

Learning techniques

We will have a look at the ways of effective learning, memorizing more information and not forgetting it soon. There is a large number of techniques, mentioned in various books by various authors. I have chosen those which have always worked for me. It is entirely up to you to find such techniques which will suit you. The module objective is, above all, to enable you to find your learning style and the most suitable learning method.

At the completion of the module you will know:

- how to improve your memory,
- how brain training and jogging work,
- what your learning style is,
- a few methods of memorizing information better.

Key concepts:

Learning - a process of acquiring and sharing experience, information and knowledge, habits, skills, values etc. Learning may be spontaneous, informal or formal in institutions.

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4. Summary

You have probably tried many methods how to memorize as much information as possible, e.g. before your (state) examinations. If you have found a method that works for you, congratulations; you are a lucky person. If not, do not despair; perhaps you will find your method today and studying will become a game.

The **objective** of the module is to show you several methods suitable for preserving information. Different methods suit different people. If you do not find your method today, have a look at the recommended literature where you will find further advice.

“It is important to stay curious. Our memory is like a muscle which needs constant training, or else it shrinks.” professor Nehen. **And you certainly do not want your brain to shrink. So let us begin.**

Try to write down what comes to your mind when you hear *learning*. Write down everything.

Now go through positive terms. Cross out all negative associations! And memorize the positive ones. After you finish reading this module, try to write down more positive associations.

You need to realize that learning is no torture. You always *do it for yourself, not for your teacher*.

1. Brain and memory

First we will learn something about the brain. Without the brain there would be no memory. And how does it actually work?

The brain is the main organ of the nervous system. It controls this system. The brain consists of the left and the right hemisphere, as we mentioned in the previous modules. The hemispheres are interconnected via a network of nerve fibres. Memory is a part of the nervous system. It is characterized by its ability to imprint and preserve a reflection of reality. Memory is a prerequisite of learning. Both in the narrow and the broad sense of the word (i.e. both the process of adopting skills, habits and knowledge, and the acquisition of any experience and behavioural changes).

Synapses (connecting routes between brain cells) should always be active, that is why we must constantly **“feed”** our memory. Therefore, find activities which you will enjoy. Learn foreign languages, go to the theatre, read, travel, play a musical instrument. Social contacts are also important.

1.1 Basic advice

Before we have a look at several methods, it is important to present some basic pieces of advice in order to improve your memory. Observe the following:

- **brain training:** set tasks to yourself (go shopping without a shopping list, try to remember the numberplate of a passing car until the evening etc.)
- **brain jogging:** remember time management - treat yourself with relaxation and exercise; remember a healthy diet (nuts, seeds, fruit, vegetables, water... - all of this will improve your brain activity)
- **stress management:** work with stress whenever possible: practise e.g. according to Brian Clegg's *Stress Management* (Brno: CP Books, 2005), do yoga or find your own preferred way.

And now a little detour. Try to remember how you learned to:

- talk,
- walk,
- read,
- count,
- do sports,
- sing,
- iron,
- sew.

Most probably you adopted these skills outside educational institutions. Either by yourselves or with the help of others. And all of that was the result of your effort and determination.

You learned some of the above mentioned abilities as small children. E.g. to walk. However, you did not start to walk immediately; the process was gradual and you fell down many times. Each time you stood up, though, and tried again. You thus used the method of trial and error. Your coach can help you while doing sports. You also have to know the given sport's rules and practise. You have to connect theory with practice.

Try to think about how you proceed when you are learning something new. E.g. you start to play tennis. What is the first thing you do? Take a tennis racket and try? Or study the rules? Or examine how others play? Will you ask anyone for help?

Think about this; it will tell you something about yourself and how you approach learning new things. It is important for you to find your own way which suits you and is the best and most effective for you. If you realize your preferences, you will be able to use them while learning, which is almost daily.

Try to answer the following questions. They are taken from the book *A Key to Successful (Not Only University) Studies*. Really try to answer the questions, it will help you. Remember, you are not doing it for us!

- Do your current learning methods differ from previous ones? Write down in what they differ. If they have not changed, write down in what they are similar.
- Do you think that you proceed in a similar way when learning a new sport as when you are memorizing the shortest route to school in a new city? Again, write down in what learning differs in these two cases. If it does not differ, write down all details.

- Is it easier for you to learn:
 - from experience, that you do something, or
 - by means of reading about how you should proceed?
- Is it easier for you to learn:
 - step by step, in small fragments, or
 - by following other people and imitating them?
- Do you prefer learning
 - by someone telling you what to do, or
 - by someone showing you how to do it?
- Is learning new things a pleasant and relatively easy experience for you, or is it arduous?

Now think about your answers. Each of them tells you something about your learning process.

2. LEARNING STYLES

You surely know common learning styles. They are styles of inherent **sensory orientation**:

- auditive-rhetorical,
- optical/visual,
- word-conceptual,
- tactile/motional.

The auditive-rhetorical style prefers the form of conversations, discussions and questions. The optical/visual style prefers pictures, texts, visual patterns. The word-conceptual style has a good level of abstract thinking, it does not mind formulas and concepts. The motional style likes motion and exploration.

There are also styles according to the dominant **type of intelligence**:

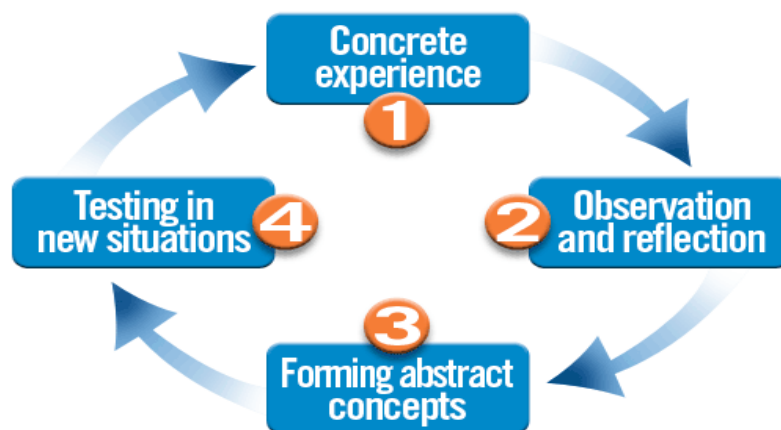
- language,
- logical-mathematic,
- spatial,
- psychomotor,
- emotional,
- musical,
- interpersonal,
- intrapersonal.

The following table summarizes what each of the styles prefers. Surely you will be able to determine what suits you. Think about what makes you feel good, what you prefer in your everyday life. This way you will easily find your style.

The following picture shows type of intelligence (theory) by **H. Gardner** (<http://bit.ly/IZUcRF>).



We will also have a look at the learning style by **David Kolb**, an American psychologist. He created the so-called **learning from experience**, which takes place in **4 phases**: A concrete experience, Observation and reflection, Forming of abstract concepts, Testing consequences in new situations.



This cycle thus demonstrates that a person does something (performance), then thinks about it (reflection), then thinks theoretically about possible activities (speculation), and finally tries something new (testing, experimenting). The cycle is continually repeated. Kolb says that everyone tends to focus on one of these phases. That is reflected in their learning preferences and strengths. Kolb also says that it is necessary to adopt specific approaches to specific situations - i.e. to have the ability to adjust.

3. METHODS

3.1 PQRST

The name of the method is derived from its individual parts. **Preview, Question, Read, Self-recitation, Test.** First gain a preview (have a look at chapter titles, summaries etc.), then pose questions and try to answer them - first on your own, then while reading. During self-recitation, try to remember the most important points and test your knowledge (preferably by means of your own test before sitting the actual examination).

3.2 The SQ4R method

This method is also named after its individual phases. **Survey, Question, Read, Reflect, Recite, Review.** At the beginning, this method may remind you of the PQRST method, but some of you may find the last three Rs more helpful.

3.3 Notes

With these methods you will surely use making **notes**. Most probably you already use this method. Let us summarize the basic tips how to make your notes more effective.

There are more correct ways to make notes. Your choice will reflect your learning style and way of thinking. You will also be affected by the time available, the document and information types etc. Each material requires a different approach.

3.3.1 Notes in a text - comments

It is advisable to provide the text you are reading with comments. If it is a study material (textbook) and the book is not borrowed (from a library or a friend), do not be afraid to write into it! It is, after all, a textbook, not a valuable copy or fiction. If the textbook was expensive, go through it and copy the most important chapters. Or create cards which you will put or stick inside the book.

How to write comments?

- Underline the main points.
- Write your comments towards the edges. Choose your own symbols (question marks for a lack of understanding, exclamation marks, checks etc.).
- Colour-code important information. It will help you with orientation in the text. This method, however, requires practice. If you highlight the text in a wrong way, you will have to read it again later because you will not understand it. Do not highlight the whole text, just some passages and the most important sections.

Try for yourselves! Take a new study text and try the method of making notes. Return to the text in a week and read only the highlighted text. Do you understand the text without the need to read it all?

3.3.2 Excerpts

If you have more time, you can use the form of excerpts. There are two basic ways: linear or using a pattern/template.

Linear excerpts copy the order of information from the original material. In your own words, you write down what you read or hear. An example may be a **summary** or an extract of the main ideas. Among **templates/patterns**, there are for example the already known **mind maps**.

3.3.3 Lecture notes

While taking notes during a lecture, you cannot check your speed. Every lecturer also has their own style and rate. Try to distinguish whether the lecturer indicates/emphasizes important information, learn to distinguish when the lecturer is making a summary. Do not be afraid to ask if you do not understand something, or ask for slowing down the pace.

Before the lecture

If you know the lecture topic in advance, it is advisable to find some information on the topic beforehand. You will understand it more easily and distinguish the important points. It is also advisable to revise the previous lecture to find the context.

During the lecture

Do not be afraid to sit in the front. This way you will not be distracted and you will stay focused longer. You will also hear better. Do not panic if you do not understand the lecture immediately. You can always ask or find some additional details at home. Just do not forget to write down what you did not understand. As soon as you get used to the lecturer's style, you will find out when and how they emphasize the main points.

In order for you to know what points to write down during the lecture, follow the introduction in which the lecturer outlines what they will be talking about.

Always write down the title of the course and the lecture, and the date. It is advisable to number the pages of your notes.

Take notes of sub-topics, main points and examples. Write down details but not word by word. Do not write fast and automatically; your writing will thus be without thinking and you will not understand your notes later.

Pay attention to the conclusion. If you have missed something, now you will find out.

After the lecture

After the lecture, go through your notes as soon as possible and edit them. If you missed something, find it in books or on the Internet. If you do not understand anything, try to find it out somewhere. If you do not neglect this phase, your notes will be a very valuable material. One of the basic mistakes is to put the notes aside and not to return to them until just before the examination. You will have to learn everything afresh and devote more time to this than you would have devoted to an effective writing of notes.

3.4 Picture method - remembering the correct order

You may apply this method if you need to memorize several things **in succession** (i.e. something is the first, the second, the third...). This method is based on pictures. First of all, create these pictures, from 0-9 at the least. You will then work with this "table".

You will create the table as follows: you will **think of an object** which **reminds you of a number shape** (e.g. 0 looks like a lake, 2 looks like a swan etc.), or assign an object to a number, while **you associate this object with the number** (18 = e.g. the driver's licence, so you draw a car). When you have the pictures, you have to **remember** what pictures belong to what numbers. This will be **easy**, since you have thought of them yourselves. And now, how to work with this. As soon as you have several things in succession which you have to memorize, always assign them to a picture belonging to a number.

A simple **example**: first you have to memorize “painting”, then “library”, then “adversary/warrior”. And you have to remember these concepts in this order, for unknown reasons. Thus, to “painting” you assign the object you have assigned to the number one, to “library” you assign the second object etc. And the most important is to connect the two things in your mind. Let us say that we have drawn a candle to the number one (a candle looks like 1), and we need to memorize “painting”. Now connect these two things in such a way that you imagine a totally absurd situation, e.g. a painting in flames, setting fire to a painting with a candle etc. The next concept is library. We connect it with the second object, i.e. swan (because this was our choice). And again, we imagine an absurd situation, e.g. a swan floating on books in a library or such. We proceed this way. The more absurd and creative images you come up with, the easier you will memorize what you need. All you have to do is believe and try; you will see you will succeed. And now let us start drawing!

And do not forget to try this method! It is also your homework. :)

3.5 The TENLE method

TENLE, or, how to TEach, Not LEarn. You simply do not learn with this method. You become a teacher. It is very simple, yet with high-quality results. The objective is for you to prepare a test for students, according to what you have to study. How to go about it?

- First, we read the materials and think of our students.
- We try to imagine what a student may ask us and how we would explain it to them. We prepare some examples and comparisons.
- And now we prepare a test. We try to pick questions which are neither too easy, nor too difficult. The students should not see through our creative method.
- We prepare an answer to each question. We bear in mind that the students must not question the correct answer. Each answer must be clear.
- We are calm all the time, we are teachers, we do not have to learn it, students do. We can look in the materials anytime we need.
- When we later return to the test, we realize that we know the answers without the need to learn them. Hurrah!

4. Summary

In this module you have found out what your learning style is. We distinguish among several styles.

We have also learned about 4 phases of the learning cycle:

experience -> observation -> forming -> testing.

Several learning methods have been presented.

The basic methods are PQRS and SQ4R techniques. We have also talked about how to take lecture notes, how to make notes and excerpts. It is important to be oriented by the type of information, or the lecturer and medium type, while making such notes. You have also learned the TENLE method (TEach, Not LEarn), and the method I know, I want to know, I have come to know. And last but not least, there is the technique of memorizing concepts in succession by means of associations.