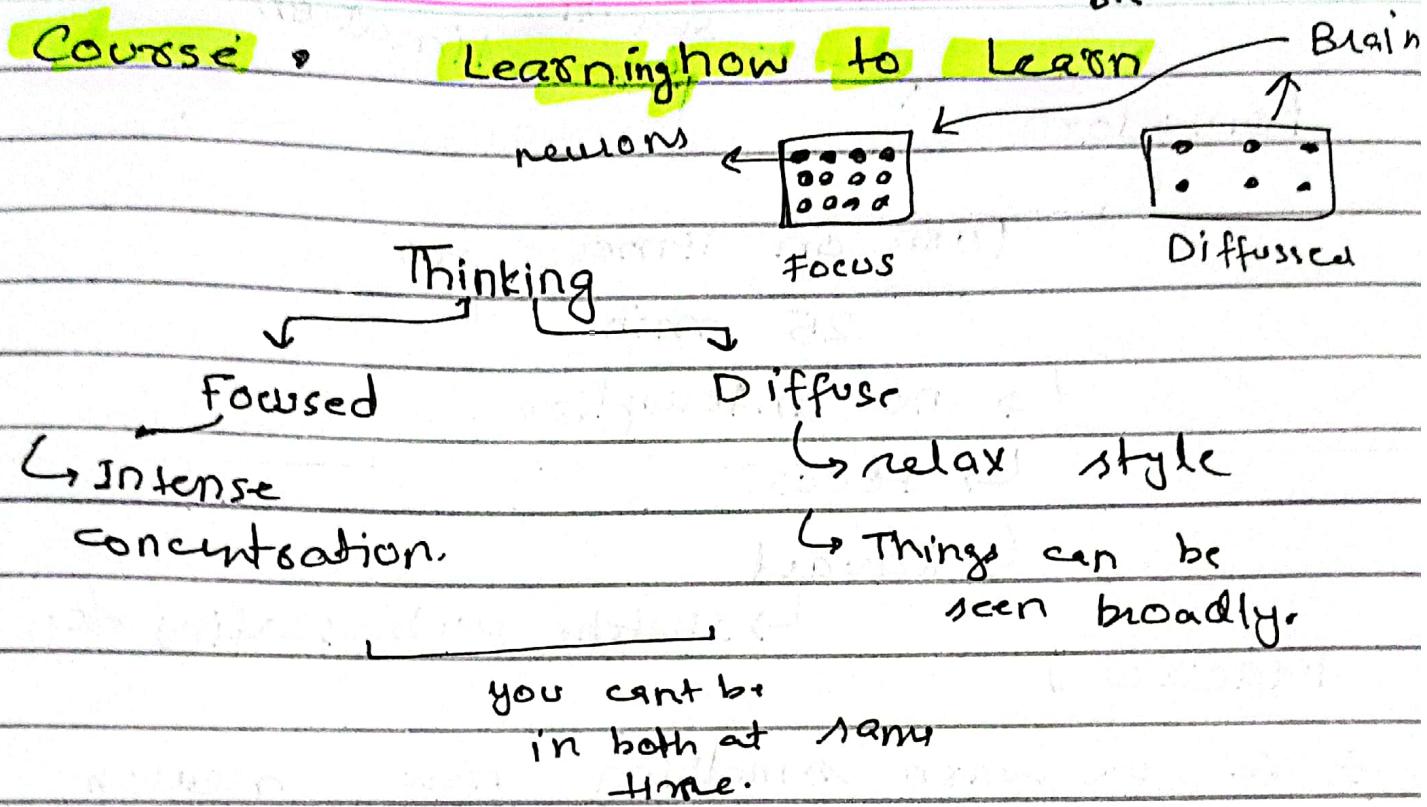


→ brain
consumes
10 times
more energy
than the
rest of organs
of body.

Course :

Learning how to Learn



→ For learning something new that is difficult your mind needs to go back & forth from diffuse to focused and focused to diffuse.

Trick :

→ Little bit work everyday.

What is Learning? When we learn something a neuron pattern starts building in our brain.

- ↳ Most part of brain is active when we sleep.
- ↳ After a nap / sleep we have an upgraded brain.

Procrastination: You don't want to work on something, a series of neural discomfort arises.

solution of
procrastination

Pomodoro



Turn on timer for
25 min.

↳ no interruption

↳ Focus

↳ Reward

↳ stretch, web surfing etc.

Practice:

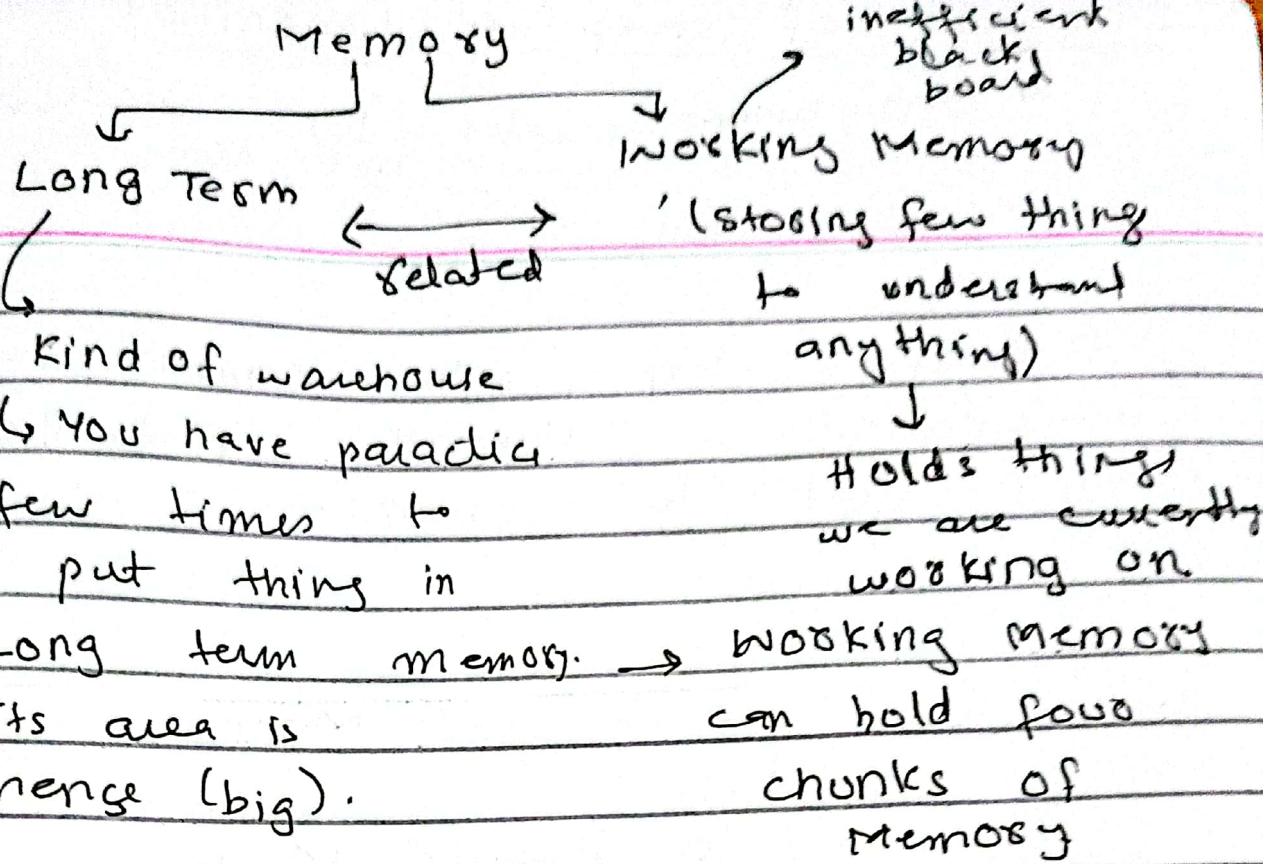
→ As we learn something new neural pattern formed is not prominent but when we ^{do} practice it (pattern) becomes darker (prominent).

→ Study with focus

→ Take a break

↳ so that neural motor can dry.

→ Just do not cram.



Moving Thing from Working to Long Term.

Technique used for it is Spaced Repetition.

- ↳ Do not practice one (new) thing 20 times in a day.
- ↳ Practice new thing same number of times over several days.

Mon	Tue	Wed	Thu	Fri	Sat
✓	✓	✓	✗	✓	✗
				SUN	✓

Importance of sleep in Learning

→ Being awake creates toxic products in brain. Get rid of them when you sleep.

→ During sleep brain remove un-necessary information & strengthen part, that you want to remember.

→ study in Focused Mode



Go to diffuse Mode

→ If you are attending a boring lecture raising question can make it interesting.

→ Living in enriched environment (among ~~enriched~~ good people) cause birth of new neuron.

→ supportive

→ OR Exercise is the way for production of new neurons.

→ For some people being alone can be creative thing but being

among creative people, give you's clearing
a boost.

SUCCESS

↓
Passion

↓
consistency

↳ not giving up-
↳ continuing doing
it.

↳ Learn with fresh
new eyes

Chunk o Packets of info our mind
can ^{easily} access.

↳ These are pieces of info joined
together to make sense

Chunking is something that help joining
bits of info that makes sense

How to form chunk

↳ Focus on info you want to chunk.

↳ understand the info you want
to chunk.

↳ Gaining context that when & where
to use this chunk.

↳ Practice for using that chunk
to ~~get~~ big picture.

Recall

→ If you have studied something then
instead of reading notes look a-way
to recall what you studied.

Illusion of competence

↳ When you fool yourself that you are learning but actually you are not learning.

↳ When you have book in front of you it seems like you have that in your mind but its illusion that is why Recall technique is important.

↳ Self Tests are important

Tip * Recall material outside your usual environment

Retrieval Practice

↳ When you learn something you build connection b/w neurons.

↳ Retrieving that learned lesson again & again strengthens that connection.

What motivates us?

Motivation is controlled by chemical substance called dopamine.

↳ It is released when you receive unexpected reward.

↳ dopamine motivates you to do something that rewards in future.

Ovelearning,
practicing same thing you have mastered.
↳ waste of valuable learning time.

→ Do not jump into water without learning how to swim.

↳ Firstly learn the concept of a thing then try to solve problems.

↳ solve variety of problems.

Interleavings

Jumping back & forth on different problems | subject | Topics.

↳ Mix up learning

→ helps you learn deeply.

→ helps in flexibility -

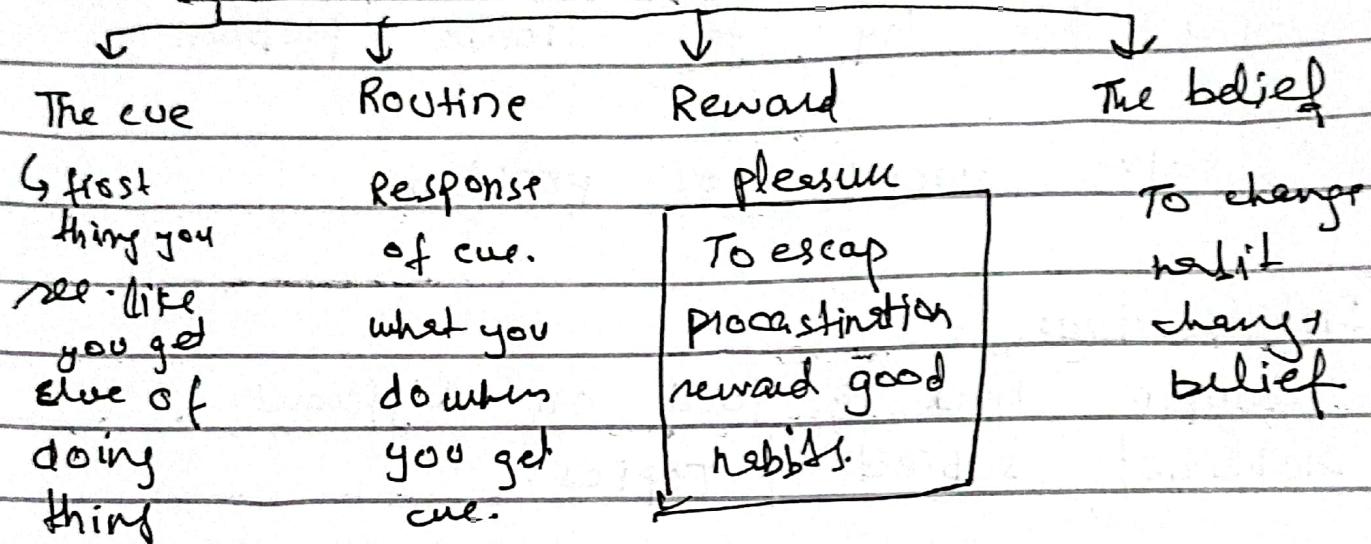
↳ Test yourself with different hard problems.

Einstellung → when idea in your mind or neural pattern strengthened, prevent a better idea from being found.

↳ Sometimes you have to unlearn old concept to learn new ones.

→ Take out a blank piece of paper and explain the problem (you want to understand) as you are teaching to anyone else.

Habit



Process vs Product

- Do not focus on product - we delay things when we think about final product- (e.g 10 pages long essay).
- Just do 25 min (Pomodoro) and don't finish to end task.
- Change your reaction to a cue.

→ If you don't write your task they will in those four slots of working memory. So free that space.

↳ Memory:

To begin tapping into your visual memory system try making a very memorable visual image representing one key item you want to remember.

↳ Visual images helps remembering difficult concepts.

To shift something from working memory to long term memory ↳

- ① Idea should be memorable.
- ② It must be repeated

Hippocampus, the part of brain helps learning new things & memorizing them.

Astrocytes, provide nutrients to neurons.

↳ huge role in fast learning.

Memory Palace Technique
involves depositing concepts we want to remember in the place we know.

When Solving a problem consider following things,

- ① What are you trying to do?
- ② what do want to achieve?
- ③ what information do you have?

- ↳ If you can not solve problem even after trying hard then go for exercise / relax - when you will come back you will have fresh eye.
- ↳ But before going to relaxed mode try hard on problem.
- ↳ Get inside the problem.

How to become better Learner?

① Exercise

↳ New neurons help you to learn new things but they die if we don't use them.

↳ Exercise helps new neurons to survive.

↳ To learn thing we should make visual metaphor for that means we should relate to any visual.

→ Remember if a person is intelligent means he can store 9 information pieces instead of 4 then he may be less creative due to Einstellung.

In this we can not get new better ideas in

our mind due to ideas that are already stored in our brain.

→ Converting average brain to excellent brain requires deliberate practice

→ practicing hard things

→ Taking responsibility of your own learning can be one of the best things you can do.

↳ while working with Team you can catch thing you usually miss when alone.

① If you test yourself on a Topic and ② You learn topic in 1 go - NO ① (Testing) is more efficient way for concentration on Topic

If you want to prepare for Test make these things answer you.

- ① Did you make a serious effort to understand text?
- ② Did you worked with classmate on homework problems? / check sol with others?
- ③ Did you attempt to outline every homework prob sol?
- ④ Did you ask your instructor when you have trouble?
- ⑤ Did you understand all problem solutions?

⑦ Did you do a review session?

⑧ Have you slept before test?



These all should be yes
before taking a test.

In test start with hardest problem
but with in minutes or two
switch to easy one this
will help a lot.



Hard start jump to easy
technique.

→ Instead of being afraid, be
excited before taking Test

→ When you panic place your hands
on abdomen & breath focus
on breath & hands coming
out -