

A Practice Hack That Could Significantly Boost Practice Efficiency (but May Not Feel Like It In the Moment)

Description

I don't know if it's true, or just my imagination, but I've always felt that my most productive practice years were actually my very *earliest* years, up until about the time I was in mid-to-late elementary school.

In that period of my life, practice was structured in a very particular way. One key factor was that I practiced in multiple practice sessions per day – morning, afternoon, and evening. And not because I had so much rep to learn that it had to be split across multiple sessions, but more just so I could “touch” everything I was working on more than once per day. If I'm remembering the rationale correctly, my mom figured that we eat three meals a day, so why not practice three times a day too?

Whatever the reason, this formula seemed to work pretty well.

As I got older however, I started moving away from this practice structure, and consolidating all my work into one single mega-session.

In college, for instance, I'd generally plop down in a practice room after dinner, start out with some etudes/technical exercises, then move sequentially through my repertoire, spending ~30-45 minutes on each piece before moving onto the next one on my list.

Or sometimes, I'd devote a whole day to one piece, and put everything else on the back burner (like the day before a lesson when it seemed like my best bet was to put all my eggs in one basket).

At the time, I figured practice was practice, and it didn't really matter how or when I did it, but there is accumulating research which suggests that maybe there really was something to my childhood approach.

How so?

Flashcards

Twenty UCLA students participated in a [study](#) geared towards identifying the most effective and efficient way to learn GRE-type vocabulary words with flashcards. Would learning be best with a big stack of flashcards? Or is learning optimized when students use smaller stacks of flashcards?

Well, let's mull this over for a moment.

If you were to study with a large stack of flashcards (say, 20), it might take quite a while to get through the stack. So it's very possible that by the time you get back to the first card, you'll already have forgotten the

answer. On the other hand, with a small stack (like 5), forgetting is less of an issue, as it's easier to keep the answers in mind as you keep cycling through the stack in a short span of time.

So, say you had a set of 20 flashcards you needed to learn. Would you dive right in and study that single stack of 20 cards? Or would you split it up into a bunch of smaller stacks and work through the “sub-stacks” one batch at a time?

Big stack vs. small stacks

The participating students were asked them to complete an online vocabulary lesson which would help them learn 20 GRE-type words (like “effulgent”).

One group (the “spaced learning” group) was presented with one large “stack” of 20 digital flashcards. The program rotated through the cards 4 times, in the same order, so they had a chance to study and attempt to recall the content of each flashcard 4 times.

Another group (the “massed learning” group) was given 4 smaller “stacks” of 5 flashcards each. In this condition, the software rotated through each stack 4 times before moving onto the next stack, so these students also had an opportunity to study and recall the content of each flash card 4 times.

There was no limit placed on their study time, and they weren't given any particular instructions on how to study; they were simply told that they would have to take a test ~24 hours following their study session.

Same time, but different results

Students in both groups averaged about 22 minutes of study time. However, despite spending the same amount of time studying, one group performed significantly better than the other on the recall test.

Specifically, the spaced group (with the big stack of 20 cards) successfully recalled **49%** of the words, while the students in the massed group (small stacks) only recalled **36%** of the words.

Why such a difference?

Why spacing works

There are a few theories about why spacing practice leads to better learning. One is that we tend to pay better attention (and not be so prone to going on autopilot) when we're studying or working on new things, as compared with when we are repeating the same few things over and over in a short span of time.

Another is that when we work on one thing, and don't come back to it for a while, it takes more effort to remember it again, which enhances learning.

And in a practical sense, when we introduce spacing in our study or practice, it means that we are

learning and retrieving information in different contexts too. Different practice rooms. Different times of day. When our bodies feel more or less fatigued. All of which is way more conducive to flexible and durable learning than if we try to learn everything at the same time, in the same setting.

The illusion of learning

There was one more rather curious finding.

After completing their study session, students were asked to predict their performance on the next day's test. Those in the spaced condition predicted they would remember about 43% of the words (but actually scored 49%). Meanwhile, students in the massed condition predicted they would remember about 50% (but only recalled 36%).

So the spaced group *underestimated* their performance, while the massed group *overestimated* their performance. In other words, studying in a massed fashion resulted in the *illusion* of effective learning.

Take action

Looking back, I see that my childhood practice – where I practiced every piece I was working on multiple times a day – falls under the category of “spaced” practice. Conversely, my college practice – where I spent more continuous time working on each piece, but only once per day – was “massed” practice. So perhaps it's not just in my imagination that I learned quicker/better when I was a young child...

Of course, it's one thing to engage in this kind of spaced practice if your rep consists of shorter pieces or orchestral excerpts, but what if you are working on a huge concerto?

Well, perhaps another way to use the “big stack of flashcards” model would be to take a movement of the concerto, and work through it from beginning to end, focusing your attention on tricky passages in intense bursts, but moving on after a few minutes and ensuring you don't get stuck in any one section, so that there's enough time to work through the entire movement multiple times? Compared to the “small stack” model of practice, where you might work through the same piece from beginning to end, but spend more time working through tricky spots in each section in that moment, with the aim of getting through the piece only once in that practice session.

It certainly sounds a little unusual, but in an odd way, it also makes sense. Have you ever structured your practice this way? And if you did, how did it go?

Date Created

March 2017