

SUDDENLY Talented

WHY DOABLE Greatness is BETTER THAN GENIUS





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Five minutes?

“A TED talk is twenty minutes long,” said the editor over the phone. “How long would it take you to get your idea of talent across? Secondly, would everyone in the room be convinced they could get talented almost overnight”?

These questions painted me into a corner.

For nearly ten years, I’d tried to explain the concept of talent to whoever would listen. But there was nothing instant about the explanation. If anything, the more I tried, the more people were highly resistant to the fact that talent was anything but inborn. The idea that expertise could be acquired quickly and permanently met with defiant resistance.

TED talks are usually restricted to a presentation that is under twenty minutes. And yet the editor’s challenge was precise: Could the idea be fitted within the constraints of a TED talk? How do you put forward a theory that causes sweeping change with a mostly sceptical audience?

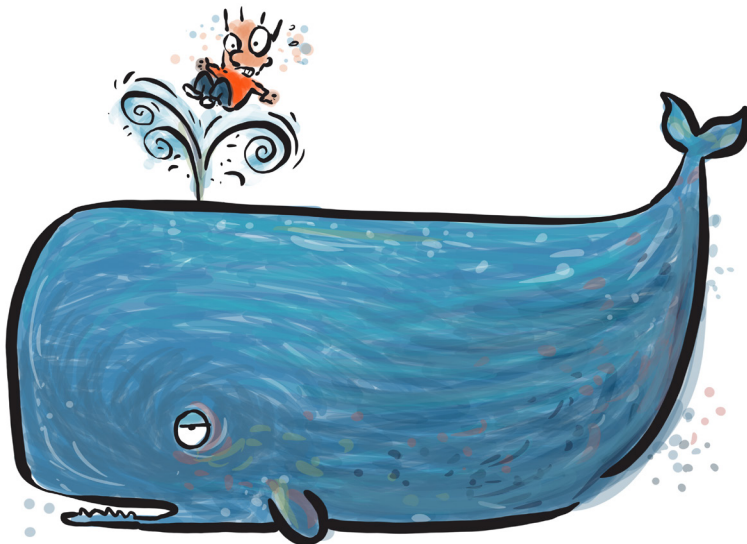
That’s when the five-minute “whale exercise” was born.

I’ve loved to draw since I was very young, and I tend to draw while on buses, at cafés, and on planes. And usually, when the aircrew has settled down after their rounds of service, they’ll stop and comment on “how talented I am”.

“Would you like to get some of this talent in the next five minutes”? I asked the Air New Zealand flight attendant. He stopped briefly and said something I’d heard hundreds of times.

“I can’t even draw a straight line”, he responded.

“That’s fine,” I continued. “But can you draw shapes such as circles, squares and triangles? And with that, I handed him my iPad and asked him to follow my instructions to draw a cartoon whale. But not just an ordinary whale, but one that would be worthy of a professional cartoonist.



Until the whale presentation, I was quite unable to explain how talent worked. Yet, within a few minutes of the whale exercise, almost anyone can draw a whale much like a professional cartoonist. When a comparison is done between the before and after, the change is dramatic and satisfying.

Five minutes?

I ran that experiment repeatedly until a folder in my iPad overflowed with whales drawn by dozens of people, of all ages, both on and off planes. In every case, the result was precisely the same. Depending on their frame of reference, the person would draw something resembling a whale or a goldfish. Within five minutes, however, everyone, without exception, could draw the whale almost as well as I did.

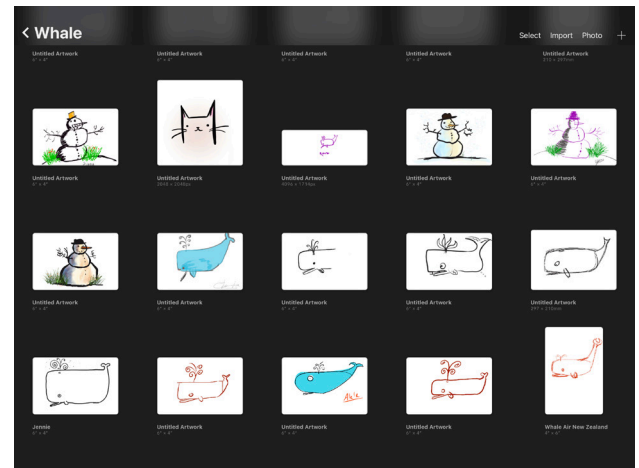
I'd been drawing for decades. They had been drawing for minutes.

Would such an experiment survive with large groups of people?

Would we get similar results, or would the experiment all turn to custard? To get a consistent answer, we tried the same test with larger audiences in Australia, Singapore, the US and Europe. Then, we had webinars online with even greater numbers. The results were strikingly similar. Everyone could go from goldfish to whale in under five minutes.

Drawing a solitary whale is hardly a skill, is it? Being able to draw a single cartoon is commendable, but that's hardly a talent is it? Talent seems so much bigger that it's sometimes hard to describe.

Let's take a shot at it anyway. However, let's reset our sights. Instead of genius levels, how about "Doable Greatness", instead?



The "whale exercise" is simply a series of steps that takes a person from drawing a rather odd-looking fish, to a cartoon version of whale. All of this change is achieved in a matter of minutes. Along the way, we may end up drawing some snowmen and cats as well.

Doable Greatness



***Doable Greatness is the moment
when you get mistaken for a professional***

Doable Greatness?

“I consider myself normal. I’ve spent twenty years in the pool.”

Those are the words of Olympian, Michael Phelps. In an interview with broadcaster Piers Morgan, Phelps admitted to training for five years, every single day, 365 days. And he spent approximately six hours in practice on every one of those days.

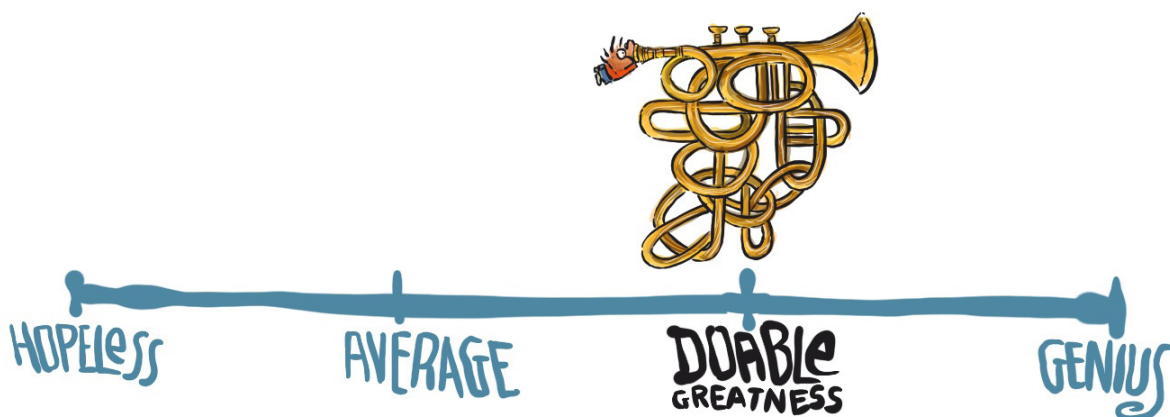
“I really focused on the sport,” he says. “I was always in bed by 10 o’clock. I was getting the right amount of recovery; I was taking care of my body away from the pool. I wanted to do something that no one had ever done before. I wanted to be the greatest of all time.”

Do you want to be the greatest of all time?

“Not me,” said the waitress at the cafe. “I don’t want to spend 365 days a year doing something for hours on end. Of course, I don’t want to be hopeless at a skill. But I don’t want to make so many sacrifices. It would be nice if there were a sweet spot, something in between.”

There is a sweet spot. It’s called “Doable Greatness”.

If we looked at a linear progression of talent, we could go from left to right. Right at the far end, we’d have what we’d loosely label “genius”. The starting point is usually when you feel utterly hopeless. You nudge ahead and get to “average”. Further down the path, however, is a point of “Doable Greatness”.



If we drew a line from left to right, we could attain a great amount of skill. If we achieved a 7/10 level, that's a point of "Doable Greatness".

Doable Greatness?

It's a stage where we could be easily mistaken for a professional.

It means that if we were to draw a cartoon, write an article, or cook a meal, we'd experience not just genuine surprise but sheer astonishment from strangers, as well as close friends and family.

We'd become what the world seems to call "talented".

At this point, we seem to run into a genuine mental hurdle.

Most modern books on talent, habit and perseverance suggest that we must put in thousands or even tens of thousands of hours to become talented. That deliberate practice is required to reach these lofty goals. And those books and research are likely to be spot on if your goal is to "spend six hours a day, twenty years in the pool".



We all love the idea of being among the best of the best. Yet, are we willing to put in the seemingly endless hours, weeks and days to get to our goal?

But what if you don't want to be a genius? What if you tried to be outstandingly good instead? What does "Doable Greatness" look like anyway?

Let's take a look, shall we?

The road to "Doable Greatness"

Do you remember who taught you to ride a bicycle?

Most of us would have had a pretty good memory of how we learned to ride.

We are likely to have memories where an adult was instrumental in helping us achieve that skill. However, if you stop and think deeply about this question, you'll realise that no one, in particular, was helping you. All an adult can do is shout out commands you can't possibly process.

A person trying to coach you might be able to hold the bike's rear end to give you stability, but they can't teach you to ride that bike.

You learn to ride a bike all by yourself.

You also learn to walk without any specific instructions. You teach yourself to speak a language, too, because most parents aren't language instructors.

This spectacular success is so early in life because your brain is astoundingly good at pattern recognition. It might not be lightning quick at spotting which mistake caused



Learning to eat correctly with chopsticks is almost as complicated and error-prone as getting on a bicycle. Our parents and teachers guide us, but the learning is largely based on a reduction of errors.

you to fall off the bike. However, it will work out what you're doing wrong should you fall off repeatedly. Then, with little or no conscious thought on your part, it will make tiny—or chunky—adjustments.

At first, most of what we do is error-ridden

We fall, we crash, but bit by bit, the errors seem to fall away. Then one random day, you do the seemingly impossible. You acquire the smallest bit of "talent".

If we examine the concept of talent, we can slice and dice it until we're knotted in

definitions. Even dictionaries wobble their way trying to nail down the idea, but by and large, they all seem to settle on something that talks about "a natural aptitude or skill".

What if we stop paying attention to what someone wrote in the dictionary and start focusing on what we know to be inherently true?

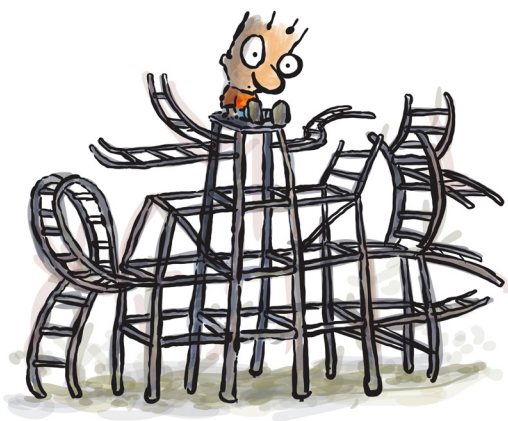
Walking, talking and speaking aside, we know that most of the things we fluently achieve today were, at once, error-ridden. When we reduced the errors, we became faster at those activities, even when the rules changed completely.

Take, for instance, entering your home in pitch darkness.

You could find your way around without the lights, couldn't you? If you were to go through the exercise of walking around in pitch darkness, it wouldn't be hard for you to move at a much faster pace. In a short time, you're likely to be the local champion of walking around in darkness—at least in your apartment. What starts as a frustrating, error-prone activity soon becomes a "talent".

Until someone moves all the furniture

Suddenly, it's a nuisance as you find yourself flung back into an error-zone—but only until you figure out the new layout. In every situation, whether we're learning Photoshop or basketball, learning to play the piano or ready to cook a curry, we're a basket-case of errors.



Talent is a "reduction of errors". If you get rid of the obstacles, you steadily attain a level of competence. The faster you get at avoiding the errors, the quicker you get to "doable greatness".

Take away the errors, and what remains?
Talent, of course.

It's what happens when someone is trying to draw a cartoon whale for the first time. The learner's version of the whale is simply a bunch of errors.

They also happen to be errors that can be easily and quickly fixed.

Learners can make changes once they know where they're making a wrong turn. At first, the changes don't seem substantial. They're still very much in struggle mode. However, with tiny corrections, they can turn out work that astounds everyone, including the person doing the activity.

If we nail down talent as a "reduction of errors", our understanding of the idea isn't quite as vague.

We don't have to depend on a dictionary to tell us that we were "born with aptitude". We can leave those "born with aptitude" folk alone to become geniuses. If we want to learn skills, all we have to do is go on an "error scavenger hunt". Once we find the errors, we can reduce them, and we have talent, right?

That's how it works with pilot training, at least. Because when you're 35,000 feet above the ground, errors are more than just a nuisance.

A plane takes just ten minutes to drop from 35,000 feet to the ground. As a pilot, you're either good at fixing errors—or you're history.

The flight simulator

“You need to make your own mistakes!”

As teachers or parents, we have no problem doling out the “make your own mistake advice”. We instinctively know that making mistakes is a valuable experience. Learning from someone else is one thing, but we own our mistakes. The more errors we make—and fix—the greater the potential for talent acquisition.

Except for the fact that society isn’t set up for mistakes at all.

Peter Birchenough has flown for the US Air force for 20 years. He’s flown 4-star generals, members of Congress and flew the First Lady for two years. He’s also flown other heads of state and foreign presidents.

I doubt the Air force tells him to make his own mistakes.

“I could lose an engine halfway over the Pacific”, he says, “and still make it back to the mainland.” And while Peter’s confidence seems almost irrationally high, it’s not uncommon for pilots to feel reasonably assured they’ll be able to cope with virtually any situation.^[1]

If you compare data from 1970-2018, fatal accidents per million flights have decreased 16-fold, from a high of 6.35 to 0.39^[2].



1 Runway safety represents 36% of accidents, Ground Safety 18% and Loss of Control in-Flight 16%

2 In commercial flying we re-trained about 30% of the time, but in the military, about 50% is training time due to the number of emergencies possible. Especially with bad weather and icing. Makes the plane heavier and you have to calculate fuel.

Have all the pilots suddenly become talented?

Or have planes become safer and more technologically advanced? There's no doubt that we're flying far more sophisticated planes today, but unlike a bicycle, or a car, where we're let loose with minimal training and no re-training at all, the airline industry can't take chances.

"With military aircraft, they'd make things twice as difficult".

But first, let's look at what was relatively more straightforward for Peter. "I flew the T-37 and T-1 in pilot training. You need basic flying skills, instrument flying, and basic navigation for those aircraft.

But the KC-135 involves a lot more complexity.

"You have a bigger crew, so you need to manage and communicate with another pilot, the navigator and as well as the boom operator. It's not quite like flying from Point A to Point B. You often fly within 10 feet of another plane, offloading fuel to the other aircraft for 15 minutes while flying at 300 mph. It's a very dynamic and changing environment, plus you have to consider a rapid shift in weather conditions. If you're operating in a hostile area, you have another layer of complexity. "

When you have a high level of complexity, error reduction becomes the norm rather than the exception. It becomes a mission to hunt down every possible error and make sure you're aware of it so that you can take corrective measures.

"If you study airline accidents, it's never one thing that causes a plane to crash.

It's always a series of events that compound each other. And it's much more expensive to go up in a plane and figure out how to fly planes or fix errors."

It's why pilots train on a simulator.

"Pilot training is about ground school first—the concepts, the engines, then the procedures. The simulator, in the beginning, is about cementing those procedures into a habit pattern.

And then, believe it or not, there's a syllabus.

"Slowly through the syllabus, they will throw stuff at you.

You'll be exposed to all sorts of flying situations. Perhaps, you'll be flying in the daytime, the lights go off, and everything changes. And then they may throw in some "weather", so you don't even see the runway until you're 200 feet off the ground. Or



When you have a higher level of complexity, every possible error can't be managed. The best way forward is to focus on the big ones and reduce or eliminate the chaos.

they'll turn off navigational aids or fly to an airport with some "gotchas", like mountains. They slowly "trick you" so you think and learn about different situations.

When you've achieved a reasonable level of fluency, you're exposed to sudden and dramatic change. "Maybe your left landing gear won't come down. Or maybe you're just getting an indication that your gear isn't down, but the light may have burnt out, and all of your equipment is solid."

If we accept that talent is "a reduction of errors," then we must find and fix the errors. A task, that at first glance, seems to be highly impractical. There appears to be an almost endless array of mistakes possible. How do we know in advance what errors a person will likely make?

Take the referees at the NBA, for instance.

Adam Silver, the NBA commissioner, decided to bring more transparency into the game. He gave the teams and the referees a private document on every mistake made in that particular game. All the mistakes made by every referee were published in the last two minutes of every game. And this level of documentation led to some surprising insights. For instance, referees are biased towards the team that's losing. The calls also favour the home team.

"If a predominantly Black team is playing, and a White team is their opponent, the Black team gets more fouls called against them, than on nights when the same team is playing with a Black referee crew.

Justin Wolfers, a behavioural economist at the University of Michigan, analysed years of data at NBA games and found unconscious yet clear racial bias. When Wolfers wrote his paper in 2007, The New York Times put it on the front page, and the NBA commissioner attacked the study. Then he tried to prove the analysis was wrong. As it turned out, the study was accurate.

After the news report, every referee, regardless of colour, was alerted to the possibility of unconscious bias.

When Wolfers did another study many years later, the bias was gone.

He doesn't know why it changed so quickly, but at least from a "talent" point of view, the error was identified and seemingly obliterated.

"You can't manage every error," says Michael D. Walker, a pilot and simulator trainer for the military and commercial airlines. "There are so many things that can happen that you can't train for all the issues. You want to train for those that will kill you. We focus

The flight simulator

on the big ones we wanted to catch, and the other ones you can manage and limp back if needed.”

Photoshop can’t kill you.

Neither can quadratic equations.

And while drawing a cartoon whale can be incredibly tedious, it’s not a life-and-death scenario. Nonetheless, it feels terrible when we can't seem to move forward.

To understand what causes this feeling of being inept, we'll start with something we all seem to know very well. It's the concept of "energy", but not quite the way we've known it so far.

Let's jump right in.

Summary: "Doable Greatness"

- Being—or somehow acquiring—genius levels of talent is on our mind a lot as we go through life. We look around us and set our sights firmly on the very top, without necessarily wanting to put in the "six hours in the pool, 365 days a year, for twenty years". It's not that we're not hard-working. It's just that we're not that obsessed at reaching the very highest level.
- This lack of utter obsession leaves us in an ongoing quandary. We understand a stage where we're hopeless. We also completely identify with being average. However, beyond that, the next goal post seems to be "genius". However, "genius" isn't a logical next step at all. While "hopeless", "average" and "genius" look like logical markers along the way, "genius" is a bit like trying to get to Pluto. It's a lot further than we anticipate.
- The step that's very much within reach is "Doable Greatness". If you were to start at the "hopeless" step right now, there's a good chance you'll get to "average" quite quickly. "Doable Greatness" is where the world already sees you as an expert.
- The question that arises is: how do you get to "Doable Greatness"? The answer lies in three concepts we have to consider. These three are: "Energy", "Confidence" and "Skill".

A visual preview!

A visual preview!



Just a little preview of what's coming up in the chapters that follow. You're going to learn about ESC (Well, ECS). You'll find out soon enough!

Energy

A visual preview!



***The benchmark of energy is how eager
you are to come back the next day***

The concept of energy

What does ESC sound like to you?

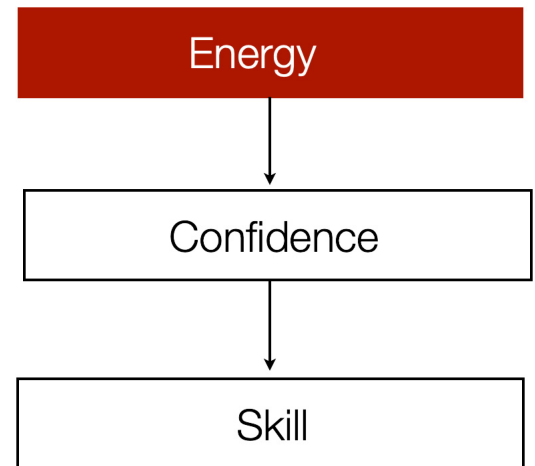
Yeah, me too. It sounds like the key on my computer: the “escape” key. Occasionally, we all need an acronym, a short cut of sorts.

We’ll work with ESC, except we’ll slightly change the order to ECS (you’ll see why, and you’re “talented enough” to move the letters around anyway). It’s why we’ll backtrack and start this chapter again.

What does ECS sound like to you?

It might sound like nothing in particular, but it stands for three core concepts.

- Energy
- Confidence
- Skill



If we’re honest with ourselves, we all aim for the third option. But in the following pages, you’ll notice that skill takes a back seat to the first two concepts. We could even go so far as to say that skill might not even matter if the first two don’t exist.

We all have our own way to describe "energy". When it comes to acquiring a skill, could it be that "energy" needs a slightly different description?

Let’s find out.

What is energy?

Let's say you wanted to format some text on your computer.

Some of the text needs to be bold, some of it needs to be italics, and, oh yes, for no reason, let's go ahead and underline some of the words.

If we did the above in HTML, it would look like this:

` The text you want to make bold goes here `

If we were to slide over to the italics, it would look like this:

`<i>The text you want to make italics goes here </i>`

As you can tell, we'd have to take a similar bumpy road when we dealt with underlining. You'd have realised that the underline would use the `<u>` and `</u>`, and you'd put up with this tedious process if you had to work with just a few sentences. Yet, when we write a chapter, we might have to bold the text over fifty times.

Suddenly all of this HTML is starting to be a drag.

However, most of us don't reach for or know the code that enables us to format text. We hammer at our keyboards, casually formatting the text with a touch of a button.



If you're starting to get a bit of a headache and want to run out on the playground instead, maybe the task is taking up too much energy.

Energy—not skill—is the first and most crucial aspect of learning. If any task takes up more than the least needed amount of energy, there's a pretty good chance of failure or at least a dollop of chaos.

The whale drawing—the one that gets done in a few minutes— isn't easy merely because of the shapes. Instead, it goes through eight or nine steps. Each step is layered and therefore requires little or no energy on the second, third, or ninth pass.

Yet, the whale cartoon works every single time because of the understanding of energy. That if you have to expend more than the minimum energy needed, there's a chance you'll go off track, get discouraged and abandon the process.

At this point, we're likely to agree.

We all understand that a task requiring the least energy allows us to advance quickly. What makes this concept move beyond whales and bold text, is a little story I heard about Susan Cain, the author of "Quiet: The power of introverts in a world that can't stop talking".

Picture this: Cain is a self-professed introvert, terrified of speaking in public, let alone to a TED audience that often numbers as many as 1500 people. Cain seemed painfully aware of the paradox of the "stuff you must do" to launch and popularise a book. At this point, she gets an invitation to speak at a big TED event.

Cain tells the story in a TED interview: "I went and signed up for this seminar on public speaking anxiety, and all you had to do in the seminar, the very first day you would show up, and you would just say your name and then sit back down and declare victory. And you were done! And that was it. And then you'd go back the next week and do a little bit more."

The story, even the logic, is barely new to us.

We are inundated with sayings such as "A journey of a thousand miles begins with just one step". There's nothing new or even remarkable in knowing that tiny increments are needed to make progress. What's slightly tangential about energy is the measurement of how tired you feel after you take that particular step.

Imagine the ping-pong battle in your head as you made your way to a public speaking anxiety seminar. Then, imagine the sheer relief of saying your name and returning home. The energy required to do such a task is so minuscule it's not even worth measuring.

And how do we know that the task requires little or no energy?

It's incredibly difficult for us as trainers, teachers or parents to know the answer. It's because we are already fairly competent at the task.

This is why, when we say "A, B, C," we tend to drop the line with a tinge of disdain. We don't just say "A, B, C", but instead say "It's easy as A, B, C".

Even so, when teaching a child, we never skip merrily to C.

Instead, we linger at A for a while. It could be a day, even all week, before we move to B. Then, whenever the moment seems right, we amble across to C and work our way through the Latin alphabet.^[1]

¹ I always thought it was the "English" alphabet, but apparently not. I stand corrected.



We all seem to know that we need "baby steps" when learning. However, in many, if not most cases, even the initial steps seem terrifying. We have to burn too much energy just to show up, let alone do the task.

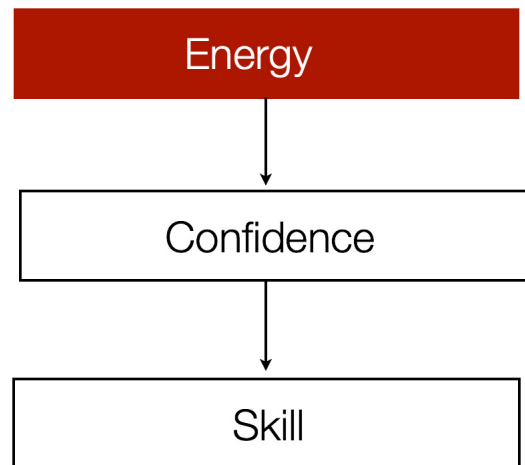
What is energy?

A young child, in particular, makes for the perfect subject.

She has limited energy before her next meal and nap. The only reason she's likely to go ahead is if the task requires the least amount of energy. Even at this stage, however, we are thinking about stages and steps.

When teaching single letters in any alphabet, we are acutely aware that moving slowly is the key to acquiring skill. However, how can we tell if the information we have, is too much?

It's at this stage that we need a benchmark: How do we know if the task we're doing is using up too much energy? Let's find out how you measure energy, shall we?



How to measure energy

The "draw a whale" experiment is an excellent example of the "What's Next" factor.

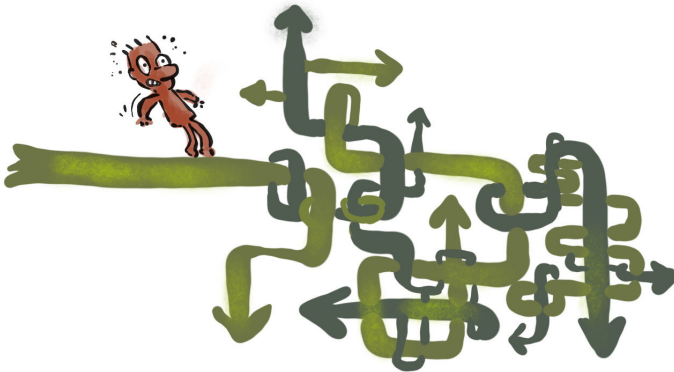
It's possible that many of us drew a random-looking fish—maybe even a goldfish—before we drew what seems like a pretty good cartoon of a whale. The ability to draw so quickly and correctly is quite a revelation to many.

However, the biggest aha moment gets lost in the excitement.

When the "draw a whale" experiment is done with a live audience, the participants have a version of what they perceive to be a whale and what they drew shortly after. You can see the embarrassment when showing off their first drawing and the consequent delight at being able to draw a pretty good image of a whale.

What gets missed is what happens next.

I asked the audience if they would like to draw a picture of an ant eater. The response is instantaneous. Almost without exception, everyone wants to move ahead. No one seems to stop to think that they don't quite know what an ant eater looks like. Is it similar to an aardvark? How do you draw an ant eater anyway?



If you wake up the next day and don't feel excited to go back to the activity, it's almost certain that the activity isn't simple enough. The "What's Next" factor is how you measure energy in almost every instance.

Just minutes before, there was muted enthusiasm for drawing a whale.

When asked if they would like to draw a whale, few people feel confident enough to play along. Yet, having gone from "goldfish to whale", there's a ludicrous amount of confidence in the room. It seems that no matter whether they were asked to draw an aardvark, buffalo or a pink fairy armadillo, they're willing to come along for the ride.

They're keen to do whatever is next.

The "What's Next" factor is how you measure energy

If a person is intimidated by what he's learned, there's a good likelihood we'd lose him long before we got to the pink fairy armadillo. However, when the task seems easy and controllable, it seems silly not to roll with the momentum.

We use generic words like "easy" when in fact, what we're doing is measuring energy. If you're learning something new, and it seems easy, it means someone has taken a lot of effort to design the task well. This level of ease encourages the learner to ask, "What's next"?

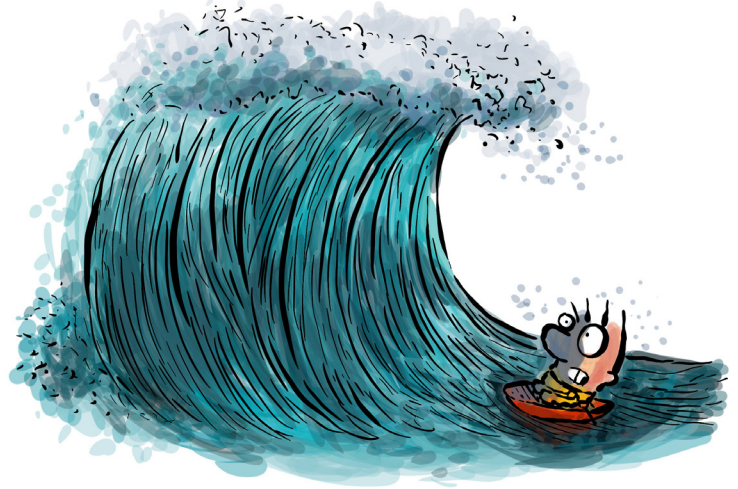
Remember the episode of involving Susan Cain and the public speaking anxiety seminar? That was an example of a task that needed very little energy. When the participants said their name and declared victory, all those learners would have felt like someone had really thought things through. The tiny step that tells you you're in the hand of someone who thoroughly understands the magic of energy.

There are many ways to drain energy, but the best way is to create anxiety.

We feel anxious because we are being called upon to learn one thing, then another, and yet another at a relatively high speed. It's not that the presenter is trying to confuse her audience. Most of us genuinely want to create change with the information we impart.

Yet, a part of us would recoil at doing something overly simplistic.

Imagine yourself in the shoes of the person conducting the seminar for public speaking anxiety. The members of your audience have had to dress up, postpone any other plans and rush across town to get to your seminar. The audience is expecting it to be, like most seminars, at least an hour long.



A teacher is usually trying to help the learner. However, the wave of information—even when it seems small—is overwhelming. Most of us struggle when we have to deal with too many steps and think it's our fault. We believe we're slow learners, when in fact our energy is being drained with too much information all at once.

Yet, within 20 minutes of starting the seminar, the class is done and dusted.

It would take incredible insight and enormous nerve for a trainer to go ahead with that first session. What if the audience doesn't get the intent of what you've just done? You decide to go ahead with the plan anyway, and the audience responds well. You—the trainer—have effectively set the stage for "what's next".

The reason why we want to know "what's next" is because we feel confident

We all know what confidence feels like, so why aren't we on top of things all the time? What is "confidence" anyway—and why is it crucial to skill acquisition?

The "what's next" factor will become apparent the moment you turn the page and are called upon to draw a cartoon whale. There are six steps, but you'll notice that despite your "skill at drawing" you'll want to go past Step 3 to the next page.

Your confidence will be high; you'll be having a good time. You might even feel like showing off later how good you are at drawing a cartoon whale. Let's go into this crazy wonderland, shall we?

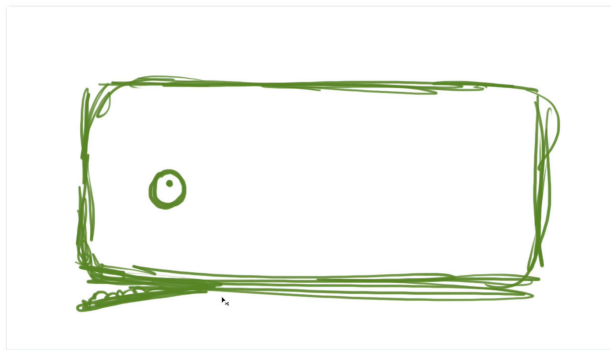
Step 1: Rectangle



Step 2: Mouth



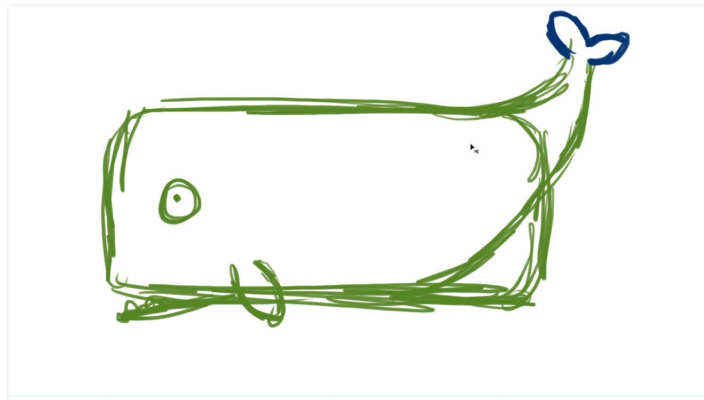
Step 3: Eye



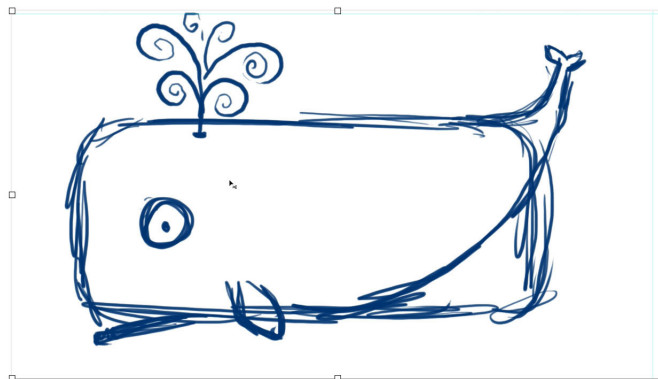
Step 4: Fin



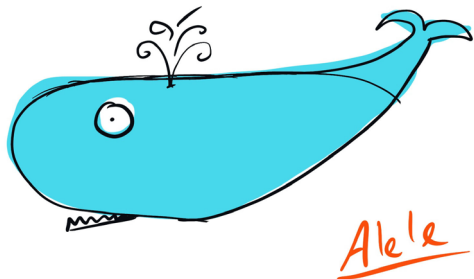
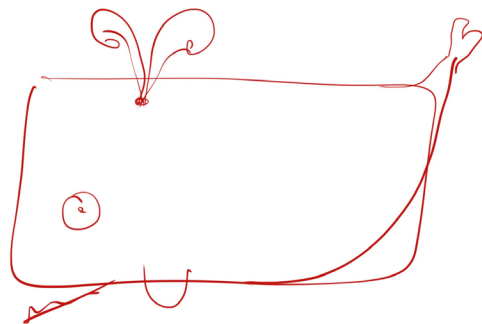
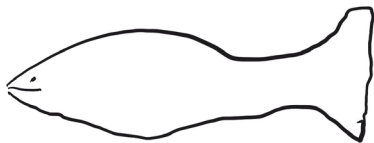
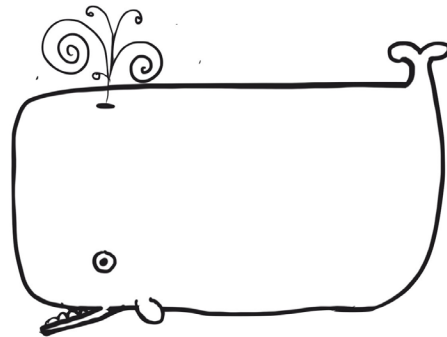
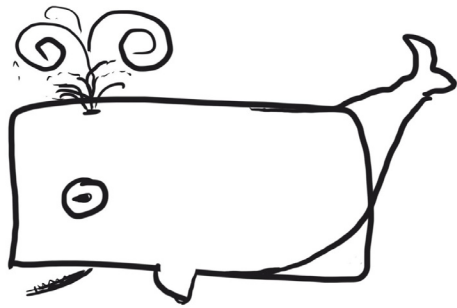
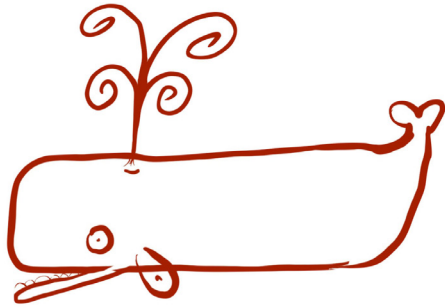
Step 5: Tail fin



Step 6: Spout

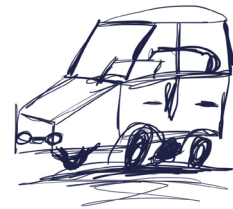
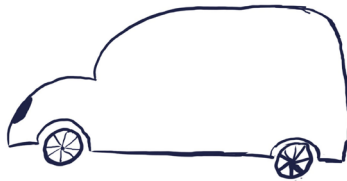


Examples of work



Spot the slightly odd goldfish with no fins.!

Instant change



In a matter of minutes, anyone—yes, anyone—can go from the images on the left to the ones on the right. The changes above were done by Errol, a 10-year old (at the time), while at a party. You can clearly see that the drawings on the left look much like most people (adults or kids) are likely to draw. Then, almost miraculously, the same drawing takes on the mark of a professional artist. When the "energy" required to do a task is minimal, "miracles" are everyday events.

Summary: Energy

- "Energy" is benchmarked by "what's next?" If a task has too many steps, or isn't simple to understand, we lose steam quite quickly. We know that the learning is just right when the learner voluntarily asks: What's next?
- Nothing is simple, not even A, B, C. We have to move from letter to letter: From A to B, and then from B to C. The need to rush from one to the other causes unnecessary drop-outs in the learning experience. If the journey is indeed a thousand miles, let's not take many steps all at once.



Confidence



***The benchmark of confidence is the
"safe zone". And the safe zone isn't a
zone, but a series of zones.***

What is confidence?

My niece, Keira, was 11 and in Year 7 when I had a discussion about maths.

She had a sleepover at our place and decided to head to the cafe with me early the following day. Several topics popped up in the car. At one point, I asked her a rather unusual question: “Are you good or bad at maths”?

“I don’t know”, said Keira uneasily. “Sometimes I’m good, and sometimes not. It’s not always simple.”



It doesn't take much to lose confidence. A single stray comment can cause you to feel you're not worthy. The loss of confidence may seem like a tiny leak, but often enough it's a gusher.

“You’re in Year 7,” I said to her.

“How good do you think you’d be at the maths taught in Year 3?” Her answer was as predictable as any other child’s. “I’d be the best in the class,” she told me.

Year 4?

Year 5?

Year 6?

In Keira’s mind, every preceding year was “easy”.

And it’s not just a child’s perception, either. We all find tasks and skills complex at first, but as

we move down the line, it’s clear that what was once hard is remarkably easy. To Keira, Year 7 was complicated, and so it should be. Yet that’s not what this chapter is about.

This chapter is about confidence.

It’s about how at least half or more of the class steps into a new year, expecting it to be a repeat of the previous one. Many of those kids believe they’ll struggle at some level with maths. Those kids will grow up to be adults and think they’re bad at maths for the rest of their lives.

And what is that belief based on?

School—that’s what! Give an adult any maths problem to do from Year 1 to Year 8, and they’re likely to breeze through it in a matter of minutes. As maths gets a little more challenging in the final years of high school, it might take half an hour or half a day. Yet, none of us will likely say we need ten years to get through a maths syllabus.

We could all sit down to a test tomorrow and, with little or no preparation, do well. Yet, our belief system is entirely at a different level. For years we’ve hugged an idea about our maths ability, and that idea prevails above all. Many of us, if not most, would quite casually state that we “aren’t good at maths”.

To understand this concept a little better, let's redesign the re-entry into maths class

Let's say the girls enter the first day of maths class in Year 7. They're all given a test, not from Year 7, but of the problems they tackled in Year 3. The next day, they're given another test, and it's maths from Year 4. Progressively they march through Years 5 and 6 in the first week back at school.

With the sleep still in their eyes from a long school break, most, if not all, students will ace their tests. It shows, without a doubt, that maths is hardly the problem.

Confidence. That's the real issue, isn't it?

When we talk about talent, we rush madly towards skill.

Yet, there is no skill without confidence.

Confidence makes the reluctant student realise that they're not so bad after all.

Equally, you could be at the top of your game, like a basketball player or a scientist. One day you're the star of the team. Inexplicably, you make a few mistakes, rattling your confidence. You start second-guessing yourself. Writers feel burdened by Writer's Block. Sports stars believe they've lost their form.

What is a loss of form?

Did the star of the basketball team suddenly lose their skill? Does the gymnast not know how to twist, twirl and land seamlessly on the floor? When we talk about the loss of form, there's not an iota of skill depletion.



When a sportsperson loses "form", does it mean they've lost their skill? The lost confidence causes them to feel nervous, forcing an enormous number of errors. Once they get their confidence back, suddenly all is well with the world.

Confidence precedes skill by a lot.

And yet confidence gets a lot of its muscle from energy. When Year 7 kids take on Year 3 maths, they expend little or no energy. They shudder when dealing with Year 7 because it's clearly out of their comfort zone.

However, a person whose confidence has been battered in Years 3, Year 4, Year 5 and Year 6 isn't likely to suddenly adore maths in Year 7. We are so focused on the skill and results that we ignore what we know to be true.

Without confidence, we are nothing. Yet, to get that level of confidence, we need to understand the concept of the "safe zone". We also need to move from one niece, Keira, to the other, Marsha.

Safe Zone: How to measure confidence

At one point, Marsha needed help with her studies, and my wife Renuka and I pitched in to help her out.

On the first day after picking her up from school, I sat her down and told her that both of us would be helping her with her work.

Then I sat her down on the floor and asked her a question.

"If you get 0/20 in maths, whose fault is it?"
She said, "Mine".

In effect, she was taking the blame as the student.

I then told her, "The responsibility of the learning lies with the teacher. Hence if you get low scores, I haven't taught you well or correctly. The responsibility of the learning always—always—lies with the teacher."^[1]

"Cool!" said Marsha.

I wish I could take credit for the teacher being responsible for the student.

It's not my idea at all. While watching a BBC series on YouTube, I ran into a three-part series about a language teacher called Michel Thomas.

In the first frame of the series, we see Thomas stride slightly despairingly into an empty classroom filled with desks as he speaks into the camera.

"This reminds me of my own classrooms.

As a child, as a youngster, in high school, always under stress—uncomfortable. One had to associate learning with work, with concentration, with paying attention, with homework—it's all work. But learning shouldn't be work. Learning should be exciting. Learning should be a pleasure. And *one should* experience a constant sense of progression with learning. And would want more—that is learning to me", he says softly.



Michel Thomas focus was on creating an environment that was suitable for learning. Without the "safe zone", learning was almost always a drudge.

¹ Many of us in a teaching position will expect the student to come halfway. We don't want to take 100% of the responsibility. Yet, if we re-frame the situation and treat the student as a "baby", then would we expect a newborn to come halfway? Wouldn't we take full responsibility and teach the child to the best of our abilities? Someone who comes to you to learn is very much in struggle mode. They need you to take full responsibility, just like you would with a young one.

The mission Michel Thomas has taken on is to teach French to a group of sixth-form students. These, however, are no ordinary students. The voiceover on the video explains: "The pupils that he has been given, who all volunteered for this experiment, would all be classed as academically very average."

We are told that all the students are doing vocational qualifications because they don't like exams. The camera pans to Paula, who has done Italian before but has yet to study French. The next student, Dharminder, has failed his Spanish GCSE and never studied French. Abdul gave German a shot but also failed his GCSE. Maria and Satwinder have both failed at French. Anthony is the only one in the room who's tried French for a few years before giving up. On the other hand, Emily was told by her school teacher to give up—because she had "no talent for languages whatsoever".

The voiceover on the video has told us that the students would be classed as academically "very average". However, from the descriptions above, it sounds more like a "parade of the doomed".

One of the first acts of Thomas is to avoid digging into grammar or vocabulary.

After introducing himself, he seems more focused on the furniture. "Where you're sitting doesn't seem comfortable," he says, "and I would like you to feel comfortable. Shortly after, we see a shot of a van with wicker furniture, rugs and sofas you're more likely to find in a home than in a classroom.

The students pitch in, removing all the desks in the classroom and hiding the bulky computers with aptly placed wooden screens. The "stressful" classroom desks have been removed, and in their place, we see what closely resembles a comfortable lounge.

Thomas continues to fortify the "safe zone".

"Before starting, I'm going to set up an important ground rule. And that rule is never to worry about remembering. Never to worry about remembering anything, and therefore not to try. He goes on to say that the burden of learning doesn't depend on the student. Instead, it lies with the teacher.

"If there's something you don't remember at any point, this is not your problem. It will be up to me to know why you don't remember and what to do about it.

As the camera pans around the room, there's a sense of delight on the faces of the students. They sneak glances at each other as if they're about to be given a double scoop of ice cream rather than a lesson in French. Some of them even pursed their lips in anticipation of what would come.



Without the "safe zone" in place, the learner can get into trouble at any given point. They find themselves struggling for no good reason, and it destroys their confidence.

Michel Thomas isn't teaching a language.

Instead, what he's doing is creating a "safe zone". He does it in layers until the students are so relaxed that eagerness is painted all over their faces. They seem to have cleanly forgotten that just that morning, they were considered to have "no talent for learning whatsoever".

For most of us, learning is about desks, concentration, and possibly utter boredom. It's not as if most of us step into a learning situation as if walking to the gallows. We voluntarily buy a book, sign up for a course or go to a workshop. We are nervously excited at the thought of learning something new. That excitement is quickly squelched out of us. We're buffeted with video after video, slide after slide, without considering creating a "safe zone".

What is the "safe zone"?

Ironically, it's not a zone but a set of zones that follow in rapid succession. At every stage of learning, the student steps into a situation of uncertainty. Well, that's a blow to their confidence, isn't it? Much like a malfunctioning plane, it isn't one problem that causes the student to stall, but instead a series of hits to their confidence. The "safe zone" isn't a foolproof method, but it shows that there's been thought given to learning design. The teacher is thinking ahead of the twists and turns and anticipating where she can get the students relaxed, even as they step through uncertain territory.

Kathy Sierra, programmer, game designer and author of *Badass: Making Users Awesome*, reminds us why the "safe zone" is crucial. In her book—and on Page 171—she shows how the user thinks about their confidence. Interestingly, she doesn't talk about programming or gaming but snowboarding instead.

"Snowboarding is hard on the first day. It really is," she writes in the book.

"The secret for keeping them going when things get tough is this: acknowledge it. Some things are just hard. And she goes on to say: The main reason people stop when they're struggling is not that they're struggling. It's because they don't know that struggling is appropriate. It's because they don't know that they're exactly where they should be. It's because they don't know that everybody struggles at this point. They stop not because of the struggle but because they don't realise it is typical and temporary.



Letting the learner know when they're likely to hit a rough patch, enables them to prepare them for that moment. If they don't know it's supposed to be hard, they think they're the ones who are terrible at learning.

When we learn, we go through a series of struggles.

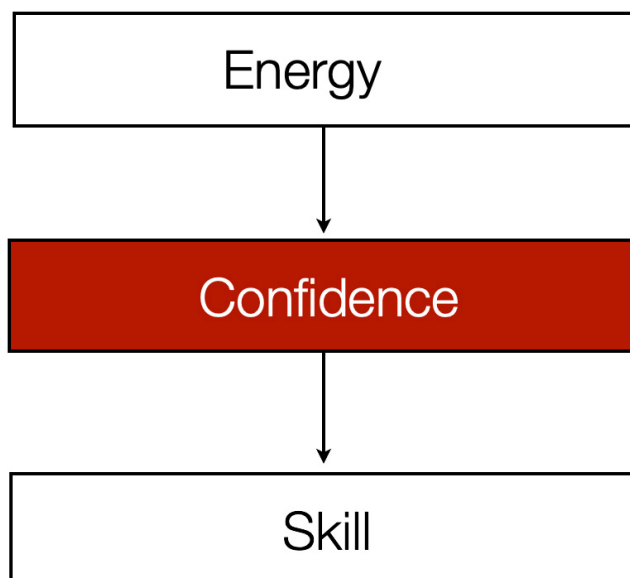
We've conducted the Article Writing Course at Psychotactics.com since 2005.

A client mentioned how easy she found the course at first. Because we bill it as the "toughest writing course in the world", she took us very seriously. She cleared her decks for three months, expecting to run into hurdle after hurdle. After coasting for the first month or so, she decided that the tag-line of "being the toughest writing course" was probably a bit overblown. She decided to take on more significant projects as she could easily cope.

A week after she decided, the course's challenging part kicked in, and she was instantly overwhelmed.

However, we'd not prepared her or even signalled where things would be difficult.

A simple diagram showing which parts of the course were likely to be harder would have sufficed. There was no such visual or text description in place. It's not like she suddenly got worse at learning to write articles, but the lack of signage caused her to go from a very "safe zone" to struggling to keep up. When working alone, we think, "I must be an idiot". ^[2]



It's the point where we start to doubt ourselves.

It's also the point where you are likely to remember everything you were told in the past. Things like "how you were born to do certain activities, how talent is inborn, how certain people have the 'gift' or have an 'eye'—and you don't.

That's why the "safe zone" is hard to pin down.

At times, the "safe zone" seems like an environment that Michel Thomas created before starting any lesson. At other times, it looks like markers, letting us know we're on the right path or when things will be easy or rough.

Instead of soaring forward, you are instantly plunged into doubt. As if self-doubt were not enough, a stray comment might pop up at the point when you're struggling. That comment, as fleeting as it seems, stays with you forever.

It's at this moment that we start to doubt our ability.

² At the end of every course—including the Article Writing Course—we ask clients to give us almost a thousand words of feedback. This feedback is about all the things that slowed them down and things we can fix. In doing so, we are able to find the potholes in the learning, and eliminate them as we move forward.

Sidebar: How tools create confidence

In the early 1900s, if you wanted to take photos, you had to be a bit of a weightlifter.

Camera equipment was bulky back then. They were often made of wood, were heavy and very complicated. The photos were made on glass plates, which added greatly to the weight.

In Germany, Leitz was the biggest microscope manufacturer in the world.

They required a new master mechanic for the experimental workshop of the microscope department. That's where Oskar Barnack comes into the picture. Barnack, despite his skills, had a severe problem. He suffered from a chronic lung ailment and often had to visit sanatoriums. Despite this obvious issue, the Leitz factory hired him and decided to put him on the task of creating a new camera.

Barnack was a keen photographer, but his lung ailment made the heavy equipment more than a nuisance. Sick of lugging the huge cameras around, he decided to create what he called the "Liliput" camera.

Then the First World War started, and his project had to be laid aside.



Oskar Barnack with a video camera that was much like a film camera. It was klutzy and just painfully heavy to lug around. Barnack's invention of the 35 mm camera changed photography forever.

When the war ended, the fortunes of the Leitz factory continued to spiral downwards.

However, based on the idea of the "Liliput" camera, they manufactured the world's first 35 mm camera. It meant anyone could take a camera on a strap and take pictures just about anywhere.

The tool created confidence, rather than any teacher or training program. Even so, photography was considered an expensive hobby for decades because it involved taking pictures and learning what went wrong only after printing the images.

All of this changed with the arrival of the digital camera, followed almost breathlessly by phone cameras. Gone were the blurry images of your childhood, thanks to instant focus capability. However, the ability to take tens of thousands of pictures and make instant fixes creates confidence in even the most reluctant photographer today.

A similar example applies to drawing.

When I started in cartooning, there was no "undo" factor. You drew on paper and coloured with pencils or watercolours. If you needed several options to show to a client, you could make photocopies, but most of the labour was manual and unforgiving.

The arrival of the desktop computer was no solace.

Photoshop and Painter, for all their magical quality, would crash repeatedly. Even with the appearance of a tablet such as Wacom, you were always chained to your computer. Besides, it didn't feel intuitive. You drew on the tablet, and the image appeared on the computer screen.

The iPad took its time and arrived only in 2010

The late CEO, Steve Jobs, believed the finger was the ultimate stylus and didn't encourage the development of any pen or device that could help artists draw. His reluctance didn't stop the marketplace from creating all sorts of clunky pens and styluses, but drawing on the iPad was still a chore.

Which is why I was a bit surprised when we visited Amsterdam a few years later

A couple of clients who'd done the cartooning course at Psychotactics were busy showing off their work on their iPads. By this point, I'd already owned two generations of iPads and saw them more as glorified e-readers. However, the work of these clients astounded me. The introduction of the iPad Pro + the Apple Pencil was far superior to anything I'd experienced.

Most of all, it could do anything Photoshop could do, including the "undo".

Today, when we conduct the cartooning course, there's a marked difference between those who choose to use pencil and paper vs the iPad. The ones that use the iPad do the

job faster, better, and are likely to be more confident than those that don't.

I guess you could say it's the difference between lugging camera equipment back in the 1900s and the phone camera in your back pocket.

It is said that a bad carpenter blames his tools. What's not said is that a good carpenter has excellent tools—and it's those very tools that bring a great deal of confidence in a very short period.

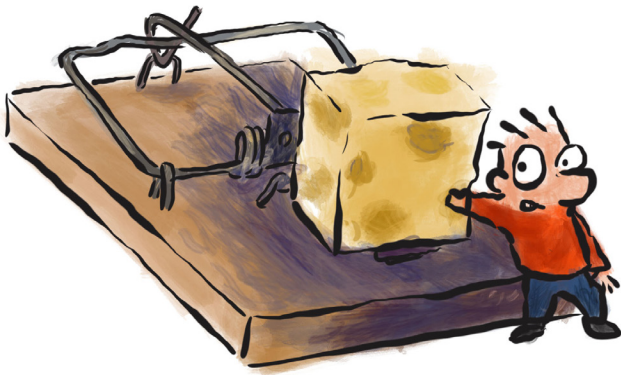
The genesis of doubt

"You have a lovely voice, Paul", says his mother to him, "but Artie has a fine voice".

That's the line that has stayed with singer-songwriter and musician Paul Simon. "Artie" is Art Garfunkel, the other half of the folk-rock duo Simon & Garfunkel.

Paul went on to win numerous awards, including 16 Grammys. He's been inducted into the Rock and Roll Hall of Fame twice, once as a member of Simon & Garfunkel and once as a solo artist.

"So I guess you can see how long that sentence has lived in my mind," he says in an interview almost sixty years later. He tells the story of Art Garfunkel, who sang solos at his temple at age five. For most of their music as the Simon & Garfunkel duo, Garfunkel would take the high notes of the melody, while Simon would adeptly handle the harmony.



Even as confidence and skill builds up, there's always a moment of doubt. Sometimes, that doubt can be so deeply embedded that it paralyses you from going forward.

At this point, Paul Simon wrote a song that needed a lead singer.

The name of that song is the hit single "Bridge over troubled waters". Art Garfunkel had no problem hitting the high A flat notes. When they sang at concerts, the one to sing that song was never "Paul, but always, Artie—with that fine voice". Soon enough, the song found takers all across the world. There were reggae versions, school choirs, and even Aretha Franklin.

"You can't compete with Aretha Franklin on anything," says Paul Simon. "Maybe I was just intimidated because the first

two versions were so unique and good—Artie's and Aretha's. It had a lot of different versions of it, none of which I could drop my voice and sing. It felt like it wasn't even my song—like I gave it up for adoption or something. It was mine, and then it was gone!

"You have a lovely voice, Paul, but Artie has a fine voice."

All the Grammys, all those concerts, hits and fame couldn't shake a single line that Paul Simon's mother said to him. He avoided singing the song for well over twenty years.

A sentence uttered so long ago put Paul Simon well out of his "safe zone".

We, too, have memories just like this. Like when a teacher picks up a drawing and

The genesis of doubt

says, "Who did this rubbish?" or when a parent gently suggests that you were "not born with that particular talent". The safety that we feel is rocked swiftly and often almost permanently. Our confidence is shaken, and we're unsure how to overwrite the lousy code embedded deep in our brains.

The genesis of doubt is usually located in internal + external issues. Let's start with the most obvious of them all: the internal doubts

- I'm not talented enough.
- Others are more talented than me.

1: I'm not talented enough

Paul Erdos^[1] was a Hungarian mathematician who made considerable contributions to several areas of mathematics, including number theory, graph theory, and combinatorics. He was able to solve complex mathematical problems rapidly and produced a prodigious output of papers.

However, this genius level was more or less in place by age three or four.

When his mother's friends came around, he would ask them their ages.

He would then tell them how many seconds they'd lived for. In Hungary, where he lived, there was a culture where you kept journals in high school. Within these journals were mathematical problems given to you each month. Students were expected to write their interpretation of the answer. It was competitive, and winners would be announced the following month. Erdos would routinely solve these problems correctly, even as others floundered. As if that were not enough, he received his undergraduate degree and the Ph.D. at the age of 21.

Imagine how inadequate you'd feel, sitting next to Erdos in maths class!

Looking around, we seem to find almost supernaturally "gifted" people.

In many, if not most, situations, they're merely early. They start with incredible promise, only for the rest of us to catch up by the time we hit our teens. Erdos wasn't just excellent at maths as a child. His prodigious talent kept him ahead throughout his early teens and the rest of his life.

However, there are two points to note at this junction.

The first—and most obvious—is that despite Erdos' abilities, he still did what most geniuses do. He continued to "spend genius levels of time" on the area he was most skilled. The second, which isn't entirely obvious, is that genius of this kind is extremely rare. Even Paul Erdos didn't think much of the concept of genius. He said, "I was left alone by my parents so much that it was just my way of passing the time."



Time and time again we're told that others are more talented than us. We are told time and time again to work on our strengths, and our weaknesses are underlined. Yet, is it possible that all of this comparison is a bit misplaced?

¹ The correct spelling is Paul Erdős, but the font I've chosen for this text doesn't seem to care about umlauts. I will find a way to fix this problem sooner or later. I did try the Alt + U on the Mac. No luck so far!

1: I'm not talented enough

All of this very early genius intimidates us as adults

When we're very young, it doesn't bother us at all. At one point, I used to do guest appearances to teach four and five-year-olds how to draw. When I asked, "Who in this class can draw?" almost all the hands would go up.

When I returned to that class several years later, the kids had grown into 10-year-olds. However, something had changed.

I'd ask: Who's good at drawing? And I'd see a few hands go up.

What happened between the ages of four to six?

Kids grow up, go to school, look to their left, and see a fellow student who seems like "Paul Erdos". They look to their right, and there's "Albert Einstein". Two rows down is "S. Ramanujan". And, of course, playing the fool (but drawing very well) in the front row is "Pablo Picasso".

A kid doesn't need their parents or friends to give them the bad news

They decide pretty early that they're not talented at drawing, maths, languages, etc. They're rolling in the mud at four with "Einstein" and "Picasso". However, a few years later, they tell themselves they're not talented.

Almost all of this self-chatter comes from comparison, namely, "I'm not as talented as the others".

Why do others matter, anyway?

2: Others are more talented than me

Remember that kid at school who was a born-wind-turbine-technician?

Or the other kid, who was a born-midwife? Surely you remember all the talented occupational therapists, acupuncturists and oral and maxillofacial surgeons.

Of course, you don't.

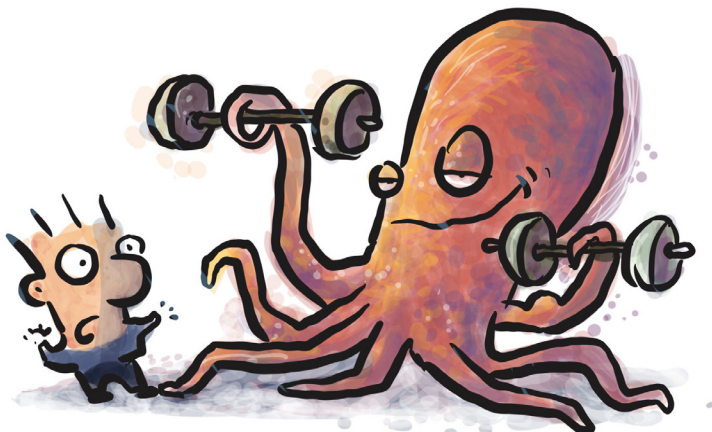
Instead, you remember the kid who was an exceptional artist or played the piano, possibly someone good at sports, maths or drama. Prodigies, as it turns out, are related to stuff kids can do. All the *maestras* and *maestros* emanate from an incredibly tiny pool of kid-friendly activities. If you start searching for talented people—living in our current age or from the past—there's a complete absence of compliance officers and respiratory therapists.

Instead, talent is seen through myopic lenses.

If we ask Britannica.com for a list of talented people, we run into the seven most famous child prodigies.

- Wolfgang Amadeus Mozart - Music.
- Sor Juana Inés De la Cruz- Poetry, Plays.
- John Von Neumann - Maths, physics, economics, computer science
- Srinivasa Ramanujan - Maths
- Stevie Wonder - Music
- Blaise Pascal - Maths and science
- Judit Polgár - Chess

It would be churlish to suggest that these kids weren't exceptionally talented, for indeed, they were. Even so, when you consider the thousands of professionals who are exceptionally good at their work, none showed any promise early on. The prodigy pool, as it seems, was pretty shallow.



We look around us and are instantly intimidated by all the marvellous things that others can do. We seem to believe they're talented and we're not.

As we grow up, we bury ourselves with untruths such as "I can't dance, I can't cook, I can't do this or that".

All of which starts with a comparison

Most of this comparison is also centred around certain skills and disciplines that kids can achieve in school. School, it seems, is where we start to form our ideas that others are talented, and we're not.

We focus tightly on just a few disciplines:

- Drawing
- Maths
- Writing
- Singing
- Dancing
- Sports

Not only do we ignore other activities such as acupuncture, surgery, etc., but we also ignore all the things that others can do just as easily. We consider others to be talented, only because we seem to be hopeless at the particular task.

Take the task that almost any kid can do: eating with a spoon.

Do we look at awe at the other kid and say: Wow, they're so talented at eating with a spoon? Eating might not seem like a talent, until you give a one-year old a bowl of rice and a spoon. Then, suddenly the five year old seems remarkably talented. However, since everyone around the age of five isn't dropping rice all over the floor, we don't make any comparisons at all.

We never say: "Look how talented that kid happens to be, because she walks better than me".

Walking, eating with spoons, etc. are considered so mundane that they're not seen to be talents at all. We don't ever consider rice-eating competitions for five year olds, because almost everyone is more or less on the same level as us. Nonetheless, when we do pick on "creative" skills, the comparison becomes inevitable. We want to be the best in our field, until we realise how much work is involved.

In time, we realise we just want to enjoy ourselves and not be the greatest in the world.

We don't want to break any world records in gardening. There's no prize for taking apart and putting a motorcycle together.

Despite the realisation that most skills are just for our personal happiness, we go through life comparing our work with others. We decide we were never born with the skills needed for "greatness". That line of thinking



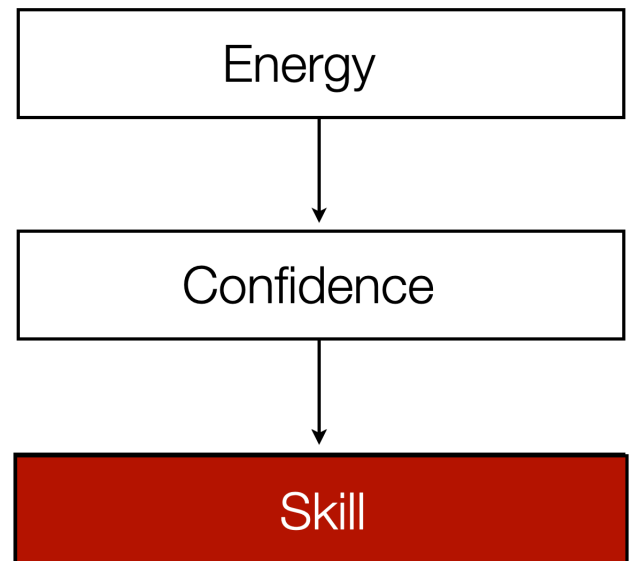
If someone else can do the same activity as us, we don't necessarily consider them talented. If your friend can eat with chopsticks, record a video or write an e-mail you aren't likely to call them talented. The moment that person can do what you can't, there's an instant comparison factor.

is similar to someone born in the "Middle Ages" who decided they were hopeless with a sword or archery. Today, almost all of us are hopeless at sword fighting or archery, but we have no one to compare with. In that manner, we're all equally "un-talented".

Internal doubt is about us and the comparisons we make

It's impossible not to compare yourself with someone else and move into a downward spiral. That doom loop of doubt can be slowed down or brought to a complete halt when we have more control over what we do. When we do something almost without thinking, and do it well, we say we're skilled.

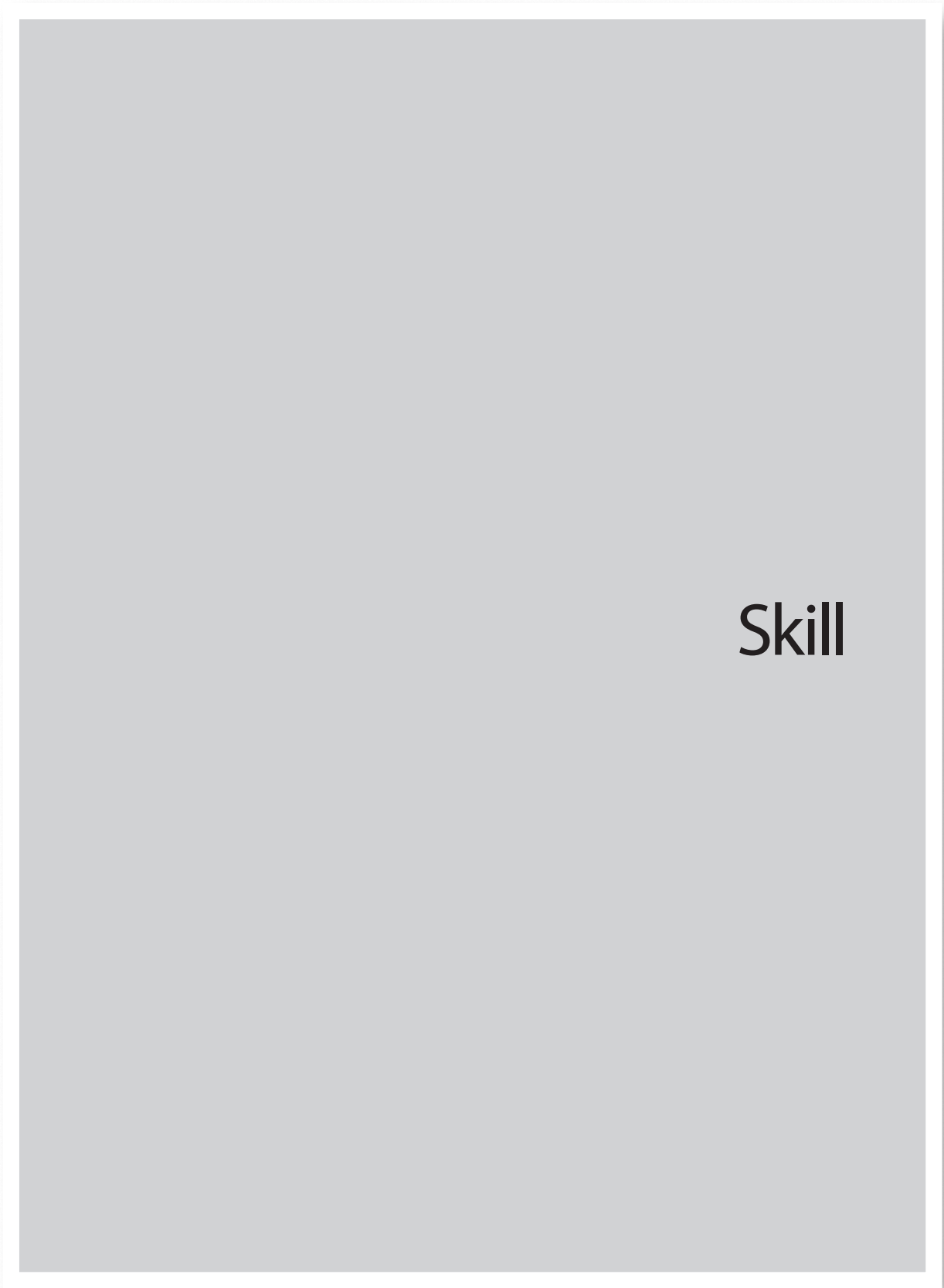
Let's dig deeper into the concept of skill.



Summary: Confidence

- We all dread when we lack confidence, yet we usually blame ourselves. A student in Year 7 feels a bit nervous at the pile of maths equations she has to solve. However, she feels much less fear if she's dealing with maths from Year 6 or Year 5. We label ourselves: we say, "We're bad at this" or "Bad at that". Usually, the struggle is when we're called upon to do something quite a bit outside our comfort zone.
- When we talk about a loss of form, we're referring to a massive depletion of confidence. The No.1 tennis player in the world still has access to the best training, resources and support. It's not like they've lost their skill overnight. The only way to claw back to the highest level is to regain their confidence. There's no real "loss of form", no "writer's block", or "bad at maths". It's always the loss of confidence that causes us to lose our footing.
- The safe zone is a simple and easily the most effective way to create confidence in a person. The safe zone is where the teacher is solely responsible for the learning. It's almost unheard of for teachers to accept this logic. The student is expected to take all the responsibility or at least for the student to come halfway. However, a student is just like a newborn. The student is lost and mostly helpless. It's upon us to take full responsibility and create a safe environment for learning.
- The safe zone isn't a single zone but a series of zones in quick succession. When a learner has taken one step, the second step is uncertain. Especially in the early stages of learning, every step is yet another zone that needs to put the learner at ease.
- In almost every learning experience, there are likely situations where things get tough. When learners hit that rough patch, they can't find their way out of the mess. They believe they're "no good at the skill" when almost everyone has a similar struggle. Letting the learner know "this part is difficult" is crucial because the learner stops blaming himself and focuses on overcoming the problem.
- A learner can get stuck almost anywhere. They may coast through the rough patches and get entrapped in a place where no one else seems to have a problem. A situation where everyone but you is breezing through feels like a complete disaster. Confidence plummets instantly, and it's up to the teacher to create a safe zone so that the learner can push her way through.
- It is often said that a "bad carpenter blames his tools". However, what remains unsaid is that "good carpenters have excellent tools". The right tool enables a person to do the task with a fraction of the energy, brings a torrent of confidence, and does so in a very short period.

- Even so, doubt is always lurking just outside the doorway. Doubt isn't restricted to the teacher or learning system. "I'm not talented enough" or "Others are more talented than me" are the two raging doubts that run through our minds.
- Supernaturally gifted people exist—yes, they do! However, these kinds of people are scarce. Someone as gifted as Paul Erdos would be one in 18 million in Hungary alone—let alone the rest of Europe or the world. The people we consider "gifted" are often merely better at an early age. Given the proper instruction, most of us can easily catch up with them.
- If you go to a kindergarten, you're likely find that almost all the kids can draw and are reasonably confident about their drawing skills. Barely four or five years later, they seem hesitant, and many say they're "bad at drawing". They all improve at other subjects such as maths, languages, etc. but consider themselves "terrible" at drawing.
- "Others are more talented than me" seems to be the second factor. We look around us and notice others who are good at music, dance, poetry, maths, chess and other "kid-related activities". Almost all our definition of talent hovers over what kids can do. No one—not the parents or the kids—compares themselves to other professions like occupational therapists or maxillofacial surgeons.
- We also fail to compare ourselves to others regarding everyday activities. We never say: "Look how talented that kid happens to be because she walks better than me". Walking, eating with spoons, etc., are considered so mundane that they're not considered talents. We never consider rice-eating competitions for five-year-olds because almost everyone is more or less on the same level as us. Nonetheless, when we pick on "creative" skills, the comparison becomes inevitable. We want to be the best in our field until we realise how much work is involved.
- If we were born in the "Middle Ages", many of us would need to be good at skills that were important back then. An able-bodied male would likely need to be "talented" with a sword or in archery. All the comparisons would have centred around what was important back then.





The benchmark of skill is the volume of mistakes that can be made—and then quickly reduced or eliminated.

Skill: What is it?

What would you do if a pit bull charged right into you?

Author, Malcolm Gladwell, talks about how fear is reduced when schooling specific bodyguards. "I'm reminded of this training that someone in the bodyguard business told me", he says.

"You have a line on the ground. You have to walk on the line. Under no circumstances are you expected to leave the line. The trainee bodyguard dutifully walks the line. Yet, a huge pit bull lunges at him at a particular moment.

"What do you do? You take off in the other direction.

You don't realise that the pit bull has a leash. The leash is long enough to get close to the line, but no further."

The exercise is repeated several times until the pit bull lunges at you, and you don't flinch. "Your heart rate, in that situation, has gone down to a level where you're capable of thinking rationally.

Then, as you'd expect, they do the exercise again, with one tiny twist.

The pit bull lunges at you and knocks you down. Only when you're lying on the ground, with the pit bull towering over you, do you realise the dog has a muzzle on.

And they make you do it again, and again, and again. With each level, they ramp it up and go into exceedingly more intense routines until you're in a state where you can deal with an aggressive animal lunging at you without completely losing your mind."

You noticed the sequence unfolding, didn't you?

Each task required a dose of energy to achieve the goal. There was a clear progression of tiny missions. With each completion stage, the trainee bodyguard gets added confidence, only after which he's moved to the next phase.

Energy.

Confidence.

At this point, shouldn't we reach for the benchmark of energy?

Remember earlier in this book, how the actual measurement was about "what's next"? We can read about this skill, but we'd have no desire to "attacked by a pitbull". The very idea described above is terrifying. No matter how much the task was broken into tiny bits, we would not be motivated to proceed. However, someone signing up for bodyguard training will expect expect chaos and extreme danger. The fear, built up in

small doses, would give them the confidence needed. After going through weeks of training they would have a new skill.

What is skill, after all?

An answer shows up on *Celebrity Masterchef* as we zoom in on the conversation between the judges and contestant Amar Latif. Serving up sea bass on a vermicelli rice noodle salad flavoured with teriyaki sauce, he appears like any other aspiring chef.

The judges seem to approve of his dish.

“In your noodles, the ginger, garlic, onions and coriander are fabulous with the fish. But your noodles are also fabulous because there’s sweet teriyaki sauce running through it,” says judge Greg Wallace.

“I think this is great. The fish is cooked beautifully. The skin is crispy. The big pieces of green chilli across the top are a little too big. However, the rest of it, I think, is fantastic,” chimes in John Torode, the second judge in the competition.

It sounds like everyday TV until you realise that Amir Latif is blind.

Latif got a call from *Celebrity Masterchef* in 2019.

“I checked with my friends, says Latif, “And we agreed that wasn’t my cup of tea. I shouldn’t be doing that. I said, look, I’m blind, and I can’t cook. And they went away.”

“Then, in January 2020, the bosses of *Masterchef* called me again and said, ‘Would you like to go on *Masterchef* in 2020? I said, look, I’m still blind, and I still can’t cook.

But this time, they weren’t taking no for an answer. I said yes, and I was terrified for the next four weeks before the filming started. I just cooked morning, noon, late afternoon, evening, and night. I just cooked constantly.”

On BBC’s Food Programme podcast, Latif talks about how he went from a non-cook to someone who captured the nation’s attention.

“My mother, she loves me; she loves us a lot. Out of the five kids, three of us are blind. We’re like the three blind mice.”

She was very protective like many mothers would be.

Even with this *Masterchef* cooking, she said, “Son, please, I beg you, do not do it. It’s dangerous, you know—knives and hot things.



When you're unskilled, you need a lot of thought to do almost any activity. A skilled person gives you the perception that they're doing something without having to think about every step.

Skill: What is it?

“When I signed up,” continues Amir, “I said, mum, I’ve got four weeks. Either you help me now, or I make a fool of myself. And she really, really helped me. She was in Glasgow, I was in Leeds, and we were doing FaceTime, and my iPhone was pointing into the pan. And my mum would say, ‘Yes, son, that’s fine,’ in a reassuring way. And she built my confidence.”

At this point, let’s slow down just a teeny bit.



Skill is merely the ability to do what others can't do—for now. To appear skilled, you don't have to be a genius. If the others can spin one plate and you can spin four, you're seen to be more skilled. No one realises that you still have a fair bit of limitations.

We’ve seen how energy plays its part. We’ve also clearly noticed that confidence builds in phases. However, we’ve also been hoodwinked without realising it.

Amir Latif, despite his fantastic progress, isn’t quite a chef.

A chef is likely to be able to whip up dozens of dishes, possibly hundreds. The bodyguard exercise made us believe that the trainee was somehow ready. And if we saw the rookie artist draw the cartoon whale and the aardvark at high speed, we’d incorrectly assume that person is an accomplished cartoonist.

Our judgment is flawed because we are hard-wired to make our assumptions quickly.

A teacher who sees a student solve one kind of maths problem faster than others automatically assumes that the child is better at maths overall. Time and time again, we are presented with

slices of skill, and we conclude that the person is talented.

We show our appreciation, even awe, bestowing even more confidence in that person. One of the reasons you, me or anyone tends to become better at a skill is when we get a dusting of praise. If that praise is given to a kid, they believe they’re good artists, cooks, or great at maths and want to live up to that ideal. They genuinely think it’s a superpower. As adults, we tend to be less receptive at first.

I remember how it felt when I started looking for work in Auckland. I’d moved from India to New Zealand and needed to get going.

Since my profession was cartooning, I was confident about my skills.

I’d worked with advertising agencies, done murals and was far ahead of most cartoonists at the time because I was fluent in Photoshop (Most were still working with pen and paper).

Among my clients were prominent newspapers and magazines in Mumbai. However, I'd decided I needed a career change by the time I got to New Zealand. I decided to become a marketing consultant, in which I had little skill and barely any confidence.

However, I did have the ability to do one thing exceedingly well. I came up with excellent elevator speeches for other professionals.

Most people are stumped when asked, "What do you do?" They have to come up with a curious and memorable elevator speech. At first, I didn't realise I was moderately good at creating elevator speeches for others. However, by the time I'd been complimented well over twenty-five times, I concluded it was something I did much better than most others.

I was still hopeless at marketing, but that didn't matter.

Based solely on the strength of the elevator speech, I got consulting gigs with a sofa store, a law firm, a software company and a bread company. I even got speaking assignments—and one on a cruise liner too.

The confidence preceded the skill, but I still had to deliver. Like Amar Latif, I had to learn marketing over breakfast, lunch, evening tea, dinner and supper. It didn't take long, and I was no expert. If anything, it was a solid dose of misdirection. Nonetheless, it's the path that most of us have to take.

You and me, we're not Paul Erdos.

We might struggle to add up a bill after dinner, let alone how many seconds a person has been alive. In many a situation, we've had to step up to the plate even when we're clear we're not quite ready. In time, however, we do get ready.

No one asks any more, "How much time will it take to get skilled?" Why would we ask when we all seem to know the answer?

It's 10,000 hours, isn't it?

Do you think so?

Let's find out.

The 10,000 hour dilemma

If you took a helicopter ride around a city, what would you remember?

If you're Stephen Wiltshire, you'd remember everything. Every street, every sign, every window as well as every window sill. As if that feat of memory isn't impressive enough, Wiltshire then proceeds to draw it out. Whether it's London, New York, Singapore—or any town or city for that matter, Wiltshire reproduces it with extreme precision.

His sister, Annette Wiltshire is certainly awestruck by her brother's ability. In one particular video, Stephen is in the Empire State Building, drawing the Empire State Building.

"He can memorise the city so well," says Annette, "but you have to remember that Stephen's been to New York quite a few times. Well over 8-9 times.

She goes on: "His memory of the skyline is still the same. He's just adapting to the new buildings that are now added to the skyline. I mean that's a remarkable thing to have—to hold that memory for as many years as he has."

Stephen Wiltshire was diagnosed with autism when he was three years old. He started drawing when he was just five. He draws obsessively, but there's one problem that's staring at us in the face.

He doesn't seem to be putting in 10,000 hours of practice

The 10,000 hour principle—rule—whatever you want to call it, makes a perfect soundbite, which is likely that most of us have heard of it. It seems to suggest that you need about 10,000 hours of practice to get to become very good at something. At first, the 10,000 hours study, done by the late K. Anders Ericsson, went unnoticed. Then, bestselling author, Malcolm Gladwell put in a tiny bit about the 10,000 hour concept in his book "Outliers".

In the book, the title of the chapter was called the "10,000 hour rule"

For a good portion of the chapter, Gladwell went down the path of deliberate practice and 10,000 hours. An audience that's looking for a magic bullet, found exactly what they were looking for. The concept of 10,000 hours, now framed as a rule, would neatly fit into everything we've been told about practice.

A quote from "Outliers" reads: "In fact, researchers have settled on what they believe is the magic number for true expertise: ten thousand hours. Practice isn't the thing you do once you're good. It's the thing you do that makes you good."

Almost immediately the 10,000 hour rule chapter sucked all the oxygen out of the room. A vast majority who'd achieved anything in life, patted themselves on putting in the hard graft. For those who were at the bottom rung of the ladder, the 10,000 hour rule seemed to be a loose guideline as to how much work was still left to be done.

However, in the noise of numbers, the rest of the chapter was mostly ignored.

Gladwell was also trying to draw out the highly imbalanced world we live in. Belatedly in the chapter, Gladwell also notes that this level of practice is often facilitated by external factors such as family support, access to resources, and cultural attitudes towards learning and success.

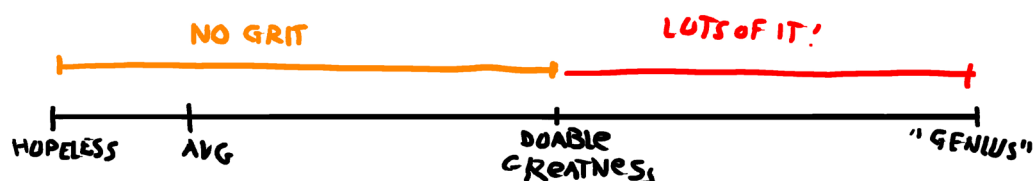
For example, in the book, he discusses the success of The Beatles, and how they were able to achieve their level of musical expertise in part because of the support and opportunities provided to them by their families, communities, and the music industry.

Roll that around your tongue: Family makes 10,000 hours possible.

Doesn't sound too cool, does it?

It's way better to say "10,000 hours of hard work", "10,000 hours of practice", "10,000 hours gets you to some sort of golden achievement". The problem is that we all needlessly venerate persistence and grit.

It just sounds better when the art teacher who turns out amazing watercolours, tells you that he put in the hard graft to reach where he is today. The audience nods sagely and reverentially, because they're stuck between "inborn talent" or "10,000 hours".



You and I have heard time and time again that we need to be gritty; we need to work hard. It's not that hard work isn't needed. To attain genius levels, you either have to be born with some unusual ability or you have to work for it. However, getting to "Doable Greatness" is possible with no grit at all. All the slog is really for the portion where there are many unknown factors. When we know what we need to do, those thousands of hours are plainly excessive.

There's no space reserved for "Doable Greatness".

We've already decided—early in this book and early in our lives—that we would like to be outstanding at many different activities. Many of us don't want the craziness of spending even half of those 10,000 hours.



10,000 hours is like having to water every potted plant in the conservatory, when a single sprinkler system does the job more accurately and without all the bother. We are obsessed with hard work and putting in endless hours, which is why we fail to see there are more elegant options to achieve similar or greater results.

The reason why we "waste" hundreds, if not thousands of hours, is because our system of learning is set up for "how-to" and not "how-NOT-to". We are encouraged to learn what's right, without necessarily going through the robustness of a flight simulator. We don't know what mistakes could or should occur.

The irony isn't that we make mistakes along the way. The reality is that we make too few of them.

Measuring skill: Volume of mistakes

During the time of Van Gogh, Japanese art had a significant impact on European painters, particularly the Impressionists and Post-Impressionists. Japanese art was seen as exotic and different, and its influence was felt in composition, colour, and subject matter.

Japanese art took the European art world by surprise.

Woodblock prints, in particular, featured bold, stylised images and bright colours, unlike anything European artists had seen before. This aesthetic profoundly impacted artists like Van Gogh, who began incorporating similar elements.

As if that were not enough, European artists ran smack bang into a concept of asymmetrical composition. Japanese prints often featured a skewed or unbalanced composition, with elements placed off-centre and the use of negative space to create a sense of balance. This approach was a departure from the more symmetrical compositions prevalent in European art at the time, and it helped develop an understanding of dynamism and movement in their work.

Most surprising was the depiction of everyday scenes of ordinary people and landscapes. Japanese art dipped deep into the natural world and the beauty of everyday life. It was in direct contrast to the stodgy European art in that era. Van Gogh, in particular, was drawn to the beauty of nature and the everyday world, and he began incorporating similar themes into his work.

Imagine someone showed up and said to Van Gogh: "Your art looks flat".

What would Van Gogh do? It would be hard to have a starting point because he would need to figure out what mistake to fix or if there was indeed a mistake in the first place. When learning a new skill, we, too, are stuck in the molasses of not knowing what mistake we're making.



When you run into obvious problems, you know you've made a mistake. However, the reason why we progress so slowly, or not at all, is because we don't have a dozen arrows in our bum. We walk around thinking it's all well, when it's clearly not the case.

Take the task of chicken sexing, for example.

It's a relatively unknown fact that the world's best chicken sexers come almost exclusively from Japan. Chicken sexing is simply about distinguishing the male chick from the female chick. For poultry owners, especially commercial poultry owners, this knowledge of which is a male chick and which is female is very important because it enables them to feed the female chicks and get rid of the male chicks, which are unproductive.

In the past, poultry owners had a problem.

They had to wait about five to six weeks before differentiating males from females. It is the reason why the Zen Nippon Chick Sexing School was established. The school held courses on how to accurately determine the sex of a day-old chick. Not a chick five or six weeks into the growth cycle but barely born. People were able to distinguish males from females instantly.

The problem that existed in the past was that the skill seemed unteachable.

Several experts could accurately tell you which was male or female. However, they couldn't explain the strategy they used. It wasn't like they were trying to hide the information. They assumed it took time, effort, and hundreds or thousands of hours.

In her outstanding book, "Badass: Making Users Awesome", programmer/gamer Kathy Sierra talks about how mistakes help the learning process. She describes how new recruits are understandably confused as all newborn chicks look the same.

It's at this point that you're encouraged to make mistakes.

You take a wild guess and guess the sex of the chick.

You might have an excellent or poor strike rate, but you'll unlikely have a perfect score. And this is in an industry that requires you to be perfect. After you make a random choice, the master chick-sexer gives you feedback.

You have no clue how, or even if you're progressing, but your accuracy increases at some point. Over time, your error rate goes down to zero. You've become an expert without knowing how you've gone about things.

Mistake-making falls into three broad areas.

- You have no clue that you've made a mistake. Have no indication you've committed an error.
- Aware of making a mistake but don't know how to fix it.
- Realise you've made a mistake and know the possible solution.

Chicken sexing straddles all these three areas.

You have no clue if you're making a mistake or not. Then, at some point, the master chicken sexer tells you when you've goofed up but you don't know how to fix the problem. Finally, you realise when you've made a mistake and can quickly fix it.

The sheer volume of examples in the chicken-sexing school speeds up the training.

Making mistakes isn't frowned upon in this type of school. Instead, it's the whole curriculum. The errors are made in the open and alongside the rest of the students. Even when you can't always see your mistakes, you can see the mistakes made by others.

This mistake-making strategy isn't part of our training.

When a child goes to school and does a test, it's almost like a private confession. The student submits the test paper, the teacher grades it, and then the score is the only part of the process that may be shared. The rest of the students don't see what's right and, more importantly, what's wrong.

The mantra that's dumped on our heads is "work harder."

If a student can't work out the problem, we go hammer and tongs at trying to get them to see what's wrong. We get louder, more annoyed that the student can't figure out what's being taught. Some might resort to name-calling or even say that the person is "not talented enough".

In every situation, there's an overly simplistic method to learn quickly and without too much fear.



We often believe that we're making too many mistakes. However, the reality is that we make too few mistakes. By yourself, you can only make a limited number of mistakes, before you're tired and have to rest. When you drink from the fountain of other people's mistakes, in combination with yours, the learning is accelerated.

It's a system where everyone gets to see each other's mistakes.

We're often blind when it comes to our mistakes. However, we can easily spot when others around us start losing their way. Our problem with mistake-making is that it's all done in isolation. I can't see your mistakes, and you can't see mine. In a course on writing, drawing, or just about any skill, even when you're unable to know the solution, you can often tell when a mistake is being made.

Usually, a tiny group of six-seven people will make between 1-4 errors when given a new task. Hence, every individual in the

group is not restricted to a small sampling of mistakes but instead to as many as 10-20 errors per session.

It's important to note that the group size needs to be no more than seven.

Too many mistakes are hard to cope with, even when you're looking over the shoulder of someone else. However, given a sampling of 10-20 errors, the accuracy level increases exponentially. It's also crucial to note that a safe space needs to be created well in advance so that people feel comfortable making mistakes.

We often think we make too many mistakes as we go about our tasks.

The reality is that we make too few!

There's usually an upper limit of mistakes we can tolerate when working on a problem. That's because getting something wrong means we have to go back and fix it. However, we have a much higher threshold when it comes to viewing the mistakes of others.

Just like the chicken-sexing training, we get things wrong but also right.

Working in a small group, we have a manageable number of errors to learn from. We can also spot how different people solved the same problem. It's the diversity of the examples that matters.

When you're learning a skill on your own, your struggle isn't imaginary.

You don't know what you're doing, and even with an online or offline course, the examples may not be enough to accelerate your learning. An endless array of YouTube videos may nudge you ahead, but you're often unable to see enough mistakes—and fixes—in a given period.

Your only fall-back is a voice in your head. At the point where you most need a hand, you hear someone saying: "You have no talent for languages whatsoever; you aren't that good at maths; ha, ha, it looks like you can't even fry an egg."

You think the problem lies with you, and your inborn talent.

Instead, so many factors have brought you to this moment. The lack of a safe space, little or no understanding of how energy works, the lack of enough examples, and most importantly, the undermining of your confidence.

The voice drowns it all.

You can still hear your teacher saying: "Who drew this rubbish?"

Sigh.

Mistake-making isn't a problem.

Talent is a "reduction of errors", but we don't make enough mistakes. If we were to make a lot of mistakes and fix them quickly, we'd get talented a lot faster. It doesn't help that errors are treated with disdain. When we do things incorrectly, we are told off by parents, teachers, and beat ourselves up as well.

The correct procedure would be to replicate a similar system as a flight simulator. A situation where you not only learn "how to fly", but are also given challenges, where things can go dramatically wrong, and then get fixed. With supervised instruction, we can quite easily conquer most hurdles on our way to "Doable Greatness".

However, not all learning needs to be difficult. Sometimes things are tough to learn simply because there's not enough emphasis on making the learning easy. Let's take on something quite challenging and see how we can build skill instantly and permanently.

Sidebar: Practice vs play

"I hate the term, 'practice', " says Doc Rivers.

Doc Rivers is a famous and well-respected basketball coach. In 2008, Doc Rivers led the Boston Celtics to an NBA championship, defeating the Los Angeles Lakers in the Finals. It was the Celtics' first championship in over 20 years.

"When I was a kid, I never called it practice.

If someone asked me: Where are you going? I'd say, 'I'm going to play basketball'. I don't get this 'I'm-going-to-practise-thing'.

He stops short to collect his thoughts, then continues, "Basketball's a game, and I love it. I never looked at it as some torturous thing. If someone asks me, 'Where you're going?' I'm going to play."

Artists doodle.

Guitarists strum.

Writers noodle over words.

Photographers are snappy-go-lucky.

The moment adults get a hold of anything, they seem to want to wring the joy out of it. To them, play appears to be a waste of time. Time, for an adult, is precious. You're not supposed to fritter away the hours in play. Instead, you need to practise.

It might sound like we're being a bit pedantic.

Play and practice could be one and the same, couldn't it? A basketball game could have instructions; then, the players go on the court for a game. Even as the game is in progress, the coach could put a stop to the game to point out some critical mistakes and how to improve on those errors. All of which sounds pretty much like practice.

And yet, there's a vast difference between practice and play.

A person who goes to a class to learn will practise for a fixed time during the day. That's not how most artists operate at all. They're constantly doodling. They sketch whenever they have the opportunity. A guitarist will pick up the guitar on a whim, and a basketball player will drive you up the wall with endless dribbling and trying to shoot hoops.

The practice may sound like play, but it's not. It's the adult version of torture, yet it can't be dropped. No one is suggesting you drop practice at all. When someone is well-practiced, they don't need to think as much. When most of their actions seem almost intuitive—it's almost always a direct result of practice. The problem only arises when practice is measured in hours, months and days.

Summary: Skill

- We looked at "energy", then "confidence", and moved on to "skill". You're said to be skilled when you do an activity at a relatively high speed and accuracy. The absence of a "stutter" in your action indicates you're doing something almost without thinking. It's like speaking a language you know well. You don't stop to think of every word and are considered skilled in that particular language.
- When it comes to skill, we make our judgments far too quickly. If we see someone who can draw a whale, an aardvark and elephant, we assume the person must be an artist. If there's a kid in school who is exceedingly quick with solving a particular type of equations, we believe she's good at maths. We make these assumptions based on a tiny amount of data. It's likely that people are good at the skill, but it's also likely that they have limited abilities.
- Our quick judgments are—ironically—the reason why the person with limited skills becomes more "talented". Despite their limitations, the people with a small set of skills are given repeated praise. That appreciation empowers them with more confidence to keep learning, even if the improvement is marginal.
- When author, Malcolm Gladwell first put forward the "10,000 hour rule", in his book, "Outliers", it fit perfectly in the mind of many people. 10,000 hours is roughly ten years of work. For those who had achieved a high level of skill, that figure seemed about right. For those of us who were just starting on our journey, it seemed logical that 10,000 hours would get us to a certain level of "mastery".
- While the author of the paper, K.Anders Ericsson, didn't state it as a rule, that's how it was printed in the book, "Outliers" (which is a very good book, by the way). However, this concept of 10,000 hours and deliberate practice simply underlined what we already assumed to be true. The nice, neat figure of 10,000 hours of work also elbowed out an equally important "piece of information".
- The "piece of information" is the resources needed for someone to reach 10,000 hours. The support network provided by the family, coaching, etc., is slightly mind-boggling. It also sounds cool when you say, "I put in 10,000 hours of work to get where I am". It preordains you as someone who was already amazingly good and just needed the hours. Saying, "10,000 hours of family got me where I am", seems very loyal but doesn't carry the same weight.
- The reason why we struggle to get skilled isn't because we keep making mistakes. Instead, the opposite is true: We don't make enough mistakes.

Summary: Skill

- Mistake-making falls into three broad categories. You have no clue that you've made a mistake. Have no indication you've committed an error. You're aware of making a mistake but don't know how to fix it. You realise you've made a mistake and know the possible solution.
- When you have to learn a skill set that has no training manual or teachers, the sheer volume of mistakes enables your brain to work out the pattern. When learning the skill of chicken sexing, you're guessing your way towards "success". You have someone who tells you if you got it right or wrong, but that person isn't able to describe a method to follow. At some point, the number of mistakes go down dramatically, and you become skilled at the occupation.
- Mistake-making isn't part of our training. It just isn't. Almost all training is like a private confession. You don't get to see the mistakes the other person is making, thereby losing a valuable opportunity to learn from the mistakes of others.
- Since everyone is taking on the same, or similar task, the volume of mistakes made, exceeds anything you could make all by yourself. Learning from the mistakes of others is also less bruising to our ego which means we can have a greater appetite for mistakes.
- "Work harder" and "be more gritty" is what we're told to do when we can't solve a problem. "Working harder" is fine when tackling something that's never been attempted. In many cases, "working harder" only increases our distaste. If we were shown where the errors were popping up, we could just as easily avoid those errors and advance our craft.
- It's also ironic that we consider one-on-one learning superior to group learning. The reality is that you can spot more mistakes in a group learning scenario than you can as an individual. However, the group needs to be about 5-7 in all, or there's way too much information to process.
- Practice is different from play. Here's proof! What makes you more tired? Practise, practise, practise, practise, practise, practise—or play, play, play, play, play, play, play, play? Just reading the word "practise" makes you feel like it's all work and often boring.

Most people don't see themselves as good at drawing; it takes little imagination to envision how they'd draw a house. It would look similar to a house they drew when they were about six.

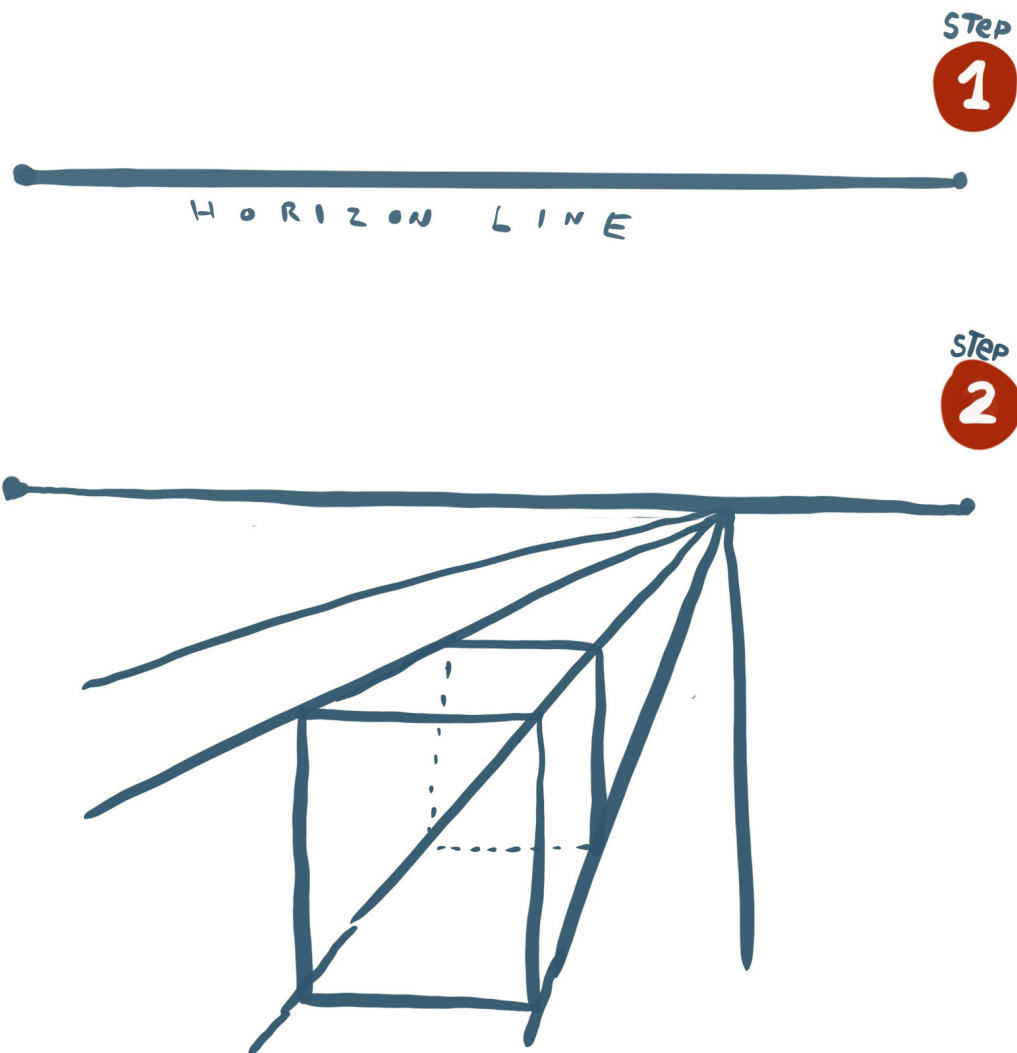


Email-Me | 61

It's almost always a flat, one-dimensional drawing.

However, if you decide to add more depth, you'll need to understand perspective. You could either get a book with instructions or learn from a video on YouTube. At this point, you run into a flurry of instructions that are simultaneously boring and intimidating.

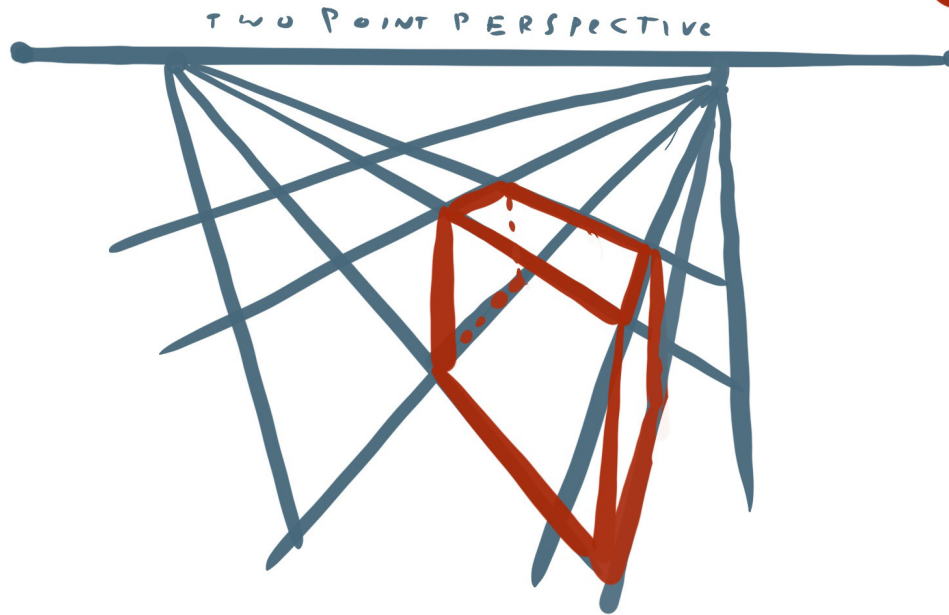
Here's what you're likely to find.



Welcome to how perspective is taught and hope you brought your ruler along.

Step

3



There's nothing wrong with this method of training.

However, as you can tell, you'd be much happier being six again and drawing the house you know so well. If you needed to learn how to draw, the only way forward would be to learn the method above and then practise, practise, practise.

Almost any skill is a matter of pattern recognition. If the pattern involves many steps, it's boring, and you give up. If, on the other hand, the pattern is simple, then you get right into it without any practice at all.

Let's see if we can draw some buildings with no rulers, no fancy lines and certainly no practice. Then, just for fun, let's draw the buildings from three view points: bottom, head on, and top down.

Do you have a few minutes and a pen and paper? First, we are merely going to look at the shapes. Then we'll draw in a few lines and finally, without any practice, you'll be able to draw a building in perspective.

I



This is a building from a bottom up view. It comprises of two flattened V-shapes (and opposing each other).

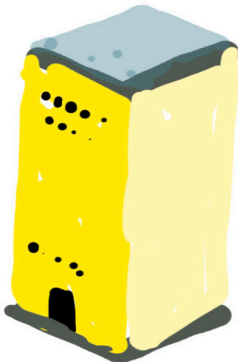
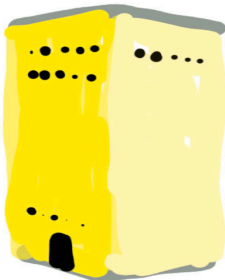
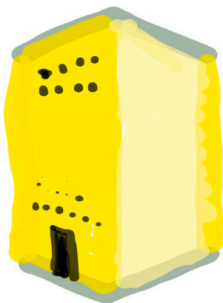


This view is of a building that's mostly head-on. The two V shapes still oppose each other but they're flattened a lot more.



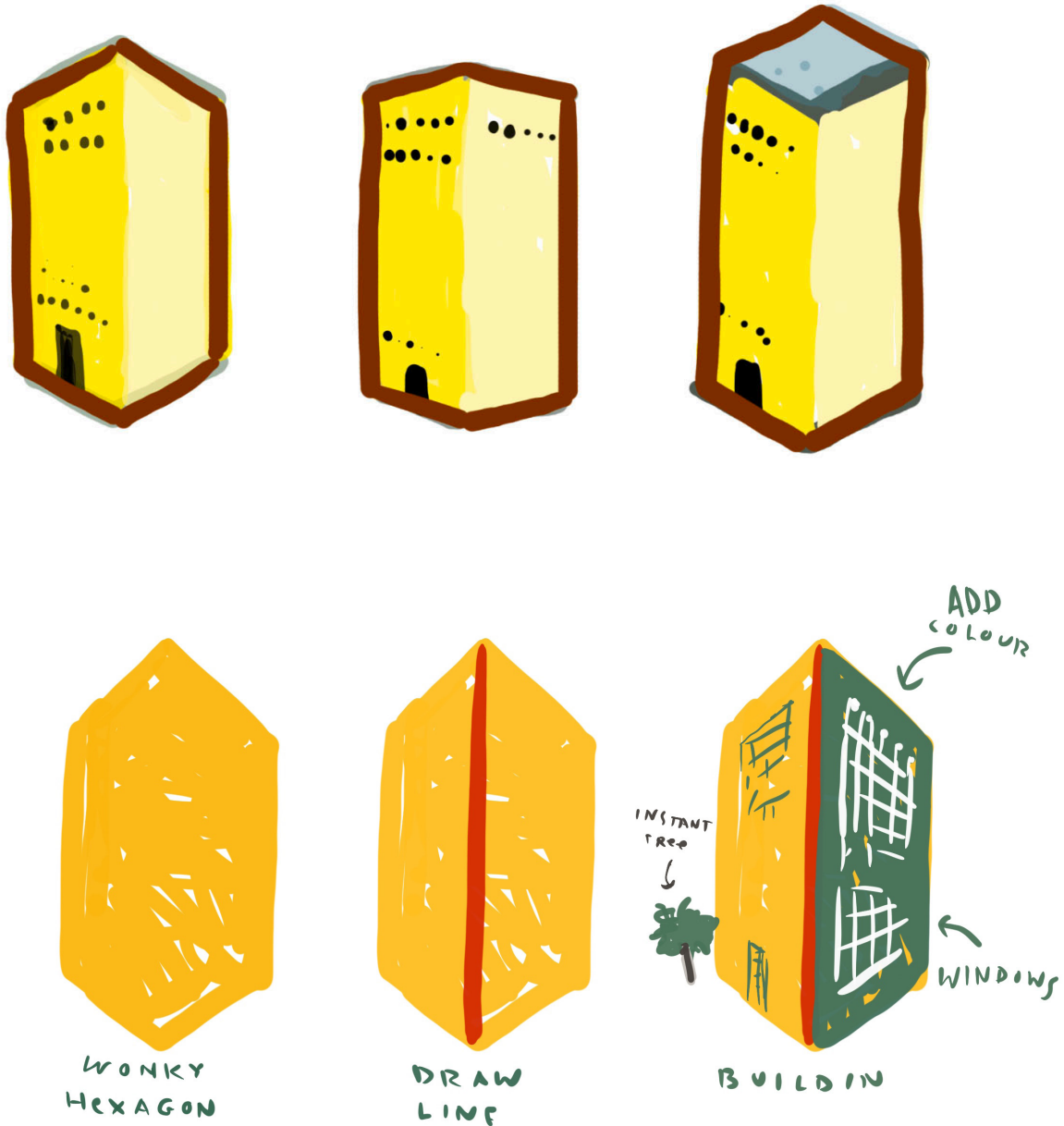
We're back to the original V shapes, but they're both drawn in an identical manner.





We have used a simple V-shape to draw buildings in perspective

However, let's say you're not fond of V-shapes. Take a look at the shapes again. What do they remind you of? Yes, they're all hexagons: some flatter, some more, um, V-shaped, but they're still hexagonal.



All you need to do is draw a hexagon and it doesn't even need to be equal as slightly lopsided is just fine. Then you draw a line and colour everything on either side of the line. Add windows and instant trees and you have a building.

Let's not stop, but draw the buildings using an "open book" format

We all know what an open book looks like. If you are not into V-shapes or hexagons, you can see the very same building in the form of an open book.



By merely drawing an open book, you can create all sorts of buildings—and do so in minutes. Once you see the open book, you can't unsee it. You look at a building, or any object such as a fridge or a box and you can instantly "see". The book concept remains in your head forever and if you choose to lift a pencil at this point and draw on a piece of paper, you will be delighted with how you can draw every object on this page without any practice.



Was that a lot of information?

It felt like a lot, didn't it? We were just using three simple methods to draw a building—or a house—but it seemed like a lot to assimilate. However, if you were following along with a pen and paper, it would have been a lot easier to remember.

In any case, notice how little energy was needed, how quickly you got confident and how you developed a knack for drawing buildings. All of which was achieved with little or no practice. Which isn't to say that practice is totally worthless. The slight anxiety we feel at this point, is because we sense that the task is easy, but we need a little more time for the idea to settle in.

Maybe it's time to stand up, walk for a few minutes and come back. When you turn the page, you're going to see the V-shape, the hexagons and the book. Even though the graphic is complex, you'll feel a bit like Cinderella. It's as though a fairy godmother has waved a magic wand and you can draw buildings in perspective.



Can you draw at least some of these buildings? Yes, you can. You have a task that doesn't require too much energy, and you have enough confidence to get it right. In time, everyone who learns through this system is not only able to draw the buildings but also everything on this page. It's not just limited to drawing, either. Any skill, no matter how complex, can be learned in this manner.

Psychologist, Robin Hogarth describes learning environments as "kind" and "wicked". A "kind" learning environment is where the answers are known, and where the feedback can be instant. A "wicked" environment is where the rules are unclear, where feedback is inconsistent or even wrong at times. There seems to be no clear pattern, either.

Most of the skills we hope to gain have a clear set of rules and feedback can be instantaneous and accurate. For instance, even when we draw the buildings all wonky, the perspective of the building still holds. Even when the body of a giraffe or a whale takes the shape of a building, you can clearly see when it's right or wrong.

The problem lies in the idea that practise, practise, practise is needed for learning. We all hang dearly to the idea that learning requires grit and hard work. The reality is that most learning isn't designed well. The core of great design is that a person—almost any person—can do the task quickly and correctly. It's even better if they have a dollop of fun in the process.

If the learner is struggling, it's rarely the fault of the learner.

Sadly, it's always bad design. Not necessarily bad teachers, but just bad learning design. When learning design is even slightly complex, you and I have to practise just to learn what is being taught. It always seems like a good idea to quit and do something easier; something that's more fun.

Something doable as well as great!

I'll take the 7/10, please!

I'll take the 7/10, please!

Imagine yourself with a magic lamp.

You rub it, and out pops the genie on cue. It's not an ordinary genie, however. It's the "talent" genie. This genie only has two options, and you get to pick one or the other.

Option 1: You can be a genius—a world-class genius.

Option 2: You can get to "Doable Greatness". You can be 7/10 in six, seven, or maybe ten different areas of your life.

I guess some of us may still want to take Option 1.

However, most of us would smile happily at the wonderment of Option 2. "Do you mean I could be a 7/10 at dancing, cooking, coding, painting, gardening and spotting pink armadillos?"

"Yes, that's Option 2", the genie would nod sagely.

The reality of "Doable Greatness" is that it's doable.

It's also expandable. "Doable Greatness" means that if you wanted to learn a language, play the guitar and dance the flamenco, you could easily add to your repertoire.

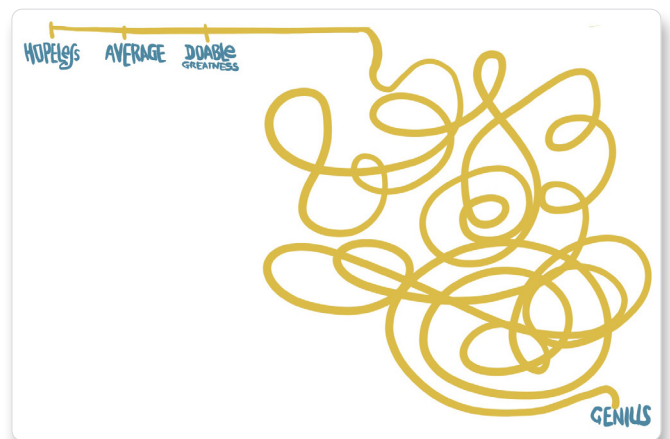
Genius would give you one option.

You'd be undeniably astounding and the best in the world, but it would feel claustrophobic.

If you're looking for genius, you might as well start looking for a magic lamp.

If, on the other hand, you are looking for "Doable Greatness", it's all around you and well within reach.

Here's to 7/10.

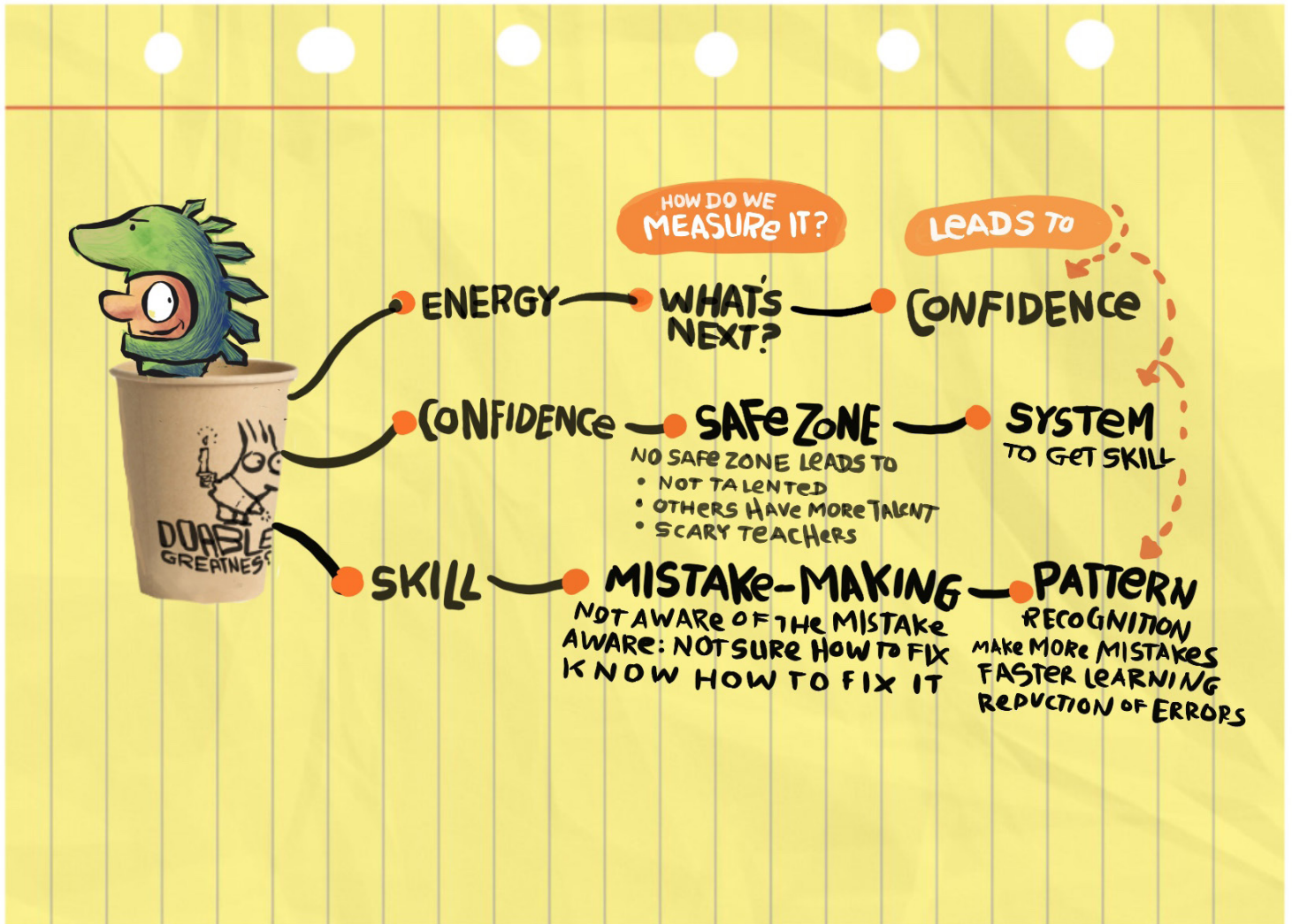


"Doable Greatness" is a 7/10 and achievable in several areas. Genius, on the other hand, is a long, winding road.

Visual summary

I wasn't that keen on this visual summary, but Renuka insisted. "I get the whole book in a few graphics," she said to me. And so we have it: graphics! Since I was given the task to put it in the book, I decided to pretty it up a bit. Then—and only then—was I on board.





The backstory

You're so talented: I could never draw like that!

The first part of the sentence didn't bug me quite as much as the second. For me, at least, the second part seemed to suggest a sort of helplessness. That the person making the comment was given a limited amount of talent, and they would have to make do.

Which is when I first threatened to write a book on the topic of talent.

It was around the year 2008 when the idea of writing the book first surfaced. Whenever the topic of talent came up, it was always a rather energetic discussion. People firmly believed they were born with strengths and weaknesses. It seemed like there was no point in trying to convince them otherwise.

That obvious obstacle didn't stop me from trying.

However, every discussion rambled seemingly endlessly, and it's not like the other person was convinced, either. After all, they could look around them and see others who were clearly more talented. "Even if I try," they'd say to me, "I could never be like that".

I decided to put my ideas on paper.

However, instead of writing a book, I started a blog.

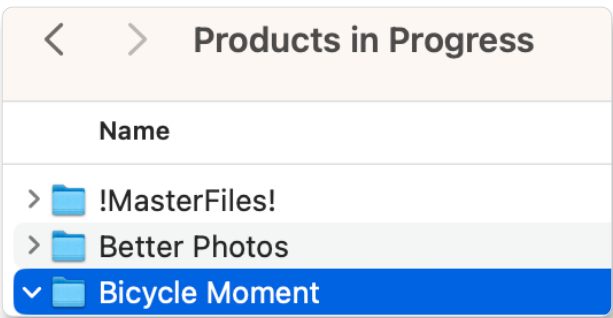


The blog at www.brainaudit.com/blog was one of the earlier attempts to put my thoughts on the topic of talent on paper.

At about the same point in time, a client asked me if I'd conduct a cartooning course. We'd already been teaching clients various skills such as: article writing, creating information products, copywriting, as well as a bit of graphic design. Of all these skills, clients felt that cartooning was the most unattainable.

However, in the very first year we had clear results.

A learner can draw, colour and create a character in barely four months at this point in time. However, back then it took us over nine months to get to a similar destination. There was a great emphasis on practise, practise, practise. Some assignments even needed you to draw between twenty to thirty circles per day, just to get the practice in.



One of the early versions of the book was called "The Bicycle Moment". It seemed to make sense then, and probably even makes sense now. However, it could just as easily be mistaken for a bike-riding book.

While all of this was going on in the background, there was almost no progress with the book. For starters, I wasn't sure of the name. It started out being called "The Bicycle Moment". The name was based on the fact that almost no one is "born talented" at riding a bike. All of us have to learn, fall, and crash before we can confidently ride by ourselves.

Anyway, the years went by with promise after promise of a book in the works. It wasn't like I wasn't

writing something. I was—but I wasn't happy with how things were turning out, so I'd start and not get very far. I realised even back then, that it wasn't a problem with writing. It was more the pressure of making a case where I wasn't just trying to shove a set of ideas down people's throats. However, my thoughts weren't quite formed. I was stuffing the book with almost anything that came to mind.

A whole decade passed and then some more.

By this point, I'd started posting to Substack@SeanDsouza hoping that somehow I'd write enough to put a book together. At the same time, I was writing an ongoing saga of talent-related articles in 5000bc.com (our membership site). However, just writing articles is no substitute for writing a book as the format is quite different. In between, I wrote new courses, other books too, but this book on talent seemed doomed to never see the light of day.

Talent
1 Teachers
1.1 Overview
1.2 Ego
1.3 System
1.4 Bureaucracy
1.5 Speed of response
1.6 Belief in talent
1.7 Feedback
1.7.1 Overview
1.7.2 Getting
1.7.3 Storing
1.7.4 Implementing
1.7.5 Safe zone
1.7.6 Ask Sean
1.7.7 Methods of collection
2 System
2.1 Overview of system
2.2 Pre-course
2.3 During course
2.4 Post course
2.5 Importance of confidence
2.6 Consumption Concept
2.7 Learning Photoshop
2.8 Tiny Increments
2.9 Reveal bit by bit
2.10 Layering of concepts
2.11 Syllabus (only as guideline)
2.12 Help (Ask Sean situation)
3 Retention

S SUDDENLY TALENTED

13 DECEMBER 2021

Why practice is boring (and why angles of practice matter, instead)

When you're learning a new skill, almost everyone will give you the same advice. Practice, practice, practice. And we do, but it doesn't always work, because it's...

SEAN D'SOUZA · 5 MIN READ



S SUDDENLY TALENTED

6 DECEMBER 2021

How to practice effectively (and why practice doesn't make perfect)

Practice, practice, practice. That's what most people will tell you if you want to learn something. But that's inherently misplaced advice. Prac...

SEAN D'SOUZA · 6 REPLIES



S SUDDENLY TALENTED

30 NOVEMBER 2021

Why we struggle to acquire skills (and how the mindset of the teacher is the root cause)

Who does the responsibility of the teaching lie with? With you, the learner? Or with the teacher? Or is it a strange 50:50 situation? Not surprisingly most of us get the...

SEAN D'SOUZA · 5 MIN READ



S SUDDENLY TALENTED

25 NOVEMBER 2021

Why Cross-Pollination Is A Crucial Element When Acquiring Talent

Stick to what you know. That's what we're told when we're trying to acquire a skill. And yet, talented are not as focused at you'd believe. If anything, they cross-pollinat...

SEAN D'SOUZA · 4 MIN READ



S SUDDENLY TALENTED

23 NOVEMBER 2021

Why the untalented stay untalented

There's a strange thing about untalented people. They seem to not have many skills. But even the untalented have one supreme skill that we're overlooking. It's a skill...

SEAN D'SOUZA · 4 MIN READ



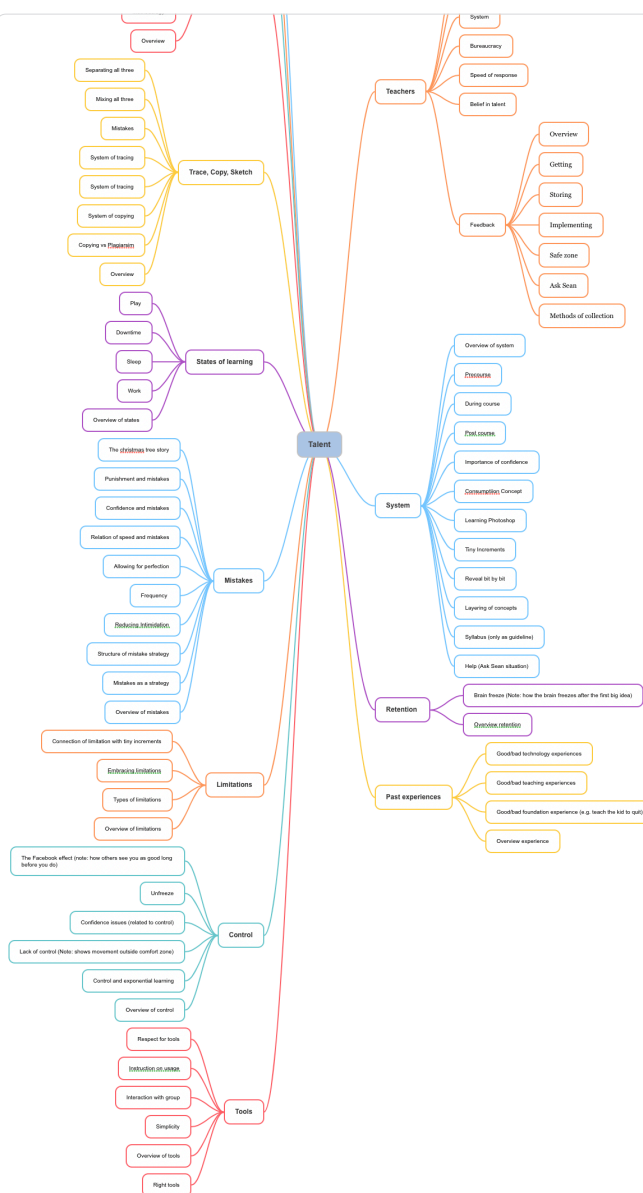
S SUDDENLY TALENTED

19 NOVEMBER 2021

Definition 3: Who's the most "talented" dishwasher on the planet?

We all know the kid who could draw well at school, or the programmer who was way ahead with her coding. But "dish washing"? How come we don't know who has the...

SEAN D'SOUZA · 7 MIN READ

**Sean's "Suddenly Talented" book (Deadline April 2, 2021)**

February 22, 2021 Wrote a thousand words today. And then moved about 500 or so away. Net result? about 454 words. The topic was: **Talent** is what others do better than you :)

Sean D'Souza · Post #29 · Feb 22, 2021 · Forum: Taking Action

**Sean's "Suddenly Talented" book (Deadline April 2, 2021)**

This is the opening set of paragraphs in that chapter.

Sean D'Souza · Post #28 · Feb 16, 2021 · Forum: Taking Action

**Sean's "Suddenly Talented" book (Deadline April 2, 2021)**

February 15, 2021: update. Wrote from around 1 pm-4pm. And covered two small chapters of about 240 and 765 words each. The chapters are about deconstructing some of the myths of **talent**. 1- Born-talented barista. 2- **Talent** is a direct result of practice.

Sean D'Souza · Post #26 · Feb 15, 2021 · Forum: Taking Action

I posted in Substack, and created endless mind maps. However, the deadlines came and they went and there was no book in sight.


The backstory

Sean's Writing on "Talent"

Sean D'Souza · Sep 17, 2020 · None

12345Next

☒ Unwatch ...



Sean D'Souza
Administrator
Messages: 72,379

Sep 17, 2020

I've decided to take on writing on the topic of Talent. Later this year, I expect to finish my book as well. The articles will make a good blog supplement, I think.

☐ Report Edit Delete IP

Reply

Even setting a goal for myself in the Taking Action forum in 5000bc.com didn't help. I wandered all over the place, writing endless amounts of "articles", but the book didn't materialise.

Examples

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Examples

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Teacher

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Suddenly Talented
Energy + Confidence + Skill

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Suddenly Talented
Energy + Confidence + Skill

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What is energy?

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Two minutes?

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Indian food?

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Energy-intensive

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Less energy-intensive

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Energy-intensive

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10,000 hours

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Headline Exercise

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HOW

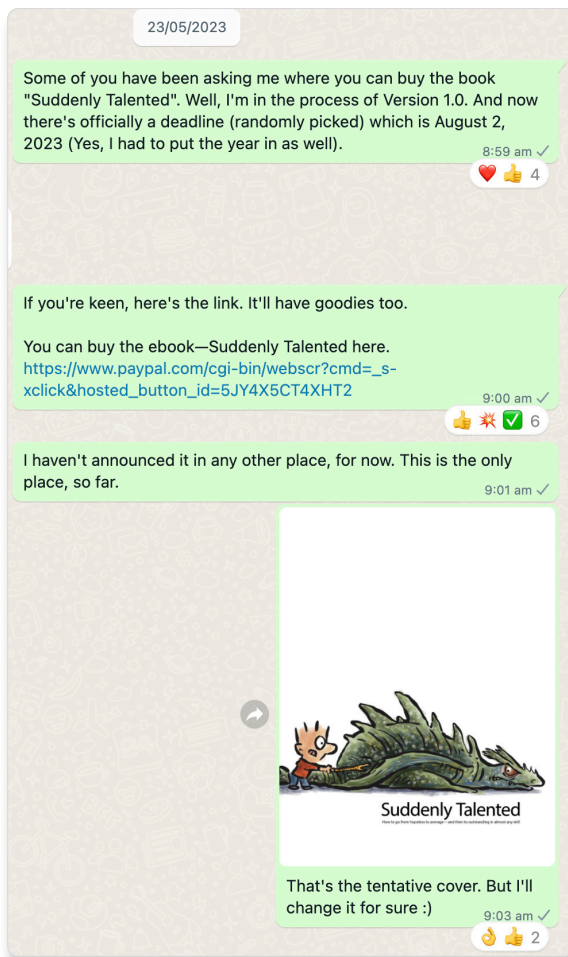
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HOW
How to draw a cartoon whale in minutes

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Around 2019, I even did a complete presentation of the idea in Brisbane, Australia at WeArePodcast. However, by this point the cover of the book was already in place. Well, at least we were getting somewhere.

78 | Bugs? Questions? Email-Me

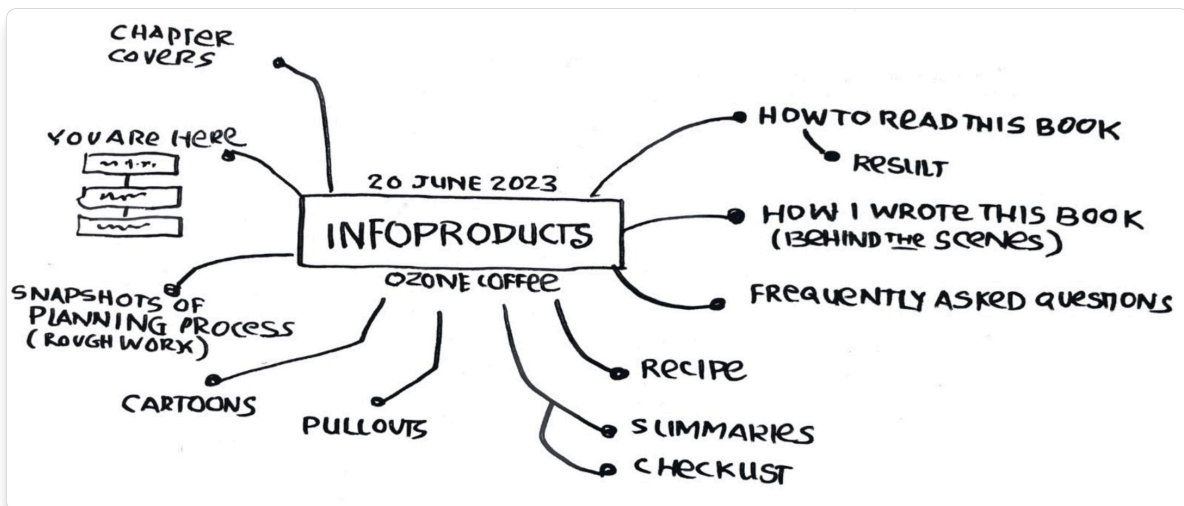


I'd been working on the text before we went on holiday in April 2023 and even kept it a secret from Renuka. I consoled myself that if the Beatles could write an album in two weeks, I could do the same with the book. For the first time ever, I made good progress in those two weeks.

It was time to make the announcement once we got back from Spain.

In late May, in a private Whatsapp group, I announced that I intended to launch the book. And there it was: A "buy now" button and a fixed release date.

It was time to get going. Which is why you're reading this book at this point. It's only taken about 15 years, but I think it's been worth the frustration. The ideas are clearer and I'm clearly less argumentative! (LOL).



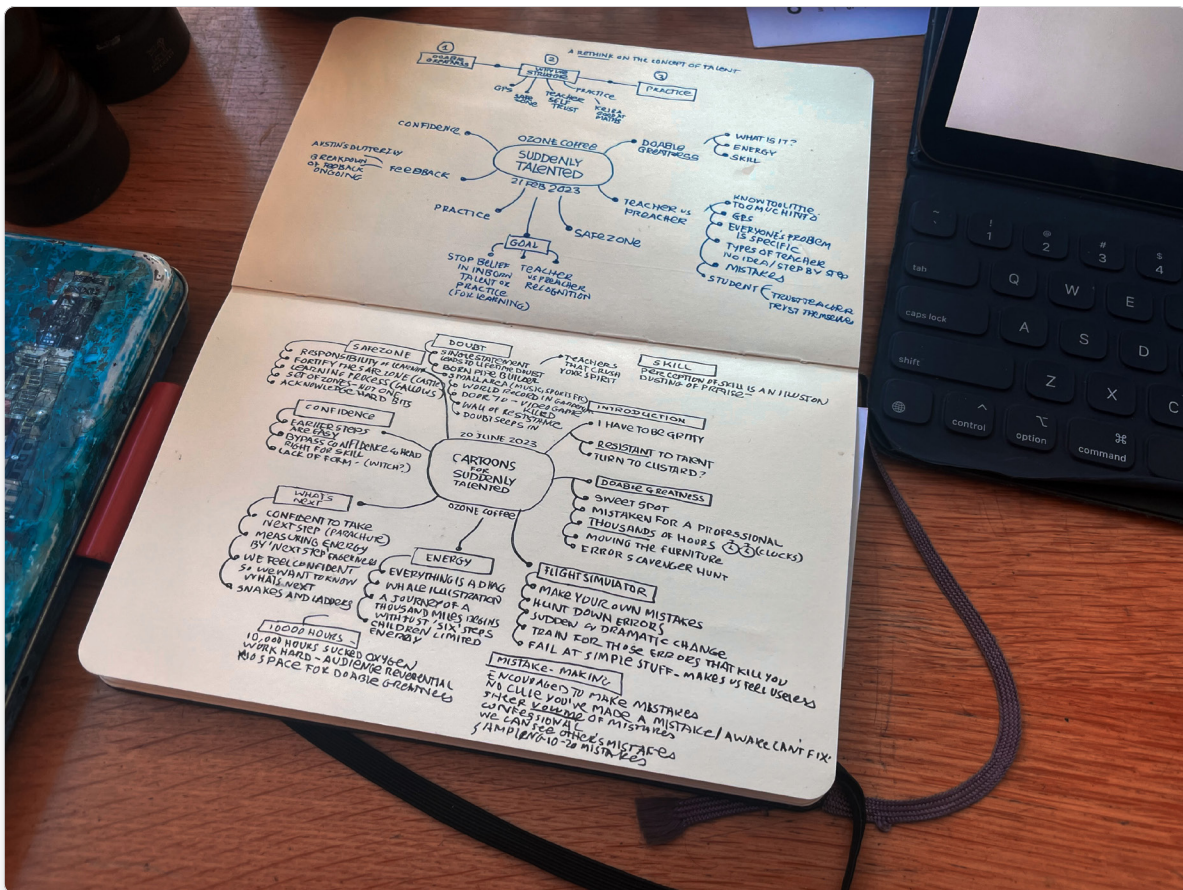
A book is meant to be a book, but why not get a little playful —and helpful—along the way. Hence, it was important to create this little guide that I can use for all books. I'd created it before but lost it. It was time to recreate the guide. I think you could use it for your books too and feel free to do so. Not all the ideas are used in this book, but in other course material this guide would be pretty helpful.



Suddenly Talented

How to make learning easier for yourself and your students.

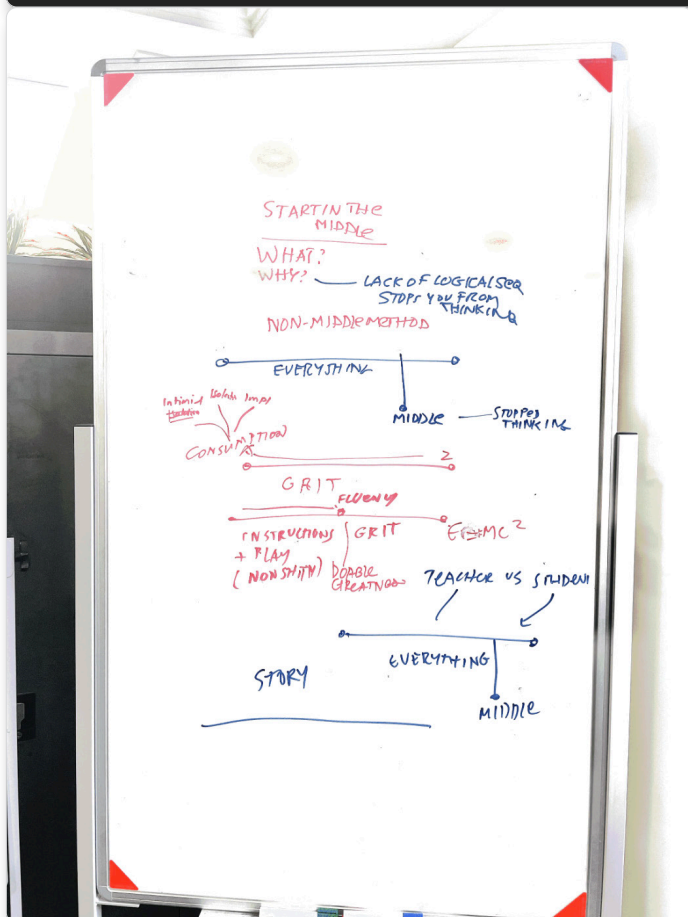
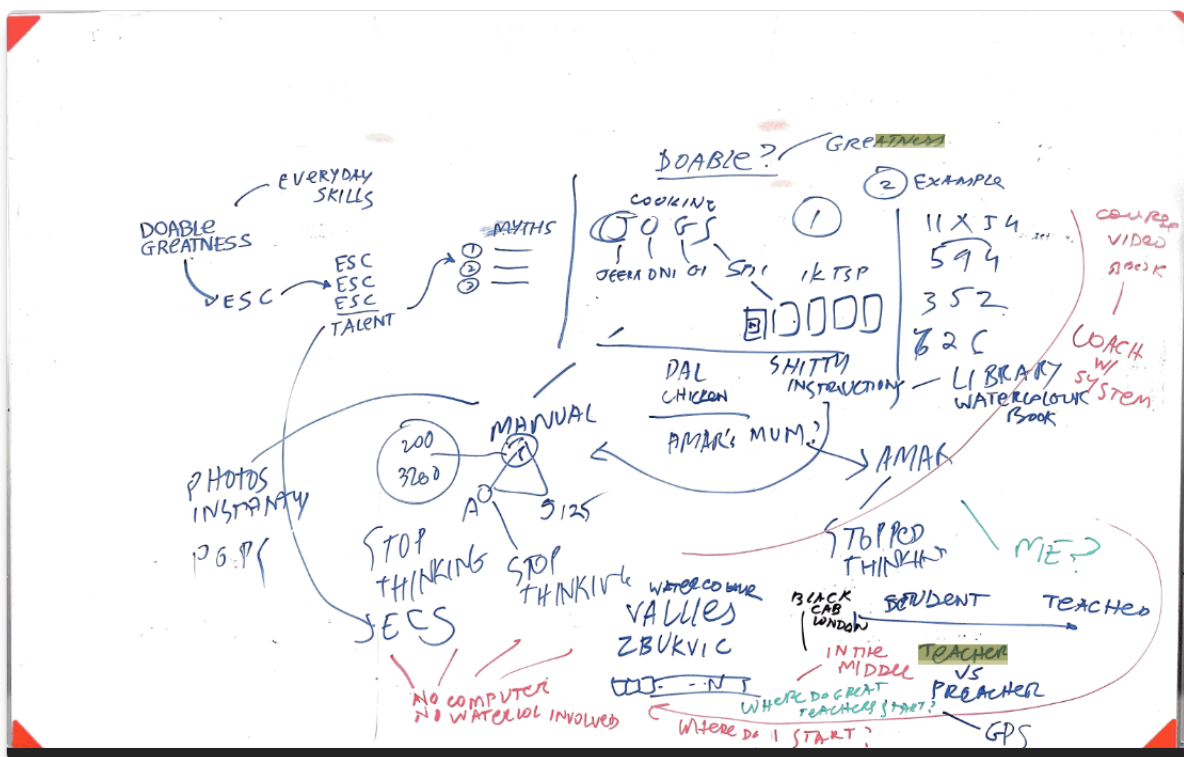
The tagline went through several iterations too. Since the tagline gives direction to the book, getting it right seemed so very frustrating. However, for the most part, I left the tagline alone and just concentrated on the contents of the book. Once I had an understanding of what I was going to cover, the tagline would be the least of the worries.



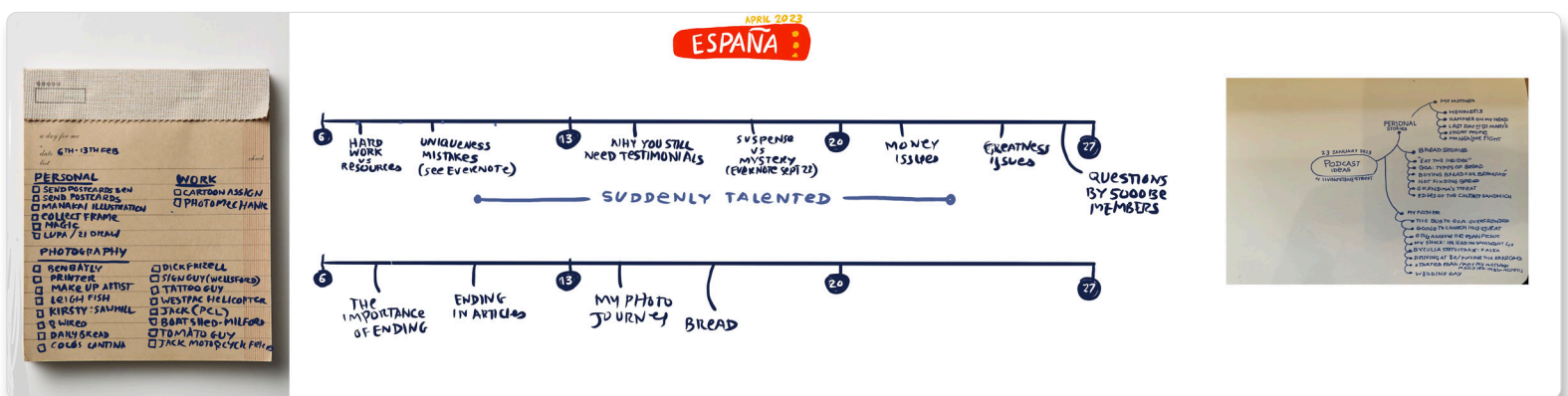
At first I had this ideal goal of "brand new cartoons" for the book. I made an extensive list, spending even more time, drinking even more coffee at Ozone Coffee. The top half shows you how there's still a bit of confusion in terms of the tagline ("A rethink on the concept of talent"). The contents of the book are also quite a bit muddled. Ideas like "Doable Greatness" jostle with "Teacher vs Preacher" and "Feedback".

When we get to the bottom half, I started on a few of the cartoons (Remember that detailed plant cartoon at the end of the 10,000 hours chapter?) Renuka had to gently remind me that I had over a thousand cartoons I'd created in the past, and could be used, instead.

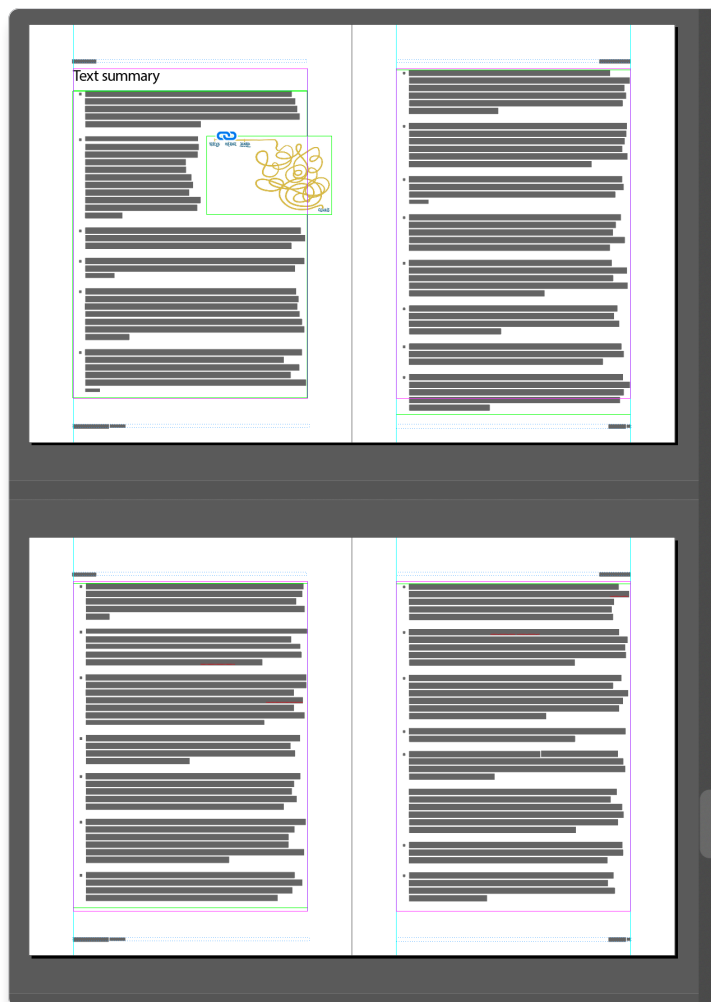
I fought the idea for a day or so, then used what was already available and very usable. I will still draw these cartoons as I tend to do when watching Netflix.



I tend to do a lot better when speaking out an idea aloud, rather than sitting at the computer, typing away. Which is why I convinced my friend, Doug Casement, to take some time off so we could have a brainstorming session. Doug found a meeting room and we spent the day talking about what I'd already done, and where the book could be headed.

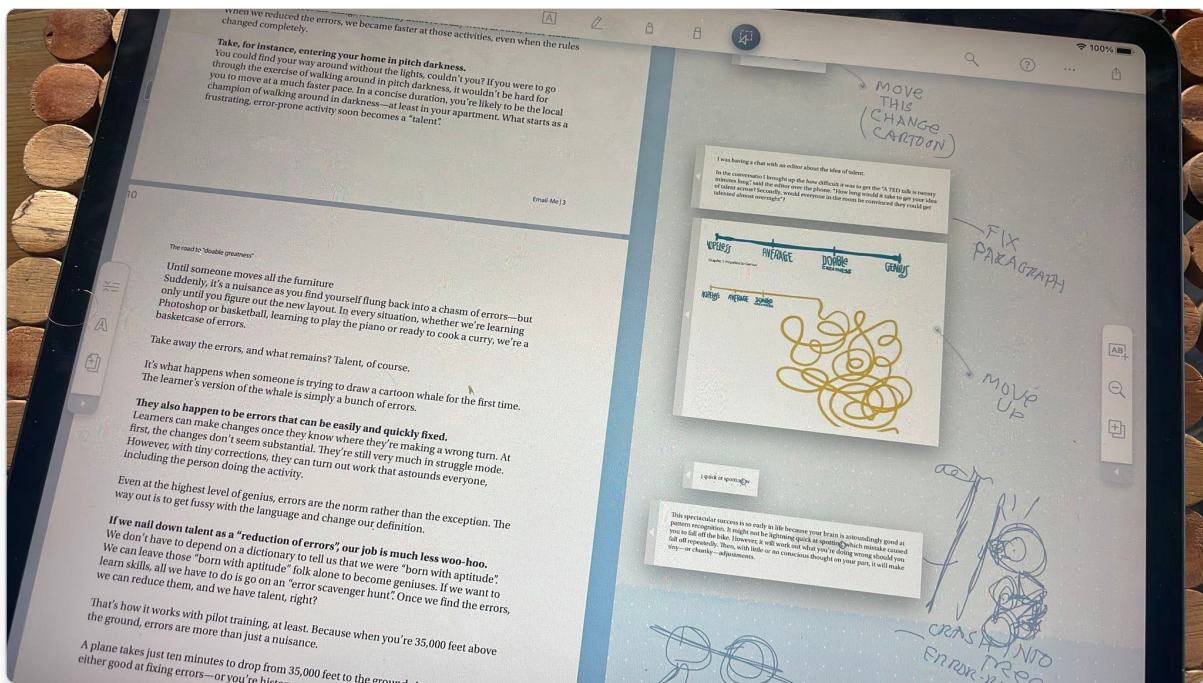


In between all of the work, podcasts and pictures I wanted to take, was the book on "Suddenly Talented". By this point, I was prepared to get the book done before I left for Spain. It was a productive period and almost $\frac{2}{3}$ of the book was completed in a determined push for the finish line. The rest of the book, with the cartoons, captions, cover and other elements had to wait until we got back from our holiday.

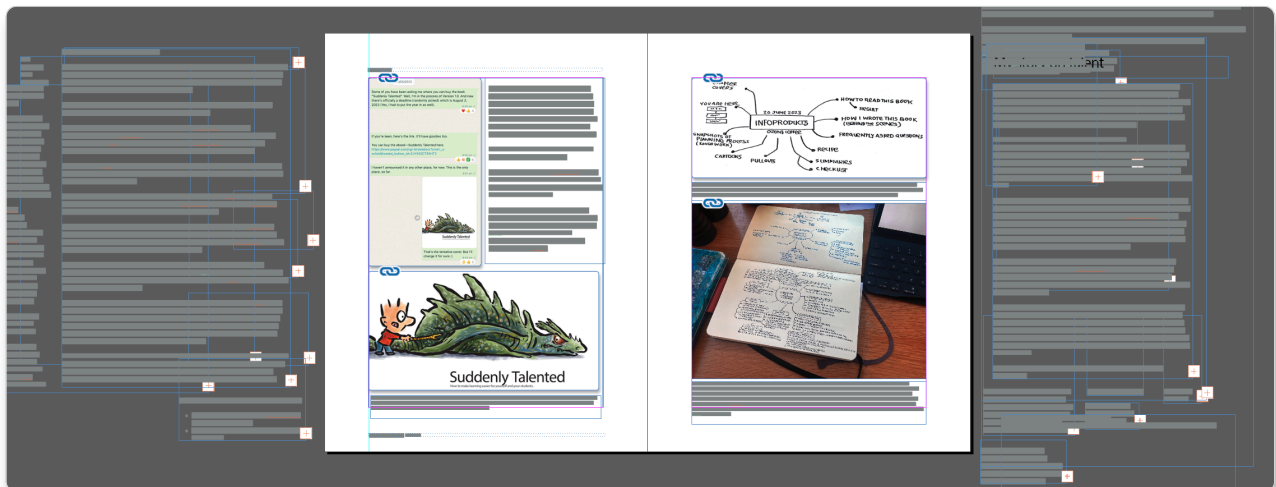


Even while writing the book, it was important to pull back and work with "energy". I add a summary at the end of every section in most course materials and books. Hence, "energy" would have its summary, as would the chapter on "confidence", and so on. This time, I initially decided to put the summary right at the end. That's when I noticed that the cumulative summary exceeded four pages and would likely be much more. "Energy" is what we all need to remember when creating information or overwhelm quietly starts to settle in.

The backstory



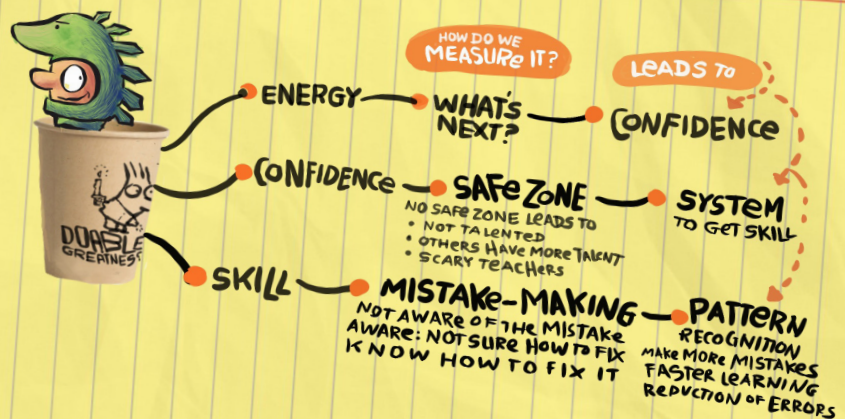
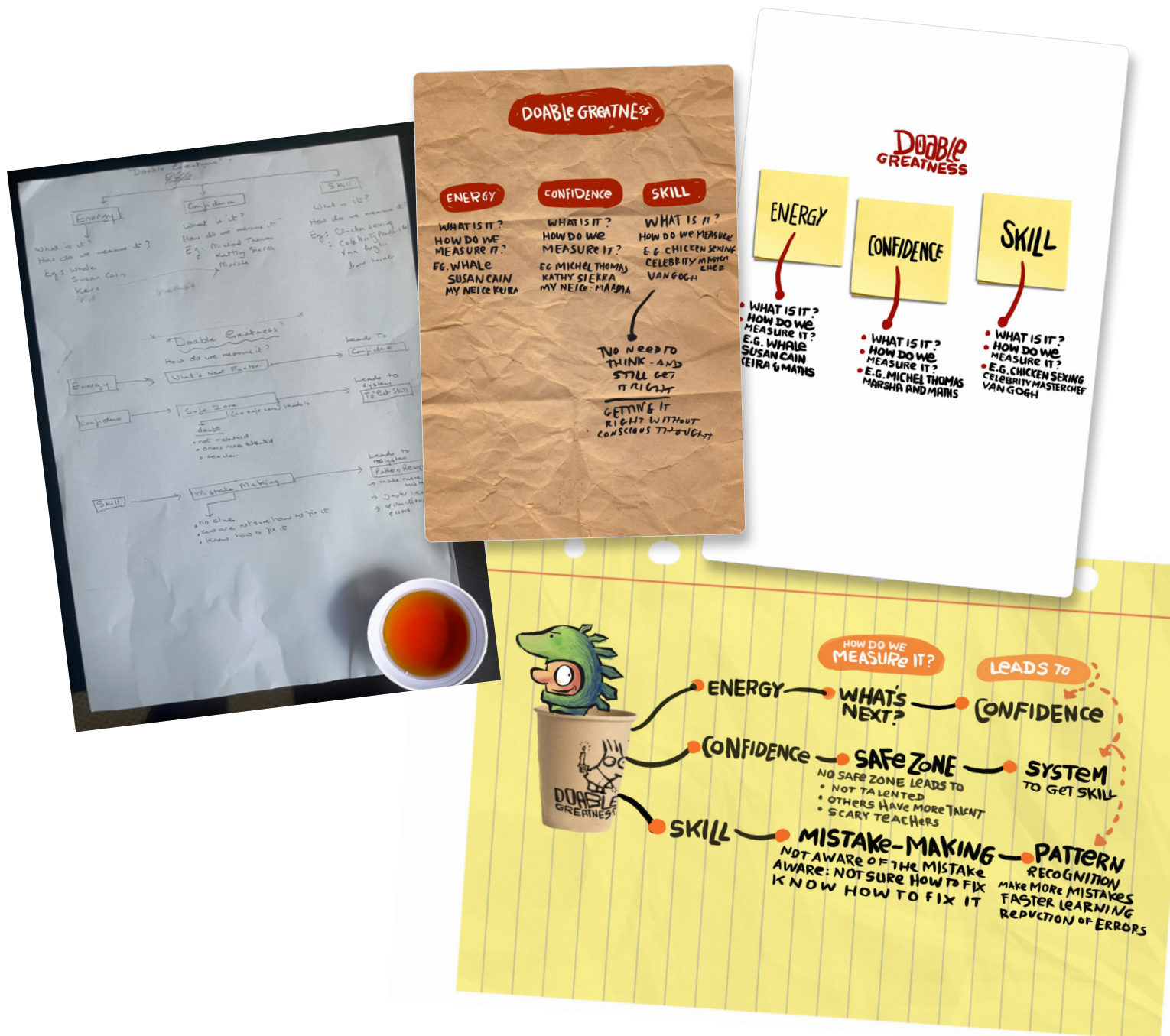
I use LiquidText on the iPad. It helps me drag across the text from a PDF to the other side. It's a really well designed piece of software and I use it a lot. However, as you can tell, I use paper, iPads, mind maps and everything in between. It's rough going when you're writing a book or creating a course. You want all the distractions you can possibly have at your disposal. <grin>



I started the book (and did several iterations of it) in Scrivener. However, easily the best software for me is InDesign. Why? Because I can add the graphics, captions alongside the text. It feels like progress, especially because the graphics, formatting etc., is an integral part of the books.

Nonetheless, there's a lot of text that has to be jettisoned. The bits you see on the left and right of the page (in the grey area) are whole pages that seemed to make sense at some point in time, but then needed to be put away. I hate deleting it, so it sits invisibly on the side.

Despite being a "visual artist" (fancy name for cartoonist), I was keen on having a text based summary. As you learned, Renuka wanted a visual summary. Hence, we went through the roller coaster of creating a graphic summary. Let's just say it took well over a day. Here are the versions, in clockwise order.





I take my camera (I use the Leica m10 monochrom or the Leica Q2 Monochrom) when I go to Ozone Coffee. In between thinking, writing and drawing, it's fun to take pictures. Yes, I take everyone's permission, which is why I'm just a couple of feet away at most times.



If you enjoyed this book, please send me an e-mail at sean@psychotactics.com. If you have suggestions, that's very welcome too. Oh, and the giraffe reads the all the e-mail too. And thanks very much for supporting us.

If you find anything that bugs you, please click on the bug above to send me an e-mail. Nothing is too small or too big. And if I can, I'll be sure to fix it. E-mail me at: sean@psychotactics.com