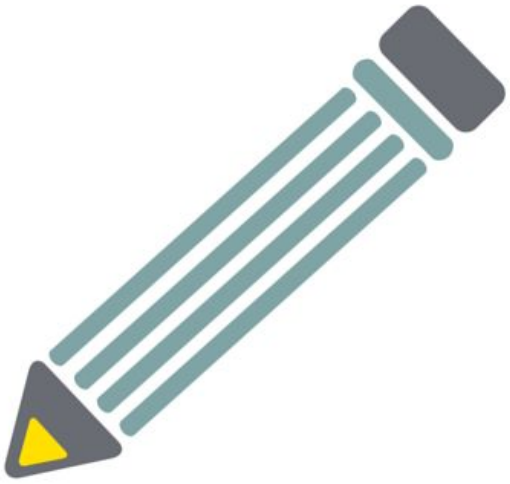
Deliberate Practice:

A Brief Guide on How to Master Difficult Skills



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Lessons on Success and Deliberate Practice from Mozart, Picasso, and Kobe Bryant

How long does it take to become elite at your craft? And what do the people who master their goals do differently than the rest of us?

That's what John Hayes, a cognitive psychology professor at Carnegie Mellon University, wanted to know.

For decades, Hayes has been investigating the role of effort, practice, and knowledge in top performers. He has studied the most talented creators in history — people like Mozart and Picasso — to determine how long it took them to become world class at their craft. Furthermore, he has investigated the choices and experiences that have led to their success.

Let's talk about what Hayes has discovered about world class performers. And more importantly, let's discuss how you can use these insights to achieve your goals and become your best.

"10 Years of Silence"

Hayes started his research by examining successful composers. He analyzed thousands of musical pieces produced between the years of 1685 to 1900. The central question that drove his work was, “How long after one becomes interested in music is it that one becomes world class?”

Eventually, Hayes developed a list of 500 pieces that were played frequently by symphonies around the world and were considered to be the “masterworks” in the field. These 500 popular pieces were created by a total of 76 composers.

Next, Hayes mapped out the timeline of each composer’s career and calculated how long they had been working before they created their popular works. What he discovered was that virtually every single “masterwork” was written after year ten of the composer’s career. (Out of 500 pieces there were only three exceptions, which were written in years eight and nine.)

Not a single person produced incredible work without putting in a decade of practice first. Even a genius like Mozart had to work for at least ten years before he produced something that became popular. Professor Hayes began to refer to this period, which was filled with hard work and little recognition, as the “ten years of silence.”

In followup studies, Hayes found similar patterns among famous painters and popular poets. These findings have been further confirmed by research from professors like K. Anders Ericsson, who produced research that revealed that you needed to put in “10,000 hours” to become an expert in your field. (This idea was later popularized by Malcolm Gladwell.)

However, as Hayes, Ericsson, and other researchers started digging deeper, they discovered that time was merely one part of the equation. Success wasn’t simply a product of 10 years of practice or 10,000 hours of work. To understand exactly what was required to maximize your potential and master your craft, you had to look at how the best performers practiced.

The practice habits of NBA superstar Kobe Bryant provide a perfect example…

How Kobe Bryant Made it to the Top

Kobe Bryant is one of the most successful basketball players of all–time. The winner of 5 NBA championships and 2 Olympic Gold Medals, Bryant has amassed a net worth of more than $200 million during his playing career.

In 2012, Bryant was selected as a member of Team USA. During this time, one of the athletic trainer's for Team USA, a man named Robert, was working with Kobe to prepare for the Olympics. In the story below, which was previously published on Reddit, Robert describes his first experience with Kobe and reveals one of the reasons the superstar has become so successful.

From Robert, trainer for Team USA:

> *I was invited to Las Vegas to help Team USA with their conditioning before they headed off to London. I've had the opportunity to work with Carmelo Anthony and Dwyane Wade in the past, but this would be my first interaction with Kobe.*
>
> *The night before the first scrimmage, I had just watched "Casablanca" for the first time and it was about 3:30 AM.*
>
> *A few minutes later, I was in bed, slowly fading away, when I heard my cell ring. It was Kobe. I nervously picked up.*
>
> *"Hey, uhh, Rob, I hope I'm not disturbing anything right?"*
>
> *"Uhh, no. What's up Kob?"*

"Just wondering if you could help me out with some conditioning work, that's all."

I checked my clock. 4:15 AM.

"Yeah sure, I'll see you in the facility in a bit."

It took me about twenty minutes to get my gear and get out of the hotel. When I arrived and opened the room to the main practice floor, I saw Kobe. Alone. He was drenched in sweat as if he had just taken a swim. It wasn't even 5:00 AM.

We did some conditioning work for the next hour and fifteen minutes. Then, we entered the weight room, where he would do a multitude of strength training exercises for the next 45 minutes. After that, we parted ways. He went back to the practice floor to shoot. I went back to the hotel and crashed. Wow.

I was expected to be at the floor again at about 11:00 AM.

I woke up feeling sleepy, drowsy, and pretty much every side effect of sleep deprivation. (Thanks, Kobe.) I had a bagel and headed to the practice facility.

This next part I remember very vividly. All of the Team USA players were there. LeBron was talking to Carmelo and Coach Krzyzewski was trying to explain something to Kevin Durant. On the right side of the practice facility Kobe was by himself shooting jumpers.

I went over to him, patted him on the back and said, "Good work this morning."

"Huh?"

"Like, the conditioning. Good work."

"Oh. Yeah, thanks Rob. I really appreciate it."

"So when did you finish?"

"Finish what?"

"Getting your shots up. What time did you leave the facility?"

"Oh, just now. I wanted 800 makes. So yeah, just now."

For those of you keeping track at home, Kobe Bryant started his conditioning work around 4:30am, continued to run and sprint until 6am, lifted weights from 6am to 7am, and finally proceeded to make 800 jump shots between 7am and 11am.

Oh yeah, and then Team USA had practice.

It's obvious that Kobe is getting his 10,000 hours in, but there is another part of his story that is even more important.

The Importance of Deliberate Practice

Kobe isn't merely showing up and practicing a lot. He is practicing with purpose.

Kobe had a very clear goal at practice: 800 made jump shots. He was deliberately focused on developing the skill of making baskets. The time he spent doing it was almost an after thought. That sounds simple, but it's very different from how most of us approach our work each day.

When most people talk about working hard, they use the amount of time they worked as an indicator of how hard they worked. (i.e. "I worked 60 hours this week!")

Putting in a lot of time might make you tired, but simply working a lot (even if it's 10,000 hours over the course of your career) isn't enough to make you a top performer. It's not the same thing as practicing deliberately. Most people who think they are working hard are merely developing the skill of being in the gym, not the skill of making baskets.

To keep this basketball analogy going, consider this quote about deliberate practice…

> *"Consider the activity of two basketball players practicing free throws for one hour. Player A shoots 200 practice shots, Player B shoots 50. The Player B retrieves his own shots, dribbles leisurely and takes several breaks to talk to friends. Player A has a colleague who retrieves the ball after each attempt. The colleague keeps a record of shots made. If the shot is missed the colleague records whether the miss was short, long, left or right and the shooter reviews the results after every 10 minutes of practice. To characterize their hour of practice as equal would hardly be accurate. Assuming this is typical of their practice routine and they are equally skilled at the start, which would you predict would be the better shooter after only 100 hours of practice?"*
>
> *—Aubrey Daniels*

Each player in the example above could brag about practicing for one hour, but only one of them is practicing deliberately.

Researchers have noted that top performers in every industry are committed to deliberate practice. The best artists, musicians, athletes, CEOs, and entrepreneurs don't merely work a lot, they work a lot on developing specific skills. For example, Jerry Seinfeld's "don't break the chain" strategy is all about deliberately practicing the skill of writing jokes.

Applying This to Your Life

Mozart has been called the "genius of geniuses" and even he toiled away for 10 years before producing popular work. I don't know about you, but I find this inspiring.

I don't have the natural talent of Kobe Bryant or the sheer brilliance of Mozart, but I'm willing to put in my "10 years of silence." I've only been writing on this site for 9 months, but I see this as the beginning of a 30–year project for me. And because I'm in this for good, I can win with commitment, grit, and unwavering consistency.

You can take the same approach to your work, to your goals, and to your legacy. By combining these two ideas — the consistency of "10 years of silence" and the focus of "deliberate practice" — you can blow past most people.

On a daily basis, this doesn't have to look big or impressive. And that's good, because it will often feel like you're failing. What feels like struggle and frustration is often skill development and growth. What looks like little pay and no recognition is often the price you have to pay to discover your best work. In other words, what looks like failure is often the foundation of success.

Thankfully, just one hour of focus and deliberate practice each day can deliver incredible results over the long–run. And that brings us to the most important questions of all:

Are you working toward your 10 years of silence today? Are you deliberately focused on developing your skills? Or are you simply "putting in your time" and hoping for the best?

How Experts Practice Better Than the Rest

My dad and I were standing in the front yard. Maybe that's why I remember it. We typically practiced baseball in the backyard, but for some reason we were out front that day. I was around 9 years old and learning how to pitch. My dad was walking me through the basic mechanics.

On this particular day, we were working on the backswing of my arm. The ball came out of the pocket of my glove, my elbow went up, and my arm began to swing back behind me in preparation to throw.

"Elbow up." That was the cue. "Elbow up. Elbow up. Elbow up."

We spent that whole session focused on one little movement of 12 inches or so when my hands parted and the backswing started. We probably repeated it hundreds of times that day. Sometimes with full throws, but mostly with drills and little practice patterns.

"Elbow up."

We kept working on this for a few days and then, at some point, we stopped talking about getting my elbow up and moved on to the next phase of the pitching motion. It wasn't until weeks later, when I realized we hadn't said "Elbow up" in awhile, that I noticed that I was getting into the right position automatically.

I didn't know it at the time, but this was one of my first exposures to the concept of deliberate practice.

What Do Experts Do For 10,000 Hours?

Malcolm Gladwell published his blockbuster book, Outliers, in 2008 and the most talked about idea from the text was the 10,000 Hour Rule. Gladwell, citing research by K. Anders Ericsson, explained that the key to becoming world-class in any field was to practice a specific task for at least 10,000 hours.

As you might expect, people quickly latched onto the number 10,000 and forgot the details of the argument.

Obviously, there is no magic in the 10,000th hour, but it is true that you need to put in a lot of work to become world-class in any task. However, the important question is this, "What should that work look like? If you want to become great at your craft, what exactly should you do with your 10,000 hours?"

You can't simply put in your time and log 10,000 hours. You have to practice deliberately on a specific skill.

But what does that mean? What, exactly, does deliberate practice look like?

What is Deliberate Practice?

During a 2012 talk, programmer and author Kathy Sierra explained deliberate practice with a very simple and elegant answer. [1]

Deliberate practice is when you work on a skill that requires 1 to 3 practice sessions to master. If it takes longer than that, then you are working on something that is too complex.

Once you master this tiny behavior, you can move on to practicing the next small task that will take 1 to 3 sessions to master. Repeat this process for 10,000 hours. That is deliberate practice.

This is the first practical definition of deliberate practice that I have come across. It's the first time I have seen the 10,000 Hour Rule broken down into something tangible that you can use at your next practice session or the next time you show up to work. And it also ties in quite nicely with the idea of getting 1 percent better each day. Each practice session should be focused on mastering a tiny skill that makes you slightly better at your craft.

The Idea in Practice

This basic method of deliberate practice applies to nearly any behavior, but let's use weightlifting as an example.

This is what deliberate practice might look like if you are trying to learn the clean and jerk…

1. During the first session, you learn how to grip the bar properly and the fundamentals of the hook grip. There might be an additional session where you learn how to properly apply chalk to your hands before a lift.
2. Once you learn how to grip the bar, the next session is focused on teaching you the basic movement with a broom stick in your hand. At this point, you are simply learning the primary phases of the lift.

3. After a few sessions with the broom, you learn how to set the starting position of your feet. You experiment with different variations and get feedback over and over again on your foot position.
4. Next, you learn how to get into the set position to begin the lift. Perhaps you spend a few sessions focusing on different aspects of this set position. For example, you might spend one day working on keeping your shoulders back and your scapula down as you prepare to lift off the floor. Or, you could spend another session learning how to take the slack out of the bar before beginning the lift.
5. After that, you move on to actually lifting the bar off the floor (known as the "first pull").
6. And so on…

Notice that during each practice session focused on one individual skill. Your energy and effort were directed toward something small enough that you could master it (or at least master the basics of it) within 1 to 3 sessions.

Also notice, however, that each skill built upon the one before it. The knowledge that you built in early sessions, like learning how to grip the bar or how to set your feet properly, was required for succeeding in later sessions as well. (This is why good teachers make such a big deal about the fundamentals. Get them right and they help you every time you go to work. Get them wrong and every task suffers because of it.)

This is what deliberate practice looks like. I like the 10,000 Hour Rule because it is a reminder that you have to put in your reps. But it's not as simple as working for a long time. It has to be vigilant work. And in many ways, you have to be continually obsessed with building upon your current skill set in small ways.

3 Questions for More Deliberate Practice

From what I can tell, the experts who embrace the idea of deliberate practice continually ask themselves three questions…

1. Do I understand the fundamentals? No matter how advanced they become, experts never lose sight of the fundamentals. In many ways, they are advanced for that very reason: they understand the fundamentals better than anyone else.

2. Am I working on the next step? There are a lot of smart people who know what the next step is, but never do it. Similarly, there are many people who take action, but waste time working on skills that don't build upon each other. Experts build knowledge and skills that are cumulative.

3. What am I missing? One of the greatest pitfalls of the 10,000 Hour Rule is that it makes expertise seems like a finish line that can be crossed. It can't. Expertise is not a race that can be won. It is simply a process that can be embraced. Experts are constantly asking themselves, "What am I missing? What new information is out there? What can I learn? How can I grow?"

Expertise is a process, not an outcome. "Elbow up."

Why Trying to Be Perfect Won't Help You Achieve Your Goals (And What Will)

We all have goals that are important to us. But is it our drive to achieve a certain outcome that makes us better? Or something else entirely?

In the book Art & Fear (audiobook), authors David Bayles and Ted Orland share a surprising story about a ceramics teacher. This story just might reframe the way you think about setting goals, making progress, and becoming better at the things that are important to you.

Here's what happened...

> *The ceramics teacher announced that he was dividing the class into two groups. All those on the left side of the studio, he said, would be graded solely on the quantity of work they produced, all those on the right solely on its quality.*
>
> *His procedure was simple: on the final day of class he would bring in his bathroom scales and weigh the work of the "quantity" group: fifty pounds of pots rated an "A", forty pounds a "B", and so on. Those being graded on "quality", however, needed to produce only one pot — albeit a perfect one — to get an "A".*
>
> *Well, grading time came and a curious fact emerged: the works of highest quality were all produced by the group being graded for quantity!*
>
> *It seems that while the "quantity" group was busily churning out piles of work — and learning from their mistakes — the "quality" group had sat around theorizing about*

perfection, and in the end had little more to show for their efforts than grandiose theories and a pile of dead clay.

Start With Repetitions, Not Goals

It's not just art studios where repetitions matter. Whenever you put in consistent work and learn from your mistakes, incredible progress is the result.

This is why I force myself to write a new article every Monday and Thursday. I can't predict which articles will be useful, but I know that if I write two per week, then sometimes I'll hit the bullseye.

And it works the same way with almost any goal you could have…

Art. If you want to be a great photographer, you could go on a quest to take one perfect photo each day. Or you could take 100 photos per day, learn from your mistakes, and hone your craft.

Strength. If you want to be stronger, you could analyze every movement and phase of your technique until you're blue in the face. Or, you could get under the bar, learn from your mistakes, and focus on doing more reps.

Writing. If you want to write a best-selling book, then you could spend 10 years trying to write one perfect book. Or, you could write one book each year, learn from your mistakes, and trust that your books will get better each time.

Business. If you want to be a successful entrepreneur, you could scheme and think and try to plan out the perfect business idea. Or, you could try to get one customer, learn from your mistakes, and experiment with new ideas until something comes easily.

It's not the quest to achieve one perfect goal that makes you better, it's the skills you develop from doing a volume of work.

In other words, when you think about your goals, don't just consider the outcome you want. Focus on the repetitions that lead to that place. Focus on the piles of work that come before the success. Focus on the hundreds of ceramic pots that come before the masterpiece.

Put in Your Reps

When you look at goals this way, you start to realize that setting up a system for putting your reps in is more important than choosing a goal.

Everyone wants to make progress. And there is only one way to do it: **put in your reps.**

The goal is just an event — something that you can't totally control or predict. But the reps are what can make the event happen. If you ignore the outcomes and focus only on the repetitions, you'll still get results. If you ignore the goals and build habits instead, the outcomes will be there anyway.

Forget about the goals this year. What is your plan for getting in the reps you need? What is your schedule for putting in a volume of work on the things that are important to you?

Thanks to Dan John for inspiring this post.

Stop Thinking and Start Doing: The Power of Practicing More

We all have goals that we want to achieve in our lives. These goals may include learning a new language, eating healthier and losing weight, becoming a better parent, saving more money, and so on.

It can be easy to assume that the gap between where you are now and where you want to be in the future is caused by a lack of knowledge. This is why we buy courses on how to start a business or how to lose weight fast or how to learn a new language in three months. We assume that if we knew about a better strategy, then we would get better results. We believe that a new result requires new knowledge.

What I'm starting to realize, however, is that new knowledge does not necessarily drive new results. In fact, learning something new can actually be a waste of time if your goal is to make progress and not simply gain additional knowledge.

It all comes down to the difference between learning and practicing.

The Difference Between Learning and Practicing

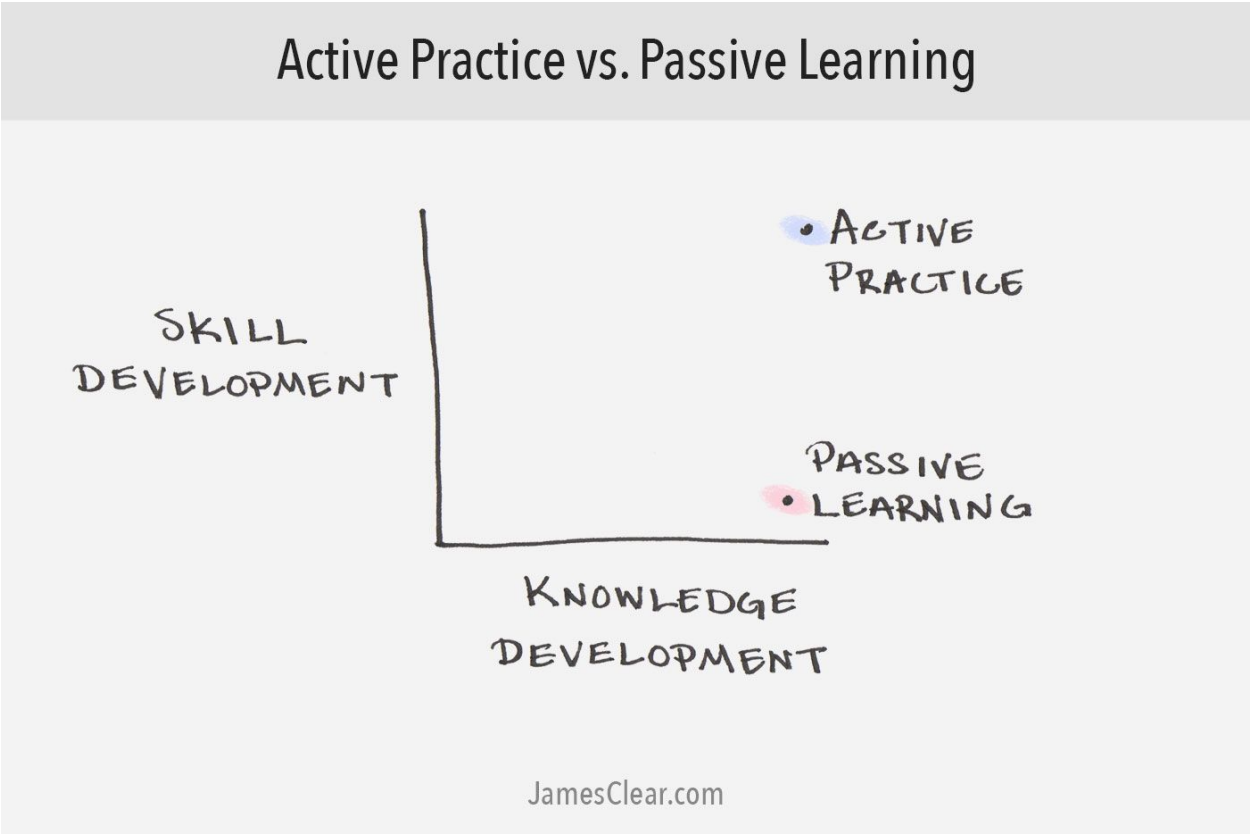
In Thomas Sterner's book, The Practicing Mind (audiobook), he explains the key difference between practicing and learning.

> *"When we practice something, we are involved in the deliberate repetition of a process with the intention of reaching a specific goal. The words deliberate and intention are key here because they define the difference between actively practicing something and passively learning it."*
>
> *—Thomas Sterner, The Practicing Mind*

Learning something new and practicing something new may seem very similar, but these two methods can have profoundly different results. Here are some additional ways to think about the difference.

- **Let's say your goal is to get stronger and more fit.** You can research the best instructions on bench press technique, but the only way to build strength is to practice lifting weights.
- **Let's say your goal is to grow your startup**. You can learn about the best way to make a sales pitch, but the only way to actually land customers is to practice making sales calls.
- **Let's say your goal is to write a book**. You can talk to a best-selling author about writing, but the only way become a better writer is to practice publishing consistently.

Passive learning creates knowledge. Active practice creates skill.



Let's consider three more reasons to prioritize active practice over passive learning.

1. Learning Can Be a Crutch That Supports Inaction

In many cases, learning is actually a way to avoid taking action on the goals and interests that we say are important to us. For example, let's say you want to learn a foreign language. Reading a book on how to learn a foreign language quickly allows you to feel like you are making progress ("Hey, I'm figuring out the best way to do this!"). Of course, you're not actually practicing the action that would deliver your desired outcome (speaking the foreign language).

In situations like this one, we often claim that we are preparing or researching the best method, but these rationalizations allow us to feel like we are moving forward when we are merely spinning our wheels. We make the mistake of being in motion rather than taking action. Learning is valuable until it becomes a form of procrastination.

2. Practice Is Learning, But Learning Is Not Practice

Passive learning is not a form of practice because although you gain new knowledge, you are not discovering how to apply that knowledge. Active practice, meanwhile, is one of the greatest forms of learning because the mistakes you make while practicing reveal important insights.

Even more important, practice is the only way to make a meaningful contribution with your knowledge. You can watch an online course about how to build a business or read an article about a terrible disaster in a developing nation, but that knowledge is unproductive unless you actually launch your business or donate to those in need. Learning by itself can be valuable for you, but if you want to be valuable to others, then you have to express your knowledge in some way.

3. Practice Focuses Your Energy on the Process

> *"Progress is a natural result of staying focused on the process of doing anything."*
> *—Thomas Sterner, The Practicing Mind*

The state of your life right now is a result of the habits and beliefs that you have been practicing each day. When you realize this and begin to direct your focus toward practicing better habits day-in and day-out, continual progress will be the logical outcome. It is not the things we learn nor the dreams we envision that determines our results, but rather that habits that we practice each day. Fall in love with boredom and focus your energy on the process, not the product.

The Bottom Line

Is passive learning useless? Of course not. In many cases, learning for the sake of learning can be a beautiful thing. Not to mention that soaking up new information can help you make more informed decisions when you do decide to take action.

That said, the main point of this article is that learning by itself does not lead to progress. We often hide behind information and use learning as an excuse to delay the more difficult and more important choice of actually doing something. Spend less time passively learning and more time actively practicing. Stop thinking and start doing.

The Repeated Bout Effect: If Nothing Changes, Nothing Is Going to Change

If you have ever taken a few weeks off from exercise and then completed a strenuous workout, you may know what I'm about to say.

That first workout back from a long break can be tough, but it's usually the soreness that follows a few days later that is really brutal. For example, if you do a squat workout after a few weeks off, it can hurt to simply sit in a chair or climb the stairs later that week.

One of the quickest ways to resolve this soreness is very counterintuitive:

Squat again.

If I'm feeling sore a few days after a squat workout, then doing some light reps is often the quickest way to recover from the soreness. I'll usually opt for three sets of ten bodyweight squats. The first few are uncomfortable, but then my muscles limber up and I feel significantly better by the end of it.

How could this be? If squatting caused the pain, then why would more squatting resolve it? It's sort of like saying, "I spent too much money, so my solution is to spend a little more money."

On the surface, this makes little sense. But, as you may expect, there is something deeper going on here. It's called the Repeated Bout Effect and it applies to much more than just exercise.

The Repeated Bout Effect

Here's the Repeated Bout Effect in plain language:

> *The more you repeat a behavior, the less it impacts you because you become accustomed to it.*

The Repeated Bout Effect comes from exercise science research, so let's return to our previous squat example.

When you perform a new squat workout your body will experience a new stimulus that stresses your muscles and, eventually, results in muscle soreness. However, the way you respond to this new stimulus is not constant. Researchers have found that "a repeated bout results in reduced symptoms." [2] Generally speaking, the more consistently you squat, the less soreness you will experience.

This is what is known as the Repeated Bout Effect. Your body's response to a stimulus decreases with each repeated bout.

There are hundreds of research studies confirming the Repeated Bout Effect. The exact mechanism by which it occurs isn't totally understood, but the fact that it does occur has been well-established. [3]

The Repeated Bout Effect in Your Life

The Repeated Bout Effect tells us that the more we do something, the less of an impact it makes on us. There are many ways to think about this effect throughout life.

- When you haven't done much strength training, doing thirty pushups will make you stronger. After a few months of that, however, an extra thirty pushups isn't really building new muscle.
- When you drink coffee for the first time, you will notice an immediate caffeine spike. After years of consumption, however, one cup of coffee seems to make less of a difference.
- When you start eating smaller portions, you'll lose weight. After the first ten or fifteen pounds fall off, however, your smaller portion slowly becomes your normal portion and weight loss stalls.
- Making ten sales calls on your first day in business may lead to a big jump in overall revenue. Making ten sales calls for the 300th day in a row, however, is unlikely to have a large impact on overall revenue.

These examples make sense when you see them neatly lined up in an article, but out in the real world we often curse ourselves for a lack of progress.

Let's say you want to lose weight and you weren't working out previously. You start running twice per week and pretty soon you've lost ten pounds. At some point, the Repeated Bout Effect kicks in, your body adapts, and the weight loss slows. Suddenly, you're still running twice per week but the scale is no longer moving.

It can be very easy to interpret these diminishing results as some kind of failure.

- "This always happens. I make a little bit of progress and then I hit a plateau."
- "Ugh, I'm working out every week and nothing is happening."
- "I've tried it all. Exercise doesn't work for me."

Except, it did work. In fact, your initial exercise worked exactly as it was supposed to because it delivered a new result and then your body adapted and became better. Now, your body has a

new baseline and if you want to achieve a higher level of success, then you need to add something new to the mix.

3 Lessons On Improvement

The Repeated Bout Effect can teach us three lessons on improvement.

First, doing a light amount of work is a great way to reduce the pain of difficult sessions. Imagine that you do an easy 1-minute pushup workout on Monday and a difficult 10-minute pushup session on Friday. The Repeated Bout Effect says that your soreness after Friday's workout will be reduced simply because you did an easy session earlier in the week. Easy work can make a difference.

Second, the amount of work that you need to do to reach your maximum level of output is higher than what you are doing now. Unless you are already performing at 100 percent of your potential, you have room to grow. And the Repeated Bout Effect tells us that you have probably adapted to all of the normal stimuli in your life. If you want to reach a new level of success then you need to put in a new level of work. This does not mean you should start by doing as much work as possible, but it does mean that when you start small you can't expect one small change to work forever. You have to continually graduate to the next level.

Third, deliberate practice is critical to long-term success. Doing the same type of work over and over again is a strange form of laziness. You can't go to the gym, run the same three miles each week, and expect to enjoy ever-improving results. After a few months of repetitive workouts, you've seen all the results that three-mile runs can deliver and your body has adapted to that stimulus. This is why deliberately practicing new skills that you can master in one to three

practice sessions is important for long-term improvement. Making deliberate practice a habit can help you avoid carelessly practicing things that no longer deliver any benefit.

The key takeaway here is that things will work for a little while and then we will get used to them.

As Marshall Goldsmith says in his best-selling book, "What got you here won't get you there." Doing the same thing over and over again, even if it worked for a long time, will eventually lead to a plateau. If nothing changes, nothing is going to change.

Pat Riley on the Remarkable Power of Getting 1% Better

The 1986 Los Angeles Lakers were one of the most talented basketball teams ever assembled, but they are rarely remembered that way.

The team started the 1985-86 NBA season with a 29-5 record. “The pundits were saying that we might be the best team in the history of basketball,” head coach Pat Riley mockingly said after the season. [4]

Despite their talent, the Lakers stumbled in the 1986 playoffs and suffered a surprising season-ending defeat in the Western Conference Finals. The “best team in the history of basketball” didn’t even play for the NBA Championship that year.

As the head coach, Pat Riley was tired of hearing about how much talent his players had and about how much promise his team held. He didn’t want to see flashes of brilliance followed by a gradual fade back to mediocrity. He wanted the Lakers to play up to their potential, night after night.

In the summer of 1986, Riley created a plan to do exactly that.



Pat Riley, Los Angeles Lakers head coach

Step 1: Taking Their Number

Following the 1986 season, Riley revealed a new program that he called the Career Best Effort program or CBE. [5]

"When players first join the Lakers," Riley explained, "we track their basketball statistics all the way back to high school. I call this Taking Their Number. We look for an accurate gauge of what a player can do, then build him into our plan for the team, based on the notion that he will maintain and then improve upon his averages."

You'll notice that Riley was interested in the average speed of his players. His first calculation was to see what a player's normal day looked like, not his best day.

In her book, When the Game Was Ours (Audiobook), author Jackie MacMullan explains Riley's CBE calculations by saying,

> *"The Lakers coach recorded data from basic categories on the stat sheet, applied a plus or a minus to each column, and then divided the total by minutes played. He calculated a rating for each player and asked them to improve their output by at least 1 percent over the course of the season. If they succeeded, it would be a CBE, or Career Best Effort." [6]*

Riley was careful to point out that CBE was not merely about points or statistics, but giving your "best effort spiritually and mentally and physically." Players got credit for "allowing an opponent to run into you when you know that a foul will be called against him, diving for loose balls, going after rebounds whether you are likely to get them or not, helping a teammate when the player he's guarding has surged past him, and other 'unsung hero' deeds." [7]

Step 2: Calculating Your CBE

I don't know Riley's exact formula, but here's what the CBE calculation might look like in practice:

Let's say that Magic Johnson had 11 points, 8 rebounds, 12 assists, 2 steals, and 5 turnovers in a particular game. Magic also got credit for an "unsung hero" deed by diving after a loose ball (+1). Finally, he played a total of 33 minutes in this imaginary game.

If we add up all the positive numbers (11+8+12+2+1), we get 34. Then, we subtract the 5 turnovers (34-5) to get 29. Finally, we divide 29 by 33 minutes played.

29/33 = 0.879

In this example, Magic's CBE number would have been 879. [8] This number was calculated for all of a player's games and he was then asked to improve his average CBE by one percent during the course of the season. Riley knew that if the Lakers could aggregate many small individual improvements they would achieve a big jump in team performance.

Step 3: Historical Comparisons

Throughout the 1987 season, Riley was constantly comparing each player's current CBE to not only their past performances, but also other players around the league. As Riley put it, "We rank team members alongside league opponents who play the same position and have similar role definitions." [9]

> *"Riley trumpeted the top performers in the league in bold lettering on the blackboard each week and measured them against the corresponding players on his own roster.*
>
> *Solid, reliable players generally rated a score in the 600s, while elite players scored at least 800. Magic Johnson, who submitted 138 triple-doubles in his career, often scored over 1,000." [10]*

The Lakers also emphasized year-over-year progress by making historical comparisons of CBE data. Riley said, "We stacked the month of November, 1986, next to November, 1985, and showed the players whether they were doing better or worse than at the same point last season. Then we showed them how their performance figures for December, 1986, stacked up against November's."

Imagine you're one of the players. Every week you walk into the locker room and see your name ranked alongside Michael Jordan or Larry Bird or some other competitor across the league. You're constantly aware of how you are performing relative to the competition and relative to your average performance. It is impossible to lie to yourself about whether you are playing well or poorly. You are are constantly aware of your choices, your actions, and your performance.

Compare that situation to how most of us live our lives. We don't track or measure the things that we say are important to us. We make excuses, create rationalizations, and lie to ourselves about our daily performance. We have no evidence of whether we are performing better or worse compared to previous months or years. It's not hard to see why the CBE program delivered results.

The Results of CBE

The Los Angeles Lakers began executing the CBE program in October of 1986. Eight months later, they were NBA Champions. The following year, during the 1987-88 season, Pat Riley led his team to another title as the Lakers became the first team in 20 years to win back-to-back NBA championships.

> *"Sustaining an effort is the most important thing for any enterprise. The way to be successful is to learn how to do things right, then do them the same way every time. Players can't excel in every area, but they can strive to better themselves in the areas*

that we value most for each individual. Then we can show them what they need to do to have their Career Best Effort. Over the length of a season, a correlation always appears between great effort and great overall numbers. It may not show from one game to the next, but in the long run superior effort is reflected in the win column."
—Pat Riley

What Makes Great Performers Great?

There is a surprisingly narrow gap that separates the good performance from the great performance. And that narrow gap is separated by small habits and daily rituals.

It is so easy to dismiss the value of making slightly better decisions on a daily basis. Sticking with the fundamentals is not impressive. Falling in love with boredom is not sexy. Getting one percent better isn't going to make headlines.

There is one thing about it though: it works.

Sources

1. "Building the Minimum Badass User" by Kathy Sierra. 2012.
2. The Repeated Bout Effect: Does Evidence for a Crossover Effect Exist? by Declan Connolly, Brian Reed, and Malachy McHugh.
3. Want to dive into the research? Here are two decent studies to kick things off. First, Temporal Pattern of the Repeated Bout Effect of Eccentric Exercise on Delayed-Onset Muscle Soreness by Cleary, Kimura, Sitler, and Kendrick. Second, The repeated bout effect of reduced-load eccentric exercise on elbow flexor muscle damage by Nosaka, Sakamoto, Newton, and Sacco.
4. Temporary Insanity and Other Management Techniques: The Los Angeles Lakers' Coach Tells All by Pat Riley and Byron Laursen. Los Angeles Times Magazine.
5. Jackie MacMullan's book (cited below), claims that Riley began his CBE program during the 1984-85 NBA season. From what I can tell, the Lakers began tracking statistics of individual players at that time, but the CBE program as it is described in this article was first used during the 1986-87 NBA season.
6. Thanks to a friendly reader, MSW, for originally telling me about Pat Riley's CBE model.
7. Temporary Insanity and Other Management Techniques: The Los Angeles Lakers' Coach Tells All by Pat Riley and Byron Laursen. Los Angeles Times Magazine.
8. From what I can tell, the Lakers talked about CBE scores in the same way you would talk about batting averages in baseball. That is, .312 is pronounced "three twelve."

9. Temporary Insanity and Other Management Techniques: The Los Angeles Lakers' Coach Tells All by Pat Riley and Byron Laursen. Los Angeles Times Magazine.
10. When the Game Was Ours (Audiobook)