- *Science:* A passion for science itself and questioning everything you read is a great way to improve your overall thinking. If you do not yet understand something, it may be useful to learn it, as it could assist you in future endeavors.

Abstract thinking enables us to reflect on complex relationships, recognize patterns, solve problems, and use creativity. Although we do not know today what we will need to know tomorrow, abstract thinking will improve our understanding of the world, the universe, and life itself.

Active vs. passive

Importance: •••••
Complexity: •
Effort: ••••

Learning better also means learning actively. Simply reading or listening to information is a passive process—only a small amount makes it into long-term memory. To learn effectively, you need to engage with the material:

I. Prioritize information by *importance*.
II. Look for connections to other topics.
III. Explain it in your own words.

Teach what you've learned as if you were explaining it to someone else. This forces you to organize the content, simplify it, and recognize connections. This active processing strengthens neural connections in the brain and makes knowledge more easily retrievable. More on this later in the book.

I

Prioritize Information by Importance

Learning better doesn't mean absorbing as much information as possible at random. Instead, it's about deliberately distinguishing between important and less important content and focusing on the essentials. Knowledge is only truly useful when it is relevant, applicable, and connected. An effective learning process starts with the ability to filter information:

- Which facts are central?
- What helps me truly understand a topic?
- Which details can I ignore?

The ability to connect information also plays a crucial role. Learning is not an isolated process—each new insight is better retained in memory when linked to previously known knowledge (mental network). Our brain functions like a network: The more connections you establish between individual topics, the more stable your learning becomes.

Often, we learn inefficiently because we treat everything equally—we try to remember every fact, whether important or trivial. But this quickly leads to overload. Effective learning is based on setting priorities:

1. *What are the core ideas?* These should be deeply internalized. They form the foundation of your knowledge.
2. *Which details are supplementary?* These can be added later, once you have understood the fundamentals. They are less important until you have built a solid understanding.

3. *What is background knowledge?* Background information provides context and can deepen understanding. It is useful but not necessarily required to master a topic.

In reality, much of what we learn consists of details that are only useful once we have grasped the core ideas. Those who focus on minor details too early often lose sight of the bigger picture and forget what truly matters. Only those who learn to prioritize can learn efficiently.

You don't need to know everything—you need to know the right things, especially what will be relevant in an exam. However, and this is particularly important to emphasize, learning for an exam is only relevant in academic studies. In life, we learn what genuinely interests us. Ideally, this aligns with what will be tested in your studies.

II

Find Connections to Other Topics

Another challenge in learning is that isolated knowledge is quickly forgotten. For example, if you memorize a historical date but have no context for it, it will soon fade from your memory. However, if you connect that date to other topics—such as cultural, economic, or political events of the time—it will stick much better.

Connecting information means integrating new knowledge into what you already know. It involves asking yourself questions like:

- What does this remind me of?
- Have I heard something similar before?
- How does this fit into a larger system?

If you're learning how an electrical circuit works, you can link that knowledge to other physics concepts—such as Ohm's law, energy conversion, or technical applications. This transforms a single fact into part of a broader understanding, making it easier to recall. Plus, it makes learning more engaging.

Back in school, I found learning particularly difficult because we were confronted with so many disconnected subjects. One day we'd study the human circulatory system in biology, geometry in math, and then learn about the Egyptians in history. How could anyone see a connection?

For me, there wasn't one, which made everything feel uninteresting. Everything? Not entirely—there were some topics that intrigued me on their own. But as soon as I was forced to learn something, the enjoyment disappeared.

At university, I no longer had that feeling. Studying business informatics was different because, for the first time, I could recognize a common thread. The topics were interconnected and built upon one another. I wasn't just learning random facts but solving complex problems at the intersection of business and technology. I was especially fascinated by mathematics, as I could finally see the connections between complex mathematical concepts and real-world applications. Not only that—I became so interested that I even enrolled in a mathematics degree at the FernUniversität in Hagen.

In the first semesters of business informatics, we focused on programming and databases. Later, we applied these foundational skills—developing a website with an integrated database. At the same time, we studied business administration to understand how companies operate, linking this knowledge with technical concepts in real-world projects. I saw how everything connected—something that had been missing in the fragmented school subjects.

This feeling of truly using knowledge and recognizing connections made studying exciting for me. The difference from school was that university learning was more practice-oriented and logically structured, making it feel meaningful. Even in my later mathematics studies, the subjects—while purely mathematical—were not a random mix of different fields. Instead, it was a specialization that allowed for a deep dive into the field, making mathematical knowledge more applicable.

Some might find that boring, but the subjects were complex and engaging, specialized within mathematics but still diverse enough to remain interesting. In such a degree program, the fields are so specialized that they differ significantly from one another, even though they are all interconnected.

Who hasn't experienced this? Repeating texts over and over, hoping to memorize them. You've already gone over it ten times, yet it still won't stick… Repetitive tasks are especially exhausting for people with ADHD—boring, monotonous, and offering nothing new to learn. "I've read this before, I already know this, why should I repeat it?"

But learning isn't about the number of repetitions—it's about the number of connections.

Our brain doesn't store information in isolation but as part of a network of associations. The more connections a piece of information has to what we already know, the easier it is to recall. Instead of rote memorization, it helps to actively link knowledge to other concepts:

1. Why is this information important?
2. How can I connect it to something I already understand?
3. In what real-world situations could I apply it?
4. Can I link it to a story or an image?

For people with ADHD, dynamic learning methods can be particularly effective—drawing mind maps, creating stories, asking questions out loud, discussing the material with someone, or incorporating movement into learning.

Learning is not a mechanical process. It's a creative, active engagement with the material. The more our brain links information together, the more vivid and retrievable our knowledge becomes.

So next time you're frustrated that repeating something ten times hasn't helped, try something new: connect, question, experience—and learn in a way that makes sense for your brain.

One of the most effective learning techniques is the Feynman Technique, which can be summed up in a simple principle: Explain the material as if you were teaching it to a child.

But what actually happens in this process? Two key things:

1. We simplify the knowledge. If we truly understand something, we can explain it in simple terms. This makes complex concepts and abstract ideas more tangible.
2. We have to articulate it. Only when we've retained the material can we explain it clearly. Gaps in our knowledge become immediately visible—we realize what we haven't fully grasped yet.

This makes the Feynman Technique not just a memorization tool but a method for deep understanding.

III

Explain It in Your Own Words

Simply reading or listening to information is very passive. Explaining it, however, forces you to actively engage with the material. How does this work?

1. Learn a section or topic—read or listen to the material carefully.
2. Close the book and explain it to yourself in your own words.
3. What was the main idea?
4. How would I explain this to someone with no prior knowledge?

If you notice while explaining that you're struggling or unable to clarify something properly, you've found gaps in your knowledge. Go back to the material and fill in those gaps.

Use images, metaphors, or simple comparisons to explain complex ideas. This makes the topic more tangible and helps you truly understand it.

If you've been paying attention, you'll notice that this is part of the Feynman Technique. However, I find that explaining things verbally or mentally has some challenges. For example, it's hard to track what I've already explained and how well I've explained it. Writing, on the other hand, makes your knowledge visible and reveals where gaps still exist (see *Writing as a Learning Technique* on page ??).

Simply copying or repeating information is not effective. While you absorb the words, they remain superficial without deeper processing. True understanding only occurs when you think through ideas, rephrase them, and express them in your own words. Instead of just consuming knowledge, you should actively process and condense it—this leads to deeper comprehension.

1. Simply copying content does not require actual thinking.
2. Only by independently formulating ideas do you realize whether you truly understand them.

3. Using your own words forces you to structure complex ideas clearly.

The goal is not to pack all information into a single text but to break it down into atomic notes—small, self-contained units of knowledge that can be linked together. Think of it as your own personalized Wikipedia, tailored to your interests. Here's an example:

1. You write an article about Sartre.
2. In that article, you mention that Sartre was from France.
3. Instead of just stating "France," you create a separate article for it.
4. This keeps knowledge structured, preventing it from becoming mixed up or overwhelming.

The Process

1. *Absorb* – Read or listen to an idea.
2. *Process* – Identify the core message.
3. *Rephrase* – Don't copy—reformulate it in your own words.
4. *Condense* – Write clear, precise notes instead of unnecessary details.
5. *Connect* – Link topics in meaningful ways.

By learning this way, you gradually build a unique network of thoughts—not just as a reference but as a foundation for deep understanding.