

# **CHANGE YOUR LEARNING, CHANGE YOUR LIFE**

A LEARNING HOW TO LEARN COURSE ASSIGNMENT

By  
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# WHAT IS LEARNING ?



Process of acquiring knowledge by study, experience or by being taught.

# WHAT ARE THE MAJOR FACTORS THAT IMPACT OUR LEARNING ?

Many things. Our way of thinking, Our memory, Our sleep pattern, Our habit of procrastination, Our self testing capacity, Our visualization capacity, Our deliberate practice, Our testing capacity and many others

# SO WHICH ONE IS TO BE CHANGED ?

We are primarily focusing on 3 things here

- Memory
- Sleep
- Testing



# MEMORY

- ⦿ **How it gets created :** Scientists have long known that recording a memory requires adjusting the connections between neurons (Actual tiny Brain Cell). Each memory tweaks some tiny subset of the neurons in the brain (the human brain has 100 billion neurons in all), changing the way they communicate. Neurons send messages to one another across narrow gaps called synapses. In simplest words we can say that a new set of synaptic joints get created with a new memory

**Memory 1**



# MEMORY

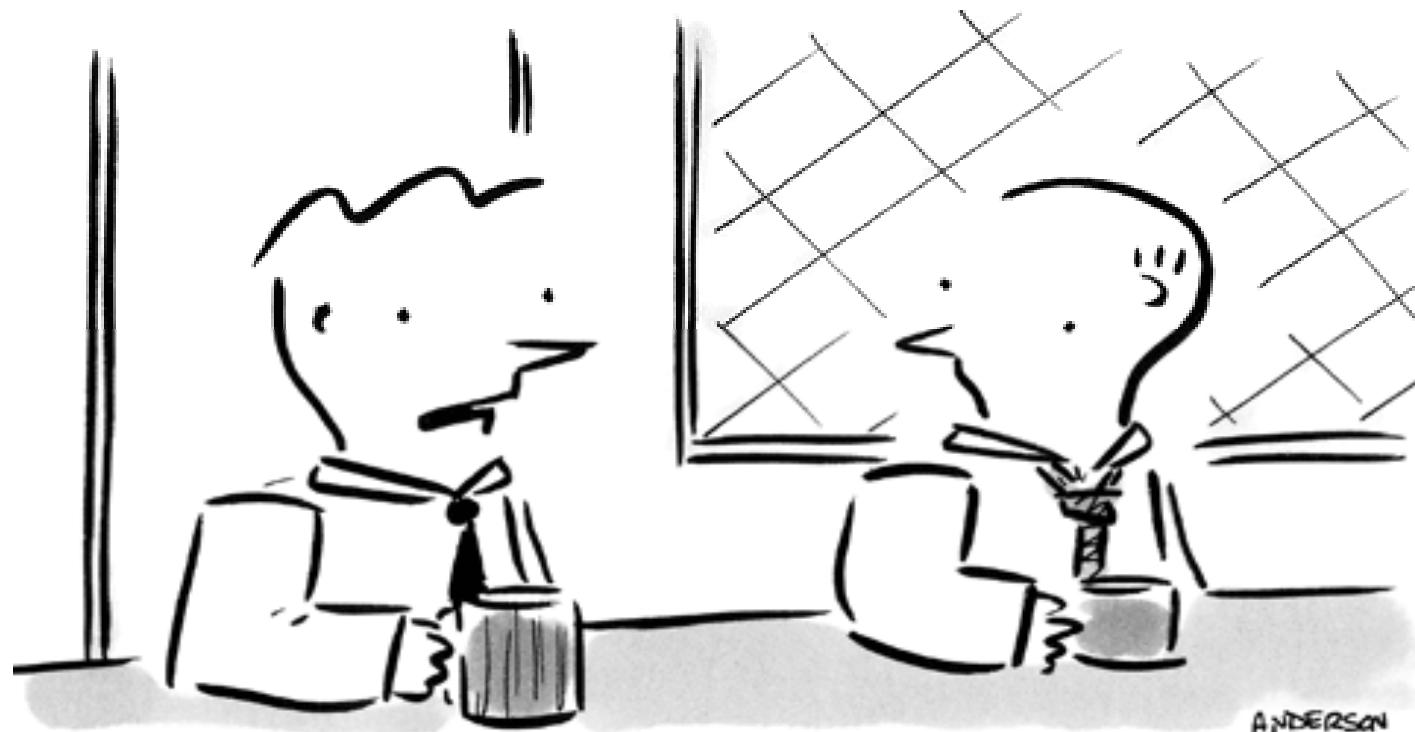
## Two Major memory systems

- **Long term memory:** It is like a storage warehouse distributed over a big area. It is so huge that we can put billions of items there and often these items bury each other making it difficult to retrieve them when we need them.
- **Working memory:** Deals with what you are immediately and consciously processing in your mind. It is more like the RAM of your computer. You have to repeat the things you keep here. For example if I do not have a chance to write down a phone number immediately, I keep on repeating it in my mind. What do you do in a similar situation?

# MEMORY

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"I've got a photographic memory, but everything's  
out of focus."

# MEMORY

How to work for it

- If you make a highway through a jungle and do not use it ---- what will happen to that road?
- If you don't wash your home utensils everyday ---- what will happen?



The first and the foremost mantra for memory is to repeat it on regular interval

# MEMORY



## What is to be done for a better memory

Long term memory	Working memory
Practice and repeat the retrieval of the memory. Extend your repeat to several days providing gap in between	Create meaningful groups that simplify the material
Meditate: Sit in a comfortable place with an erect spine. Remove all items of distraction. Close your eyes. Free you mind from any thought. Initially for 15/30 seconds then increase the duration. Make it a regular habit	Create an arbitrary visual image of a key item that you want to remember. Use mnemonics.
	Join brain training exercises. You can find many websites for that. Though its impact is controversial

# MEMORY

Some general tips.....

- Engage yourself in exercise. It contributes to your overall wellness including your memory.
- Eat balanced diet. Minerals like sodium, potassium and some amino acids contributes heavily for your memory transmission.
- Socialize. Socializing impacts your brain by using unused parts
- Do things differently. Sometimes use the stair case instead of elevator where you go regularly, like your office. Use a new road which you generally do not opt for. Sometimes brush your teeth with the hand that you generally do not use for that.
- Make things like listening to a music, reading a story book a habit
- Write something everyday



# SLEEP

We spend a third of our lives doing it.

Napoleon, Florence Nightingale and Margaret Thatcher got by on four hours a night.

Thomas Edison claimed it was waste of time.

Sleep has an important role in your learning.



# SLEEP

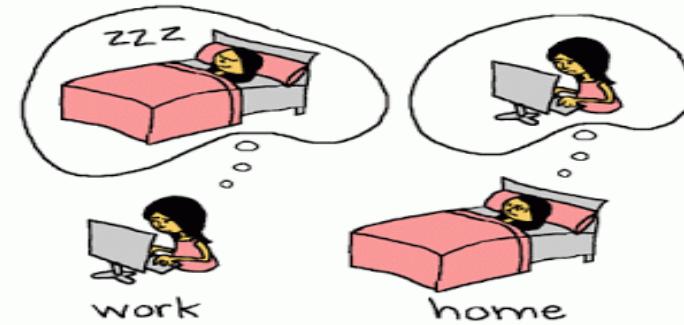
How it contributes to our learning



Just plain being awake creates toxic products  
In your brain. During sleep your brain cells shrink  
and the toxic wastes flow away from your brain.

A research in 2013 explored the efficiency of the glymphatic system during sleep and provided the first direct evidence that the clearance of interstitial waste products increases during the resting state.

# SLEEP



During your sleep your memory works on strengthening areas that you need or want to remember.

During your sleep your brain also rehearses some of the tougher parts of what you have learned.

It is the complete deactivation of your conscious mind, your working memory which helps other areas of your brain to put together what you have studied and putting it to your long term memory.

# SLEEP

How much sleep is required



There is no set amount of time that everyone needs to sleep, since it varies from person to person.

Results from the research indicate that people like to sleep anywhere between 5 and 11 hours, with the average being 7.75 hours.

The simple answer though: "The amount of sleep we require is what we need not to be sleepy in the daytime."

# SLEEP

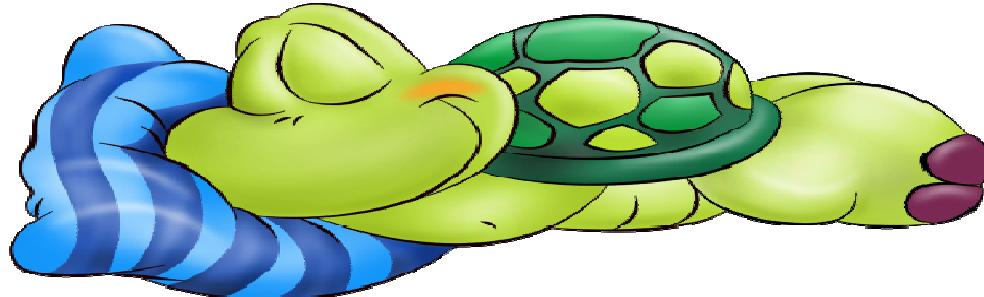


## Problems of not having enough sleep

- ◉ Increased risk of drowsy feeling throughout the day
- ◉ Increase in body mass index - a greater likelihood of obesity due to an increased appetite caused by sleep deprivation
- ◉ Increased risk of diabetes and heart problems
- ◉ Increased risk for psychiatric conditions including depression and substance abuse
- ◉ Decreased ability to pay attention, react to signals or remember new or old information

# SLEEP

## How to sleep better



- Establish consistent sleep and wake schedules, even on weekends
- Create a regular, relaxing bedtime routine such as soaking in a hot bath or listening to soothing music - begin an hour or more before the time you expect to fall asleep
- Create a sleep-conducive environment that is dark, quiet, comfortable and cool
- Sleep on a comfortable mattress and pillows
- Use your bedroom only for sleep (keep "sleep stealers" out of the bedroom - avoid watching TV, using a computer or reading in bed)
- Finish eating at least 2-3 hours before your regular bedtime
- Exercise regularly.
- Avoid caffeine and alcohol products close to bedtime and give up smoking

# SLEEP

## Interesting facts about sleep

- Species Average total sleep time per day



Animal	Sleep time in hours
Python	18
Tigers	15.8
Cat	12.1
Sheep	3.8
Elephant	3.3
Giraffe	1.9

- The current world record for the longest period without sleep is 11 days, set by Randy Gardner in 1965. Four days into the research, he began hallucinating. This was followed by a delusion where he thought he was a famous footballer. Surprisingly, Randy was actually functioning quite well at the end of his research and he could still beat the scientist at pinball.

# TESTING

Testing our acquired knowledge actually helps us in learning more.

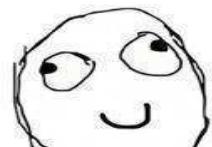
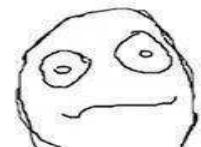
Testing in itself is an extraordinary powerful learning experience



# TESTING

Testing is an excellent way to concentrate your mind.

Testing checks the effectiveness of your working  
And long term memory

 <p>le preparation before exams will prepare 1 chapter per day</p>	 <p>10 days left 10 chapters left will prepare 2 chapters per day</p>
 <p>2 days left 10 chapters left 5 chapters per day</p>	 <p>10 hours left 10 chapters left one hour for each chapter</p>

# TESTING

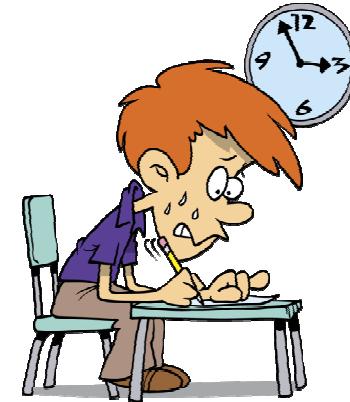
How to test yourself



Mini short test : Start the test at random.  
After you read some pages or a chapter or a list, close the book and appear for a small test to check how much you can recall.  
Practice this often over different parts of your textbook. Repeat this kind of test after certain intervals.

# TESTING

Full length mock test: Simulate the actual environment that you will face in the examination. Appear for a full length test that you are likely to face. Try the test with different set of questions each time. Maintain the rules and regulation that you are likely to get in the exam scenario.



It would be better if you maintain a test checklist and answer positively most of the items there before Taking the full length mock test.

# TESTING

Test checklist originally developed by Dr. Richard Felder

- Ⓐ 1. Did you make a serious effort to understand the text? (Just hunting for relevant worked-out examples doesn't count.)
- Ⓐ 2. Did you work with classmates on homework problems, or at least check your solutions with others?
- Ⓐ 3. Did you attempt to outline every homework problem solution before working with classmates?
- Ⓐ 4. Did you participate actively in homework group discussions (contributing ideas, asking questions)?
- Ⓐ 5. Did you consult with the instructor or teaching assistants when you were having trouble with something?
- Ⓐ 6. Did you understand ALL of your homework problem solutions when they were handed in?
- Ⓐ 7. Did you ask in class for explanations of homework problem solutions that weren't clear to you?
- Ⓐ 8. If you had a study guide, did you carefully go through it before the test and convince yourself that you could do everything on it?
- Ⓐ 9. Did you attempt to outline lots of problem solutions quickly, without spending time on the algebra and calculations?
- Ⓐ 10. Did you go over the study guide and problems with classmates and quiz one another?
- Ⓐ 11. If there was a review session before the test, did you attend it and ask questions about anything you weren't sure about?
- Ⓐ 12. Did you get a reasonable night's sleep before the test? (If your answer is no, your answers to 1-11 may not matter.)
- Ⓐ Yes No TOTA

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