Black Box Thinking Summary

By Matthew Syed

What makes people successful?

Black Box Thinking argues that the key to success is failure, and top performers embrace failure, and own up to mistakes. Success hinges on our ability to deal with failure pragmatically, so we need to foster a culture that interrogates failure, learns from mistakes, and doesn't get defensive when errors are made.

Matthew Syed is a consummate storyteller, who has an engaging and captivating method of teaching. In *Black Box Thinking*, he delves into how we think about success and successful people and groups. How we answer the question of what makes people successful, determines how we navigate our own success or failure.

Let's briefly take a look at the wisdom inside *Black Box Thinking*, and some of the critical factors that allow us to succeed. We'll scrutinize failure and why it's central to success. And, we'll learn why 1% is enough, why the aviation industry should be looked towards as an inspiration, and why cognitive dissonance needs to be kept in check.

Thinking inside the Black Box

How does high performance happen? According to Syed, there are usually two schools of thought on this. There's the dominant view that it all comes down to talent, and then there's the view that although talent isn't irrelevant, practice is the difference between success and failure.

The former is redolent of a fixed mindset. It's important to note that neither side refutes talent or hard work; they just believe that one or other is more dominant and important. Nonetheless, where we sit in terms of this argument massively impacts our behavior.

Syed suggests that it all comes down to how we react to failure, and whether or not we subscribe to black box thinking. So what is black box thinking?

Black box thinking helps us to figure out what went wrong, and to embrace the process of failure. The concept is based on the black box in aviation, where a device logs input and output. This means that f there's a malfunction or error, relevant authorities can investigate what went wrong. Black box thinking is all about going against the common practice of brushing failure under the carpet, disguising mistakes, and deflecting any errors. Instead, we're encouraged to act with intellectual honesty, and to interrogate what went wrong, and how we can improve. Syed argues that we need to actively engage in the process of failure.

Why are we So Terrified of Failure?

When was the last time you failed at something, and how did you feel about it?

For many of us, admitting our mistakes is one of our fundamental flaws, and we often feel great shame when we have to admit we're wrong. These lessons on failure are taught from a young age, and children often learn to omit truths, or "deflect and decoy." How many of us fibbed as children about breaking vases, stealing cookies, or doing poorly on a school assignment?

We often admonish this behavior, but as grown-ups we do this all the time. When we make mistakes, we tend to gloss over them. We hate making errors, but even more than that, we hate admitting to them. We need to learn that failure makes us better, and not acknowledging failure can have disastrous consequences. As an extreme example, let's look at the criminal justice system.

Did you know that in the USA, between 2.3 and 5% of prisoners are innocent? In real numbers this means that up to 120 thousand people are wrongfully convicted. A lot of these wrongful convictions come down to stubbornness, failure to admit mistakes, and denial. If we go back to the idea of intellectual honesty, there's a lot to be said for stepping up and taking ownership of our errors.

Juan Rivera was wrongfully convicted three times. In 1992 he was accused of raping and murdering 11-year-old Holly Staker. After serving 20 years in prison, he was finally released. His wrongful conviction led to US history's largest settlement, but how did the justice system get it so wrong? Much of the case's mishandling came down to individuals not being able to own up to initial mistakes or errors in judgment. Living with mistakes is often very difficult, but the sooner we try to rectify them, the sooner we can move on from them.

Reframing Failure

Failure wounds our egos, which is often why we feel so dejected when we fail.

However, we always have the ability to fix things, and every single failure provides us with opportunities to improve and succeed. The first thing to realize is that no matter how hard we try, no matter how talented we are, we will never be perfect at something. All of us will always be able to improve. If we think about success in this way, we realize that there's no way to avoid failure. The only thing we can control is how we react to failure.

Syed juxtaposes the aviation industry with the healthcare industry, in order to contrast the growth mindset with a fixed mindset. He argues that a growth mindset allows us to realize that It's not failure that has terrible consequences; it's the inability to admit mistakes. What's more, it's relatively straightforward to determine outcomes, because something is either a success or a failure. Nuances emerge when we look at whether mistakes were made, and if errors were made, it's up to us to interrogate them and prevent them from happening again.

If we look at the aviation industry, it's a growth mindset industry that focuses on hiring talented people. However, having a history of catastrophic errors made them cognizant that they had to engage with the data and work on improving their success rate. The industry is continuously striving to improve its safety record. Pilots submit reports, actions are scrutinized, and everything gets dissected when it comes to safety and near misses. Most importantly, if there's a crash, it's owned up

to immediately.

The industry introduced black boxes to airplanes, which log electronic and technical information, and communication between the pilots. The focus on institutional learning, has resulted in the aviation industry making huge strides towards excellence in safety records. In 1912 almost half of US army pilots died. In 2014, there was one crash for every 8.3 million takeoffs across all major airlines.

On the other hand, did you know that just over 250 thousand people die every year in the States because of medical errors? In fact, medical errors are the third leading cause of death in America. Syed argues that this is because doctors and medical professionals come from a culture of adopting a fixed mindset. This industry typically rewards talent and places doctors on pedestals.

Syed explains that the health system is flawed because people are threatened by admitting to mistakes. In many cases, mistakes are covered up because doctors don't want to appear fallible. Often mistakes are "just one of those things," or "a complication." These examples of cognitive dissonance, coupled with the industry's high blame nature, lead to many problems. Medical professionals are terrified of being sued, and they continuously seek to justify their behavior. In short, the field can't make progress if no one is willing to change or reframe failure as a learning opportunity.

If we look at an example, many archaic medical procedures lasted a lot longer than they should have. Bloodletting was a hazardous and utterly pointless procedure that was practiced for 1700 years. No one tested it because the belief is that we don't argue with doctors. This isn't to say that doctors aren't incredibly talented; it's just that the culture dictates a

fixed mindset when dealing with failure.

We often look for simple solutions, but the world isn't simple. There are often many answers, and we need to know that the world and humankind are constantly evolving. With this in mind, we should adjust our behaviors and technical skills, and seek to test theories and methodologies.

It's very seldom that we get things right the first time. So why do we expect that when we start something new, we'll succeed? We need to be better prepared to fail and not just accept failure, but to reframe it as necessary and positive. Running from failure means we'll fail more.

Failure to Progress

Has anyone ever told you that you can't do something?

Hearing people express doubts about us, often galvanizes us to pour all of our energy into proving them wrong, and we don't care if we fail. In such circumstances, our failure is a means to an end. Failure also allows us to see things differently, and to gain perspective.

Tackling problems in new ways is one of the keys to innovation. If you were to find yourself in London, and walking down the high street of Enfield, you might come across an ATM outside Barclays bank. You'd probably not stop to pay it much attention; unless you needed to draw some money. However, this is widely believed to be the site of the first ATM. The story of John Shepherd-Barron is that he missed the bank's opening hours and was without cash. He explains, 'It struck me there must be a way I could get my own money, anywhere in the world or the UK. I hit upon the idea of a chocolate bar dispenser, but replacing

chocolate with cash.' He approached Barclays with his idea, and soon ATMs were popping up like daisies. Other innovations in automation and "self-service" emerged and others became redundant. Things can never stay the same, and therefore we always need to keep our eyes open for opportunities to progress.

Taking hold of opportunities should never be taken for granted. Syed argues that we all need to be part of the game if we want to succeed. A great example of this is an experiment on quality vs. quantity. An art teacher told his class that they'd be divided into two groups. One group had to produce 50lbs of pottery to get an A. The other group was told that to get an A, they needed to create one work that they believed to be worthy of a high grade. What do you think the outcome was?

The group who had to produce quantity started immediately. They got going and started churning out pottery, and not just a lot of pottery; they made exceptionally high-quality work. The other group vacillated and theorized what the perfect object would be. It took them ages to begin. The lesson here is to just get down and do the work. We learn from practice and failure.

Practice is critical, and this is illustrated by the "Beckham Effect." David Beckham was an average soccer player when he was six, but he had an insatiable hunger. After school, he would spend the whole afternoon practicing his ball skills. When he began, he could keep the ball up five or six times. After six months, he got it up to about 50. Over time he kept building this up, so by the time he was nine, he could keep the ball up 2003 times. After this, he practiced free-kicks. It's estimated that David Beckham practiced free-kicks at least 50 thousand times. People think David Beckham is a genius, but Beckham says that every free-kick he takes, he sees all the thousands of times he practiced.

The 1% Rule

Practice and improvement need to be consistent. Matthew Syed talks about marginal gains, and says that we should measure success on whether or not we're actually doing anything. We need to be productive and determined. It's not about the end product of perfection; it's about being able to say that every day we're trying.

Did you know that 1% is enough?

Up until 2003, British cycling was a non-starter. Since 1908 they'd only won one Olympic gold medal, and they'd never won a Tour de France. Then, throughout the mid-2000s they completely dominated the sport. This trajectory towards excellence was not because the population's physiology changed, but because they changed the psychology of their performance. Dave Brailsford was hired as performance director, and he poured his energy into developing a growth mindset that focused on marginal gains.

Brailsford broke down cycling into numerous parts, and said that if they could improve each of these elements by 1%, this would accumulate and give them the edge. The "aggregation of marginal gains" means that despite just a 1% improvement, when you add all the one percents up, they make a phenomenal difference.

So the team set about redesigning aspects of the bikes, making adjustments to the team kit, adjusting factors to improve aerodynamics, and so on. Once they'd made the more obvious adjustments, they started looking elsewhere. They tested massage gels, improved hygiene practices, standardized mattresses, and they even vacuumed the riders' rooms before they would bed down for the night (to minimize exposure to germs and dust).

Within five years, the accumulation of marginal gains became obvious. Team Britain dominated the Beijing and London Olympic Games. What's more, Bradley Wiggins became the first British cyclist ever to win a Tour de France, and later Chris Froome wore the yellow jersey a whopping 59 times and won the race four times.

The 1% mindset works because it interrogates how often we take minor improvements for granted. Furthermore, 1% is such an easy percentage to implement in our lives. Every day, when we wake up, we just have to perform 1% better than we did the previous day. Most of us are put off because we think we need to make considerable strides in performance, but, if we choose to focus on 1%, the changes will be more meaningful and less daunting. So run 1% further, practice for 1% longer, write 1% more. Whatever you do, just add 1% to what you're doing.

In Conclusion

All of us can be better if we're prepared to fail more.

Matthew Syed argues that it's not enough to simply be aware of failure; we also need to embrace it, and use it. What's in your black box, and what are the hurdles and obstacles you face?

Answering these questions may bring up some excuses, or some general apathy about how we don't have enough talent or ability. The fact is that everyone is capable of improving, and all of those unfinished projects can be completed. We need to apply intellectual honesty when we open up our black boxes and look at the factors holding us back. What's more, instead of trying to justify failure, we need to critically analyze it. Imagine failure, own up to it, and then set about trying to solve problems as they arise.

Be curious. The world is not simple. Achievements are not simple. Everything needs to expand, including our mindsets and our skill sets. So engage with your failures and think inside your black box. Then wake up tomorrow and start improving by 1%.