The 10,000-Hour Rule Was Wrong, According to the People Who Wrote the Original Study

What is really required to become an expert is very different.

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Over the past decade, everyone seems to have heard of the so-called 10,000-hour rule, popularized by Malcolm Gladwell in his book [Outliers: The Story of Success](http://www.amazon.co.uk/gp/product/0141036257/ref%3Das_li_tl?ie=UTF8&camp=1634&creative=19450&creativeASIN=0141036257&linkCode=as2&tag=idetoval-21). It asserted that people who were performing at a world-class level, such as musicians, artists, or sportspeople, had practiced for approximately 10,000 hours up to that point.

And so, if you wanted to become one of the best in the world, all you had to do was also practice for 10,000 hours.

However, the authors behind the original study on which Gladwell based his figures now claim that his interpretation wasn't actually very accurate.

This has wide implications for anyone trying to develop a skill and expertise, whether in the arts, business, sports, or any other field.

**What the original study actually found**

In 1993, Anders Ericsson, Ralf Krampe, and Clemens Tesch-Römer published the results of a study on a group of violin students in a music academy in Berlin. It stated that the most accomplished students had put in an average of 10,000 hours of practice by their 20th birthday. That paper would go on to become a major part of the scientific literature on expert performers, but only attracted mainstream attention after Outliers was published.

Recently, Ericsson and co-author Robert Pool wanted to clarify what the science actually says, highlighted in their new book [Peak: Secrets From the New Science of Expertise](http://www.amazon.co.uk/gp/product/1847923194/ref%3Das_li_tl?ie=UTF8&camp=1634&creative=19450&creativeASIN=1847923194&linkCode=as2&tag=idetoval-21). They laid out some of its main points in an[excerpt](http://www.salon.com/2016/04/10/malcolm_gladwell_got_us_wrong_our_research_was_key_to_the_10000_hour_rule_but_heres_what_got_oversimplified/), where they mentioned the fundamental flaws with the 10,000-hour rule:

The rule is irresistibly appealing. It's easy to remember, for one thing. It would've been far less effective if those violinists had put in, say, eleven thousand hours of practice by the time they were twenty. And it satisfies the human desire to discover a simple cause-and-effect relationship: just put in ten thousand hours of practice at anything, and you will become a master.

They then go into detail about the first of its specific flaws:

**Problem 1: The number 10,000 was chosen arbitrarily**

First, there is nothing special or magical about ten thousand hours. Gladwell could just as easily have mentioned the average amount of time the best violin students had practiced by the time they were eighteen (approximately seventy-four hundred hours) but he chose to refer to the total practice time they had accumulated by the time they were twenty, because it was a nice round number.

And, either way, at eighteen or twenty, these students were nowhere near masters of the violin. They were very good, promising students who were likely headed to the top of their field, but they still had a long way to go at the time of the study. Pianists who win international piano competitions tend to do so when they're around thirty years old, and thus they've probably put in about 20,000 to 25,000 hours of practice by then; ten thousand hours is only halfway down that path.

It is very important to differentiate between the amount of time required to become extremely good at something, to become a master at something, and to become the world's best at something.

**Problem 2: 10,000 hours was only the average**

Second, the number of ten thousand hours at age twenty for the best violinists was only an average. Half of the ten violinists in that group hadn't actually accumulated ten thousand hours at that age. Gladwell misunderstood this fact and incorrectly claimed that all the violinists in that group had accumulated over ten thousand hours.

Fundamentally, 10,000 hours of practice will actually only keep you level on average with everyone else working toward your same goal. At most stages in your life, if you're committed to practice and improvement, that figure means you'll be ahead of about half of your competition, but still be behind the other half.

So you're actually further away from mastery than most people would think. Other studies have shown that most artists don't begin to produce their best work until they have been working on their craft [for at least 10 years](https://www.ideatovalue.com/crea/nickskillicorn/2016/05/10000-hour-rule-wrong-according-original-authors/).

Finally, here is the piece of information that may have the biggest impact for the majority of people in pursuit of developing their skills:

**Problem 3: Practice itself isn't enough**

Third, Gladwell didn't distinguish between the type of practice that the musicians in our study did--a very specific sort of practice referred to as "deliberate practice" which involves constantly pushing oneself beyond one's comfort zone, following training activities designed by an expert to develop specific abilities, and using feedback to identify weaknesses and work on them--and any sort of activity that might be labeled "practice."

This is where we get to the crux of what makes some people improve faster than others. Deliberate practice is about being completely honest with yourself about what you want to improve, finding the best ways to actually achieve that improvement, and then actually executing that practice even if it is challenging and uncomfortable.

It is all about pushing yourself beyond your comfort barriers for a specific purpose because that is where you see the greatest gains.

If you just "spend time practicing," by spending time doing a task, you will not improve as quickly as you would if you focused on what you want to achieve in that time practicing. One of Kobe Bryant's trainers recalled a fascinating story of him [spending several hours before team training](https://www.ideatovalue.com/crea/nickskillicorn/2016/05/10000-hour-rule-wrong-according-original-authors#kobe) with the U.S. Olympic basketball team, focusing solely on making 800 jump shots.

This is why there is such a fundamental difference between practice and deliberate practice. In fact, if your definition of practice is to repeat what you have previously done, over and over again without pushing yourself further, it will only make your brain more fixed in using those neural pathways and make it less flexible and able to generate ideas to handle new challenges. To illustrate, this optical illusion can show you [the exact moment that your brain stops processing your sensory input](https://www.ideatovalue.com/curi/nickskillicorn/2016/05/this-illusion-shows-how-your-brain-ignores-most-of-what-you-show-it/) and instead switches to processing based on memory and experiences.

This will make it harder for you to be creative in the long term. Fortunately, there are simple regular activities you can do that act as **deliberate practice specifically for your creativity**. I teach them in my seminars and workshops, but you can [get the same tool here for free](https://www.ideatovalue.com/free-creativity-training-tracker).

So what is the lesson? You will improve significantly faster at whatever you are trying to practice if you practice deliberately.

**What does this all mean for you and me?**

If this all seems a bit depressing, then it shouldn't be.

While this evidence suggests that it might be hard to become one of the world's best performers, most of us are not dedicated to becoming world-beaters. For most of us, we want to know whether we can improve enough to see ourselves become better and feel like we are achieving something.

Here, Ericsson and Pool give their view on what their research actually suggests.

In pretty much any area of human endeavor, people have a tremendous capacity to improve their performance, as long as they train in the right way.

If you practice something for a few hundred hours, you will almost certainly see great improvement ... but you have only scratched the surface.

You can keep going and going and going, getting better and better and better. How much you improve is up to you.

Additionally, it is important to remember that you don't need to be a world-class performer to be creative and have ideas.

Too many people believe that they aren't creative because they're not a skilled artist. They might say, "I can't draw to save my life" or "I'm a terrible singer and can't play the guitar."

In reality, you don't need to be "arty" to be creative and have ideas. You can have ideas in whatever domain you work in. And as long as they [add value to the end goal](https://www.ideatovalue.com/inno/nickskillicorn/2016/03/innovation-15-experts-share-innovation-definition/), that is the definition of creativity.

So don't worry if you don't have an extra 10,000 hours to devote to practice. Any amount of time you spend doing it in a deliberate way will bring even better results.

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