

Practice Activity 7: The Overnight Boost

In 2016, a study in Lyon, France, examined students preparing for a test that was all about recall; participants had to learn 16 words in Swahali – a language they’d never studied before – and remember their translations when asked under exam conditions. So far, so predictable. But here’s where the study gets interesting. The students were split into two groups of twenty and given different circumstances in which to revise. (*Relearn Faster and Retain Longer: Along With Practice, Sleep Makes Perfect*, Stéphanie Mazza, Emilie Gerbier, Marie-Paule Gustin, Zümrüt Kasıkcı, Olivier Koenig, Thomas C. Toppino and Michel Magnin, *Psychological Science*, Vol 27, no 10, 2016)

Group 1 were called the “sleep” group. This lot revised the material at 9pm in the evening, then went to sleep, then took their test at 9am in the morning.

Group 2 were the “wake” group. They revised at 9am in the morning, then did their usual day at college/university/job, then took their test at 9pm at night.

Both groups were the same in terms of gender, age, quality of sleep and so on... but it quickly became apparent that there were differences in what happened when they sat down to complete their tests.

Exam 1 happened after **12 hours**. The students in each group saw the same 16 words in Swahali and had to type the translations from memory.

Exam 2 happened after **1 week** and the same procedure was followed.

Exam 3 happened after **6 months**; same procedure again.

There was no studying in-between these times. Why not have a guess what happened?

We’ve given you a table, and added the scores the groups achieved on their first attempt after 12 hours. We’ve left four missing scores... and put the four numbers you need below the table. All you have to do is match the scores to the correct box.

Have a go...

	EXAM 1: Average score out of 16 after 12 hours	EXAM 2: Average score out of 16 after 1 week	EXAM 3: Average score out of 16 after 6 months
The sleep group	10.3 out of 16		
The wake group	7.5 out of 16		

Other scores achieved: 15.2, 11.3, 8.7, 3.4²

² Clue ... (not that you need it!) the ‘sleep’ group scored better in all the tests

Once you've decided, have a think about why you've chosen the results you have. Assuming you haven't just put them in randomly...

- Why do you think the results might be happening the way you have predicted?
- What variables might be at play here?

The researchers concluded that:

- The sleep group performed better because – and here's a direct quote from the study – "...sleep has been shown both to passively protect memories against decay and interference and to actively consolidate new memories." In other words, **sleep allows the brain to process and store information without disturbance**, strengthening it in your memory.

And that...

- The sleep group performed better because the wake group, "operated on memories degraded by interference" – in other words, the busy events of the day 'get in the way of', or 'slow down' the brain's ability to process and store information.

What Does All This Mean for Us?

The study suggests a good way to tackle a subject or topic that won't stick in your head, is to try what we call **The Overnight Boost** to crack it. Here's how an overnight boost works.

1. Just like in the experiment, revise your hard-to-remember topic in the evening. Spend two short 25 minute bursts on it, with absolutely no distractions.

Read it through actively. Make clear, simple notes in bullet points capturing the main information.

The session doesn't have to be at 9pm like the experiment, but you want as little further stimulus as possible after the work. Try and do it close to bedtime. Avoid watching TV or doing any further work after your session. Just pack away, take it easy, then sleep.

2. In the morning, about ten hours later if you can, test your material from memory.

Take out your notes, quickly scan the main points, then cover everything up. You're going to push yourself to recall it all from memory. Speak it out loud or write it down like a test.

That's it! Stick with the strategy, and pretty soon you'll find that the information is really embedding in your thinking and your recollection getting is stronger and stronger.