

Learning How to Learn

What is learning

Focused mode and Diffuse mode
(专注模式) (发散模式)

顺序性推理 → Focused mode

整体性直觉 → Diffuse mode

Chunking

chunk (组块): how the concept fits together with other concepts you're learning
这个概念与你正在学习用其他概念之间的关联

- Focused attention
- Understanding
- Practice (a little everyday)
- Recall (回顾法): 阅读材料后, 移开视线, 看看你能回顾多少内容
- Mini-testing 自测
- Value of making mistakes 自测中犯错是有所值的

dopamine (多巴胺): emotions strongly affect learning
transfer (迁移): 组块可以帮助你理解新概念

overlearning (过度识记) { 自动性 (Automaticity) 确实很实用
可能对宝贵学习时间造成浪费

deliberate practice (刻意练习): 专注于困难部分进行学习

einstellung (思维定势): 学习新事物时, 摒弃错误的旧思想、旧方法

interleaving (交替学习): 练习那些需要不同技术和策略的问题以及情况, 中来回转换

→ { 当你在不同学科交替学习, 你开始在这门学科发展创造力
当你在同一学科交替学习, 你更容易在不同领域组块创造联系

Procrastination

Pomodoro 25 minutes learning / 5 minutes rest

Habits have 4 parts:

1. The cue ←
2. The routine ← plan
3. The reward
4. The belief

{
• Location
• Time
• How you feel
• Reactions

关注过程 (process) 而不限结果 (product)

便于干扰最小化

REMEMBER · MEMORY

- Weekly list of key tasks
- Daily "to do" list

- * Plan your quitting time!
- * Sleep well!

Summing up procrastination:

- Keep a planner journal
- Commit yourself to certain routines and tasks each day
- Delay rewards until you finish the task
- Watch for procrastination cues
- Gain trust in your new system
- Have backup plans for when you still procrastinate
- Eat your frogs first

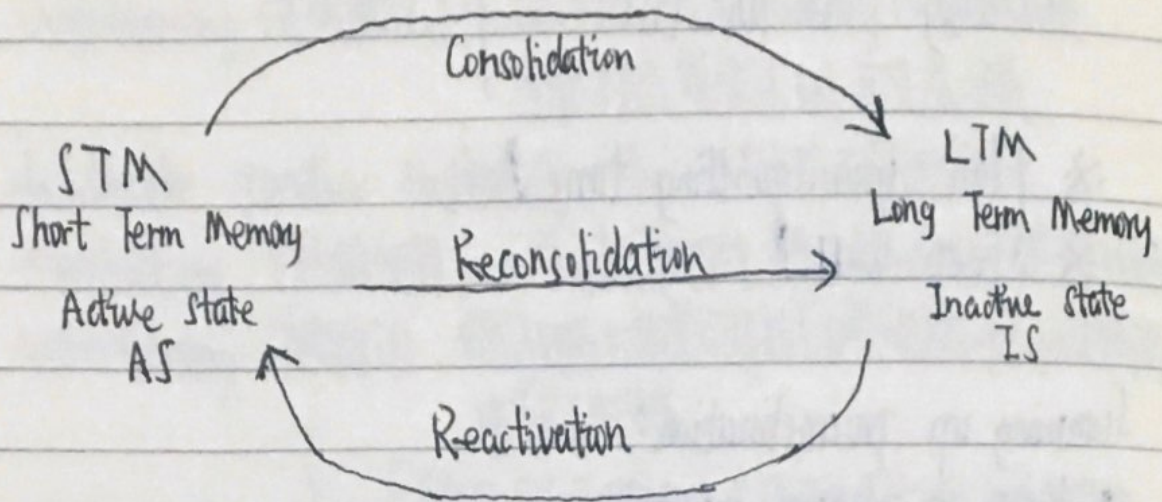
Memory

Working memory and Long term memory
(工作记忆) (长期记忆)

① 可视化 (visualization): 令人难忘的视觉场景

② 复习与回顾

每当你展开记忆时,记忆会变化,这一过程称为再巩固(reconsolidation)



Memory palace technique 记忆宫殿:

想象一个熟悉的场景,伴随与要记忆的物体相关的自主画面

Renaissance Learning and Unlocking your Potential
奖励大脑最好的方式就是运动(exercise).

Learning using metaphor (比喻) and analogy (类比)
比喻和类比也能帮你摆脱思维定势(Einstellung)

左脑: 专注模式, 保持现状

右脑: 发散模式, 检查纠错

Value of teamwork: 更易发现思维路偏离之处

REMEMBER · MEMORY

Perform well on tests

Hard start - jump to easy technique

减少

考前

焦虑

- ① 腹式呼吸: 注意力转移到呼吸上
- ② This test has made me afraid →
This test has made me excited to do my best
- ③ Have a "plan B"

考试前最后快速浏览一遍资料

考试中使用 Hard start - jump to easy technique

答卷完成后由后往前进行检查纠错

In the end

The law of Serendipity: Lady Luck favors the one who tries.

Use your natural contrariness to defy the always present prejudices from others about what you can accomplish.