

Learning and Self-Improvement

M12-E-Unit4



Introduction-Preview

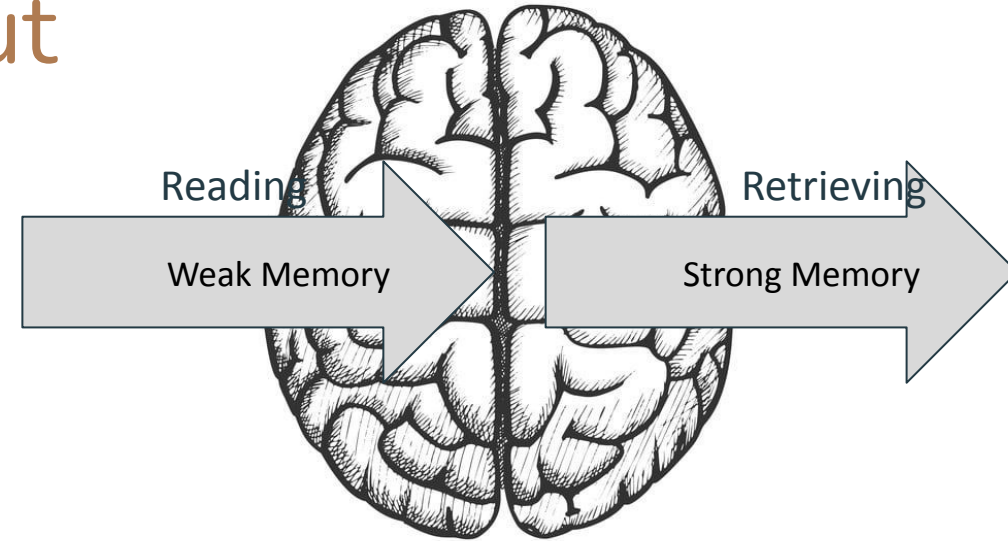
Main point #1:Active Recall

Main point #2:Spaced Repetition

Main point #3:Feynman Technique

Active Recall: Input V.S. Output

The Science of the “Testing Effect”



- The Problem: Passive Review creates the "Illusion of Competence."
- The Solution: Active Recall.
- The Mechanism: The struggle to recall information strengthens neural connections.
- Key Concept: Don't just absorb knowledge; extract it.

Putting It Into Practice

- 1. The Blurting Method:

Close book □ Write everything you know □ Check & Correct.

- 2. Flashcards:

Key Rule: You must say the answer before flipping the card.

- 3. Practice Testing:

Do textbook exercises without looking at the solutions immediately.



Spaced Repetition: Study Smarter, Not Harder

1. What is spaced repetition?

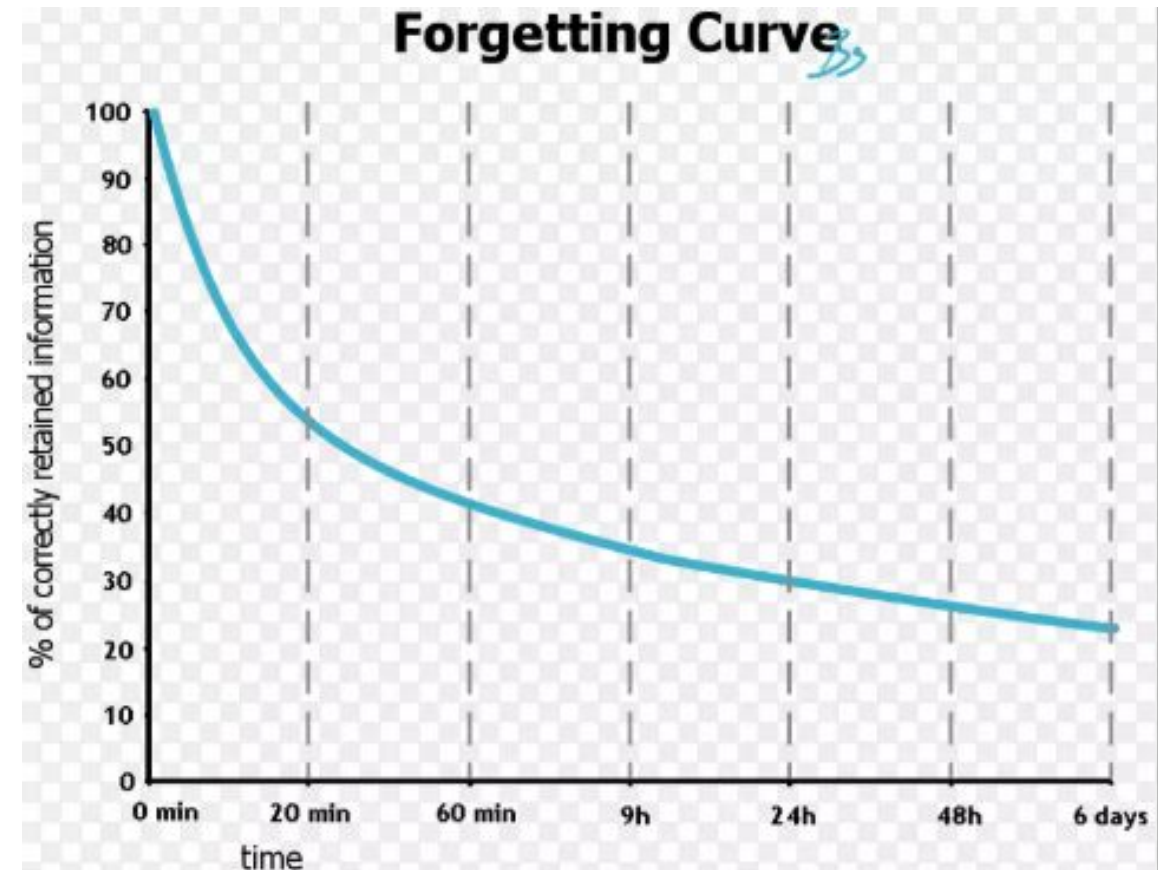
- Spread out your study material and review it over several days or weeks

2. Why is it useful?

- Fighting the brain's natural forgetting
- Review every time to reinforce memory

3. How to execute?

- Day 1: Learning New Information
- Day 2: First Review
- Day 4: Second Review
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Practical Tools

By using apps like Quizlet and Anki, you can **enter vocabulary words to create flashcards**, allowing you to review them anytime, anywhere.

You can also use these flashcards to **take quizzes**.

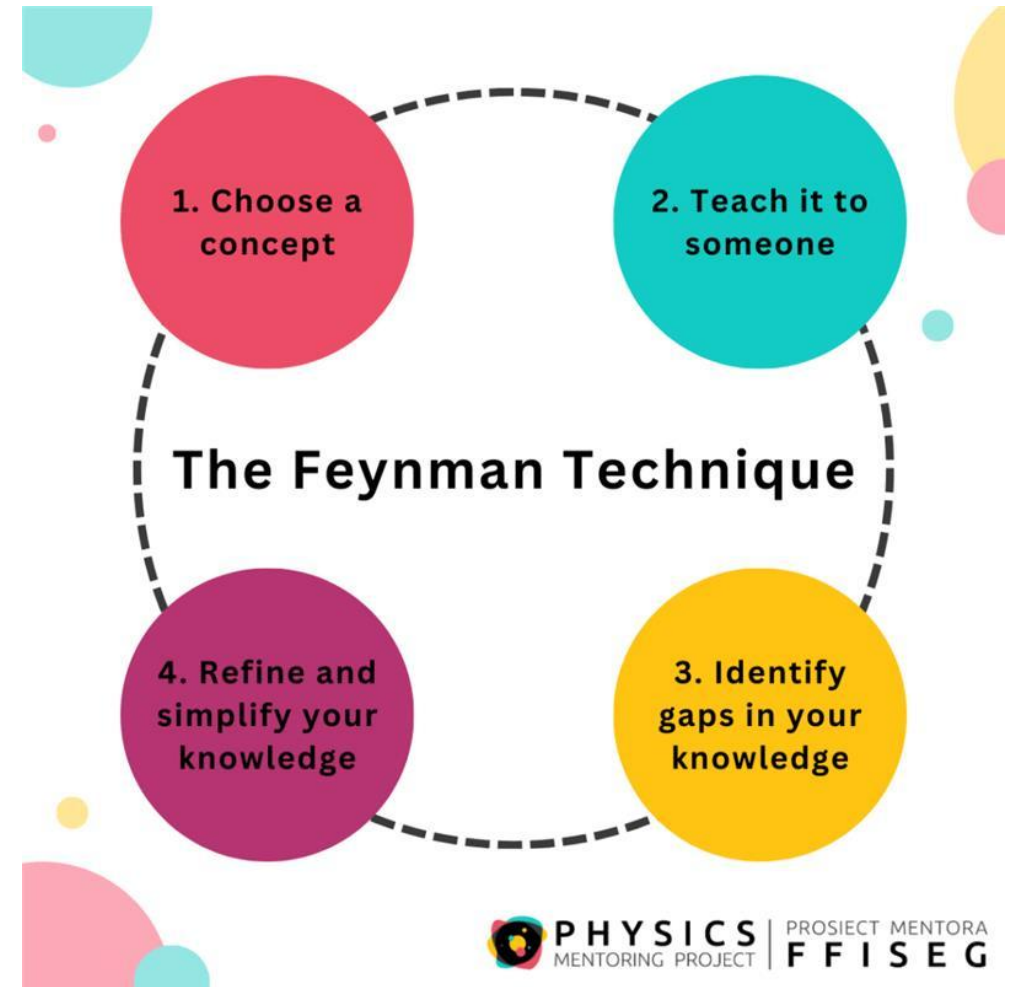


Feynman Technique

Plain Language: Avoiding "jargon" is the litmus test. If you hide behind big words, you likely have a gap in your fundamental understanding.

Knowledge Gaps: The "stumble points" in your explanation identify exactly what you need to go back and re-study.

Analogy: Using metaphors to connect new concepts to familiar ones, which solidifies long-term retention.



How to do?

Step 1: Select a concept and map your knowledge

Pick a concept you want to learn, and write down everything you know about your chosen topic.

Step 2: Explain it to a 12-year-old

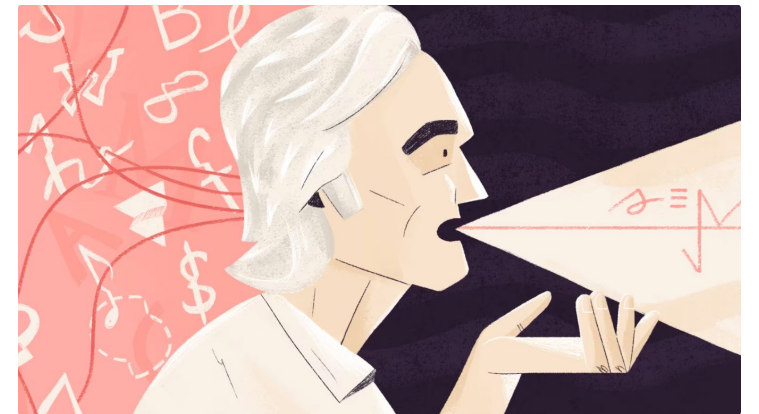
Explain the topic to someone who doesn't know it well, like a child.

Step 3: Identify gaps

Notice where your knowledge is incomplete, and return to the source material

Step 4: Refine and Simplify

Use analogies and clear language to explain the topic.



Conclusion-Review

Main point #1 Active Recall → Retrieval strengthens memory

Main point #2 Spaced Repetition → Beat the forgetting curve

Main point #3 Feynman Technique → Simplify & teach to understand

Q&A Session

Q1: Isn't Active Recall too slow?

A1: It feels slow, but it saves time because you don't have to re-read ten times.

Q2: Which tools can you use to enhance memory?

A2: Flashcard, Quizlet, and Anki

Q3: What is the second step of Feynman Technique?

A3: Explain the topic to someone who doesn't know it well, like a child.

Works Cited

What is active recall? The Best Study Method explained (and how to use it). Birmingham City University. (1970, March 11).

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Shane. (2024, December 15). *Feynman technique: The ultimate guide to learning anything faster*. Farnam Street. <https://fs.blog/feynman-technique/>

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