As we know, the brain is enormously complex. But we can simplify its operation into two fundamentally different modes. The first mode is called the focus mode. It is just like it sounds: you turn your attention to something and boom! It's on.

The second mode is a little different. It's a relaxed set of neural states that is called the diffuse mode.

Thomas Edison, one of the most influential inventors in history, when was stuck at solving some problem, had sit down and relax in a chair, and he'd have keys in his hands. Just as he'd relax so much that he'd fall asleep, the keys would fall from his hands, the noise would wake him up and he'd take ideas came to him from the diffuse mode over to the focus mode, where he could work with them properly.

One of the biggest problems of modern society is procrastination – avoidance of doing a task that needs to be accomplished. Procrastination starts with the trigger (incoming message, a link to a tweet), consists of performing automatic actions (reply, read, see) and supported by the award (lots of fun, interesting news, funny pictures). To overcome it, you need to break the link between the triggers and the associated actions. So, there are two ways how you can handle this. The first way is just to keep working a way through the task. And research has shown that within a few minutes procrastination actually will disappear.

Another way to beat procrastination is to use the Pomodoro Technique, developed by Spanish student Francesco
Cirillo in the late 1980s. All you need to do is to get a timer. Then you just set it for 25 minutes and make sure everything else is turned off - so, no instant messengers, nothing like that won’t disturb you - and you work with focused attention for 25 minutes. When you’re done, you can do something fun, just a little bit, a few minutes of relaxed fun. It is important to understand that relaxation is also a great part of the learning process.

There are plenty of well-known methods of how to effectively train humans brain. One of them is to split information into small parts and learn them consequentially. Good example here is a brick wall: if you built it level by level, giving dry, you get a strong smooth masonry; if you try to throw in a bunch at once all the bricks and cement, you do not get anything except a strange mess.

Spaced repetition is another learning technique that incorporates increasing intervals of time between subsequent review of previously learned material in order to exploit the psychological spacing effect. Commonly applied in contexts in which a learner must acquire a large number of items and retain them indefinitely in memory. It is, therefore, well suited for the problem of vocabulary acquisition in the course of second language learning.

To memorize anything it is useful to use visual images and metaphors, connecting as many senses as possible. One of the most useful and widely used mnemonics is the Memory palace – a place or series of places in your mind where you can store information that you need to remember.

Researchers are finding powerful insights into how we can learn most effectively. One of those ways is simply through exercise. Exercise within a matter of a few days can increase our ability to both learn and to remember.

It is useful to do the tests. Tests are the best. Test yourself all the time. Would you ever sing a song once and
think you knew that song? No. Test yourself, work problem several times over several days until the solution flows like a song from your mind.

Perfect recipe for better understanding is to combine previous technique with recalling. It will help to avoid the illusion of knowledge something that you just understand, but don't know for sure. For example reading a book. The most effective technique is simply to look at a page, look away, and see what you can recall. Doing this, as it seems, helps to build profound neural hooks that help enhance your understanding of the material.

And finally, don't be fooled by the erroneous idea that understanding alone is enough to build the mastery of the material. Understanding is truly important, but only when combined with practice and repetition in a variety of circumstances you can truly gain mastery over what you're learning.

Don't just follow your passions, broaden your passions, and your life will be enriched beyond measure.

References: