

Secret to success: practice, not talent

Top performers in all walks of life succeed not through natural ability but through perseverance and 'the growth mindset'

Driving force: Gary Player said: 'The more I practise, the luckier I get'.
Photograph: James Benwell/Action Images

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Most of us have been on the receiving end of an inspirational speech. Usually it is delivered by a former Olympian at a company conference and is all about the big M: motivation. It is sometimes eloquently delivered, and often fun to listen to, but most people leave the room wondering how 30 minutes of biographical information about a 7ft rowing champion is going to help them back in the office.

Nobody would dispute that motivation is a key driver of performance, but this knowledge does not help many of us understand where it comes from. Listening to a sportsperson speaking about their own personal journey may be uplifting, but how is it going to leave a lasting and usable legacy in terms of how you approach your job? It is almost insulting to think it could.

It is not anecdotes we need, so much as a science of performance, underlying principles that help unlock the question of why some people work hard and excel, while others don't; why some are committed to what they are doing while others exist in a state of semi-detachment. It is a question with ramifications not just for business but for education. And, fortunately, the answers are beginning to emerge.

To see how, we need to take a step back and ask a deeper question: where does excellence come from? For a long time, it was thought that the answer hinged, in large part, upon talent. Hard work may be important, but if you don't have the ability, you are never going to become top class. It is the notion that high-level performers have excellence encoded in their DNA.

It turns out that this point of view is mistaken. Dozens of studies have found that high flyers across all disciplines learn no faster than those who reach lower levels of attainment – hour after hour, they improve at almost identical rates. The difference is simply that high achievers practise for more hours. Further research has shown that when students seem to

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possess a particular gift, it is often because they have been given extra tuition at home.

This tallies with evidence in business, too. In 2001, General Electric launched a study of the best performing companies worldwide – those that had grown much faster than the economy for many years and had produced excellent returns for shareholders. What did they have in common?

According to Fortune Magazine: "The key trait the study found was that these companies valued 'domain experience' in managers – extensive knowledge of the company's field."

As Jeff Immelt, the chief executive of General Electric, put it: "The most successful parts of the business are places where leaders have stayed in place a long time. The places where we've churned people, like reinsurance, are where you will find we've failed."

The question of talent versus practice/experience would not matter much if it was merely theoretical. But it is much more than that. It influences the way we think, feel and the way we engage with our world. And it determines our motivation.

Lack of incentive

To see how, consider an employee who believes success is all about talent – this is known as the "fixed mindset". Why would they bother to work hard? If they have the right genes, won't they just cruise to the top? And if they lack talent, well, why bother at all? And who can blame someone for having this kind of attitude, given the underlying premise?

If, on the other hand, they really believe that practice trumps talent – the "growth mindset" – they will persevere. They will see failure as an opportunity to adapt and grow. And, if they are right, they will eventually excel. What we decide about the nature of talent, then, could scarcely be more important.

Businesses often suppose that financial incentives are the primary driver of motivation, but this is not supported by the evidence. Monetary inducements can, indeed, make a significant difference, but mindset is more important.

This insight was first demonstrated by Carol Dweck, a professor of psychology at Stanford University in a now famous experiment in 1978. She took 150 students and gave them a questionnaire to identify their beliefs about talent. She divided those with the fixed mindset (those who believe

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that talent or intelligence is by and large determined by genes) from those with the growth mindset (those who believe intelligence is transformable).

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The students were then given a series of 12 problems: the first eight were relatively easy while the remaining four were considerably more difficult. As the students struggled to solve the problems, two different patterns emerged.

Dweck described the students in the fixed mindset group when they came up against the tough puzzles: "Maybe the most striking thing about this group was how quickly they began to denigrate their abilities and blame their intelligence for the failures, saying things like 'I guess I am not very smart', 'I never did have a good memory' and 'I'm no good at things like this'.

"Two-thirds of them showed a clear deterioration in their strategies, and more than half lapsed into completely ineffective strategies. In short, the majority of students in this group abandoned, or became incapable of deploying the effective strategies they actually had in their repertoire." And the kids with the growth mindset? Dweck said: "We saw that the students in the fixed mindset group blamed their intelligence when they hit failure. What did the students in the growth mindset group blame when they hit failure? The answer, which surprised us, was that they did not blame anything. They didn't focus on reasons for the failures. In fact, they didn't even consider themselves to be failing.

"How did they perform? In line with their optimism, more than 80% maintained or improved the quality of their strategies during the difficult problems. A full quarter of the group actually improved. They taught themselves new and more sophisticated strategies for addressing the new and more difficult problems. A few of them even solved the problems that were supposedly beyond them."

This is not merely surprising; it is extraordinary. Just to reiterate: this schism in performance had nothing to do with intelligence and nothing to do with incentives. Indeed, Dweck actually made sure all the students were equally incentivised by offering gifts they had personally selected.

Instead, the gap in performance was opened up by their respective mindsets. Those who held the belief that abilities are transformable through effort not only persevered but actually improved when confronted

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with difficulties; those labouring under the talent myth, on the other hand, regressed into a state of psychological enfeeblement.

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Why such a striking difference? Consider for a moment what was going on in the minds of the two groups. Both groups understood that the test was measuring their intelligence or talent. So far, so good. But those in the fixed mindset had a further belief: that their intelligence is set in stone and there is little room for personal development.

That, of course, is the defining feature of the fixed mindset. Is it any wonder, therefore, that they interpreted failure as calamitous; that it saps creativity and undermines performance; that they will do anything to avoid challenges, even when they might be useful?

These results are not limited to youngsters; they have been replicated with university students, sportsmen, business leaders, and even systems engineers at Nasa. The growth mindset not only predicts motivation and performance highlights but other key indicators, too.

Managers with a fixed mindset, for example, are less able to recognise changes in employee performance and are disinclined to coach employees on how to improve their performance (why would they bother, if they believe that ability levels are fixed?) A growth mindset positively predicts managers' perceived fairness in dealing with employees, which is critical in enticing employees to identify with their work and commit themselves to it.

So, how to create a growth mindset within an organisation? Interventions which have presented participants with the powerful evidence of how excellence derived from perseverance – which explains the possibility of personal transformation – has had a dramatic impact on motivation and performance. When this is allied with clearly identifiable pathways from shop floor to top floor, so that employees can see the route ahead, these results are strengthened further.

Businesses that focus on recruiting external "talent" with "the right stuff", on the other hand, and who neglect the cultivation of existing personnel, foster the fixed mindset. A rank-and-yank appraisal system is also damaging, because it suggests that the abilities of those ranked the lowest cannot be developed. Many would argue that these outdated techniques provide the underlying cultural explanation for the collapse of Enron in 2001.

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In short, an ethos constructed upon the potential for personal transformation is the underlying psychological principle driving high performance. It is an insight that is not merely deeply relevant to business, but to any organisation interested in unlocking human potential.

The power of the growth mindset in sport

Sports science has long focused on the question of why some young athletes are more motivated than others. Why do some put in the hours, while others regard it as a bit of a chore? For a long time words such as "hunger" or "drive" were used. But careful study has shown it turns on mindset.

The Nick Bollettieri Tennis Academy, which has produced more than a dozen grand slam champions, is built on this guiding principle. It is its published creed, which has to be signed by all residents at the club: "Every endeavour pursued with passion produces a successful outcome, regardless of the result. For it is not about winning or losing – rather, the effort put forth in producing the outcome."

The same is true of the British Olympic Team, which won so many gold medals at the Olympics in Beijing. Here is Peter Keane, the sports scientist who masterminded the success: "I am convinced that world-class performance emerges from mindset. Many of our greatest cyclists did not start out with obvious natural advantages, but they transformed themselves through application.

"Perhaps the key task of any institution is to encourage the adoption of a growth mindset. When that kind of philosophy becomes embedded in the culture, the consequences can be dramatic."

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