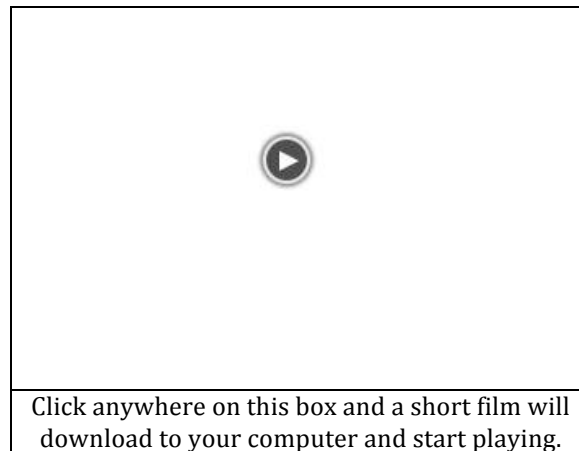


Effective Memory

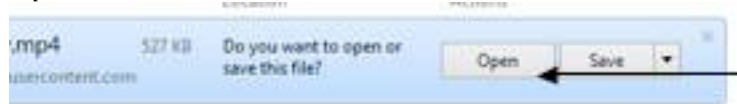
To start with, we'll do a little memory test. Click on the link below and a little .mp4 will download and play on your machine. It's a longish list of words. Watch the video just once, and on a piece of paper, write down all the words you remember. This is not easy and don't expect to remember all the words. Just try your best. The purpose is to show something about how memory works.



Note that you **may** have to click twice to see this movie. The first click may present you with this box:



And you may also be presented with this box.



All done?

Here are a few questions that may help you remember some more words:

- Can you remember any of the first five words that you haven't written down? If yes, write them down now.
- Can you remember any of the last five words that you haven't written down? If yes, write them down now.
- Were there any repeated words? How many? If you haven't already, write down any of the repeated words you remember.
- Can you remember any word that was somewhat different from the rest?

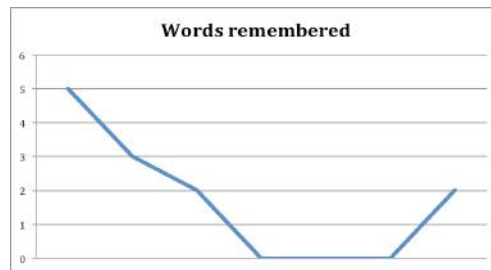
If you have written down all the words you can remember, go to the end of this document to see the whole list of words and mark off the words you remembered. You can use it to make a graph of your learning over this short period.

That's the point of this little experiment.

¹ Thanks to Rose Anne Leonard

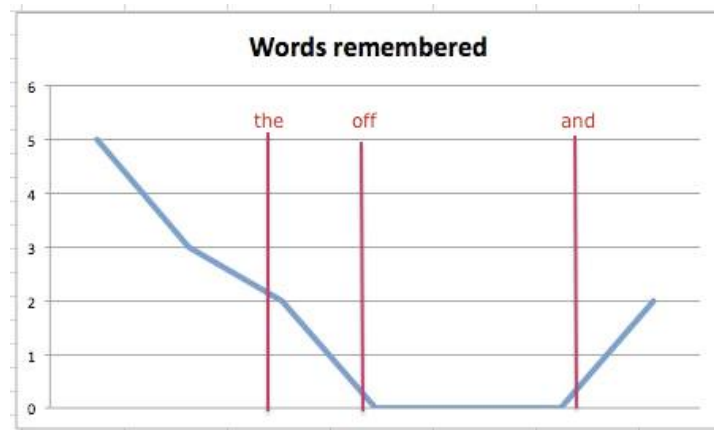


The chances are that you have remembered rather more of the words at the start of the list than you have remembered words at the end of the list. This is typical of any time you set out to learn anything. If we create a graph of your learning performance, in general, it looks something like this:



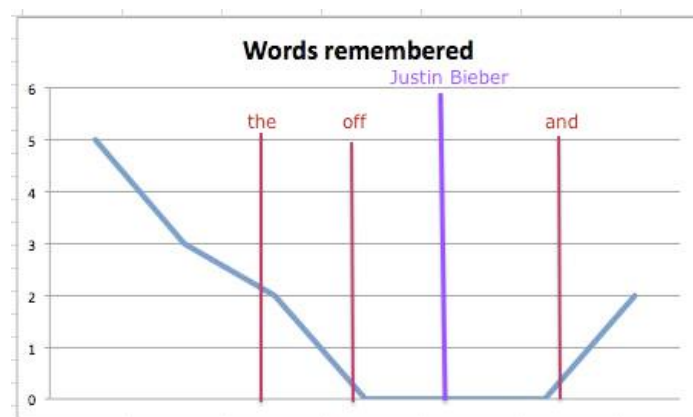
But that's not all there is to it, is it? We also have the repeated words. **And** appears on the list 4 times, **the**, 3 and **off**, twice.

Almost certainly you remembered **and**, and probably **the** as well. That's despite the fact that the repetitions happened in a place where you probably remembered no other words. The graph then might look something like this:



Notwithstanding the general trend of the other words you remembered, you have remembered the words that were repeated. So, repetition works to help you remember things. But you knew that.

And there's the last question: Can you remember any word that is different from the rest? Of course you got that one. Your chart now looks like this:



Even though you probably didn't remember either of the words beside **Justin Bieber** (shoe and watch), you remembered the pop singer's name. Why? Probably it's because that name, unlike most of the other words in the list, has a lot of associations for you.

There are three important conclusions to be drawn from this little memory experiment:

1. Repetition works.
2. Association works even better than repetition.
3. All things being equal, a learning session has a beginning, a middle and an end and, in general, you will remember more from the start, less from the end, and there will be information in the middle that you will always find difficult to remember.

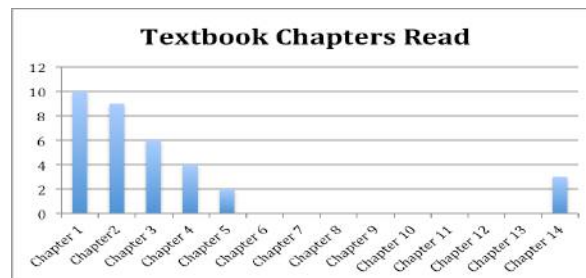
Memory Strategies

Based on the results of this little experiment, let's consider what strategies can be used to help you remember things more effectively.

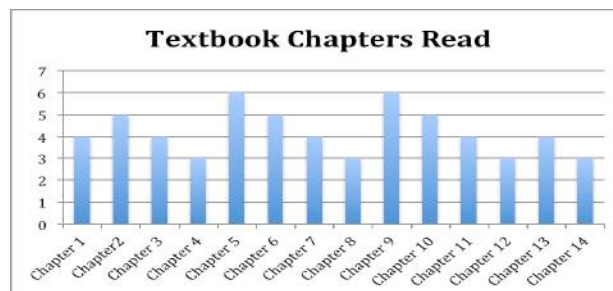
Repetition

This one seems simple -- it's a good idea to look repeatedly over the material you want to learn. So, if you have to learn your textbook, read through the chapters repeatedly, for example.

Actually it's not so simple, because the characteristic shape of the learning sessions has to be considered. Let's take the textbook example a step further. It seems logical to read the textbook starting with chapter 1. So, the learners working with this textbook will, repeatedly, start to read the textbook, starting with chapter 1. The result is that chapter 1 is read something like 10 times, chapter two somewhat less, chapter 3 somewhat less still, and there will be a number of chapters in the middle of the textbook that have never been read by anyone in the class. The pattern of the learning session, thus, reproduces itself in the reading of chapters in the textbook.



The solution to this problem is to read the chapters in your textbook, but don't always start with chapter 1. Move your starting point through the textbook, so that you get something like this:



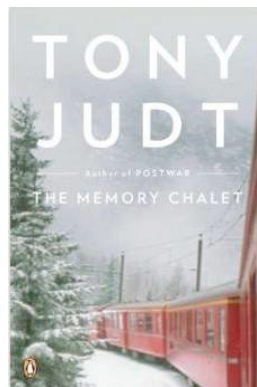
Association

Perhaps, as you launched into the memory test at the start of this lesson, you tried to make a sentence or a series of associations among the 29 words in the list. You probably didn't have enough time to form associations among the words, but association certainly works.

Several memory performers, such as Harry Lorrayne, have developed systems to help people improve their memories by using association. The idea here is to make associations between the items on the list that are colourful, violent, vulgar, so that you find the associations memorable.

Thus, you might associate shoe with phone by remembering Maxwell Smart's shoe phone, or you might picture putting a huge boot to your ear to answer the phone.

From Ancient Times people have used a "peg" system by suggesting that people associate the things they need to remember with the rooms of a house with which they are familiar. There are two famous books that describe this use of the rooms in a house to organize one's memories. One is the Memory Book of Matteo Ricci, a Jesuit in China in the seventeenth century, who learned the Chinese language and Chinese history rapidly by using the "peg" system. You can read more about him here: http://en.wikipedia.org/wiki/Matteo_Ricci. Tony Judt, a modern historian who, to continue his writing after he became unable to write things himself because of ALS, has described how he used a peg system to remember his plan for his writing while he couldn't sleep, has written *The Memory Chalet* as a personal memoir.



Harry Lorrayne has a system, which he calls a "peg" system that gives one a number to translate numbers into associations. Once one has formed strong images for each of the numbers, one has a way to remember large numbers of items that are associated with numbers. Lorrayne's system works like this:

0 is Z	5 is L
1 is T	6 is S
2 is N	7 is K
3 is M	8 is V
4 is R	9 is B

In Lorrayne's system, vowels don't count, and also, spelling doesn't count -- what one builds the system on is how the word *sounds*, not how the word is actually spelled.



How do you remember these associations? Lorryne uses association:

0 is Zero. Z sounds like the word for "0" or Zero.

T is one. T has one down stroke, just like 1.

N is two. N has two down strokes, counting out the number 2.

M is three. M has three down strokes, counting out the number 3.

R is four. The last letter in the word for 4 (four) is R.

L is five. The Roman numeral for 50 is L.

S is six. The initial sound of the numeral 6 is "S".

K is seven. If you put two 7's together, they form the letter K.

F or V is eight. The letter "F", handwritten, has two loops, like the numeral 8

P or B is nine. The letter P is like the numeral 9 turned around.

Based on this number system, one can create a "peg" system with which one can associate things one has to remember. For example:

1 might be Tie (T for 1 and any vowel)

2 might be Noah (imagine a grey-bearded old guy who is building an ark)

3 might be Ma (picture your own mother)

4 might be Rye (r and a vowel -- I picture a bottle of Seagram's V.O., a rye whisky I drank years ago)

5 might be Law (picture a flat-footed policeman on his beat)

6 might be Shoe (your own shoe or those huge shoes that clowns wear)

7 might be Cow (imagine those charming cows in those yoghurt ads)

8 might be Ivy (again, stress is on the consonant, V or F, rather than on the vowels. Ivy grows over something)

9 might be Bee (imagine an aggressive bee attacking what you want to remember)

Now we go to two digit numbers:

11 might be ToT (two T's with a vowel between. Picture the most horrible tiny child you know)

12 might be TiN (picture a huge tin can into which you can stuff what you need to remember)

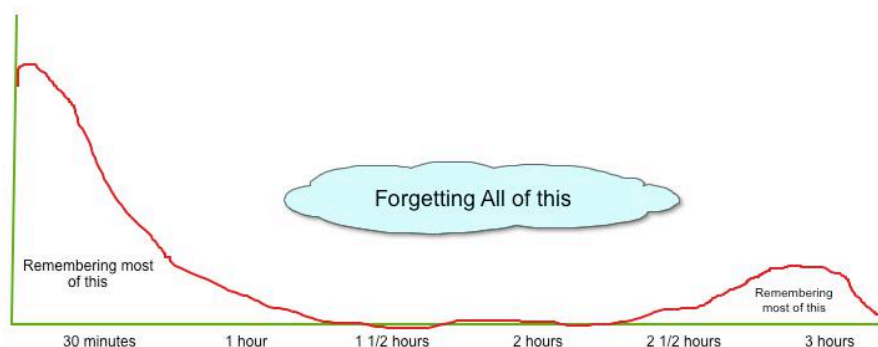
13 might be ToMb (picture an elaborate Egypt Pharaoh's tomb)

14 might be TiRe (associate your number with a spinning tire) and so on ...

If you find it necessary to learn large amounts of information that you can associate with numbers, Lorryne's system might be very useful.

Planning your Learning Sessions

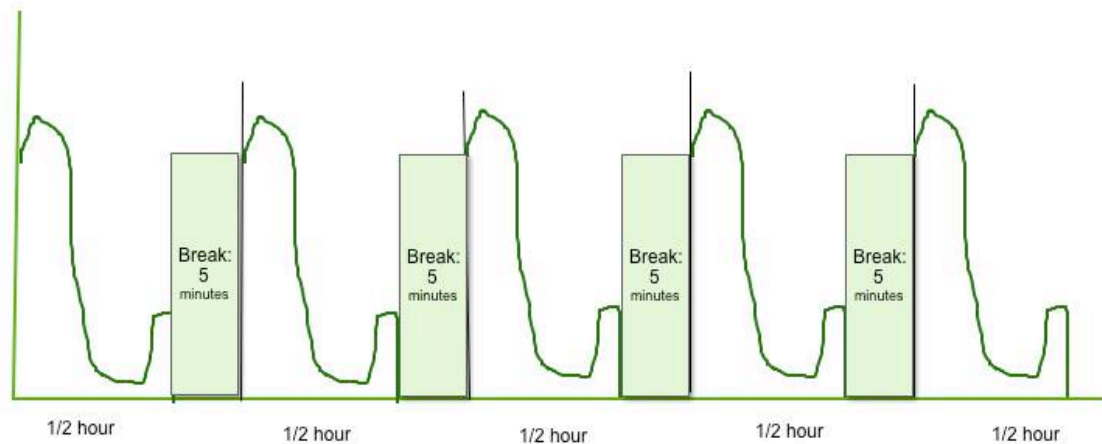
Most importantly, you can plan your learning sessions to recognize the general pattern we identified at the start of this session. One learns more at the start, less at the end and one tends to forget what happens in the middle. You don't want your study to have these results, do you?



Research shows that when you sit down to learn things, you should plan to work for 20 to 30 minutes and then take a break. After the break (say five minutes to clear your head, have a look at the weather, make yourself a cup of tea), you can continue on to learn efficiently for another 20 minutes or half an hour before you need to take a break again.

Taking these breaks gives your mind a moment to sort and remember what you have done in the previous half an hour. Once this sorting has happened, you are ready to learn more information.

So, if you're working through an evening, your study might look like this:



The key to this is the break. Learning things is not like digging a ditch. It's very important that you take the time to break every 20 minutes or half an hour and give your brain a chance to sort the material that you have just learned.

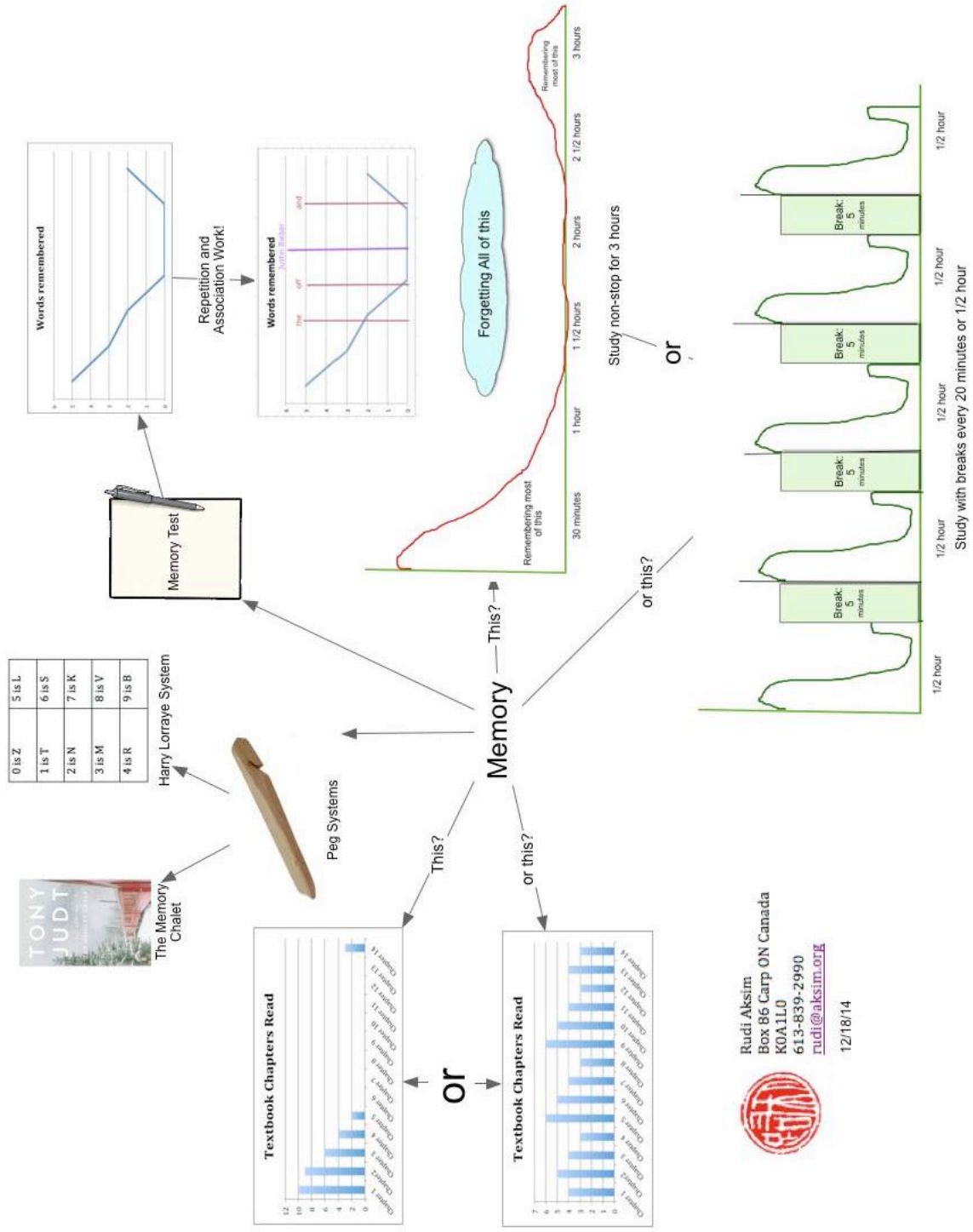
And, of course, you will start each session with your first, quick review of what you did in the previous half hour, getting you back into the flow of things.

Some years ago, i was an English teacher teaching a class of Auto Body students. One of the students asked me if he could say something to the class. Certainly, I said, although I was a little worried about what he might say. What he did say was this (somewhat cleaned up for a modern audience):

When you come to College, most of what your teachers tell you is nonsense. And this is particularly true of English teachers. **But**, you have to try this studying for half-an-hour and taking a break and then studying some more. **It really works!**

While we will take up these ideas further when we look at [An Overview Approach to Textbook Reading](#) and in [An Overview Approach to Reading Online Materials](#), certainly one of the key thing you can do to help yourself remember information is to plan your study and take breaks every 20 to 30 minutes, to give your brain a moment to sort what you have just learned.





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List of words from the Memory Test:

		<i>Remembered?</i>
1	chair	
2	and	
3	light	
4	room	
5	the	
6	phone	
7	and	
8	under	
9	off	
10	end	
11	table	
12	blue	
13	tree	
14	the	
15	phone	
16	and	
17	shoe	
18	Justin Bieber	
19	watch	
20	off	
21	pen	
22	jacket	
23	the	
24	noise	
25	poster	
26	and	
27	shirt	
28	bag	
29	web	

