

Language Notes: 2

Memory and Sleep

SIL (linguistics group in US) reports that it takes about 70 exposures to a new word or phrase in order for it to finally “stick” in the memory of an adult. It is important to understand how our memory system works. Let me explain how our memory system works in relation to daily sleep. In order for short-term memory (e.g., a new phone number) to be stored into long-term memory (e.g., being able to recall the new phone number next month), we need several periods each night of deep sleep. We have four periods of deep sleep within an 8 hour sleep cycle. As we get older, we spend less and less time each night in deep sleep, as a result new information storage becomes more difficult. Hence, learning a new phone number is much harder when you are 60 than when you are 20.

My wife Carrie and I have been conducting a little experiment over the past two years. Carrie and I were curious, what would happen to our memory if we progressively reduced the number of hours we slept?

The results of our sleep-memory study are in! We have found that if you are regularly getting only 4 hours of sleep per night it takes at least 700 exposures to a new word in order for it to be stored. We have two years of data to support this finding. Now if you have sleep problems, alcohol or sleeping pills like Tylenol PM help you fall asleep, but they interfere with your ability to sleep deeply, and therefore interfere with storage of new information into long-term memory. Sickness, pregnancy, baby, more sickness, injury and heat have all made sleep difficult. In spite of our tiredness, we have tried to remember two important tips: People who relax for one hour before bedtime (TV watching does not count—it interferes with being able to mentally unwind) and people who exercise regularly fall asleep faster and sleep deeper.

Depression

Within our community of people, there are many who are depressed and do not know it. We tend to be optimistic people and being depressed can be ignored for some time. But being depressed, just like reduced sleep, seriously interferes with learning new information. If you are depressed, it will require a tremendous amount of effort to learn new words and grammatical concepts.

Depression does not mean feeling “depressed.” Some people feel down, but often active people do not. Depression is a loose group of symptoms that shows up differently depending on the person and their circumstances. Right away I know that the label “depression” is going to bother some people. So, let us forget about the label for a minute. What happens when we do not have control of our circumstances, day after day? What happens when we are misunderstood, have hurt feelings and problems can not be resolved? What happens when we try to solve something again and again and fail? What happens when we expect something to come of our efforts but nothing comes? What happens when the expected encouragement from others never arrives? When this happens, we get discouraged. “Discouraged” is a word that people in our community feel OK using—it is our culturally appropriate word.

What are the signs of serious discouragement problems? You are discouraged for a few weeks in a row and it does not seem to let up. You start to feel like you could get addicted to anything. You do become addicted to something. You waste a lot of time zoning out doing things that do not matter. You start to become more brittle and edgy. You begin to feel that others around you have become very annoying and need to be criticized a little to “help them out.” You just want to avoid people all together. You can no longer picture a positive future. You have changes in your appetite (up or down), energy level, sex drive, and you begin to lose a sense of enjoyment in everyday things. Things that used to interest you or give you pleasure no longer do. If several of

Language Notes: 2

these things are true for you, you have “Discouragement” with a capital D. Check out www.webmd.com for more on this if you need to. (I am not endorsing their advice, but the info might be useful for you.)

Strategy

In the last language notes, I mentioned the four basics of the daily learning cycle: 1. Listening and practicing **phonetics**, 2. Reviewing **grammar** and learning new grammar, 3. **Talking** with others, 4. **Recording** what you have learned and **reviewing** each day things you have learned before. Remember you have to write, read, say, hear and **experience** a new word or concept up to 70 times before it sticks. It takes a lot of work.

One strategy that the PILAT program teaches is series. The idea behind it is that in order to learn a new language, you have to constantly use it in every circumstance of your life. You have to be thinking about it all the time. Learning series of steps associated with daily activities is a phonetics drill, useful in talking to others, and it is also a great grammar drill. Let me illustrate this:

How I wash the dishes:

1. I throw out the leftovers
2. I put the dishes in the sink.
3. I rinse the dishes with hot water.
4. I put soap on the sponge.
5. I wash the pots and pans.
6. I wash the silverware, even though I do not like washing silverware.
7. I dry the dishes and put them away.

- Step One: Record this on a one minute loop tape.
- Step Two: Listen to this for 10 minutes each day.
- Step Three: Always say the steps as you are doing them.
- Step Four: As a grammar drill, practice by throwing two dice. The numbers 1 through 3 will stand for first, second, and third person singular, and 4 through 6 stands for first, second and third person plural. The other die: 1 through 6 stands for 1. present tense, 2. past tense, 3. future tense, 4. conditional 5. imperative, 6. questions or denial. (Did he wash? No, he did not wash.)
- Step Five: Tell someone you washed the dishes, you will wash the dishes, you should have washed the dishes, they washed dishes, or no one washed the dishes.
- Result: Your accent will be improved (if you do the one minute loop tape)

Review

1. Your memory is delicate. Without rest, exercise, and a balanced life, it is hard for your memory to work at its optimal level.
2. We all get discouraged. Some of us are discouraged long enough that it begins to lead to other more serious symptoms. If even the thought of clipping your fingernails seems like a lot of work, something that needs to be planned when you have enough energy to do it, well, maybe you are discouraged with a capital D.
3. Everything you do on a daily basis, learn how to say it in your new language. Learn about 15 different daily routines and keep adding to them over the years.

Our enemy is the master of discouragement. We need to be givers of encouragement whenever we see the chance.