

### Essay 3

Before determining how I can use the four concepts to improve the effectiveness of my learning, the purpose in doing so must be examined. The purpose in using these concepts would be to improve not only the effectiveness of my learning, but also the efficiency. Doing so will also make school work significantly easier, and prepare me for future learning experiences.

There are a few questions that need to be asked to better understand how to improve the effectiveness of my learning. Are there any concepts that I already use in my learning strategies? I do already utilize the spacing effect and elaborative rehearsal. What actions are needed to utilize the rest of the concepts? In order to improve the learning process, some actions must be changed to make improvements.

There are also assumptions that I have about using the four concepts. One is the belief that using the concepts will require much more work to be done related to school. It usually seems that better school work is related to a large quantity of work. Another assumption is that I will have to sacrifice more leisure time in order to improve my learning.

Now the four concepts must be explained. The first is the information processing system. The information processing system is the means by which our minds determine what information is worth remembering. After learning information, the brain filters through it, and discards any information that is not needed. The information that is discarded is based on your attitude about it (Figure 1). For example, after learning about a boring lesson in history, a student reflects on his torturous experience. Later in the day, his mind deems the information in the lesson to be not worth remembering, because that is what the student believed.

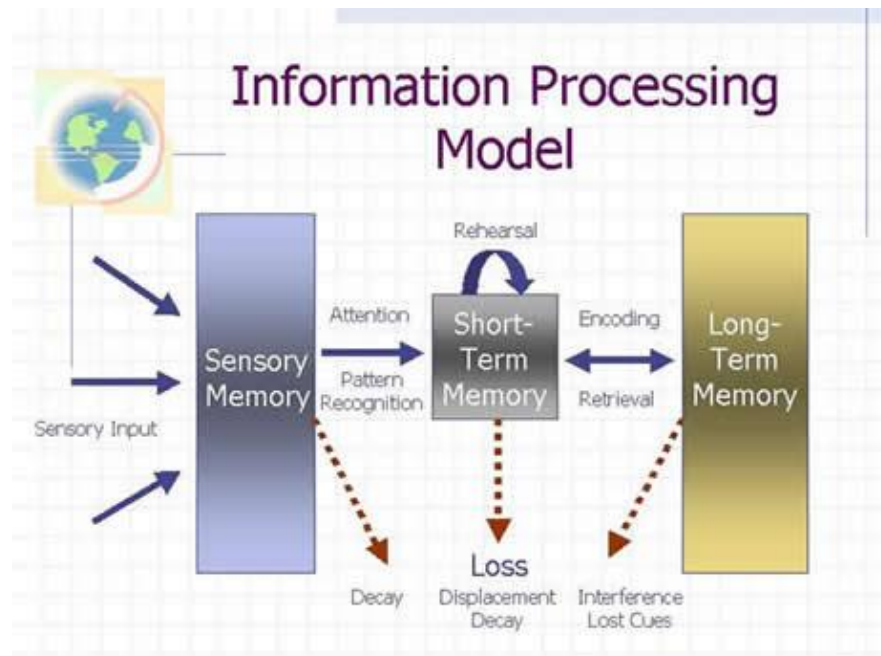


Figure 1. The information processing model.

Another concept is known as elaborative rehearsal. This is the process by which we repeat the information we have taken in, making connections and associations with information we already know (Figure 2). In other words, we convince ourselves the information is true by using the logic of previous information we learned. An example of this could be found in history. A history student has sufficient knowledge about World War I, but needs to study World War II. In order to better study WWII, the student decides to draw parallels and contrasts to WWI, making the topic much easier to remember.

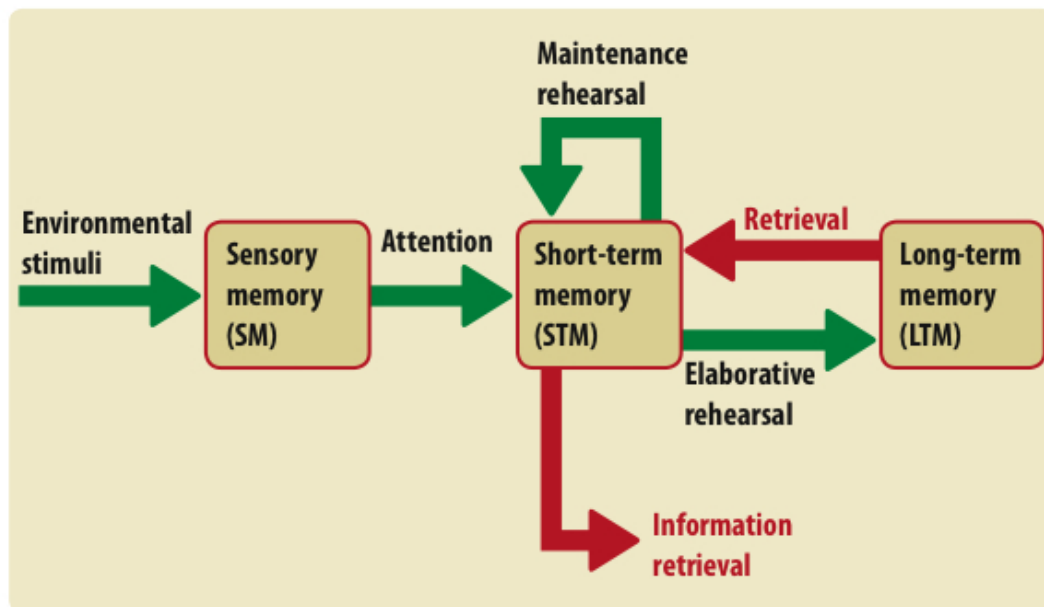


Figure 2. Memory storage.

One often overlooked concept is the spacing effect. The spacing effect occurs when large gaps are left between periods of learning, as opposed to learning all of the information in one sitting. By giving the mind more time to process the information it had just learned, the information sticks in your mind much more effectively (Figure 3). For example, when a student crams studying into the day before a final, there is too much information to know all of it. Because there is so much information to process, the student's mind discards some of the information through the information processing system. Had the student spaced out his studying over the span of multiple days, he would have time to process the information properly.

## The spacing effect (Ebbinghaus, 1985)

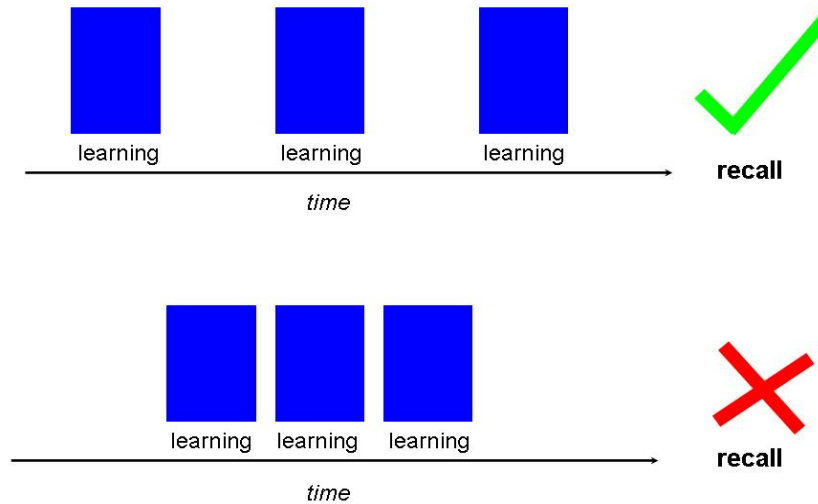


Figure 3. The spacing effect.

The last concept is retrieval versus exposure. Simply listening to lectures each day, or exposure, is not the most effective method of learning. In addition to exposure, one should also utilize retrieval. After lectures, students should retrieve the information they had learn to test their understanding. By retrieving the knowledge, students understand it much better than with just the lecture. Exposure also includes looking at notes or text books, so simply looking at them does not improve the quality of learning as much as retrieval. For example, a student could look at his notes for hours, but he won't have those notes on the test. Instead the student quizzes himself to improve his own understanding of the topic. An effective way to utilize retrieval is flash cards (Figure 4).



Figure 4. Flash cards.

Some information needed is the strategies that can apply these concepts. As for the information processing system, attitude is the most important factor. A good strategy would be to always keep a positive attitude. Since the brain discards information that you find boring and insignificant, it is critical that you keep a positive attitude about that information. Therefore if you think the information is fun and exciting, your brain will be much more likely to remember the information.

For elaborative rehearsal, a good strategy would be to explain the newly learned information to another person. By explaining the information in a way another person can understand, you develop associations to other information that you use to convince the person it is true. Thus, since you can explain it, you understand the material.

To utilize the spacing effect, an effective strategy would entail making a schedule. By scheduling study times, you can better pace yourself, leaving enough time between study sessions to process the information. Scheduling your information retrieval will help the learning process by not only the spacing effect, but also preventing your brain from becoming exhausted.

Lastly, a strategy for retrieval versus exposure would be flash cards. Since you can't see the answers to your questions, the cards will force you to try to remember the information learned in lectures or reading. It will improve learning by testing your knowledge, while allowing you to know if you are right or wrong without staring at notes.

Next, the consequences of these concepts must be considered. By using these concepts, learning will become easier, since the methods make learning more efficient. This efficiency helps reduce the amount of time needed to absorb more information, as well as prevent exhaustion of the mind.

In conclusion, the four concepts can be used to improve the effectiveness of learning by increasing the efficiency of learning. By applying the corresponding strategies, the four concepts will reduce both the amount of time and effort needed to absorb new information.

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