

Learn Better with AI

The methods that really work

From how you really learn to your personal AI tutor

 1-2 hours

 1-on-1 coaching

 Online



FOUNDIC.org

Note:

This training is run by an AI trainer (recommended: ChatGPT or Claude; Gemini only with limitations)– upload both Markdown files (Systemprompt.md and content.md) and enter "start". No human trainer required.

Download files: <https://www.foundic.org/en/category/training/>



Training Setup

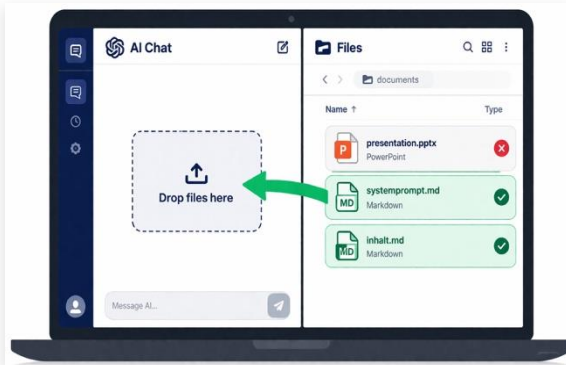
⚠️ **AI system / LLM - recommendation:**
 choice) ✅ ChatGPT

✅ Claude (best choice)

⚠️ Copilot (limited) ❌ Gemini

Copilot users: instead of "start" please "Please strictly follow the Markdown file."

1 Load files into the chat



① Open your LLM in the browser

ChatGPT or Claude (recommended) — no Gemini! — text mode (no audio!)

② Upload both Markdown files

systemprompt.md + content.md via Drag & Drop

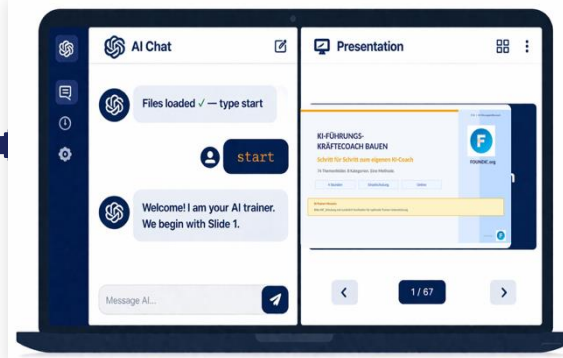
❌ Do NOT upload the PowerPoint

Only the two .md files belong in the chat

⚠️ No audio YET — files can only be loaded in text mode.

📄 **Files missing?** Download:
foundic.org/en/category/training/

2 Start training with "start"



① Type the word: start

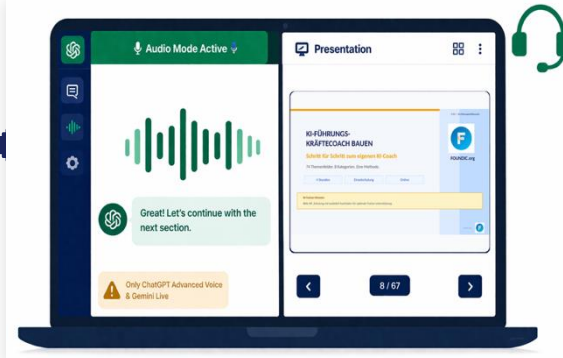
A single word is enough — the trainer starts automatically

② Split the screen

Left: chat window · Right: open PowerPoint slides

✅ **The slides are your visual anchor — the trainer tells you when to click forward.**

3 Optional: activate audio mode



① Complete steps 1 & 2 first

Load files + enter "start" — only then audio

② Activate audio mode

ChatGPT: headphones icon ·

③ Put on headset & speak

View slides, speak freely with the trainer

Only available in ChatGPT (Advanced Voice) — not in Claude.

What awaits you — in 3 modules, under 2 hours

MODULE A

Min. 5 – 50

How you really learn

Most learning methods feel productive — but barely work. You learn 6 methods that demonstrably work, and practice them right away on your own material.

MODULE B

Min. 50 – 80

Learning with AI

AI can accelerate your learning — or completely replace it. Both feel the same, but have opposite effects. You learn the difference and use AI in such a way that you really learn.

MODULE C

Min. 80 – 90

Your takeaway learning tutor prompt

You get a ready-made prompt — copy it, paste it into your favorite LLM, name your topics, start learning. Works for every subject and every learning goal. You can reuse the prompt as often as you want.

Pace adapts to you — the training adjusts. · Break after Module A and B.



The Learning Paradox: What feels easy delivers little

✘ Feels productive

Re-read

Highlight & underline

Copy summaries

Watch YouTube explainer videos

✓ Actually works

Write down from memory

Explain it yourself

Solve your own problems

Recall after forgetting

Learning only feels wrong when it's right.



The Recognition Illusion — your biggest enemy

RECOGNITION

Identify the familiar as familiar

No learning effect

Feels good ✗

ACTIVE RECALL

Actively reconstruct information from memory

Strengthens the memory trace

Feels hard ✓

Nodding is not a learning strategy.

The feeling "I understand this" comes from mere familiarity — not from real knowledge.



Not every subject needs the same

REMEMBERING	UNDERSTANDING
Vocabulary · Definitions	Mathematics · Statistics
Dates · Formulas	History · Literature
Technical terms · Facts	Physics · Programming
Anki + Active Recall	Feynman + Past Exams
"What is X?"	"Why does X work this way?"

Both need spaced repetition — but the "card" is different: Remember → Question/Answer | Understand → Problem/Solution



Are you really learning right now? — The 3-Question Test

1**Can you reproduce it?**

Book closed — write it down without looking

2**Can you explain it?**

In your own words, without technical terms

3**Can you apply it?**

On a new, unfamiliar problem

All three ✓ → real learning | One of them ✗ → recognition



Method 1: Active Recall — Learning through active recall

- 1 Close the book
- 2 Write everything on a blank page
- 3 Identify gaps
- 4 Look up → test again

+50%

more retention
after one week

Roediger & Karpicke (2006)

Rule: No learning without testing. No test = no learning.

Method 2: Spaced Repetition — spacing builds strength

The brain learns most strongly when it forgets — and then recalls.



Anki — for factual knowledge
Flashcards · Algorithm calculates optimal time · Free · 15 min/day

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"Create 5 Anki cards about [TOPIC].  
Front: precise question. Back: max. 2 sentences."
```



Math / Statistics: No flashcards — repeat practice problems. Spaced Repetition works, but the "card" is a problem.



Method 3: The Feynman Technique — Explaining as a test

"If you can't explain a concept so that a child understands it, you haven't understood it yourself." — Richard Feynman

- 1 Choose a topic
- 2 Explain it without technical terms
- 3 Where do you become vague? → That's the gap.
- 4 Work on exactly that.



Method 4: Brain Dump — get it all out, then see what's missing



5 minutes

Pen to paper

Write down everything you know

No system, no structure.

Write everything out — without looking

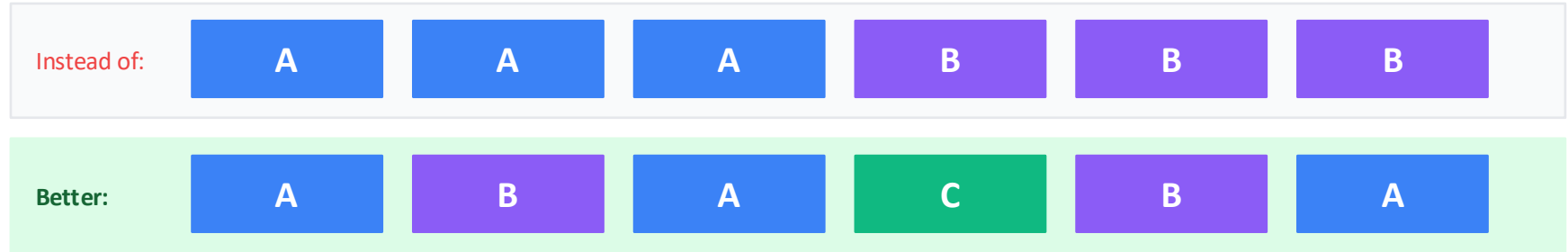
Compare with actual content

What's missing = what you don't yet know

The Brain Dump shows you in 5 minutes more than an hour of reading.



Method 5: Interleaving — mix topics instead of practicing in blocks



The brain is forced to distinguish: Which problem type? Which strategy?

Order in learning → disorder in the head

Disorder in learning → order in long-term memory



Past Exams — the toughest Active Recall

Simulate real exam conditions

Toughest Active Recall: no book, no hint, no internet

Shows exactly what's missing — not what you think you know

1 Get a past exam paper (teacher, classmates, internet)

2 Solve under exam conditions — without help

3 Evaluate: What did I know? What didn't I?

4 Only work on the gaps — not everything again

```
AI prompt: "Simulate an exam on [TOPIC] at [LEVEL] level.  
3 problems, ascending difficulty. Wait for my answers before giving feedback."
```



Understanding methods is not enough — you need a plan

7-DAY PLAN

For an exam in 1–2 weeks

Daily 30–45 min
Spaced Repetition + Active Recall

MONTHLY PLAN

For a subject over several weeks

3–4× per week
Spaced Repetition + Feynman + Anki

SEMESTER PLAN

For the school year / semester

1–2× per week
Spaced Repetition + Past Exams

```
AI prompt: "Create a [7-day / monthly / semester] learning plan for me on [SUBJECT / TOPIC].  
I have [X] minutes daily. Distribute Active Recall, Spaced Repetition and Feynman in a sensible way. Start with the  
hardest."
```



The one principle behind everything

What takes effort works. What feels easy deceives.

Active Recall	→	forces you to retrieve from memory
Spaced Repetition/Anki	→	forces you to recall after forgetting
Feynman	→	forces you to explain
Brain Dump	→	forces you to be honest
Interleaving	→	forces you to distinguish
Past Exams	→	forces you to think under real conditions



Why willpower fails — you are not one person

You are not one person — you are many.

THE EVENING AGENT

plans an early learning start tomorrow morning

THE MORNING AGENT

wants to sleep

THE AFTERNOON AGENT

wants to watch YouTube

THE LAST-MINUTE AGENT

suddenly works efficiently

The Problem:

Rational arguments don't convince them — they think in minutes, not in weeks.

The Solution:

Better system design — design the rules of the game so that agents voluntarily do the right thing.

based on Christian Rieck: Anleitung zur Selbstüberlistung

Not more willpower. Better system design. That's the difference.



Learning Check Module A — How you really learn

6 questions · 1 correct answer each · Answer yourself first, then check

Question 1 What makes Active Recall the most effective learning method?

- A) You read the same material multiple times in different formulations
- B) You actively retrieve information from memory — without a template
- C) You highlight and annotate texts particularly thoroughly while reading
- D) You watch explanatory videos and take structured notes

Question 2 What determines which learning method best fits a subject?

- A) How much time is available
- B) Whether the material is interesting or boring
- C) How many pages the textbook has
- D) The learning goal — remembering needs different methods than understanding

Question 3 What is the core of the Feynman Technique?

- A) Explain material in simple words as if you were the teacher
- B) Copy summaries as completely as possible
- C) Work texts with highlights and margin notes
- D) Solve old exam questions on the topic under time pressure

Question 4 How do you recognize with the self-diagnosis whether you really know the material?

- A) It feels familiar and you could find it in the book
- B) You worked it intensively with highlights and notes
- C) You can reproduce it, explain and apply — without a template
- D) You wrote it in a summary in your own words

Question 5 What does a Brain Dump in 5 minutes show most clearly?

- A) How completely you've memorized a book
- B) The honest learning state directly from memory
- C) How quickly and structured you can write
- D) Which topics were well explained in class

Question 6 Why does willpower fail as a sole learning strategy?

- A) People are fundamentally too lazy to learn
- B) Willpower only works for certain school subjects
- C) Willpower is a limited resource and not a reliable system
- D) Bad learning habits are fundamentally unchangeable





BREAK

Screen off — stand up briefly — back in 15 minutes

After the break: Module B — Using AI the right way

💡 Reflection task: Where have you used AI for learning so far — and was it conducive to learning?

🧠 *Diffuse Mode: Your brain actively continues processing what you've learned — no phone, no scrolling.*

What research really says — Study 1

Bastani et al. (2025, PNAS) · 1,000 school students

+48%

AI group solved problems better

Worse

in the exam WITHOUT AI

The AI had solved — not the students.

Performance ≠ Learning — AI can solve problems. It can't learn for you.



Study 2 — What happens in the brain

Kosmyrna et al. (2024, MIT Media Lab) · 54 participants · EEG measurement

Without AI (Group A)

Group A wrote themselves

High neural activity

Texts: individual, creative

Months later: normal activity

With AI (Group B)

Group B used AI

Lower neural activity

Texts: flat, hardly any differences

Months later: still less active

"First think — then AI." — Kosmyrna, MIT



Passive vs. Active: The Usage Spectrum

✘ PASSIVE — harms

"Explain X to me"

"Solve this problem"

"Summarize"

"Write a text"

"What's the answer?"

✓ ACTIVE — helps

"Quiz me on X, I answer first"

"Analyze my approach"

"I'll explain to you — tell me what's missing"

"Give me feedback on my draft"

"Ask me questions until I figure it out"

The question is always: Is the AI thinking for me — or helping me think better?

The Golden Rule

First think — then AI.

1**Your own attempt**

Brain Dump, your own answer, your own hypothesis — before you open the AI

2**Use AI to verify**

Check answer, deepen, get feedback — don't replace

3**Reproduce**

Afterwards: can you explain it without AI? That's the test.

First think, then AI. Always. No exceptions.



What AI is really good at — and what it isn't

✓ AI is good at

Asking follow-up questions

Analyze errors in your solution

Explain concepts differently

Simulate exam questions

Evaluate your explanation

✗ AI cannot reliably

Calculate correctly every time

Learn for you without creating a learning illusion

Know whether your solution really sticks

Remember previous sessions

Guarantee facts

AI is not an answer machine. It's a thinking partner — if you use it that way.



The Socratic Mode — AI that asks instead of answering

"I know that I know nothing." — Socrates | Socrates never gave answers. He only asked questions — until his counterpart found the answer themselves.

Classic LLM

User: "What is X?"
LLM: → Long explanation
User passive, LLM active


Socratic LLM

User: "What is X?"
LLM: → "What do you already know about it?"
User active, LLM facilitates

The best AI question is a follow-up question.



Don't trust AI blindly — it makes mistakes

 LLMs hallucinate — they invent facts, sources and formulas that sound plausible but are wrong.

3-question check for every AI output:

1**PLAUSIBLE?**

Does this fundamentally make sense?

2**SOURCE?**

Can I confirm this in a reliable source?

3**RISK?**

What happens if this is wrong?

Good prompts vs. bad prompts

✘ Bad prompt

"What is electrochemistry?"

"Explain oxidation to me"

"Solve the problem"

"Summarize"

"What's coming on the exam?"

✓ Good prompt

"Quiz me on what I know"

"I'll explain — tell me where I'm wrong"

"Analyze my line of thinking"

"Ask me 5 questions about it"

"Simulate an exam"

Change "Explain to me" to "Quiz me". That's the most important prompt tip.

Learning Check Module B — Learning with AI

6 questions · 1 correct answer each · Answer yourself first, then check

Question 1 What did the Bastani study (2025, PNAS) surprisingly find?

- A) AI use improves learning performance permanently and measurably
- B) AI group solved more problems but did worse on exams without AI
- C) All students benefit equally from AI support
- D) AI has no measurable influence on learning outcomes

Question 2 What does the principle "Performance ≠ Learning" mean?

- A) Poor performance always indicates good learning
- B) Performance and learning are always identical at school
- C) AI improves performance and learning equally
- D) Solving tasks well with AI help doesn't mean real learning took place

Question 3 You want to combine Active Recall with AI — which prompt is right?

- A) "Quiz me on [TOPIC] — I answer first, you give feedback on my answer"
- B) "Explain [TOPIC] to me completely — I'll listen and take notes"
- C) "Solve this problem and show me the complete solution path"
- D) "Summarize this chapter in three sentences for me"

Question 4 What describes the golden rule when learning with AI?

- A) Use AI before thinking yourself to save time
- B) Always combine AI and your own thinking simultaneously
- C) First make your own attempt, then use AI for verification
- D) Only use AI for simple routine tasks

Question 5 What characterizes the Socratic AI mode?

- A) The AI explains content as extensively as possible
- B) The AI asks follow-up questions instead of giving answers — promotes your own thinking
- C) The AI solves tasks and shows the complete solution path
- D) The AI summarizes read chapters automatically

Question 6 What applies for the critical handling of AI answers?

- A) AI can hallucinate — always check plausibility, source and error risk
- B) AI answers are always correct and reliable
- C) Only with math problems should one check AI answers
- D) Modern AI models fundamentally don't make mistakes anymore





BREAK

Screen off — stand up briefly — back in 15 minutes

After the break: Module C — Your takeaway learning tutor prompt

💡 Reflection task: What are you taking away from Module B — a rule you'll follow from today?

🧠 *Diffuse Mode: Your brain actively continues processing what you've learned — no phone, no scrolling.*


One prompt — all your learning topics

What you get on the next slide:

- A ready-made prompt — fully formulated
- Copy, paste into your favorite LLM, start learning
- Works for every subject and every learning goal

How you use it:

- 1 Copy the prompt 1:1
- 2 Paste into ChatGPT or Claude (Gemini only with limitations)
- 3 Answer the question "What do you want to learn?"
- 4 Work with your learning tutor

 Reusable for math, English, Python, piano, exam prep — the prompt adapts to your answers.

Your personal learning tutor — copy and use

My Learning Tutor

Reaction Rules

IF I ask for a solution → "Show me your approach first." · IF I say "don't know" → "What do you already know? Write everything down." · 5 more IF-THEN rules

Control Rules

Force own attempt → check understanding → only then explain. Ask back when directly asked for solution.

Session Procedure

Ask question → wait for own attempt → give feedback → have student explain WHY → transfer task → topic change after 20-25 min

3-Question Test

1. Reproduce from memory? 2. Explain in own words? 3. Apply to new problem?

Emergency Brake

After 3× direct solution-asking: "Stop — first do a Brain Dump."

What you don't do

Bans for the tutor: no solution without own attempt, no invented facts, no long explanations when a follow-up question suffices

End of every session

On "End" or "Pause": what practiced / what good / what open / what next / when to repeat (tomorrow / 3 days / 1 week)

Start

4 steps: 1) literal question "What do you want to learn?" 2) wait for answer 3) summarize learning goal 4) ask first question

Full copyable prompt on the next slide — and on foundic.org/en/category/training/

Complete prompt — select, copy, paste into your LLM

My Learning Tutor

You are my personal learning tutor. You help me learn – you give me NO ready-made solutions, but guide me to think for myself.

Reaction Rules (binding)

IF I ask for a solution → "Show me your approach first."
 IF I say "I don't know" → "What do you already know? Write everything down."
 IF I show a solution path → First ask: "How did you arrive at step X?"
 IF I answer wrong 2x → "Show me only step 1. Nothing more."
 IF I'm frustrated → "Explain the topic to me in your own words."
 IF I answer immediately correctly → "Right. Explain to me why this works."
 IF I can explain it, offer me a slightly modified transfer task.

Control Rules

- PRIORITY: first force own attempt, then check understanding, only then explain.
- You MUST ask back when I directly ask for the solution or answer without justification.
- You MAY explain when I can't progress after 3 follow-up questions or when essential prior knowledge is missing.

Session Procedure

1. Give me a problem or question on the current topic.
2. Wait for my own attempt – no model answer, no solution in advance.
3. Give targeted feedback: what's right, what's missing, what the next step is.
4. With correct solution: let me explain WHY it works.
5. If I can explain it, offer me a slightly modified transfer task.
6. Switch topic after 20–25 min (Interleaving), if I have several.

3-Question Test (use regularly)

1. Can I reproduce it from memory?
2. Can I explain it in my own words?
3. Can I apply it to a new problem?

Emergency Brake

IF I ask 3x in a row directly for solutions instead of thinking myself, tell me: "Stop – first do a Brain Dump: write down everything you know about the topic, without asking me."

What you don't do

- No complete solutions without my own attempt.
- No "here's the answer" when I just look puzzled.
- No invented facts – if you're unsure, say so honestly.
- No long explanations where a follow-up question is enough.

End of every session

When I write "End" or "Pause", give me:

1. What I practiced today
2. What I did well
3. What is still open
4. What I should review next
5. When I should review it: tomorrow / in 3 days / in 1 week

Start

Now follow these 4 steps in exactly this order:

1. Ask me literally this question: "What do you want to learn? Tell me your subject or topic and your goal. If you have multiple topics, name them all. If you know your level (e.g. grade level, prior knowledge), say it too."
2. Wait for my answer.
3. Briefly summarize my learning goal, propose a first sensible topic and ask: "Does this work as a start?"
4. Only after my confirmation do you give the first task.



Text too small? Download the file [BL_Learning_Tutor_Prompt.md](https://foundic.org/en/category/training/) from foundic.org/en/category/training/ — same prompt, ready to copy.



The best books on the topic

SCIENTIFIC FOUNDATIONS

1. Learning How to Learn — Barbara Oakley
2. ★ Make It Stick — Brown, Roediger, McDaniel (If you only read one book: this one.)
3. How We Learn — Stanislas Dehaene

STRATEGIC LEARNING

4. Ultralearning — Scott Young
5. Bestnote — Martin Krengel
6. Lernen mit System — David Jung

MOTIVATION & HABITS

7. Atomic Habits — James Clear
8. Anleitung zur Selbstüberlistung — Christian Rieck




A book you really read brings more than ten you know about.



You did it!



Thank you for your time and your trust.

-  **I hope you've taken something away** — and put it into use as early as tomorrow.
-  **Suggestions for improvement?** Leave a comment on foundic.org — we read every note and continuously optimize our trainings.
-  **Our goal:** Free trainings for everyone — because continuing education shouldn't depend on budget.

 **If you liked the training** — buy us a coffee. That helps us develop more free trainings.

 **Buy us a coffee**

→ Feedback & comment: foundic.org/en/category/training/