

Enhancing Learning Using Spaced Practice

By Linda M. Love, EdD

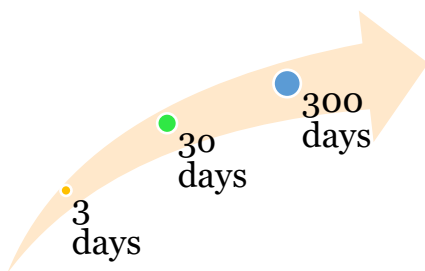
What is it?

The **spacing effect** is the phenomenon whereby learning is better when studying is spread out over time, as opposed to studying the same amount of content in a single session. There is significant evidence that **spaced practice**, distributed practice, or spaced repetition outperforms massed learning or “cramming” strategies. Multiple psychological functions are responsible for the beneficial effects of spaced practice. The most prevalent of these are procedural learning, priming effects, and expanding retrieval.

How do I teach using it?

- Do not consider your learning goals as one hour blocks of lecture content. *Plan* for spaced practice within your block or teaching units. Performance of students who hear content one time, in one lecture, will be lower than those who frequently revisit content.
- An easy gaming strategy, widely used on social media platforms, can be adapted for spaced practice. Integrate “Throwback Thursdays” or “Muddy Point Mondays” to help keep a broader array of content in play with students at any point in time.
- Design learning materials that are less focused around a singular PowerPoint lecture topic. Create opportunities for “beneficial discomfort” in a *safe* learning environment to help student—and yourself—understand where knowledge gaps exist.
- Model spaced practice by outlining and showcasing your spaced practice strategies for the class.

How do I teach students how to use it?



- Encourage students to make a study schedule that reserves more segments of time over the course of the block, term, or year. Anticipate cramming to be a difficult habit to break, especially when the benefits of sustained learning are often not fully apparent until weeks, months, and years later. Ultimately, scheduled spaced practice over time will produce desirable results that the student should notice going into high stakes situations.
- Recommend technology and apps (e.g., Anki) to drive learning toward students in a predetermined structure and time frame. Make learning tips and resources a regular part of your Canvas template.
- Caution students that spaced practice will feel harder in the beginning and make them question their forgetfulness in general. Remind students that *quality time* learning must be part of the equation in space practice. Spaced practice can also take different forms such as using the iWall, drawing relationships on white boards, simulation and anatomy labs as well as the library or local coffee shop.

More Information

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Read More:

1. Ambrose, S. A., Bridges, M. W., DiPietro, M., Lovett, M. C., & Norman, M. K. (2010). How learning works: Seven research-based principles for smart teaching. John Wiley & Sons.
2. Benjamin, A. S., & Tullis, J. (2010). What makes distributed practice effective? *Cognitive Psychology*, 61, 228-247.
3. Brown, P. C., Roediger, H. L., & McDaniel, M. A. (2014). Make it stick. Harvard University Press.
4. Weinstein, Y. & Smith, M. (2017). *Learn to Study Using Concrete Examples*. Retrieved at www.learningscientists.org.