



THRIVE

Wellbeing and study success

Presented by:

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Session 8: The Science behind Learning and Memory

What is this program all about?



No Recordings

Today's session will **NOT** be recorded for your privacy.

These sessions are:

- Safe
- Respectful
- Inclusive
- Non-judgemental



▶ Learning

What does it mean?

▶ Learning

The acquisition of knowledge and skills through applied study, experience, or being taught.

▶ Learning

- Acquisition – Obtaining the information
- Consolidation – Sorting and storing information
- Recall – Accessing and using the information

▶ Acquisition

Passive – Obtaining new information without conscious effort. Usually by simple exposure.

Active – Purposely seeking and obtaining information with conscious effort.

▶ Active Learning

Active learning is any activity that ensures student participation with the learning material as opposed to passively absorbing the information.

Why would this help?

It changes the priority of consolidation!

► Consolidation

The brain is unable to store all incoming information. There is a bandwidth limit!

Estimates vary, but as little as 5% of sensory input might be stored each day.

How does it decide what to store?

► Consolidation

- Emotional Significance
- Saliency (Attention)
- Novelty
- Repetition
- Context & Association

Active learning raises saliency, novelty, gives some repetition, and provides context & association.

▶ Active or Passive

1. Reading the textbook
2. Attending a lecture
3. Attending a seminar
4. Taking notes
5. Watching a video

► Why not?

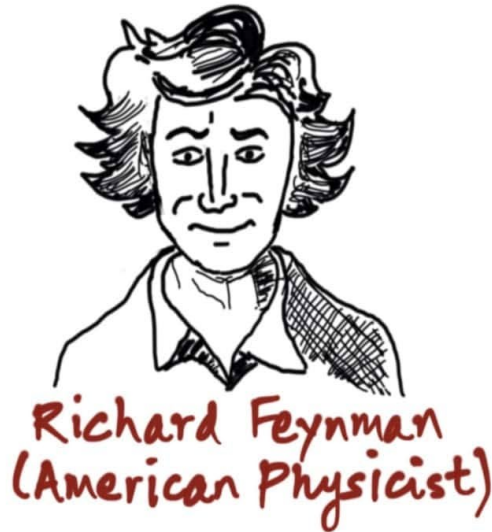
Why don't we always engage in active learning?

1. Lacking understanding
2. Lacking goals
3. Lacking motivation
4. Fear
5. Tired

▶ Active Learning

1. Active techniques are unique to the individual
2. Relate to self
3. Make it novel
4. More neuron use = More acquisition

THE FEYNMAN TECHNIQUE



STEP 1 - Pick and study a topic



STEP 2 - Explain the topic to someone, like a child, who is unfamiliar with the topic... and at their level of understanding. Use simple language.



STEP 3 - Identify any gaps in your understanding



STEP 4 - Return to the literature to understand better



► Consolidation

When, and how, does it happen?

► Consolidation

Sleeping for at least 30 min after learning increases recall by about 20-30%.

New neuronal connections only really grow when asleep, so not getting enough sleep actually reduces a persons ability to recall.

Yes, this is encouragement to nap after studying!

What will you take
away from today?

The goal is *Progress*
not *Perfection*

