

# Interleaved Practice: The Best Method for Increasing Reliability, Consistency, and Confidence in Performance

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## The Big Picture:

In a performance, you get one shot to get it right. If you haven't practiced playing perfectly the very first time, you're putting your brain at a disadvantage in performance situations.

## The Science: Studies unanimously support interleaved practice over massed practice for superior performance

- By far the worst combination for performance success is massed practice and interleaved performance, which is exactly the combination most musicians use (lots of repetitions in the practice room, but then having to get it perfect on the first try on stage).
- In the practice room, areas of the brain associated with higher cognitive skills (planning, working memory, etc.) work harder during interleaved practice. But during performance, these same areas work *less* relative to brain activation when performing something learned using massed practice. Less activation means less effort and more ease on stage.
- The illusion of mastery is a powerful force: it is easy to fall into the trap that massed practice is better because it feels better in the practice room. But science says otherwise.
- Interleaved practice promotes connections between areas of the brain associated with long-term storage of a skill, even when the skill is new.
- There is evidence that starting with massed practice (AAAA BBBB CCCC), then progressing to serial practice (ABC ABC ABC ABC), and then finally interleaved practice (ACBCABACBACB) is the best combination for consistent and accurate performance.

# Some ideas for practical application

- Try serial practice:
  - Pick at least 3 trouble spots (5 is optimal, more than 10 is too many at once) and put a small sticky note in your music at each spot. You should be able to do these at least 5 times in a row perfectly before trying this.
  - Play the first spot. If it's correct, put a tick mark on the sticky note. Go through and play each spot, putting a tick mark if you do it correctly.
  - Once you've gone through all of them, go back to spot #1 and play it again. If it's right, give yourself another tick mark. If it has a mistake, erase the tick mark from the first time and start over from zero. Keep going through all the spots, giving yourself tick marks when it's correct, and erasing all the tick marks you've earned for that spot if there's a mistake.
  - The goal is to get 5 tick marks on each one.
- Download an interval timer for your phone (there are many free ones).
  - Set the interval timer to go off every X number of minutes (say, every 5 minutes).
  - Practice in your normal way.
  - Every time the timer goes off, immediately stop whatever you're doing and play your trouble spot just once as if it's a performance, no matter how bad it is.
  - Go back to whatever you were working on before the timer went off.
  - Repeat until the end of your practice session.
- "Speed dating" practicing
  - Pick 3-5 spots you want to work on.
  - Set your interval timer to go off every 5 minutes.
  - Every time it goes off, you have to switch to practicing a different spot.
  - This will force you to practice efficiently and will also test if you practicing was effective when you come back to each spot later in the practice session.
- Mix up your technique routine.
  - Write the name of each key on a slip of paper and put all the slips in a small bag.
  - Write different bow strokes or bowing patterns on slips of paper and put these slips in a different bag.
  - Write different tempos on slips of paper and put these slips in a third bag.
  - Everyday, pick a slip of paper out of the key bag, the bow stroke bag, and the tempo bag. That is how you have to practice your scales and/or arpeggios that day.
- At least two weeks prior to an audition or concert, whenever your brain is at its worst (early in the morning for those of you who aren't morning people, late at night for early birds), play your program from start to finish with only the warm up you'll do on the day of the event. Record it and then listen and take notes on what didn't go well.