

Accelerated Learning:

A Brief Guide on How to Learn Faster



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10 Things This Guide Will Teach You

1. How to develop your skills and talent faster.
2. How to learn difficult concepts quickly.
3. How to solve big problems with ease.
4. How to break down complex issues into simple pieces.
5. How to replicate the thinking processes used by intelligent people.
6. How to identify (and avoid) common learning mistakes.
7. How to accelerate your learning within the constraints you face each day.
8. How to focus on what matters (and ignore what doesn't).
9. How to inspire creativity.
10. How to make learning a daily habit.

Table of Contents

How to Build Expertise, Talent, and Skill: Lessons From Peyton Manning	4
How Constraints Make You Better: Why the Right Limitations Boost Performance	9
The Weird Strategy Dr. Seuss Used to Create His Greatest Work	13
How to Solve Big Problems: Lessons Learned From Cancer Scientists	18
How to Solve Difficult Problems by Using the Inversion Technique	22
Mental Models: How Intelligent People Solve Unsolvable Problems	26

How to Build Expertise, Talent, and Skill:

Lessons From Peyton Manning

It was the first game of the season and Peyton Manning, one of the greatest quarterbacks in the history of the National Football League, already had a chance to set another NFL record.

Late in the fourth quarter, with the ball on his own 22-yard-line, Manning stepped up to the line of scrimmage and surveyed the defense. Just before snapping the ball, he noticed something.

The Baltimore Ravens defenders were moving around in front of Manning, preparing for the play, but something didn't feel right. After the game, Manning would simply say that he "saw something." [1, 2]

Baltimore was going to blitz and Manning knew it. He took a step forward, spread his arms to signal a new play call, and yelled out the play, "Alley! Alley! ... Alley! Alley! Alley!"

The Broncos snapped the ball. The Ravens, as expected, blitzed. Manning threw a perfectly planned pass to wide receiver Demaryius Thomas, who ran 78 yards for a touchdown. The Baltimore defenders never laid a hand on him.

It was Manning's seventh touchdown pass of the game, tying the NFL record. And perhaps more impressive, it took Manning just four seconds to step up to the line of scrimmage, analyze the location of all eleven defenders, compare their coverage to the play he had called, recognize that they were preparing to blitz, and then call a new play. All that, in just four seconds.

Let's talk about how Peyton Manning can do that, and how you can develop expertise in the areas that matter to you.

Here's the deal...

The “Cocktail Party Effect”

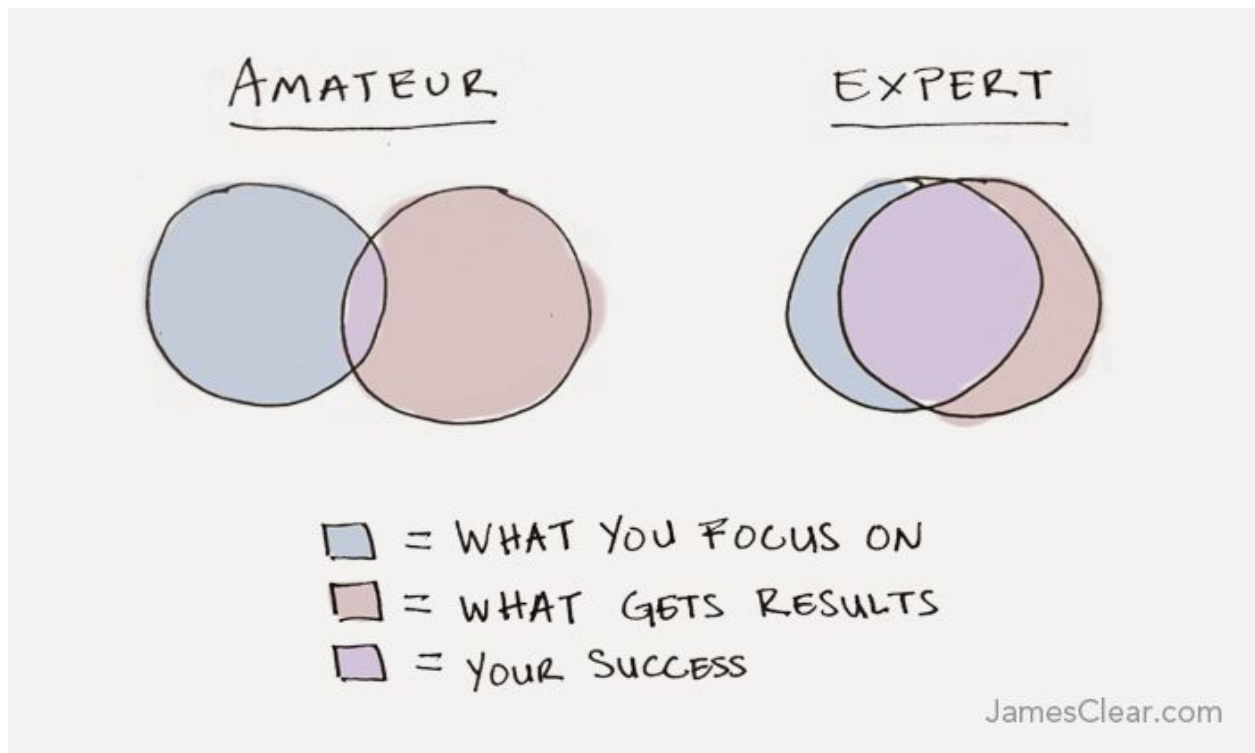
In a variety of studies, researchers have shown that website visitors have learned to ignore the common areas of webpages loaded with advertisements. In many cases, the readers breeze right past the advertisements like they aren't even there (yet another reason why I don't run any advertisements on JamesClear.com). Known as “banner blindness” this phenomenon is essentially saying that as you read more articles online, you learn to ignore the irrelevant or unimportant pieces of the experience. [3]

This basic idea – that you can focus on one part of an experience and ignore others – is a cognitive psychology concept known as selective attention. It's also called the “cocktail party effect,” which is named after the idea that your brain can pay attention to a single conversation while standing a crowded room full of people talking. Selective attention helps you filter out the noise and focus on the signal.

Selective attention is what allowed Peyton Manning to instantly assess the defense of the Baltimore Ravens and change his play call accordingly. Manning has put in thousands of hours playing the game, studying film of opposing defenses, and learning from his mistakes. As a result, his brain instinctively knew what was signal and what was noise. He knew what to focus on and what to ignore.

The result is that Peyton Manning can make snap decisions that are based on thousands of hours of experience. While a young quarterback might see a dozen possible options for what will

happen, Manning can narrow it down to a few options, perhaps even one option, by paying attention to the right factors. The result is increased success, and it's a major difference between amateurs and experts.



The Truth About Hacks

It seems that the world is obsessed with quick fixes and performance hacks. I get it. I've felt that way too. We all want to "hack" our bodies and brains, to find a hidden solution to mastering our mental and physical performance.

The thing is, when you look at how the top performers in the world operate and examine what is really going on in their minds and bodies, you often see the complete opposite of a hack. You see repetitions and consistency.

When LeBron James wants to increase his recovery and physical performance, he sleeps for 12 hours.

When Kobe Bryant wants to improve his skill set, he shoots 800 times.

When Peyton Manning wants to see holes in the defense, he puts in thousands of hours in the film room.

Sure, these athletes are blessed with one-in-a-million genetics, but chalking their success up to innate talent ignores a very big piece of the puzzle. I'm willing to bet that their tireless approach to mastering the fundamentals and unwavering commitment to consistency would pay dividends for nearly anyone in any field, regardless of genetic talent.

The Secret to Selective Attention

That said, Peyton Manning does have one distinct advantage over most people looking to develop expertise: statistics.

Everything that Manning does is measured. How many interceptions he throws. How many touchdowns he throws. How many passes he completes. How much weight he lifts in the gym. How fast he runs his sprints. It's all measured.

Why is this important? Because he has proof of whether or not he is making progress in his life and work. Because he is measuring these numbers, he is also looking to improve these numbers. And when he does something new and the numbers go up, that is a clear signal to him that this new behavior is working.

The only way to figure out what works and what doesn't is to measure your results. If you repeat this cycle for 20 years, then you end up becoming very good at focusing on the things that matter and ignoring the things that don't.

If you want to get better, then practice consistently and measure constantly. Use that feedback to figure out what is working and what isn't. Then, spend your time putting in more reps rather than searching for another hack. Experts spend more time focusing on what works. And the only way to know what works, is to put the time in.

How Constraints Make You Better: Why the Right Limitations Boost Performance

In 1930, a 23-year-old teacher in Uruguay named Juan Carlos Ceriani created a new sport. Ceriani wanted to design a game that was similar to soccer, but that his students could play indoors throughout the year. His new game became known as *futsal*.

Futsal is very similar to soccer, but it has a few important differences. First, it is played in a much smaller area. (Ceriani designed the game so that it could be played on YMCA basketball courts.) Second, the ball is smaller and has less bounce than a regular soccer ball. Third, there are only five players per side rather than the typical eleven players per side in a soccer match.

This combination of factors—a tighter playing environment and a less bouncy ball—requires *futsal* players to develop more creative ball skills because they are constantly playing in crowded spaces. Additionally, because there are fewer players, each person touches the ball much more than they would in a standard soccer match. In fact, according to research quoted by Daniel Coyle in his book [The Talent Code \(audiobook\)](#), *futsal* players get 600 percent more touches during a typical game than soccer players do. [4]

Throughout the 1930s and into the 1940s, *futsal* migrated from Uruguay to Brazil, where the Brazilians fell in love with the new game. (Even today, over 75 years later, more people play *futsal* in Brazil than soccer.) It's hard to say why *futsal* became so popular in Brazil, but one thing is for sure: the young Brazilians who grew up playing *futsal* throughout the 1940s and 1950s developed incredible ball handling and technical skills.

Eventually, these children grew into adults and made the transition from *futsal* to soccer. The athletic creativity they developed in those *futsal* games would help the Brazilians to shine on the world stage. During the 12-year span from 1958 to 1970, there were four World Cup championships. Brazil won three of them. [5]

Constraints Accelerate Skill Development

It is common to complain about the constraints in our lives: too little time, not enough money, too small of a network, barely enough resources. Certainly, some of these constraints do hold us back. However, there is also a positive side. The constraints in our lives often force us to make choices and cultivate talents that would otherwise go undeveloped. Constraints drive creativity and foster skill development.

Just as the constraints of *futsal* forced Brazilian children to develop creativity and better ball handling skills, constraints can also drive your own skill development. In many ways, reaching the next level of performance is simply a matter of choosing the right constraints.

How to Choose the Right Constraints

From what I can tell, there are three primary steps to follow when using constraints to improve your skills.

1. Decide what specific skill you want to develop. The more specific the skill, the easier it will be to design a good constraint. For example, *futsal* didn't help players develop the skill of being good at soccer. That's too general. It helped them develop creative ball handling skills, which turned out to be valuable in the game of soccer.

Similarly, you shouldn't try to develop the skill of being "good at marketing", for example. It's too broad. Instead, focus on learning how to write compelling headlines or analyze website data—something specific and tangible.

2. Design a constraint that requires this specific skill to be used. There are three main options for designing a constraint: time, resources, and environment.

1. **Time:** Give yourself less time to accomplish a task or set a schedule that forces you to work on a skill more consistently.
2. **Resources:** Give yourself fewer resources (or different resources) to do a task.
3. **Environment:** According to one study, if you eat on 10-inch plates rather than 12-inch plates, you'll consume 22 percent fewer calories over the course of a year. (More on this idea and other nutrition improvements [here](#).) One simple change in environment can lead to significant results. In my opinion, environmental constraints are best because they impact your behavior without you realizing it.

3. Play the game. Constraints can accelerate skill development, but they aren't a magic pill. You still need to put in your time. The greatest Brazilian soccer players were still playing *futsal* all the time. The best plan is useless without repeated action. What matters most is getting your reps in.

The Idea in Practice

I am currently experimenting with different constraints to boost my skills in certain areas. Here are a few skills I have been working to develop and the constraints I am placing on myself to make them happen:

Writing skills. I want to be a better writer, so I set a schedule where I have to publish a new article every Monday and Thursday. The schedule is my constraint. It doesn't matter how good or how bad the article is. It doesn't matter how long or how short it is. I have to get something out every Monday and Thursday. This forces me to be creative and to do the one thing that good writers do: write. I don't always hit the mark, but I have stuck with this schedule for two years and I've written over 200,000 words.

Storytelling skills. I have some friends who are amazing storytellers. I've never been great at it, but I'd like to get better. The constraint I've placed on myself is scheduling talks without the use of slides. My last five speaking engagements have used no slides or a few basic images. Without text to rely on, I have designed a constraint that forces me to tell better stories so that I don't embarrass myself in front of the audience.

Strength skills. I only lift three days per week. To someone who doesn't workout, this might sound like a lot. However, many strength athletes train four to six days per week, sometimes twice per day. With restricted training time, I have to be very deliberate with my workouts if I want to make progress. Right now, I'm prioritizing foundational strength over all else. I'll move on to in-depth technique development once my strength levels are higher.

What do you want to become great at? What skills do you want to develop? Most important, what constraints can you place upon yourself to get there?

The Weird Strategy Dr. Seuss Used to Create His Greatest Work

In 1960, two men made a bet.

There was only \$50 on the line, but millions of people would feel the impact of this little wager.

The first man, Bennett Cerf, was the founder of the publishing firm, Random House. The second man was named Theo Geisel, but you probably know him as Dr. Seuss. Cerf proposed the bet and challenged that Dr. Seuss would not be able to write an entertaining children's book using only 50 different words.

Dr. Seuss took the bet and won. The result was a little book called Green Eggs and Ham. Since publication, *Green Eggs and Ham* has sold more than 200 million copies, making it the most popular of Seuss's works and one of the best-selling children's books in history.

At first glance, you might think this was a lucky fluke. A talented author plays a fun game with 50 words and ends up producing a hit. But there is actually more to this story and the lessons in it can help us become more creative and stick to better habits over the long-run.

Here's what we can learn from Dr. Seuss...

The Power of Constraints

What Dr. Seuss discovered through this little bet was the power of setting constraints.

Setting limits for yourself — whether that involves the time you have to work out, the money you have to start a business, or the number of words you can use in a book — often delivers better results than “keeping your options open.”

In fact, Dr. Seuss found that setting some limits to work within was so useful that he employed this strategy for other books as well. For example, *The Cat in the Hat* was written using only a first-grade vocabulary list.

In my experience, I’ve seen that constraints can also provide benefits in health, business, and life in general. I’ve noticed two reasons why this occurs.

1. Constraints inspire your creativity.

If you’re five foot five inches tall and you’re playing basketball, you figure out more creative ways to score than the six foot five inch guy.

If you have a one-year-old child that takes up almost every minute of your day, you figure out more creative ways to get some exercise.

If you’re a photographer and you show up to a shoot with just one lens, then you figure out more creative ways to capture the beauty of your subject than you would with all of your gear available.

Limitations drive you to figure out solutions. Your constraints inspire your creativity.

2. Constraints force you to get something done.

Time constraints have forced me to produce some of my best work. This is especially true with my writing. Every Monday and Thursday, I write a new article — even if it’s inconvenient.

This constraint has led me to produce some of my most popular work in unlikely places. When I was sitting in the passenger seat on a road trip through West Virginia, I wrote an article. When I was visiting family for the 4th of July, I wrote an article. When I spent all day flying in and out of airports, I wrote an article.

Without my schedule (the constraint), I would have pushed those articles to a different day. Or never got around to them at all. Constraints force you to get something done and don’t allow you to procrastinate. This is why I believe that professionals set a schedule for their production while amateurs wait until they feel motivated.

What constraints are you setting for yourself? What type of schedule do you have for your goals?

Related note: Sticking to your schedule doesn’t have to be grand or impressive. Just commit to a process you can sustain. And if you have to, reduce the scope.

Constraints are Not the Enemy

So often we spend time complaining about the things that are withheld from us.

- “I don’t have enough time to work out.”
- “I don’t have enough money to start a business.”
- “I can’t eat this food on my diet.”

But constraints are not the enemy. Every artist has a limited set of tools to work with. Every athlete has a limited set of skills to train with. Every entrepreneur has a limited amount of resources to build with. Once you know your constraints, you can start figuring out how to work with them.

The Size of Your Canvas

Dr. Seuss was given 50 words. That was the size of his canvas. His job was to see what kind of picture he could paint with those words.

You and I are given similar constraints in our lives.

You only have 30 minutes to fit a workout into your day? So be it. That's the size of your canvas. Your job is to see if you can make those 30 minutes a work of art.

You can only spare 15 minutes each day to write? That's the size of your canvas. Your job is to make each paragraph a work of art.

You only have \$100 to start your business? Great. That's the size of your canvas. Your job is to make each sales call a work of art.

You can only eat whole foods on your diet? That's the size of your canvas. Your job is to take those ingredients and make each meal a work of art.

There are a lot of authors who would complain about writing a book with only 50 words. But there was one author who decided to take the tools he had available and make a work of art instead.

We all have constraints in our lives. The limitations just determine the size of the canvas you have to work with. What you paint on it is up to you.

How to Solve Big Problems: Lessons Learned From Cancer Scientists

In late November of 1991, a three-year-old girl was diagnosed with leukemia. There was a 30 percent chance she would die.

In the coming months, she would receive a long list of chemotherapy drugs: 6MP, asparaginase, methotrexate, prednisone, and vincristine. The miracle was not only that these drugs could potentially cure her, but that they existed at all.

In his fantastic book, [The Emperor of All Maladies \(audiobook\)](#), author and physician Sid Mukherjee explains the history of cancer and how brilliant physicians and scientists finally began to discover cures for the disease.

You see, for many years, doctors and scientists dreamed of finding a single cure for all cancers. They searched for a radical surgery or a miracle drug that could cure everything from breast cancer to leukemia to prostate cancer. According to Mukherjee, however, breakthroughs finally came when scientists stopped trying to tackle this large scale problem and made the problem smaller.

The first breakthrough came when Sidney Farber, now known as the Father of Modern Chemotherapy, decided to focus exclusively on treating leukemia. He was one of the first physicians to dedicate his efforts solely to a single type of cancer and by narrowing his focus Farber was able to make significant progress against this single condition.

Eventually, the drugs and treatments Farber uncovered for leukemia led to new solutions for other cancers. By focusing on one tiny vertical, Farber uncovered answers that could be used to treat the larger problem. As Mukherjee put it, “[By] focusing microscopically on a single disease, one could extrapolate into the entire universe of diseases.” [6]

This central idea, that solving large complex problems is often accomplished by first attacking smaller micro-problems, is useful not just for cancer treatments, but for life in general.

How to Solve Complex Problems

The main lesson mentioned above is simple: When you’re facing a complex problem or trying to do something bold, start with a smaller version of the larger problem. Focus exclusively on that small problem and solve it. Use the answers to this small issue to expand your knowledge of the larger issue. Repeat.

If you take a look around, you can see this pattern playing out everywhere.

For example, consider Amazon. The company started by selling books. Once they mastered the online purchase and delivery process of books, they moved on to other products. Today, they sell just about everything.

Amazon could have started by trying to solve the big problem: how do we master digital commerce? Instead, they started with a narrow focus and expanded from there. It has been proven many times that this small-to-large approach works well for businesses, and I think it can be very useful for our personal goals as well.

The Idea in Practice

Let's consider a few examples of how we might put this idea into practice.

Creativity. BIG PROBLEM: How do I become more creative?

Small solution: If you want to become a good photographer, then start small. Learn how to take a really good picture of a chair. Once you can take a fantastic picture of a chair, use those principles — light, composition, lines, curves — to take better pictures of everything.

Exercise. BIG PROBLEM: How can I start exercising consistently?

Small solution: If you can't crack the fitness code and struggle to exercise consistently, then forget about every other exercise and just learn how to do one pushup. Use [the steps I describe here](#) to increase your number slowly. Stick with that one exercise for days, weeks, months. Once you prove to yourself that you can solve this small problem, use the lessons you learn to become more consistent at exercise in general.

Nutrition. BIG PROBLEM: How can I eat healthy each day?

Small solution: Want to improve your nutrition? Maybe you should ignore switching to a new diet at first. You don't need to change all of your food habits at once. You could start by solving a very small segment of the problem: eat one vegetable today. Master that. Do it for four weeks. Or longer. Take what you learn about being consistent with that one thing and apply it to adding a second healthy food.

And finally...

Narrowing your focus is a mental model that you can apply whenever you want to start a new behavior or take on a new project that seems too big or overwhelming or complex to handle. It is a filter you can run larger problems through to approach issues from a more useful place.

So, how do you solve big problems? Start with a smaller one.

P.S.

That three-year-old girl who was diagnosed with leukemia and treated with the drugs that were discovered through the Father of Chemotherapy, Sidney Farber? It was my sister. More than 20 years later, she is alive and well.

I'm very glad Farber decided to start small.

How to Solve Difficult Problems by Using the Inversion Technique

Here's a new framework for thinking about how you solve difficult problems (like losing weight and getting fit, creating more innovation in your company, learning a new skill, or otherwise changing your behavior).

I call this strategy the Inversion Technique and author Josh Kaufman covers it in his book, [The First 20 Hours \(audiobook\)](#).

Here's how it works.

The Inversion Technique

The way to use the Inversion Technique is to look at a particular problem from the opposite direction. [7]

For example, if you want to be a better manager, then you would ask, "What would someone do each day if they were a terrible manager?" This line of questioning will often reveal some surprising insights.

Here's an in-depth example from Kaufman's book...

“By studying the opposite of what you want, you can identify important elements that aren’t immediately obvious. Take white-water kayaking. What would I need to know if I wanted to be able to kayak in a large, fast-moving, rock-strewn river?”

Here’s the inversion: What would it look like if everything went wrong?

- *I’d flip upside down underwater, and not be able to get back up.*
- *I’d flood my kayak, causing it to sink or swamp, resulting in a total loss of the kayak.*
- *I’d hit my head on a rock.*
- *I’d lose my paddle, eliminating my maneuverability.*
- *I’d eject from my kayak, get stuck in a hydraulic (a point in the river where the river flows back on itself, creating a loop like a washing machine) and not be able to get out.*

If I managed to do all of these things at once in the middle of a raging river, I’d probably die – the worst-case scenario. This depressing line of thought is useful because it points to a few white-water kayaking skills that are probably very important:

- *Learning to roll the kayak right side up if it flips, without ejecting.*
- *Learning how to prevent swamping the kayak if ejecting is necessary.*
- *Learning how to avoid losing my paddle in rough water.*
- *Learning and using safety precautions when rafting around large rocks.*
- *Scouting the river before the run to avoid dangerous river features entirely.*

This mental simulation also gives me a shopping list: I’d need to invest in a flotation vest, helmet, and other safety gear.

Now ... I have concrete list of subskills to practice and actions to take to ensure that I actually have fun, keep my gear, and survive the trip.”

— Josh Kaufman, *The First 20 Hours*

Using the Inversion Technique will often reveal daily errors that you may not realize you are already making. Or, as shown in the kayak example, it will showcase potential problems that could arise. Inverting the problem provides a different perspective by forcing you to think through the hidden barriers that could prevent your progress.

Becoming Smart vs. Avoiding Stupid

“Say you want to create more innovation at your organization. Thinking forward, you’d think about all of the things you could do to foster innovation. If you look at the problem backwards, you’d think about all the things you could do to create less innovation. Ideally, you’d avoid those things. Sounds simple right? I bet your organization does some of those ‘stupid’ things today.”

—Shane Parrish [8]

It is far easier to avoid stupidity than it is to create genius.

Eliminating the errors and mistakes that are preventing your success can be just as powerful as building new skills or habits. This was part of the [success story of football player Jerry Rice](#). Rather than trying to build skills he didn’t have (like speed), Rice focused on eliminating mistakes that he made by running the most precise routes. As a result, when his opponents did make mistakes, Rice was able to take advantage.

Reducing Risk

There is an additional benefit to this strategy as well: While there may be adverse side effects from seeking success, there is very little risk from preventing failure.

For example, say you want to increase your focus and productivity. You could take a drug or mental stimulant that increases your ability to focus, but you run the risk of possible side effects.

On the other hand, using the Inversion Technique you could ask, “What if I wanted to decrease my focus? What are ways I could distract myself?” The answer to that question may help you discover distractions you can eliminate, which should also increase your level of productivity. It’s the same problem, but the Inversion Technique allows you to attack it from another angle and with less risk. [9]

Give the Inversion Technique a try and turn your problems inside-out.

Thanks to Josh Kaufman and Shane Parrish for inspiring this article.

Mental Models: How Intelligent People Solve Unsolvable Problems

Richard Feynman won the Nobel Prize in Physics in 1965. He is widely regarded as one of the greatest physicists of all-time. (He was a pretty solid bongo player as well). [10]

Feynman received his undergraduate degree from MIT and his Ph.D. from Princeton. During those years, he became known for waltzing into the math department at each school and solving problems that the brilliant math Ph.D. students couldn't solve.

Feynman describes why he was able to do this in his fantastic book, [Surely You're Joking Mr. Feynman!](#) (one of my favorite books that I read last year).

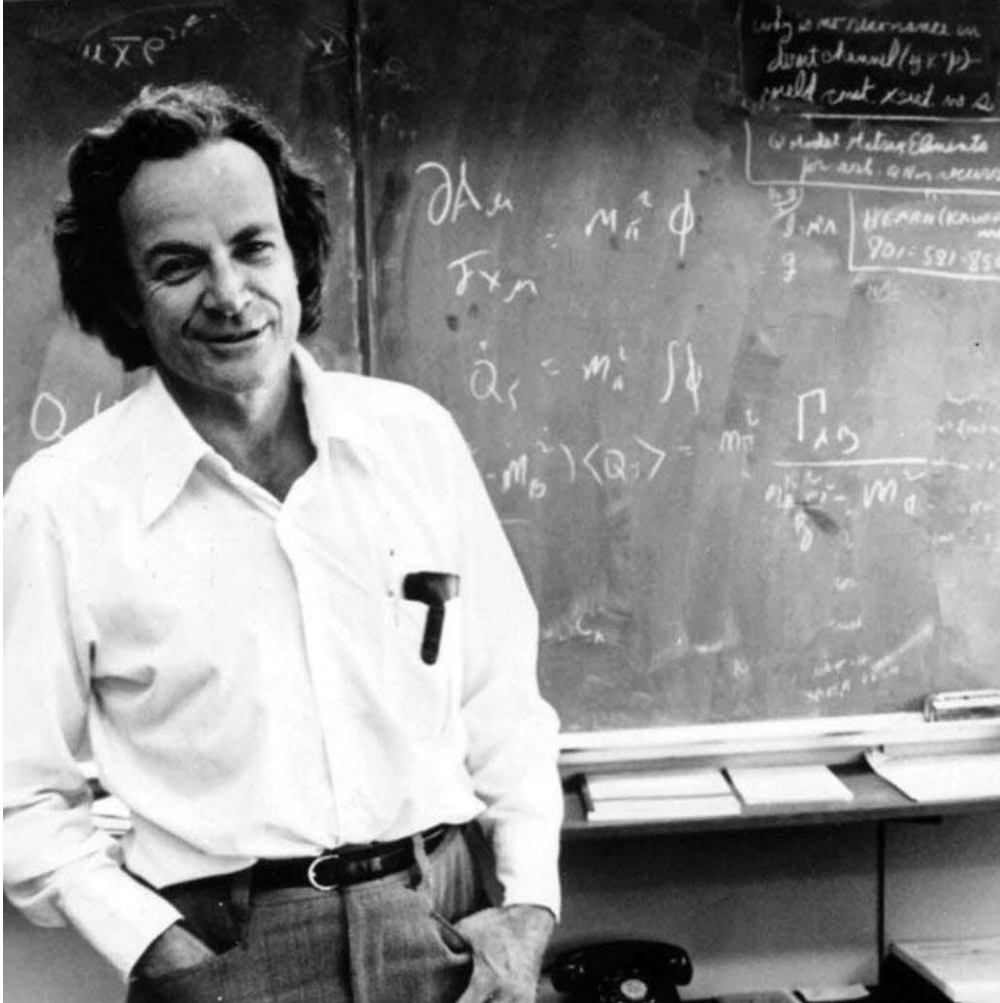
“One day [my high school physics teacher, Mr. Bader,] told me to stay after class. ‘Feynman,’ he said, ‘you talk too much and you make too much noise. I know why. You’re bored. So I’m going to give you a book. You go up there in the back, in the corner, and study this book, and when you know everything that’s in this book, you can talk again.’

So every physics class, I paid no attention to what was going on with Pascal’s Law, or whatever they were doing. I was up in the back with this book: Advanced Calculus, by Woods. Bader knew I had studied Calculus for the Practical Man a little bit, so he gave me the real works—it was for a junior or senior course in college. It had Fourier series, Bessel functions, determinants, elliptic functions—all kinds of wonderful stuff that I didn’t know anything about.

That book also showed how to differentiate parameters under the integral sign—it's a certain operation. It turns out that's not taught very much in the universities; they don't emphasize it. But I caught on how to use that method, and I used that one damn tool again and again. So because I was self-taught using that book, I had peculiar methods of doing integrals.

The result was, when the guys at MIT or Princeton had trouble doing a certain integral, it was because they couldn't do it with the standard methods they had learned in school. If it was a contour integration, they would have found it; if it was a simple series expansion, they would have found it. Then I come along and try differentiating under the integral sign, and often it worked. So I got a great reputation for doing integrals, only because my box of tools was different from everybody else's, and they had tried all their tools on it before giving the problem to me.

—Richard Feynman, [Surely You're Joking Mr. Feynman!](#) [11]



Richard Feynman (Image Source: California Institute of Technology)

Mental Models

"Point of View is worth 80 IQ points."

—Alan Kay

A mental model is a way of looking at the world.

Put simply, mental models are the set of tools that you use to think. Each mental model offers a different framework that you can use to look at life (or at an individual problem). Feynman's strategy of differentiating under the integral sign was a unique mental model that he could pull out of his intellectual toolbox and use to solve difficult problems that eluded his peers. Feynman wasn't necessarily smarter than the math Ph.D. students, he just saw the problem from a different perspective.

I have written about mental models before. For example, you can use [the Inversion Technique](#) to view situations in a different way and solve difficult problems.

Where mental models really shine, however, is when you develop multiple ways of looking at the same problem. For example, let's say that you'd like to avoid procrastination and have a productive day. If you understand the [2-Minute Rule](#), [the Eisenhower Box](#), and [Warren Buffett's 25-5 Rule](#), then you have a range of options for determining your priorities and getting something important done.

There is no one best way to manage your schedule and get something done. When you have a variety of mental models at your disposal, you can pick the one that works best for your current situation.

The Law of the Instrument

In Abraham Kaplan's book, [The Conduct of Inquiry](#), he explains a concept called The Law of the Instrument.

Kaplan says, "I call it the law of the instrument, and it may be formulated as follows: Give a small boy a hammer, and he will find that everything he encounters needs pounding." [12]

Kaplan's law is similar to a common proverb you have likely heard before: "If all you have is a hammer, everything looks like a nail." If you only have one framework for thinking about the world, then you'll try to fit every problem you face into that framework. When your set of mental models is limited, so is your potential for finding a solution.

Interestingly, this problem can become more pronounced as your expertise in a particular area grows. If you're quite smart and talented in one area, you have a tendency to believe that your skill set is the answer to most problems you face. The more you master a single mental model, the more likely it becomes that this mental model will be your downfall because you'll start applying it indiscriminately to every problem. Smart people can easily develop a confirmation bias that leaves them stumped in difficult situations.

However, if you develop a bigger toolbox of mental models, you'll improve your ability to solve problems because you'll have more options for getting to the right answer. This is one of the primary ways that truly brilliant people separate themselves from the masses of smart individuals out there. Brilliant people like Richard Feynman have more mental models at their disposal.

This is why having a wide range of mental models is important. You can only choose the best tool for the situation if you have a full toolbox.

How to Develop New Mental Models

In my experience, there are two good ways to build new mental models.

- 1. Read books outside the norm.** If you read the same material as everyone else, then you'll think in the same way as everyone else. You can't expect to see problems in a new way if you're

reading all the same things as your classmates, co-workers, or peers. So, either read books that are seldom read by the rest of your group (like Feynman did with his Calculus book) or read books that are outside your area of interest, but can overlap with it in some way. In other words, look for answers in unexpected places. [13]

2. Create a web of ideas that shows how seemingly unrelated ideas connect.

Whenever you are reading a new book or listening to someone lecture, write down the various ways that this new information connects to information you already understand. We tend to view knowledge as separated into different silos. We think that a certain set of ideas have to do with economics and another set have to do with medicine and a third set have to do with art history. This is mostly a product of how schools teach subjects, but in the real world information is not separated like this.

KNOWLEDGE IS ABOUT CONNECTIONS

Understanding how seemingly unrelated areas overlap leads to a greater understanding of the topic.

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For example, I was watching a documentary the other day that connected the design of the Great Pyramids in Egypt with the fighting rituals of animals. According to the historians on the show, when animals are battling one another they will often rise up on their back feet to increase their height and show their dominance. Similarly, when a new Pharaoh took power in Egypt, he wanted to assert his dominance over the culture and so he built very tall structures as a symbol of power. This explanation links seemingly unrelated areas (architecture, ancient history, and animal behavior) in a way that results in a deeper understanding of the topic.

In a similar way, mental models from outside areas can reveal a deeper level of understanding about issues in your primary field of interest.

Don't try to tighten a screw with a hammer. The problems of life and work are much easier to solve when you have the right tools.

Thanks to Shane Parrish for sending me down the rabbit hole of mental models.

Sources

1. Here is [the video of Manning's play](#). You'll notice Baltimore safety Matt Elam slide up toward the line and shuffle his feet just before Manning changes the play.
2. [The ugly truth about Peyton Manning](#) by Seth Wickersham.
3. [Banner Blindness: The Irony of Attention Grabbing on the World Wide Web](#)
4. [The Talent Code](#) by Daniel Coyle.
5. [Wikipedia entry on Futsal](#).
6. The Emperor of All Maladies by Sid Mukherjee, pg. 159
7. This is different than working backward or "beginning with the end in mind," where you start with the same result and approach it from a different direction. Instead, the Inversion Technique asks you to consider the exact opposite of your desired result.
8. [Mental Model – Inversion and The Power of Avoiding Stupidity](#) by Shane Parrish.
9. Here's a personal example of how I decrease distractions: I often leave my phone in another room while I write. Answering calls completely breaks the flow of my work. Simple, but effective.
10. Feynman was famously eccentric and varied in his hobbies. Among other things, he played the bongos, spent years as an artist drawing nude models, and cracked a safe with top secret information about the atomic bomb inside.
11. [Surely You're Joking Mr. Feynman!](#) by Richard Feynman. Pages 86-87.
12. [The Conduct of Inquiry: Methodology for Behavioral Science](#) by Abraham Kaplan. Page 28.
13. This isn't to say that you should avoid reading the books your peers are reading. You should probably read those too, so that you have the same baseline of knowledge.