

How to Use the Feynman Technique to Learn Faster

by Thomas Frank (adapted from <https://collegeinfo geek.com/feynman-technique/>)

If you want to understand something well, try to explain it simply.

By attempting to explain a concept in simple terms, you'll quickly see where you have a good understanding of that concept. You'll also be able to instantly pinpoint your problem areas, because they'll be the areas where you either get stuck or where you end up resorting to using complex language and terminology.

This is the idea behind the Feynman Technique.

Named after the Nobel Prize-winning physicist Richard Feynman – who, in addition to being a brilliant scientist, was also called “The Great Explainer” for his ability to relay complex ideas to others in simple, intuitive ways – the Feynman Technique is a method for learning or reviewing a concept quickly by explaining it in plain, simple language.

In addition to helping you pinpoint those problem areas in the concept you're trying to learn, the Feynman Technique gives you a quick, efficient way to shore up those areas using targeted learning. It's a simple technique, but it'll help you study much more efficiently once you put into action.

So how do you actually use it?

How to Use the Feynman Technique

Since the root of this technique involves explaining the concept, you could execute it in a number of ways – including literally grabbing a friend and explaining to them what you're learning. However, you don't always have willing friends at hand, so here's the simpler method that just involves a sheet of paper.

Step 1: Grab a sheet of paper and write the name of the concept at the top. You can use pretty much any concept or idea – even though the technique is named after Feynman, it's not limited solely to math and science.

Step 2: Explain the concept in your own words as if you were teaching it to someone else. Focus on using plain, simple language. Don't limit your explanation to a simple definition or a broad overview; challenge yourself to work through an example or two as well to ensure you can put the concept into action.

Step 3: Review your explanation and identify the areas where you didn't know something or where you feel your explanation is shaky. Once you've pinpointed them, go back to the source material, your notes, or any examples you can find in order to shore up your understanding.

Step 4: If there are any areas in your explanation where you've used lots of technical terms or complex language, challenge yourself to re-write these sections in simpler terms. Make sure your explanation could be understood by someone without the knowledge base you believe you already have.

That's it!

What's retrieval practice?

From www.retrievalpractice.org

https://www.youtube.com/watch?time_continue=36&v=ZO8abw3DHxs&feature=emb_logo

Transcript from the video:

There is a lot to learn in the world students can't learn everything and educators can't teach everything, especially not over and over and over again. Each time students forget what can we do to improve learning and reduce forgetting? How can we use our limited amount of classroom time and make learning stick? Based on more than 100 years of research by cognitive scientists the most powerful and effective strategy for improving learning is retrieval practice. In fact retrieval practice is more effective for increasing learning than common techniques including lectures, concept maps and even note-taking. With retrieval practice and evidence-based learning strategy we bring information to minds, we retrieve our knowledge and we use our knowledge. For example, students retrieve what they know when they answer quiz questions. When students think about a course topic from last week they're retrieving information and putting it to use. Even when we think about what we ate for breakfast we're retrieving. With retrieval practice, when students think about and use what they know they strengthen their learning. Keep in mind that high-stakes exams and assessments involve retrieval but they're typically used to evaluate learning. On the other hand low stakes and no stakes retrieval activities like quizzes, flashcards and quick writing exercises can be used to improve learning. In other words retrieval practice activities focus on improving learning not assessing learning. How can we use retrieval practice to build student learning in our classrooms?

First, use ungraded no stakes quizzes. For example, think about breaking up your midterm for one large assessment into weekly quizzes that are ungraded or carry very low stakes. Second, provide short writing exercises ask students to simply reflect on what they learned last week. These are just two strategies supported by cognitive science research. In fact cognitive scientists are exploring a number of retrieval strategies to boost student learning. For example, those retrieval practice improve learning in k-12 classrooms. Does it work in medical education? Should I use short answer or multiple choice quizzes? How often should I give opportunities for retrieval? And should I give feedback? For more research resources and tips for applying cognitive science in your classroom visit www.retrievalpractice.org and download our free guide for more Information it's time to switch from getting information into student heads, instead let's focus on getting information out of students heads with retrieval practice and let's transform learning in our classrooms.