

A Visualization Hack to Get More Out of Your Mental Practice

Description

From tennis great [Billie Jean King](#) to pianist [Glenn Gould](#), imagery has long been a staple of athletes' and [musicians'](#) bag of practice tools.

When visualizing, a general rule of thumb is that you want whatever it is that you're imagining, to be pretty close to the actual real-life experience that you are working towards. The same sounds, the same kinesthetic sensations, the same visuals.

Take tempo, for instance. If it normally takes you about 13 minutes to play the first movement of the Mendelssohn violin concerto, the visualized version should probably take about 13 minutes too. And if you blaze to the finish line in 3 minutes, you know something is a bit off.

But when it comes to regular physical practice, we don't always practice or play things in real time. Lots of folks swear by slow practice. And some even advocate for practicing things *faster* than you'd ever play them in performance too.

So...could there be any benefit to doing super slow or super fast *mental* practice as well?

Batting practice

Nine baseball players from youth travel teams¹, volunteered to participate in an imagery study ([O, Ely, & Magalas, 2019](#)).

Everyone started out with a baseline assessment of their swing, swinging at real baseballs in a batting cage at a training facility they were all familiar with. After a short warm-up period, the participants all took 4 "unofficial" practice swings, followed by 4 "official" swings that were video-recorded and evaluated by the general manager of the facility (a former baseball player and collegiate/international-level coach).

Once a baseline level of performance was established, the participants received a brief crash-course in a few basic imagery concepts (like the difference between seeing images from a first person vs. third person perspective), and learned how to use visualization to practice their swing. Each player practiced visualizing their swing in slow-motion, real-time, and fast-motion.

Next, the general manager and each participant entered a batting cage, where he demonstrated the swing in both slow motion and in regular speed, to give participants a more vivid real-life picture to model their imagery after.

And finally, the participants had their first guided mental practice session.

Mental practice

One group of participants watched a video of 3 slow-motion swings (at 1/3rd speed), followed by 3 swings at normal speed (the **slow+realtime** group).

Another group watched a video of 3 normal-speed swings, followed by 3 fast-motion (at 2x speed) swings (the **realtime+fast** group).

And a final group watched 2 slow-motion swings, 2 normal speed swings, and 2 fast-motion swings (the **slow+realtime+fast** group).

A different purpose for each speed

Participants were also informed that each visualization speed actually had a unique learning purpose.

Slow-motion imagery, for instance, was to be used as an opportunity to learn and refine the different technical elements of their swing (e.g. set-up, load, swing).

Real-time imagery, on the other hand, was for getting the timing and sequencing of these different components down.

And fast-motion imagery was described as an opportunity to “experience the confidence associated with being able to swing a baseball bat extremely fast and to hit a baseball extremely hard.”

The **slow+realtime** and **realtime+fast** groups then did 15 mental repetitions at each swing speed, while the **slow+realtime+fast** group did 10 mental swings at each speed (to make sure the total number of mental practice swings was the same across all groups).

When they finished, they were given a mental imagery journal to log their practice in, and told to repeat exactly what they just did, every day, for the next 6 weeks. Meanwhile, every Sunday, they would return to the facility for another guided imagery session to make sure the quality of their imagery practice remained high, and for another swing test to see if there were any changes in their swing from one week to the next.

So...did anything change?

Which was best?

Overall, there were positive improvements over the 6-week period for all three groups.

However, the improvements for the **slow+realtime** group were rather modest, while the **realtime+fast**

group had more noticeable gains, and the **slow+realtime+fast group** made the biggest and most immediate improvements.

So...the main takeaway seems to be that mental practice at various speeds could indeed be helpful – though the greatest gains may come from a combination of all three.

Sticking with it

One thing that stuck out to me about the study was the length and amount of mental training. Maybe it's just me, but six weeks of daily mental practice seems like a pretty big ask, for 14-year olds who presumably have school and lots of other competing demands and motivations – especially since all of this took place when the baseball season had already ended.

Indeed, not everyone stuck to the daily regimen. Only four reported practicing every single day – three of whom were in the slow+realtime+fast group, which had the greatest improvement. And interestingly, the participant who improved the least, also missed the most practice sessions (15).

Why is this? I'm not really sure, but I wonder if there was something about the combination of slow, realtime, and fast visualization that was somehow more engaging? Or maybe because the slow+realtime+fast group's performance improved more noticeably even in the first week, they were more motivated to keep it up?

Caveats & takeaways

Keep in mind that it was a small sample of participants, and there's more work yet to be done here. But experimenting with a combo of slow, regular, and fast speeds does seem like an interesting mental practice hack to experiment with.

One thing I haven't quite sorted out in my head is whether fast-motion imagery of swinging a baseball bat and fast-motion imagery of a tricky passage in music are truly analogous. Like, I could see how imagining yourself generating greater bat head speed, with greater ease, could translate into a more powerful swing.

But what if you're playing a slow movement of Bach, where speed isn't necessarily the goal? Would there be any benefit in visualizing the movement at twice the tempo?

Maybe instead of multiplying tempo by a factor of 2, it would be more useful to visualize twice the dynamic contrast? Or a 200% juicier sound? Or a version where all of your musical ideas are [cranked up to 11?](#)

Of course, if tempo *is* the main challenge, and you're struggling to get a Paganini Caprice up to tempo ([or not](#)), then maybe a bit of slow-normal-fast mental practice could be the thing that helps to free things up a bit.

Reference

O, J., Ely, F. O., & Magalas, S. (2019). It's all about timing: An imagery intervention examining multiple image speed combinations. *Journal of Applied Sport Psychology*, 1-39.

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