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# STUDY

**If I'm going to be a lifelong student,  
how can I optimize my study time?**

**Is cramming the best way to learn something?**

**How do I become a better note-taker?**

One Friday night, after a very busy workweek, I received a call. The person on the other end of the phone told me that we had a common friend and that this friend had suggested he reach out to me.

"Sure, how can I help you?" I said.

For the first 30 seconds of our call, this man had seemed entirely calm. But with that question, his voice became more animated.

"You've gotta help me, please. My speaker can't make it out tomorrow because of an emergency. He was supposed to give our

keynote."

I told him that I was sorry to hear about his predicament but that I didn't take speaking assignments on the spur of the moment. I usually booked speaking gigs six months in advance, and I always gave myself time to prepare for them.

That didn't deter this caller. He said that our mutual friend had raved about speeches he'd seen me give and that if anyone could deliver a strong presentation on short notice it was me.

"Please save me," he said with even more emotion in his voice.

This guy's plight was starting to get to me. I happened to be free on Saturday, and the conference he was throwing was in Manhattan, where I lived. I decided to ask him the topic of the keynote. When he told me, I stared at the phone as though the caller were speaking to me in an alien language.

"Why are you calling me about this?" I said. "I know nothing about that topic."

"Yes, but the speaker who canceled has a book."

"I'm not sure how that matters."

The caller responded so quickly that it was clear he'd already prepared this argument. "I've heard you're a speed reader. I was thinking you could come in a little early, study the book, and then give the speech."

This scenario was so completely outlandish that I did the only thing I could do under the circumstances: I took the engagement. How could I turn down a challenge like that? We agreed on the particulars, he told me a bit more about the audience to whom I'd be speaking, and then I hung up, asking myself what just happened.



I got to the conference center the next morning at 10 A.M. The man who'd called the night before handed me a copy of the book and set me up in a quiet room. I was to deliver the keynote at 1 P.M. Over the next three hours, I read the book, made a ton of notes, and laid out the basic parameters of the presentation I was about to give. I then went up on stage and gave a keynote that turned out to be the most highly rated talk of the conference. I was exhausted, but I have to admit that the entire experience was quite the rush.

You are unlikely to ever find yourself in a situation like this. But as outrageous as the caller's request had been, I knew I could do this, because with competence comes confidence. I'm not saying this to impress you; I'm saying it to express to you what's possible. To illustrate to you how any sense of constraint fades when you've learned how to absorb a subject in a sitting, remember what you've learned, have the ability to highlight the most essential points, and have an understanding of how people learn—in other words, many of the things we're discussing in this book.

I never would have been able to deliver that particular keynote if I hadn't been a quick study. And just like the other skills we've been addressing here, this isn't an ability you either do or don't have. Instead, it's an ability you've either cultivated or haven't. You can learn how to unlimit your studies. And when you do, it'll be a superpower you'll employ the rest of your life.

### **KWIK START**

Think about a topic or subject you'd like to learn this month. How would you go about studying this topic? What's your current approach or process?

## **THE FOUR LEVELS OF COMPETENCE**

Since the sixties, psychologists have noted that there are four levels of competence or learning. The first, known as “unconscious incompetence,” is when you don't know what you don't know. For example, you might not even be aware of the fact that something like speed-reading exists. So, you're also not aware that you're currently not capable of doing it.

In the next level, known as “conscious incompetence,” you're aware of what you don't know. For example, you're aware that people have learned to read and comprehend much faster through speed-reading techniques, but you yourself have not had any training in this area, nor do you understand what tools are necessary to become a speed-reader.

The third level is “conscious competence.” What this means is that you're aware of a skill and have the capacity to perform that skill, but only when you actively put your mind to it. You can do it, but it takes work. Continuing with speed-reading, this would be akin to speed-reading successfully, but only when you focus on employing a speed-reading technique. Similarly at this stage for other activities, like typing or driving, you can do it, but it requires your conscious attention.



The fourth level—the one any lifelong learner is seeking—is “unconscious competence.” In this case, you know how to perform a skill, and it’s second nature to you. With speed-reading, you would reach the point of unconscious competence when this simply becomes the way you read. You’re not *making* yourself read faster; you’re just doing so. You are typing or driving without your deliberate attention.

Now the key to get from conscious competence to unconscious competence is obvious. It’s practice. Practice makes progress.

While the model psychologists use ends there, I would add a fifth level: true mastery. This is a step beyond unconscious competence to where it’s second nature to perform a skill at an elite level. This is the level of being limitless. And if you’re going to be a master, you’re going to need to study like a superhero.

## HOW TO STUDY BETTER

Why are most of us restrained in our ability to study? Most people do not know how to study effectively, because they were never taught. Many people naturally assume they already know how to learn. The challenge is that most of the techniques you use now are old and ineffective. Many of them date back hundreds of years.

We now live in a highly competitive information age where information is everywhere. Yet we are still using the same methods to absorb and process it all. Today, our requirements for learning are much different. But most of us were taught that studying was all about reviewing material over and over and over so we could spit it back out during a test. We’re going to talk in a moment

about why cramming is such a bad idea but suffice it to say, the process is far from optimal.

The most successful people in the world are lifelong students. That means they’re continuously learning new skills, keeping up with the latest in their chosen fields, and staying apprised of what other fields might be able to offer to them. As we discussed earlier in this book, there are enormous benefits to spending a lifetime learning, so if you’re going to approach your goal of being a limitless learner, you’re going to want to make study a part of your entire life.

This is something that James, one of our students, discovered—although it took a little time. James struggled with his education and, after high school, he spent three years working at a liquor store even though he’d always dreamed of becoming a successful businessman. He realized that, in order to fulfill his dream, he was going to have to go to college but, he told me, “It was like pulling teeth. I eventually got my accounting degree, then got into an accounting firm, and then went into banking. But for the longest time, I couldn’t build up to being a wealth manager. I got into an analyst position, and that required a lot of learning, a lot of studying, and I was just barely getting by. I had the people skills and I had the discipline, but the studying part was really hard for me. A lot of the designations I have now, I failed the tests a few times before I got those designations. When it was time to take my CFP exam while I was working, it just became so burdensome.”

James was six weeks away from his big test—a test that normally requires 12 weeks of study—when he learned about my speed-reading program. This allowed him to turn the corner, im-



proving his studies, helping him “keep my brain healthy through the whole process of intensively studying,” and providing him with a big boost on the day of the test.

James got his CFP designation, and this allowed him to get a new position where he works directly with clients as a wealth manager. He continues to use his newly refined learning skills while going through the vast number of prospectuses he needs to read and understand.

James could easily have allowed restrictions to stop him in his tracks. Instead, he learned to unlimit his old ways of studying to overcome the obstacle in his career.

## BUT WHAT ABOUT CRAMMING?

The all-nighter is an age-old study tradition that many people continue long after their school days are over. Much of this is due to procrastination and putting off the work that needs to be done for that big test or that big presentation. But many people also believe that cramming is their most effective form of preparation. Chances are good, however, that it is not.

“In reality, cramming is associated with emotional, mental and physical impairments that reduce the body’s ability to cope with its environment,” wrote journalist Ralph Heibutzki in the *Seattle Post-Intelligencer*. He cited a Harvard Medical School study that indicates that cramming leads to many unwanted side-effects, including impaired mental function.<sup>1</sup>

In addition, cramming usually requires forgoing all or at least much of one’s normal amount of sleep, and this can wind up undermining the very purpose of cramming. UCLA professor of

psychiatry Andrew J. Fuligni coauthored a study on cramming and came away with a clear connection between this by-product of cramming and the expected results. “No one is suggesting that students shouldn’t study,” he said, “but an adequate amount of sleep is also critical for academic success. These results are consistent with emerging research suggesting that sleep deprivation impedes learning.”<sup>2</sup>

In working with students of all ages, I have learned that cramming is rarely as useful as we would like it to be. Concentrating on one subject for many, many hours makes it less likely that you’re going to retain the information. Earlier, we talked about the effect of primacy and recency on memory. If you tend to remember the first thing and the most recent thing best, cramming a huge amount of information between that first and most recent thing is only going to lead to your having more things that you forget. We’ll talk about a better alternative in a moment.

Whether you’re a high school junior taking five AP classes with the goal of gaining acceptance to a top college or a corporate head faced with the need to stay on top of your rapidly changing industry, you’re likely facing two challenges simultaneously: a mountain of information to scale, and little time in which to scale it. If this is you, you’re going to want to make sure you’re studying as efficiently as you can. Over my years of helping people to learn faster and study better, here are seven of my favorite simple habits to unlimit your studies.

### Habit 1: Employ Active Recall

Active recall is a process through which you review material and then immediately check to determine how much of it you’ve re-



membered. This allows you to draw the distinction between simple recognition (familiarity with the words on the page) and recollection (making the material an active part of your memory).

“Most students do not realize how important it is to force themselves to recall,” writes neurologist Dr. William Klemm of Texas A&M University. “In part, this is because they are conditioned by multiple-choice tests to recall passively, that is recognize when a correct answer is presented, as opposed to generating the correct answer in the first place. Studies of student learning practices reveal how important to memory formation it is to retrieve information you are trying to memorize.”<sup>3</sup>

To employ active recall, do this:

- Review the material you are studying.
- Then close the book, turn off the video or lecture, and write down or recite everything you remember from what you just reviewed.
- Now, look at the material again. How much did you remember?

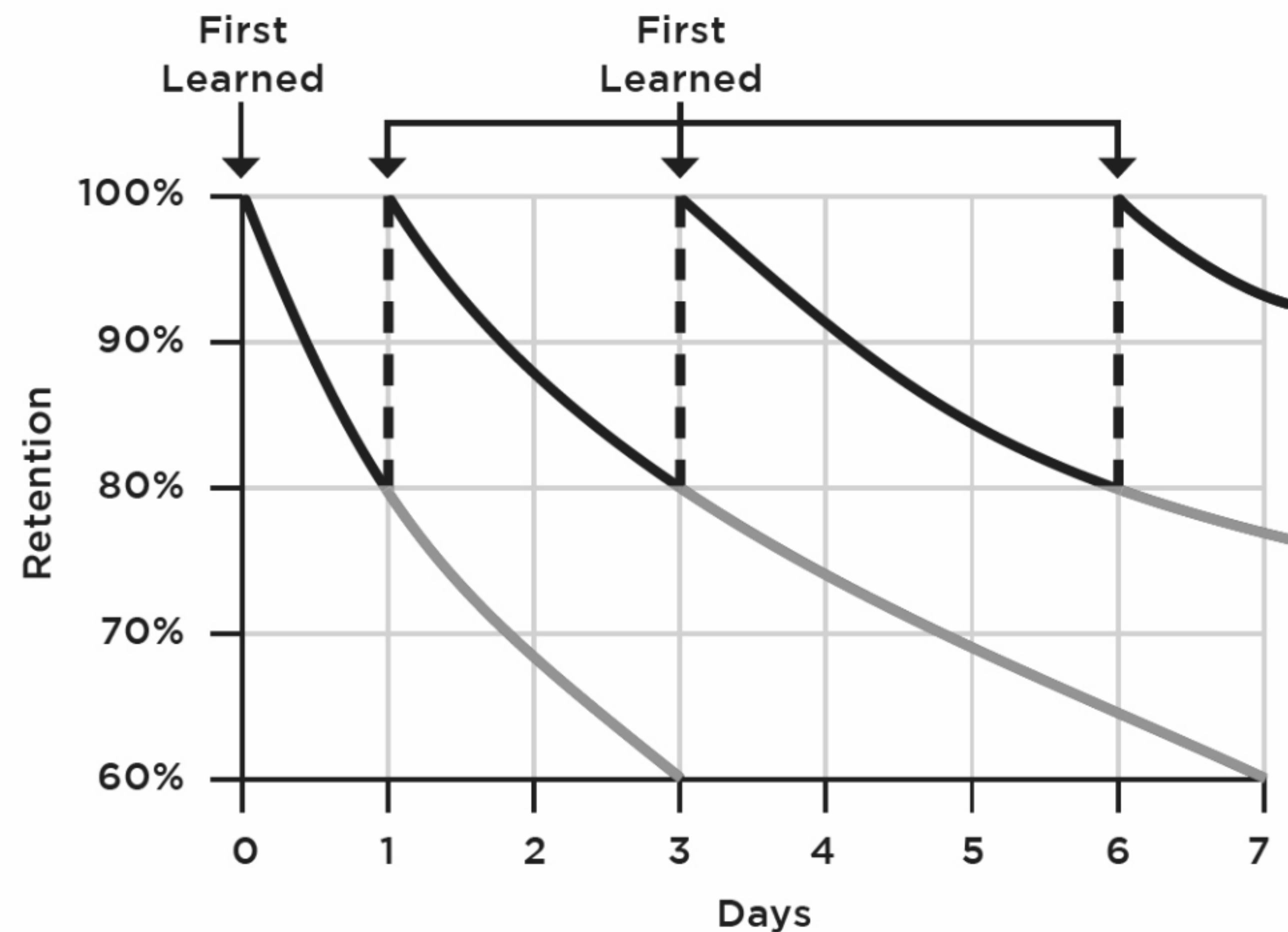
Make sure you have enough study time to allow yourself to go through this process multiple times. As Klemm points out, the studies showed that “optimal learning occurred when an initial learning session included repeated study and forced-recall testing of all items at least four times in a row.”<sup>4</sup> This leads me to the next important habit to adopt.

## Habit 2: Employ Spaced Repetition

As discussed earlier in this chapter, cramming has many downsides. While it is natural to procrastinate, leaving yourself in situations where you need to study a tremendous amount of material all at once makes it likely that you aren’t going to learn that material at all. The reason is that trying to work that way puts us in direct opposition to the way our brains work.

Alternatively, if you space out your reviews of the material, focusing more heavily on information that you haven’t retained in the past, you’re using your brain to the best of its abilities. “Spaced repetition is simple but highly effective because it deliberately hacks the way your brain works,” agrees James Gupta, CEO of the online learning platform Synap. “It forces learning to be effortful and, like muscles, the brain responds to that stimulus by strengthening the connections between nerve cells. By spacing the intervals out, you’re further exercising these connections each time. It produces long-term, durable retention of knowledge and, in my experience, once people start using it, they swear by it.”<sup>5</sup>





Spaced repetition seems to work most effectively when you can review the material at similar intervals. This is why it's important to give yourself enough time. Perhaps you perform the review once in the morning and again right before dinner for four days in a row, and then move on to other material you need to study at similar intervals. Use this technique in concert with active recall. Review the material, test yourself on what you remember, then take a break before coming back to this particular material.

### Habit 3: Manage the State You're In

As we talked about earlier in this book, the state you're in when

you perform any activity will have the greatest impact on your success. For example, if you had a really bad day and were asked to give a presentation for your job or take a test, you most likely would not perform to the best of your ability. This is because your state of mind did not promote optimal performance. On the other hand, if you're feeling great, when the same opportunity arises, you would definitely produce better results. The more positive and resourceful your state, the greater the results you'll produce. Studying is no different.

Your posture also controls the state of your mind. Sit as if you're about to learn the most crucial life-changing information. Did you just have to move? If you did, then notice how you feel more focused after you've changed your posture. When you sit straight, it also facilitates breathing and the circulation of necessary oxygen to your brain and the rest of your body. If you are slumped over, it could stifle the breathing process and make you tired.

#### KWIK START

While you are sitting in a chair, slump over, look down, take short breaths, and put a frown on your face. Do this now. How motivated do you feel to achieve success? How productive do you think you are in this state? This is the posture a lot of students take while studying. Is it any wonder they dislike studying and have to work hard to achieve bare minimum results? Now sit up straight and smile. How much better do you feel?



#### Habit 4: Use Your Sense of Smell

I'm sure something like this has happened to you: You walk into a room and discover the air filled with a particular scent. Maybe it's the smell of a specific spice baking in the oven. That scent immediately sends you back to a day with a childhood friend when she made a joke that was so funny that milk came out of your nose. Why would the smell of that spice trigger that memory? Because that smell was in the air when the event that you're remembering happened, and smells are especially effective at bringing memories to the forefront of our brains. The scent of rosemary has been shown to improve memory. Peppermint and lemon promotes concentration.

"The answer is likely due to brain anatomy," writes Jordan Gaines Lewis, postdoctoral researcher at Penn State College of Medicine. "Incoming smells are first processed by the olfactory bulb, which starts inside the nose and runs along the bottom of the brain. The olfactory bulb has direct connections to two brain areas that are strongly implicated in emotion and memory: the amygdala and hippocampus. Interestingly, visual, auditory (sound), and tactile (touch) information do not pass through these brain areas. This may be why olfaction, more than any other sense, is so successful at triggering emotions and memories."<sup>6</sup>

What this shows us is that smell is an enormously important, yet underused, memory tool. If a particular scent can rocket us back to our childhoods, a different scent can be used to accelerate our recall. If you're studying for a big test, put a bit of a particular essential oil on your wrist while you're studying and then make

sure you do the same thing before you take the test. If you do the same thing in preparing for a big meeting, the results should be similar. Obviously, you want to take other people into consideration, so you don't want to douse yourself with the scent, but just a touch is enough to heighten your recall.

#### Habit 5: Music for the Mind

Think about how you did some of your earliest learning. Did you, like so many people, memorize the alphabet through a song? Or perhaps you know how a bill gets through Congress because *Schoolhouse Rock* sang it to you. Parents have probably been teaching toddlers basic concepts through music for as long as music has been around. They do it because it works, and it works because there is strong science behind it.

Numerous studies link music to learning. The arousal-and-mood hypothesis, introduced by Dr. E. Glenn Schellenberg, identifies a connection between music and mood and the subsequent connection between mood and learning, suggesting that music can put us in conditions that improve our ability to learn.<sup>7</sup>

Baroque music seems to have some particularly valuable qualities. "Music stabilizes mental, physical and emotional rhythms to attain a state of deep concentration and focus in which large amounts of content information can be processed and learned," states music and learning expert Chris Boyd Brewer. "Baroque music, such as that composed by Bach, Handel or Telemann that is 50 to 80 beats per minute creates an atmosphere of focus that leads students into deep concentration in the alpha brain wave state. Learning vocabulary, memorizing facts, or reading to this music is highly effective."<sup>8</sup>



There's no similar evidence that the results would be the same with, say, rap or K-pop, but because one's reaction to music is such a personal thing, it's possible that this music would work for you as well. But since streaming music is so ubiquitous, I'd recommend adding a baroque playlist as background to your study sessions. Amazon Music, Apple Music, and Spotify all have baroque playlists and, if you wanted to explore further, each have classical music playlists (comprised largely of baroque music) that have been specifically compiled for the purpose of studying.

### Habit 6: Listen with Your Whole Brain

If you are going to unlimit your learning, you're going to want to make sure your listening skills are fully tuned up. There's a very strong connection between listening and learning, and more than a quarter of us are auditory learners, meaning that the primary way in which we learn is through hearing something.<sup>9</sup>

Listening is critical to learning, and we spend a large percentage of our waking time listening. But most of us are not particularly good at it. "Plenty of studies examine this phenomenon," write Bob Sullivan and Hugh Thompson in their book *The Plateau Effect*. "While listening is the core of most of our communications—the average adult listens nearly twice as much as they talk—most people stink at it. Here's one typical result. Test takers were asked to sit through a 10-minute oral presentation and, later, to describe its content. Half of adults can't do it even moments after the talk, and 48 hours later, fully 75 percent of listeners can't recall the subject matter."<sup>10</sup>

One of the reasons we don't listen well is that we tend not to apply all our brainpower to the exercise. Sullivan and Thompson,

who conducted a study with Carnegie Mellon University on the nature of digital distractions, point out that "the human brain has the capacity to digest as much as 400 words per minute of information. But even a speaker from New York City talks at around 125 words per minute. That means three-quarters of your brain could very well be doing something else while someone is speaking to you."<sup>11</sup>

To help alleviate this problem, I've devised a tool that will help you listen with your whole brain. Just remember the acronym HEAR:

- **H is for Halt:** In all likelihood, as you're listening to someone else speak, there will be other things going on in the same space. Maybe there are people milling about. Maybe your phone is chirping, telling you that you've just received a text. Maybe there's music playing in the room or a television in the background. Meanwhile, you're thinking about your to-do list, your next meeting, or what you're going to have for dinner that night. Do everything you can to tune all of this out and to be completely present with whomever you're listening to. Remember that listening involves more than just the words a person is saying; vocal inflection, body language, facial expressions, and more create additional context and provide additional information. You can absorb all of this only if you halt everything else.
- **E is for Empathy:** If you can imagine yourself in the speaker's shoes, you're likely to learn more from this listening experience than if you do it dispassionately. Trying to understand where the speaker is coming from and why brings additional



substance to what they might be saying and allows you to feel it from their perspective.

- **A is for Anticipate:** Engage in the experience with a sense of anticipation. Remember that learning is state-dependent and that what you can learn from this speaker will become a long-term memory if you attach emotion to it. Your enthusiasm for what you're hearing will greatly increase your potential of truly hearing it.
- **R is for Review:** If you have the opportunity to directly engage with the speaker, do so. Ask clarifying questions or maybe even for a point to be repeated. If you're in the position to take notes, do so. And afterward, reflect on what the speaker said. Paraphrase it in your mind and imagine yourself teaching it to someone else. Doing so will solidify it in your mind.

### Habit 7: Take Note of Taking Notes

Studying under the best conditions will likely improve your retention considerably. And, both in preparation for your studies and in concert with your studies, upgrading your note-taking ability is invaluable.

The ultimate advantage of taking notes is that they customize the information you need to retain to your vocabulary and your mode of thinking. At their best, notes allow you to organize and process information in a way that makes it most likely that you can use this information afterward.

But many people take notes ineffectively. Common pitfalls include concentrating so heavily on writing notes that you're not

actually listening to the information, trying to write down every single thing you hear, and writing notes in such a way that they won't be helpful to you a day later. It's easy to avoid all of these pitfalls once you are aware of them, so let's put a plan together for upgrading your note-taking ability.

First off, be sure that you understand the purpose for taking these notes. For example, the goal of taking notes in a midsemester lecture might be very different from the notes you take in the review class before a big final. Similarly, what you're trying to accomplish with the notes you take in a weekly meeting with your team is likely to be different from the notes you take in the week leading up to a major client presentation.

By being clear on your intention with your notes, you are able to distinguish between information that is relevant to you and information that is not. I have a friend who is a writer and insists on transcribing every interview he does even though it would be more time-efficient to have a transcription service do it for him. The reason, he says, is that by doing it himself he only transcribes the parts of the interview that he knows he's going to be able to use, therefore eliminating the possibility that these quotes will get lost among all the other conversation that might not be relevant to the book he's writing. What he's left with is nearly pure content. Likewise, if you take notes with a goal in mind, every note you take will have relevance.

Once you're clear on your goals, take an active approach to note-taking. Listen with the intention of getting exactly what you need, and write your notes in ways that will benefit your recall later. If you're going to use abbreviations and shortcuts, use



ones that are familiar to you. The last thing you want is for your own notes to be indecipherable to you later.

Equally important is making sure that you use your own words wherever possible. As noted earlier, one of the key pitfalls to effective note-taking is trying to record *everything*. There are two obvious downsides to this. One is that it is impossible to write as quickly as most people speak. On average, people handwrite 10 to 12 words a minute, and the average speaker speaks at around 100 words a minute. Even if you were typing your notes (which I don't recommend; more on this shortly), you'd probably only be able to get down about half of what the speaker was saying.

But there's an even more fundamental downside: If you're copying what someone is saying verbatim, you're probably not processing any of it. That means that, at the most essential moment of learning, you're utilizing most of your brain to the task of taking dictation. When you use your own words in your notes, you begin to process the information, and that greatly enhances learning.

And while we're on the subject of writing, I'd recommend handwriting your notes. Even if you're using a tablet computer to store your notes, use an electronic pen to do so. For one thing, there are readily available programs that can convert your handwriting to text for later organization. But most importantly, writing by hand requires you to start processing the material immediately, and that has proven to be more effective.

"The present research suggests that even when laptops are used solely to take notes, they may still be impairing learning because their use results in shallower processing," write Pam A. Mueller and Daniel M. Oppenheimer in their study on this topic.

"We found that students who took notes on laptops performed worse on conceptual questions than students who took notes longhand. We show that whereas taking more notes can be beneficial, laptop note takers' tendency to transcribe lectures verbatim rather than processing information and reframing it in their own words is detrimental to learning."<sup>12</sup>

Most importantly, make sure you are really listening. You're not there as a secretary; you're there as someone who is receiving information for later use. Therefore, it is important to actually hear what others are saying. Take note of what's being emphasized. Make sure you're understanding the points the speaker is making and, if the opportunity is available, ask questions. This can only happen if you're devoting at least as much attention to the information being delivered as you are to your recording of that information.

While you're taking notes, use a method that I call "capture and create." On the left side of the paper, you're capturing, you're taking notes; on the right side, you're creating, you're making notes. You're writing your impression of what you're capturing. How can I use this? Why must I use this? When will I use this?

After your note-taking session is over, review your notes immediately. This will help you retain the information much more effectively than if you don't read your notes for days. As an added benefit, you'll be able to supplement your notes with anything you might have missed while taking them, because the information will still be fresh in your mind.



## A TIP FOR UPGRADING YOUR NOTE-TAKING

If you want to make sure you're always getting the most from your note-taking, remember the mnemonic **TIP**:

- **T is for Think:** Before you begin any session where you're going to be taking notes, think about what you're hoping to retain most from this session. This will help you filter the high-value information from the information that is less relevant to your goal.
- **I is for Identify:** Listen carefully to the information being presented and identify what is most important in the context of your goal. Remember that attempting to write down everything is going to make it impossible to process the information at the time and will probably make studying harder. Identify what you need the most and write that down.
- **P is for Prioritize:** As you review your notes after the presentation, prioritize the information that is most valuable to you, perhaps adding additional notes as necessary to make the priority information clearer or making an outline to highlight key points.

## BEFORE WE MOVE ON

If you acknowledge that unlimiting yourself means being a student for life, then how you go about your studies is vitally important. Before we move on to the next chapter, let's try a few

things:

- Take your active recall out for a spin. Introduce yourself to some new material and immediately assess how much of it you retained.
- Find a music playlist that works for you. There are many of them available, and the right music is likely to enhance your ability to absorb information, so take some time to find one that you like. Maybe you'll even want to have it in the background while you read the rest of this book.
- Try out your new note-taking tools. Maybe go through this chapter again and take notes about it. Or watch a TED talk and take notes on that instead. Use the skills you've learned here to upgrade this experience.