

A Better Way to Do Mental Practice

Description

I still remember how nervous I felt as I walked across the 100 or so yards of grass and sidewalk between my dorm and the one next door.

I had decided that I was going to ask out the cute pianist I met in the conservatory lounge a few weeks earlier. But this being pretty new territory for me, “winging it” wasn’t really an option. So I practiced the conversation I anticipated having with her the only way I knew how.

In my head.

I imagined what I might say. I mentally practiced how I might respond if she said such-and-such. And I went through the various iterations of how I thought this conversation could go.

Then, finally, before I had a chance to chicken out and put it off for another day, scrounged up the courage to go and knock on her door.

How to practice when physical practice isn’t an option

Whether it’s navigating the turns of an Olympic bobsled track, nailing tricky shifts in a high-pressure audition, or asking pianists out on dates, sometimes it’s not possible to do as many real-life physical practice repetitions as we might like.

And for such times, you’ve probably heard [musicians](#) and [athletes](#) alike rave about the benefits of mental imagery. How it can not only enhance learning, but improve performance, help build self-confidence, regulate your emotional state, and more.

Yet most of us were never taught anything about *how* to visualize or do mental practice. I mean, heck, is mental imagery even a thing that one *can* get better at with practice?

Individual differences in mental imagery ability

Researchers have known for some time that imaging ability does vary from person to person. Like any physical skill, whether it’s running, jumping, or sniping a baddie with your precision gaming mouse, visualization comes pretty naturally to some, while others find it to be a real challenge – if not impossible!

Quick side note: And when I say impossible, I mean that literally. In recent years, there has been increasing recognition of a phenomenon known as “aphantasia.” People with aphantasia cannot see

images – or sometimes sounds or other sensory details – in their mind’s eye. It’s pretty interesting actually; check out [this short BBC article](#) with two short video profiles which explains what this is all about.

In any case, despite all of the research that’s been done on visualization, there hasn’t been very much of it devoted to finding ways to practice mental practice. For the most part, the idea has been that the more mental imagery you do, the better you’ll get at it.

But that doesn’t feel like especially helpful advice, no?

A way to make imagery clearer?

Part of what I think can make visualization feel hit or miss for some folks, is that for mental practice to be effective, the images have to be clear and vivid. But real life is a rich and complex experience. Which means there’s an awful lot of stuff we could add to the movie in our head!

So in an effort to make mental imagery a clearer, more concrete, step-by-step process, a [team](#) of British researchers developed an imagery training technique called **layered stimulus response training (LSRT)**.

LSRT is based on the principle of developing imagery ability in layers, one tiny step at a time, instead of trying to create a vivid scene all at once. A little like the process of building a house, from pouring the foundation to framing to interior decoration, adding more detail and refinement with each new stage.

So how might this work exactly?

Better mental imagery in three steps

Step 1: Form an Image

The first step is to generate an image. Something like playing through the first movement of a concerto in studio class. Or even something much simpler, like playing a scale in your practice room. It’s best if the image is based on a memory of something you’ve actually done in the past though, as this will make it easier to imagine the details.

A key part of this step is describing – *in words* – as much of the scene as you can. That’ll help add clarity to the image, and also make it obvious to you when your image is a little too vague or fuzzy.

And then you can let the mental image play out until the scene ends at some logical point. Like the end of your studio class performance, or the last note of the scale.

Step 2: Reflect

Step two is to rate the mental image you just created on a scale of 1-5. Where 1=“no image at all, only thinking of the scenario” and 5=“a perfectly clear and vivid image.”

Take a moment and reflect on the quality and completeness of the image. Were you able to **see** the details of the music on your stand, the instrument in front of you, or what was on the walls around you? And did your image also incorporate how your hands or embouchure **felt**? And how clearly could you **hear** the nuances in the sound of your instrument?

The idea is to identify which parts were vivid and which parts were hazy. This way you'll have some idea what ingredients to emphasize in your next mental practice repetition.

Step 3: Develop/elaborate on the image

After reflecting for a moment on your last imagery attempt, you can either re-imagine the same exact thing, focusing on the elements that were the most vivid and easiest to visualize clearly. Or, you could try to elaborate on the image, by adding another layer of detail on top.

It could be another aspect of the space, like adding a stand or different lighting to your image. Or it might be a change in perspective, going from a 3rd person perspective to a 1st person perspective. Or the addition of vibrato to your sound. Or how your thumb feels as you release tension during a tricky shift.

If this process seems vaguely familiar, it could be because it does resemble the formula for [deliberate practice](#). Where you try a thing, reflect on how it went, and think up small adjustments for your next attempt.

So this is all fine and dandy. But the real question is, how much of a difference does this leveled up version of mental practice make relative to other types of imagery practice?

A golf study

To find out, the team responsible for developing LSRT recruited 24 participants who were assessed to be low in imagery ability and who had little to no golf experience ([Williams et al., 2013](#)).

Everyone started out with a putting test of 15 putts, and then returned to the lab every day for the next four days for a short 15-min mental practice session.

Three different approaches to mental practice

One group completed a basic **visual imagery** session each day, where they were asked to “imagine seeing the golf ball run along the green and gently roll into the hole” five times.

Another group engaged in a daily **motor imagery** session, where they were asked to “imagine yourself

correctly and successfully performing the golf putting task” five times.

And a third group was trained in the 3-step **LSRT** process, and asked to “imagine yourself correctly and successfully performing the golf putting task” five times, utilizing the reflective and additive layering process.

And after a few days of mental practice, was there any difference between the groups?

Two big changes

Yep!

After 4 days of practicing golf putts in their heads, the **LSRT group** was the only group that improved their ability to mentally “feel” the shot.

But more importantly, the LSRT group was the only group that improved their actual putting performance!

Williams, S. E., Cooley, S. J., & Cumming, J. (2013). Layered stimulus response training improves motor imagery ability and movement execution. *Journal of Sport & Exercise Psychology*, 35, 60-71.

Two takeaways

I think the findings suggest a couple things.

One, that imagery ability can be improved with the right kind of practice. And two, that this ability can be improved enough to produce results of practical significance!

Take action

Maybe you’ve tried mental practice in the past, but never got much out of it? Or perhaps you’re already pretty awesome at visualizing and have super vivid images?

It’s not clear from this study what LSRT’s impact might be on those with high imagery abilities, but either way, I think LSRT could be worth a try. And this week is as good a time as any!

Here’s a quick recap of how this might look:

1. Visualize yourself playing a passage.
2. Reflect, evaluate, and rate the vividness of your imagery from 1-5 (i.e. Which parts were easiest to imagine? Most clear and vivid?).
3. Visualize playing through the passage again, aiming to make the clearest, easiest to imagine elements even more vivid.
4. Reflect and evaluate the image once again.

5. Repeat this process four more times, each time taking the vividness of the image up a level, or adding an additional layer of detail to the image. Something like how effortless and light your fingers feel, or the feeling of confidence before executing a tricky shift. Don't worry too much about what the "right thing" to add to the image may be. Just add whatever detail you feel would make the image more real and relevant to you!

Epilogue

And in case you were wondering how things worked out with that cute pianist from college, we've been married for almost 20 years now. So I guess we could call that another win – though of a different sort – for mental practice? ?

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References

Williams, S. E., Cooley, S. J., & Cumming, J. (2013, February). Layered Stimulus Response Training Improves Motor Imagery Ability and Movement Execution. *Journal of Sport and Exercise Psychology*, 35 (1), 60–71. <https://doi.org/10.1123/jsep.35.1.60>

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