

PEAK: SECRETS FROM THE NEW SCIENCE OF EXPERTISE

by K. Anders Ericsson and Robert Pool

INSIGHTS BY:
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ABOUT:

This is a comprehensive summary of the book Peak: Secrets from the New Science of Expertise by K. Anders Ericsson and Robert Pool.

Covering the key ideas and proposing practical ways for achieving what's mentioned in the text. Written by book fanatic and online librarian Ivaylo Durmonska. (Printable available only for supporting members.)

HIGHLIGHTS:

- No one is born gifted. You are not born with natural skills. You acquire skills through hard, focused work.
- *Just* practicing can delude you that you are making progress. What you actually need is deliberate practice.
- Believing that you can do it is immensely important when approaching a new discipline.

ABSTRACT:

Frustrated by your random actions and average results? You are convinced that greatness is something you are born with, not something you can acquire? Expose yourself to decades of research debunking the myth about talent – that success is embedded in our DNA. Peak (a.k.a. the deliberate practice book) explores the mindset, skills, and techniques a person needs to obtain to reach expert performance. After working with top achievers, the authors provide a battle-tested guide for reaching extraordinary results – what they label as the science of expertise.

THE CORE IDEA:

The main question the authors tackle is this: How do the people we see on TV become amazingly good at what they do? In theory, the answer looks surprisingly simple: you get a coach, you practice, get outside your comfort zone, adjust based on feedback, you re-program your mind and finally your default actions become exceptional. This is, in short, the implication of the theory of deliberate practice – systematic and purposeful work towards a particular outcome. Is there anything else? Oh, yeah. It will take you around 10,000 hours of hard, focused work.

KEY LESSONS FROM PEAK:

- LESSON #1: THE BRAIN IS HIGHLY ADAPTABLE
- LESSON #2: DON'T SIMPLY PRACTICE, START WITH PURPOSEFUL PRACTICE
- LESSON #3: DON'T TRY HARDER, TRY DIFFERENTLY
- LESSON #4: UNDERSTAND HOW THE BEST PERFORMERS THINK
- LESSON #5: SKILLS, NOT KNOWLEDGE
- LESSON #6: BELIEVING THAT YOU CAN DO IT
- LESSON #7: APPLYING DELIBERATE PRACTICE

LESSON #1:

THE BRAIN IS HIGHLY ADAPTABLE

The legendary Wolfgang Amadeus Mozart was – and still is – considered a prodigy.

His skills with the instruments were nothing but exceptional. And according to books, his musical career started due to his magical ability to easily recognize notes.

When an instrument was playing, Mozart could identify exactly which note was played.

Some argued that he was born with this ability, which later allowed him to become a virtuoso with the piano and the violin.

But not according to the authors.

The technical term of the note-guessing skills is called absolute pitch – also known as perfect pitch.

But Mozart wasn't born with it. Simply, his gift was the ability to learn quickly.

Ever since he was born, he has been exposed to musical instruments thanks to his father. This early engagement was the main thing that made Mozart great.

Previously, people believed that no amount of practice would help you become good at a particular skill if you don't have the right genes.

But after decades of research on the human brain. The authors report that everyone can transition from capable to exceptional.

We just need “the right sort of practice,” as the authors point out – the so-called deliberate practice.

Our brains are highly adaptable to the outside world. With the right training, the correct internal conviction, and ongoing motivation we can transcend any field.

The problem is not so much what cards we are dealt with when we emerge. But what we do with them and what extra we acquire along the way.

So, don't get discouraged if you don't think you have natural talents. Rather, approach the subject you are interested in as a topic you can learn and master.

“In this new world it no longer makes sense to think of people as born with fixed reserves of potential; instead, potential is an expandable vessel, shaped by the various things we do throughout our lives. Learning isn’t a way of reaching one’s potential but rather a way of developing it.” K. Anders Ericsson & Robert Pool

LESSON #2:

DON'T SIMPLY PRACTICE, START WITH PURPOSEFUL PRACTICE

After the initial demonstration that there is no such thing as talent.

The book continues with a story about a student spending two years improving his remembering skills. After two years, he was able to recite and remember a string of eighty-two random digits. I know, who cares!

But despite being able to remember his strong passwords without having to use a file or software. This gigantic mental feat is amazing for a couple of reasons:

First, at the beginning of the journey, the student was struggling to remember nine digits in a role. And second, the gold medal for remembering digits at that time was seventeen.

Still, who cares, right?

Wrong.

What the authors are trying to pass off as a genuine fact is that extraordinary performance can be achieved by ordinary folks, too. As long as they are willing to do the work.

In other words, no one is born with exceptional skills. Everyone is average when they are born. The difference is hours of purposeful practice. If one takes on the journey of becoming great. He can become exceptional and far exceeds his initial results.

The key here is purposeful practice – which later evolves into the term deliberate practice.

This is quite different from how we usually approach training.

Here's the comparison in short:

- **The usual approach of learning a new skill:** You want to learn how to play tennis. You get the equipment. You hire a coach or you play with friends. Initially, you quickly improve. You are no longer missing the ball. But since you don't challenge yourself – you play with the same caliber of opponents. You keep the same average level of performance. Even if you play for years, you still won't get better.
- **Purposeful practice:** This sort of practice is hugely different from your usual gym session – or whatever. Some believe that if you do something every day, you will succeed. But if you don't improve during your training sessions, you will stay idle

in your performance – keep being average. Purposeful practice states that when you practice, you should specify exactly what you should improve during this hour of training. For example, keep practicing till you can play a melody all the way through at the proper speed without a mistake three times in a row. The main characteristics of this sort of practice are focus, feedback, and gradually getting outside your comfort zone.

When you apply the purposeful practice theory, you approach what you want to master by breaking it down into tiny goals. And in addition, each of your training sessions has a well-defined, measurable outcome that you are aiming to reach.

Finally, and most importantly, you don't settle down with average opponents. You continuously increase the difficulty.

“The key thing is to take that general goal—get better—and turn it into something specific that you can work on with a realistic expectation of improvement.” K. Anders Ericsson & Robert Pool

LESSON #3:

DON'T TRY HARDER, TRY DIFFERENTLY

There are enough books and articles stating that you should work smart, not hard.

The same is true in the topic of purposeful practice.

Well, except that you should do both – work smart while you are working hard.

What does smart mean in purposeful practice?

First, the authors share an important observation.

Why people who are playing instruments for, say, 20 years. Are not world-famous? You know, the musicians we admire in local bars.

Two main components keep them away from world-fame:

They keep doing the same things.

For instance, your favorite jazz player is still playing the same songs in the same way and probably in the same pub.

And secondly, they are either not getting feedback or not doing something with it.

We want to think that we are good at what we do. That's why we don't try new things. New things mean that we won't be good at them. Thus, we don't try them.

We need the courage to try something we are not familiar with. Be brave enough to suck at something new, as they say.

Ounce by ounce. Inch by inch. Slowly, but surely, to get outside the comfortable state to do uncomfortable things. And when we do get stuck. We shouldn't hide from feedback. Quite the opposite. We should make a system where we regularly get feedback – e.g., getting a coach, a mentor.

And most importantly, what the authors point out as an important component of the overall improvement of top players. Is that when we reach a block. When there are obstacles. Don't try harder. Rather, try differently.

Instead of doing the same thing, but harder. Look around. Try a different approach. Improve other skills. The combinations of little improvements will help you get past the roadblocks standing

ahead.

“The best way to get past any barrier is to come at it from a different direction, which is one reason it is useful to work with a teacher or coach. Someone who is already familiar with the sorts of obstacles you’re likely to encounter can suggest ways to overcome them.” K. Anders Ericsson & Robert Pool

LESSON #4:

UNDERSTAND HOW THE BEST PERFORMERS THINK

You will be surprised to hear that the most important skill of every top achiever is not his insane drive – nor big muscles.

It's something much more sophisticated.

It's the way he thinks. The mental representation of the subject he's good at.

The authors emphasize the need for a person to develop the correct mental representation about what good looks like in order to be great at something.

Let me explain it further by giving an example:

To perform a dive. You need to figure out what an Olympic medal-worthy dive looks like first.

How many twists? What type of landing? What you should do with your arms?

All of this. Happens in your head, *first*.

If you don't know how a dive should be performed. Or worse, have an incorrect view about how this should be done. You won't get it right.

The mental preparation is far more important than the physical one.

In the book, this is called mental representation.

Having the right mental representations is a major part of reaching Olympic-level performance.

It's not only critical because when you know what a good dive looks like, you know what type of skill you need to develop. But also because you can make adjustments by yourself along the way. You are not bound to have someone always looking behind your shoulder to correct you. You compare your performance based on the mental representation you have and make adjustments.

Consider this:

People who have a good idea about what a quality song should sound like, can self-correct during the process of creating a quality song.

If they make an error while they record, they 1) know that they are making a mistake and 2) can make a proper correction to ensure that this won't happen again in the future.

If the view they have about how a quality song should sound like is different from the rest of the world, they deceive themselves that what they are producing is good.

That is why this part of the purposeful practice process should be adopted first. It's a skill that separates experts from beginners.

Newbies simply don't have the correct view of what a quality song – or anything – looks/sounds like. Only when they adopt this mental image – the framework. They can get better because they will know when what they are producing is poor. Thus, make the needed adjustments.

"When practicing a new piece, beginning and intermediate musicians generally lack a good, clear idea of how the music should sound, while advanced musicians have a very detailed mental representation of the music they use to guide their practice and, ultimately, their performance of a piece. In particular, they use their mental representations to provide their own feedback so that they know how close they are to getting the piece right and what they need to do differently to improve." K. Anders Ericsson & Robert Pool

LESSON #5:

SKILLS, NOT KNOWLEDGE

The usual road of learning something new is insultingly faulty.

You attend lectures where you just listen to someone who talks about the thing you want to do.

But how is this helping you improve your own skills? Sure, theory can give you a sense of doing something, but it can't provide real-world experience.

The authors recommend something quite radical compared to the usual boring lecture-listening method. Namely, focusing on skills, rather than knowledge.

Accumulating more knowledge won't lead to better performance. Gaining more experience is what matters.

Or, in other words, doing the thing instead of only hearing about

how it should be done.

That's why, when you approach a subject. It's best to focus on learning by doing.

Want to learn how to write? Write a poem.

Want to learn how to code? Build a website.

You start your day by setting an objective – I will build a small site with a contact form. From there, you start to research what is needed for this goal to become a reality.

This approach – skills over knowledge – was implemented at the University of British Columbia.

When preparing the lessons, the teachers first sat down to point out what a student should be able to do after they are done with the training – not particularly what they should know theoretically.

The outcome apparently was a huge success. After analyzing the results. The teachers claimed that success was basically guaranteed because: Students try things instead of only hearing about them.

Courses like the ones listed above are rare. But this doesn't mean that you can't implement these steps when you approach a subject.

Even if you are attending a boring lecture. Pause regularly and try things. Get out of your comfort zone and don't be afraid to fail. Failure leads to learning.

“...training should focus on doing rather than on knowing—and, in particular, on bringing everyone’s skills closer to the level of the best performers in a given area.” K. Anders Ericsson & Robert Pool

LESSON #6:

BELIEVING THAT YOU CAN DO IT

This might sound like a sleazy motivational quote, but believing that you can achieve your goals is an important component of the ongoing process.

Think about it, what's the difference between a professional runner and a person who runs just for fun?

The first person obviously wants to become a professional in this field, but there is something else. He also believes that he can do it.

Gunder Hägg, a famous Swedish athlete breaking fifteen world records has an interesting story.

When he was young, he went with his father for a run. His father measured his time with a clock. After Hunder was done, his father shared his time for running a fifteen hundred meters long

track – it was 4 minutes, 50 seconds.

The young Gunder was amazed by this time – it was indeed a very good time based on his age and the quality of the track.

Years after that, his father confessed that his actual time was 5 minutes, 50 seconds. He deliberately lowered the time to prevent Gunder from losing motivation.

Plainly, he wanted to encourage his son. And he did.

If you stop believing that you can reach your goal. You will stop pursuing it. It's that simple.

That's why the authors continuously share in the book that you should be a part of a supportive environment – hire a coach or be part of a support group.

When we are young. Our parents are responsible for our motivation. We need their support. To encourage us to try different things even when everything feels like it's falling apart.

Eventually, with time, encouragement and motivation are drawn from the feedback we get from other folks. If others cheer us, we feel good and we keep going.

But the key component is probably different. It's this one: How to keep your motivation high when things are not going so great?

Again, it all falls down to the people around you. Forming a

supporting group of folks who are able to pick you up when you fall down. People who believe in you even when you don't believe in yourself.

“Deliberate practice can be a lonely pursuit, but if you have a group of friends who are in the same positions—the other members of your orchestra or your baseball team or your chess club—you have a built-in support system. These people understand the effort you’re putting into your practice, they can share training tips with you, and they can appreciate your victories and commiserate with you over your difficulties. They count on you, and you can count on them.” K. Anders Ericsson & Robert Pool

LESSON #7:

APPLYING DELIBERATE PRACTICE

Can you become a professional golfer if you never played golf before?

Sure, if you are 7 years old and your parents sign you up for lessons. But what if you're in your thirties and you've never played?

Dan McLaughlin from Portland, when he turned 30, decided that he will become part of the Professional Golfers Association. He wasn't particularly athletic, but he had a plan: Quit his job and spend the next couple of years perfecting his golfing skills.

All of this by following the concept of deliberate practice. His goal was to prove to the world, and to himself, that not only athletic people can become good athletes but also regular folks.

His aim was to inspire people to pursue their dreams.

Did he succeed?

Because of when the events are taking place, the book only states that he significantly improved his handicap – an important metric in the field of golf. Yet, we can find stories online.

The important thing is what he did to improve.

And here enters the deliberate practice framework that is the main receipt for world-class results – also the main topic of the book.

I've identified and summarized the steps of deliberate practice so you can implement them when trying to master a discipline:

- **Step 1:** Identify the field you want to master and find out who are the best in this field.
- **Step 2:** Find out what these super successful folks do, daily, that distinguish them from the rest of the people in this field.
- **Step 3:** Form a mental representation of what top performance should look like in this field but update it along the way.
Since in the beginning your skills will be limited, your mental representation should also change.
- **Step 4:** Break down your long journey into a series of goals that have a clear outcome.
- **Step 5:** Try to master one specific skill before you move to the next. This will not only – obviously – help you concentrate your efforts. But it also acts as a psychological booster – you see that you are improving and this keeps your motivation high.

- **Step 6:** Hire a coach or engage with people who will give you feedback. Having a teacher is crucial for your improvement because he can provide insights about your overall performance – he can see things you can't.
- **Step 7:** Engagement and motivation – this is something ongoing. You need to be fully engaged in the process – when training – and move away from institutions or folks who are not helping you. We can participate in karate lessons and think that we are improving. But what really happens is that a large part of the people there don't want to become good. They simply want to have a good time.
- **Step 8:** Overcoming plateaus is the last step. You need a plan for when things aren't going according to plan. Inevitably, you will hit a wall. The best way is to try something different instead of doing more of the same. Change the exercises, add more or less weights when working out. Usually, little things hinder your progress. Find them and improve them.

The last step is particularly important because we enter a trap without realizing it. We sign up for a course – or karate lessons as said in the example – and we think that we're all set, “I just have to practice what the teacher is showing me.”

But how following some basic rules — “Do ten kicks with your right leg and then with your left” – will help you become the best?

In short, it won't.

Becoming great requires more than just going to lessons. It requires all of the above steps. Slowly but continuously going

outside what is possible without losing motivation when you still don't know how to do something.

“...when you reach a point at which you are having difficulty getting better, it will be just one or two of the components of that skill, not all of them, that are holding you back. The question is, Which ones? To figure that out, you need to find a way to push yourself a little—not a lot—harder than usual. This will often help you figure out where your sticking points are.” K. Anders Ericsson & Robert Pool

ACTIONABLE NOTES:

- **Good enough disease:** Being good enough at something is, well, good enough. In a lot of areas, you don't have to be exceptional – good enough is just fine. After all, you don't have to possess Formula One-like driving skills when you sit behind the wheel to drive to work. And yet, pushing beyond good enough is what you need if you are interested in getting recognized as more than decent. If nothing is changing in your life. This usually means that you are not changing. You are stuck in the happy, but often boring state of homeostasis. How to improve? Identify areas where being good enough is enough. Then, figure out in which disciplines you need to enhance your game. Spot the things that are currently not possible and find out how you can make them possible.
- **Develop mental representation:** You can't produce quality work if you don't have the correct image of what quality work *is*. This state requires both research and a bit of brain re-writing. You need to research and find what best looks like in your field of choice. Then, replace your old image with the new one. Mental representation is simply what you think about a certain activity. If we take running for example, this will involve how you think about all the components in relation to running: What you do before the race, during the race, monitor your breathing, the movement of your arms, your thoughts while you run, etc. In a way, you form an idea about running. This idea later serves as a quality checker. If during the race you are not performing as your mental representation, you can spot where you are

underperforming and make corrections.

- **Don't listen to teachers:** The book explains that there is no such thing as talent. The concept of talent is presented as an advantage. Some kids simply learn faster – that's their main advantage. "The dark side of innate talent", as described in the book, is that we let teachers convince us that we are not talented enough to become writers, athletes, or whatever. When we are young, this can be a huge blocker. As observed above, we need to believe that we can make it in order to start practicing. If someone tells you that you are not born to become a writer, simply respond that "no one is!" Then explain that people learn to become writers, they are not born with this ability.
- **Differences between best, better, and good:** What's the main difference between being good, better, and best? According to the research in the book, it's only one thing: the time people spent practicing alone. The authors interviewed thirty violinist players and found out that the best simply practiced longer. As stated in the book, "best violin students had practiced an average of 7,410 hours" by the time they were eighteen, compared to an "average of 5,301 hours" for the better students and only 3,420 hours for the good. There is no magical gene. No extraordinary ability. Just long hours of practice where you aim to improve all skills related to the discipline.
- **Determine what you should do:** When approaching a subject, don't simply try to learn about this thing. Determine what you should be able to do. This is more important than knowledge about the discipline. For instance, if you look at our current life. We can conclude that your ability to create online applications is valuable. So, instead of reading about software. Set a goal to create a simple application all by yourself. This goal will keep

you concentrated. You will still ingest information. But it will be targeted towards a specific outcome – creating something. This approach, obviously, can be applied to everything else. Don't simply play the guitar. Approach this by learning how to play a specific song.

COMMENTARY

While quite dry and repeatable, this book offers something magical.

It gives you a sense of hope by explaining that there is no such thing as talent.

The authors debunk the notion that you need to be born with the magical ability to sing, run, write, or whatever you are interested in. You simply need to have passion and insane drive to achieve top results.

What else?

Yes, learn about the deliberate practice framework – learn what the best in the field are doing, practice daily, and improve based on the received feedback along the journey.

What makes someone great is not his DNA. It's something quite boring and unsexy. It's the ability to practice and most notably to keep practicing when things are not going so smooth.

Peak provides an easy to follow – but hard to practice – framework that will help you identify what type of tasks are important for your advancement in your field of choice. All of this, to help you make the impossible possible.

Key takeaway?

Don't let others convince you that you can't do something. Sure, you are probably not fit enough to run a marathon. Not tall enough to play basketball. And not word savvy enough to publish a book. But if you believe that you can do something. If you self-convince yourself that you can make it. You will.

NOTABLE QUOTES:

“People do not stop learning and improving because they have reached some innate limits on their performance; they stop learning and improving because, for whatever reasons, they stopped practicing—or never started.” K. Anders Ericsson & Robert Pool

“The first thing Imreh did when she sight-read the piece was to develop what he called an “artistic image”—a representation of what the piece should sound like when she performed it.” K. Anders Ericsson & Robert Pool

“In particular, deliberate practice is informed and guided by the best performers’ accomplishments and by an understanding of what these expert performers do to excel. Deliberate practice is purposeful practice that knows where it is going and how to get there.” K. Anders Ericsson & Robert Pool

WORKSHEET

Reading alone won't help you understand the actionable notes. You need to engage with the content. Answer the question below to plan your next steps:

1/ In which skills being good enough is OK? In which disciplines you need to excel?

2/ Develop mental representation based on experts in your field - write it down:

3/ Are you part of a group that is helping you advance? If not, how can you find one:

4/ How many hours per day are you spending perfecting your craft?

5/ Don't simply learn. Determine what specific skills you should be able to do:

THANKS FOR READING!

Ivaylo Durmonska

