

The Spacing Effect

Education

The same study time spread over days beats the same time in one block.

Distributed practice produces more durable learning than massed practice of equal total duration. The gap does the work.

gap ~ 10-20% of the target retention interval

Test in 1 week

Then again later

Review after 1 day

Test in 1 month

Roughly

Review after 1 week

Test in 1 year

Roughly

Review after 1 month

THE COMMON MISTAKE

✗ **Blocking a topic into one intensive week and never returning**

✓ **Revisiting it briefly across the term**

Massed practice raises performance in the lesson and lowers it at the test.
Performance during learning is a poor guide to learning.

Well supported. The optimal gap ratios come from Cepeda and colleagues; treat them as a guide, not a formula to obey.