

Dear Aunt Abby,

I have always considered myself to be a slow learner who has been struggling with learning almost my entire life. In school, I have been struggling with my classes, especially math and science, and I study just to pass the exams and then once the exams are over, it seems like whatever I have studied instantly disappears from my mind. As a result, I feel like it was all just for show, all that studying goes down the drain as I do not learn anything at all, rather just memorizing facts and figures for the sake of passing exams.

It has been 10 years since I had last taken any classes of any sort. Now with the proliferation of massive open online courses (MOOCs) which I can sign up online for free, I have decided to start learning new subjects again. Instantly I can see that I have stumbled on roadblocks. The concepts taught in subjects such as Philosophy, and Introduction to Financial Markets seem to fly over my head.

Is it because it is past my prime to learn new things or am I doing something wrong here with my approach to learning? Whenever the subject seems difficult, I have the tendency to procrastinate learning about it or doing related assignments. As a result I find myself cramming for an exam or rushing to complete an assignment as the deadline is looming. This then adds up and I end up dropping out of the class due to being overwhelmed or barely scraping through and not doing very well in the course.

If there is any advice you can give me on how to change my approach to learning, I would gladly appreciate it.

Sincerely,
A Slow Learner

Dear Slow Learner,

First off, I commend you on taking the first step in wanting to learn new things by taking MOOC courses. Learning is a lifelong journey and you are never too old to learn. Secondly, I hope by the end of this letter I can change your perception to learning and give you some new insights on how to go about learning.

Let's talk about procrastination. You mentioned that whenever you have to study a difficult subject you procrastinate and put the studying on hold. This is actually a natural tendency for most of us. Whenever something unpleasant or difficult crops up, an area of our brain, known as the insular cortex which is associated with pain, is triggered. This then creates an unhappy feeling in ourselves. Our mind then decided to distance itself from this unhappy feeling by turning our attention to a more pleasant task, such as watching YouTube clips or chatting on the phone. This then gives us a sense of happiness, albeit temporarily. It however, does not solve the problem at hand and if we repeatedly procrastinate, this then becomes a habit and the task at hand snowballs from a small problem to a seemingly impossibly large problem.

To manage and control procrastination, you have to first identify your procrastination cue. This cue is what triggers you to procrastinate. If you can change your reaction to the cue, then you can change your habits and keep procrastination at bay.

For example, your procrastination cue might be when you go on the internet. When you go on the internet, your immediate reaction might be to go on facebook or surf news websites, effectively putting your studying or assignments on the backburner. To change your reaction to the cue, you can install pageblocker apps that restrict your access to the internet by blocking external websites, leaving you to focus only on doing your studying and using the internet to look up related information.

One technique which I personally find to be highly effective in overcoming procrastination is the Pomodoro technique. It is a technique where you set a timer to 25 minutes for work/study followed by 5 minutes of break/relaxation. In those 25 minutes, it is a period of intense focus and concentration on the task at hand, with no interruptions. Then, it is followed by a 5 minute break period which will be your reward. Take a walk, make a cup of coffee etc. during your break. Then come back, and start the next Pomodoro session. A good way to look at this is by comparing it to an intense workout at the gym. Think of the Pomodoro technique as an intense 25 minute mental workout followed by a 5 minute relaxation period. This will allow your mind to take a break and not be too overwhelmed with the intense focus.

A good learning habit consist of 4 items. The cue, the routine, the reward, and the belief. Using our example above, we can change our bad habit (procrastination) to a good habit (learning and tackling difficult subjects). When prompted with a cue (going online), we go into a routine (Pomodoro technique) of intense concentration on the task at hand. Then we take a 5 minute coffee break (reward). All the while, keeping in mind the belief that this new system is working for us and we are on the way to cultivating a good habit.

If you are like most learners, you are probably doing some things wrong with your studying technique. Reading and rereading your notes right after and excessive highlighting of your notes is the most common illusion of competence of learning most people make. These techniques are ineffective

and they create a false sense of understanding in the learner.

Active recall (looking away from the text and trying to recall the information that was just read) is a far more effective learning technique than passively rereading information. This forces you to test yourself on the new material you have just learnt. Sir Francis Bacon described this in his text, *Novum Organum* in 1620:

"If you read a piece of text through twenty times, you will not learn it by heart so easily as if you read it ten times while attempting to recite from time to time and consulting the text when your memory fails."

Studies have shown that while cramming at the last minute might be an effective way of fitting as much information as possible in your mind in a short time frame, it is in fact a poor way of retaining information in long-term memory. The decline in retention over time is exponential. That is why during your school years you have difficulty in retaining the information you have studied by cramming for exams.

Rather than cramming a large portion of study material in one study session, it is better to break it down into chunks and spread the study material over the length of several smaller study sessions. This will give our brain time to absorb the material and to create new neural pathways. Practice makes permanent.

This method is known as spaced repetition, whereby you study a particular topic and then revisit it after a certain time period, say daily, over several days. This will bring the new information from being stored in working memory into long-term memory. You can use spaced repetition apps such as Anki, which employs the use of virtual flash cards, to help you out.

You might have heard of the Law of Serendipity, which states that Lady Luck favors those who try. So don't worry and stress yourself out about the end product, which for example might be to complete your final project. Just focus on the present moment and the process at hand. Don't let negative thoughts cloud your mind.

Sit down, take a few deep breaths, open up your Philosophy book, set your Pomodoro timer, and tackle the course material bit by bit by spacing it out. You will be pleasantly surprised at what you can achieve.

With these new insights, I hope you will now see yourself not as A Slow Learner, but An Efficient Learner.

Sincerely,
Aunt Abby