier, any missing element will be easier to spot when you use the memory you do have. (But see, [G] below on "Increase the complexity.")

[B] Use your fingers.

Approximately 25% of your brain activity is devoted to your fingers. Memory, in your brain, occupies a physical space. When you use your fingers you cause physical spaces in your brain to activate. If, when you are attempting to memorize, you *touch your thumb to your fingers in sequence as you go through the elements in the set* you are seeking to memorize, then you will tend to store that memory in conjunction with that physical motion. That way, when you seek to retrieve the memory you will be more likely to trigger activity in that part of the brain where the memory is stored. Whether you should use the fingers on your right hand (left brain) or your left hand (right brain) can be idiosyncratic. Experiment using both your right and left hands.

[C] Repeat your repetitions.

There is no getting around it: you need to repeat your repetitions. Once is very unlikely to do it, unless the thing you are attempting to memorize is within that set of items for which you have a heightened ability due to genetics or imprinting. Be sure to note what types of items you learn easily and swiftly, as well as those that are difficult for you. Allocate your time and efforts accordingly. This way you can avoid the nasty surprise of objectively detected ignorance on an exam.

[D] Stop lying to yourself.

We all like to think of ourselves as better than we, in fact, are. We all know this and we all deny this: hence, we lie to ourselves. In many instances, this innate tendency is a necessary ego defense mechanism given the fundamental flaws that we all routinely present to the world. However, when it comes to actually accomplishing memorization, this innate tendency prevents us from reaching success just when memorization finally is within our grasp. With respect to memorization, how do we lie to ourselves? In our internal dialog, we will pretend that we know without requiring ourselves to unambiguously demonstrate that knowledge. We fill in blanks and swiftly skip over our weaknesses. How can you stop this? Easy, *act like an insane person*

and talk out loud to yourself. Rather than reciting the elements of a contract to yourself merely in your internal dialog, force yourself to say the elements out loud. Once you start talking out loud, you will be surprised at how often you had been lying to yourself.

[E] Avenues of input matter.

Every person *can* learn in every manner, but not as easily. Every person learns *best* in a different manner. Actively search for and identify *your preferred method*.⁴

The avenue of information delivery (e.g., sight, sound, smell, touch, action, etc.) influences the amount of information uptake. Do you personally learn more by reading or by listening?; by thinking or by doing?; by speaking or by listening? Each person is unique. *The number of repetitions required to create memory is minimized when the avenue of information delivery matches that person's preferred avenue*, and the required repetitions increase otherwise. You may have noticed that flash cards work very well for some folks and merely annoy others. Identify your best avenue and your weakest avenue. If time is of the essence and you get to select the avenue of input, then use your preferred avenue. On some occasions, time will not be of the essence, in which case you should deliberately use a less preferred avenue. Forcing yourself to use a less preferred avenue of input will strengthen your memorization skills, and will be very helpful when you are required to memorize via those less preferred avenues.

[F] Mnemonics.

In mnemonics the person associates easily remembered items with hard to remember items. For example, to remember the names of the five Great Lakes of the USA and Canada, use the word HOMES to signify Huron, Ontario, Michigan, Erie, and Superior. Mnemonics works very well for some students and/or some subjects; or mnemonics may be a hindrance to creating memory.⁵ *In my experience, you will benefit most from mnemonics if you, personally, think in pictures.* I do not.

[G] Increase the complexity.

Once you have mastered the material, you can deepen and strengthen your knowledge by breaking rule [A]. Try it. Recite your ABCs backwards. Do it twice. Then recite your ABCs forward. You will notice the singsong has decreased and your thoughts during the forward recitation are different in content and scope that before.

⁴ For a simple web test of preferred learning styles visit <http://www2.ncsu.edu:8010/unity/lockers/users/f/felder/public/ILSdir/ilsweb.html>

⁵ Note that the mnemonic you use may not convey all of the information you need to memorize. For example, from west to east what are the names of the five Great Lakes? SMHEO. East to west? OEHSM. North to south? SHMOE. South to north? EMHOS. Big to small? Small to big? Mnemonic? But, recall [A]: Use one sequence. Recall footnote 3.