

‘People say I have a great talent, but in my opinion excellence has nothing to do with talent. It is about what you choose to believe and how determined you are to get there. The mind is more powerful than anything else’ (Michael Phelps)



# Mindsets Magazine

## If You're Open to Growth, You Tend to Grow

By Janet Rae-Dupree (The New York Times: Published July, 2008)

### Why do some people reach their creative potential in business while other equally talented peers don't?

After three decades of painstaking research, the Stanford psychologist Carol Dweck believes that the answer to the puzzle lies in how people think about intelligence and talent. Those who believe they were born with all the smarts and gifts they're ever going to have approach life with what she calls a "fixed mind-set." Those who believe that their own abilities can expand over time, however, live with a "growth mind-set." Guess which ones prove to be most innovative over time. *"Society is obsessed with the idea of talent and genius and people who are 'naturals' with innate ability,"* says Ms. Dweck, who is known for research that crosses the boundaries of personal, social and developmental psychology.

*"People who believe in the power of talent tend not to fulfil their potential because they're so concerned with looking smart and not making mistakes. But people who believe that talent can be developed are the ones who really push, stretch, confront their own mistakes and learn from them."*

In this case, nurture wins out over nature just about every time.

While some managers apply these principles every day, too many others instead believe that hiring the best and the brightest from top-flight schools guarantees corporate success.

The problem is that, having been identified as geniuses, the anointed become fearful of falling from grace. *"It's hard to move forward creatively and especially to foster teamwork if each person is trying to look like the biggest star in the constellation,"* Ms. Dweck says.

In her 2006 book, "Mindset: The New Psychology of Success," she shows how adopting either a fixed or growth attitude toward talent can profoundly affect all aspects of a person's life, from parenting and romantic relationships to success at school and on the job.

She attributes the success of several high-profile chief executives to their growth mind-set, citing an ability to energize a work force. These include John F. Welch Jr. of General Electric, who valued teamwork over individual genius; Louis V. Gerstner Jr. of

I.B.M., who dedicated his book about I.B.M.'s turnaround to "the thousands of I.B.M.'ers who never gave up on their company"; and Anne M. Mulcahy of Xerox, who focused on morale and development of her people even as she implemented painful cuts.

But Ms. Dweck does not suggest that recruiters ignore innate talent. Instead, she suggests looking for both talent and a growth mind-set in prospective hires — people with a passion for learning who thrive on challenge and change.

After reading her book, Scott Forstall, senior vice president of Apple in charge of iPhone software, contacted Ms. Dweck to talk about his experience putting together the iPhone development team. Mr. Forstall told her that he identified a number of superstars within various departments at Apple and asked them in for a chat.

At the beginning of each interview, he warned the recruit that he couldn't reveal details of the project he was working on. At the beginning of each interview, he warned the recruit that he couldn't reveal details of the project he was working on. But he promised the opportunity, Ms. Dweck

says, *"to make mistakes and struggle, but eventually we may do something that we'll remember the rest of our lives."*

Only people who immediately jumped at the challenge ended up on the team. *"It was his intuition that he wanted people who valued stretching themselves over being king of their particular hill,"* she says. People with a growth mind-set tend to demonstrate the kind of perseverance and resilience required to convert life's setbacks into future successes. That ability to learn from experience was cited as the No. 1 ingredient for creative achievement in a poll of 143 creativity researchers cited in "Handbook of Creativity" in 1999.

Which leads one to ask: **Is it possible to shift from a fixed mind-set to a growth mind-set?**

Absolutely, according to Ms. Dweck. But, *"it's not easy to just let go of something that has felt like your self for many years,"* she writes. Still, she says, *"nothing is better than seeing people find their way to things they value."*

(Retrieved from [http://www.nytimes.com/2008/07/06/business/06unbox.html?\\_r=1&](http://www.nytimes.com/2008/07/06/business/06unbox.html?_r=1&))

# Secret to Success: Practice, not Talent

By Matthew Syed (The Guardian: Published June, 2011)

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

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 sports-person 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 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 ex-

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

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 not good at things like this'.**

"I want to solidify as an artist and show that as I grow as a person and make mistakes & learn from them, I'm going to grow artistically" (Eminem)

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

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.

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.*"

(Retrieved from: <http://www.theguardian.com/money/2011/jun/04/secret-to-success-is-practice>)



## Giving Pupils a Sporting Chance

By Lee Elliot Major (Sutton Trust: Published December, 2013)

*"One thing is certain in business. You & everyone around you will make mistakes" (Richard Branson)*

One of the joys of being a dad is taking your son or daughter to watch a football game. I'm particularly lucky as our local club happens to be Arsenal. The North London club currently tops the English Premiership table. And they play sumptuous football.

Yet even Arsenal's fans adhere to the norms of terrace culture: their loudest cheers are reserved not for the audacious skills on show but for the times when players put in '110%' for the team. Just listen to the applause when a player races back to make a last-ditch tackle, or makes a lung-busting run down the left wing to meet a cross-field pass.

In football hard graft earns respect, particularly so if it leads to improved talent. Aaron Ramsey, Arsenal's most improved player, is lauded for running 13 kilometres during a game, a higher work-rate than any of his team-mates. Those fortunate few like Ramsey who make it as professionals are not only supremely gifted but demonstrate an incredible work ethic.

Football terraces may seem an unlikely inspiration for educational policy, but it does cast into stark light one of the major challenges in our schools: how to ensure teachers and pupils adopt a similar 'developmental' attitude to academic talent.

All too often the very opposite is true: we fall into the trap of distinguishing children by

their perceived cognitive ability, and then assume that no amount of work or effort will ever change this. Being clever in the classroom is seen as a fixed characteristic, as if it is generated exclusively by our genes, and detached from the hard work that actually often lies behind it. We don't encourage or reward academic effort enough.

This assumption is aided by headlines, such as those linked to today's research by Robert Plomin, suggesting that academic grades are mostly down to our genetics. As Plomin himself said on *Today* this morning a more balanced reading of the research literature points strongly to the importance of both environmental and biological factors in shaping who we are.

*"The idea that intelligence is learnable and can be developed through effort and skillful practice has not penetrated our society widely or deeply,"* argues Stanford psychologist Carol Dweck. Dweck's research does not suggest that anyone can become an Einstein (or the next Arsenal great), but it does make clear that even Einstein had to put in years of effort to become a great scientist.

The fixed, deterministic worldview of academic talent however tends to prevail. It was implied for example by Boris Johnson's recent comments appearing to suggest that those with the lowest IQs are inevitably consigned to life's

rubbish heap. Yet today's league tables - and yesterday's Ofsted report - confirmed the extent to which the results of poorer pupils can vary enormously by school and local authority.

The need to reward and recognise effort in the classroom is a theme that runs through the findings of our popular toolkit on what works in schools. One of the central lessons for effective feedback given by teachers for example is to praise a pupil for their effort attempting a specific task, and guide them on how to try again. What is largely ineffectual is telling a pupil they are a clever boy or girl. We all tend to slip into the latter language as parents when talking to our own offspring. The truth is that it does little to inspire future development.

Grouping by ability in schools meanwhile is often delivered poorly in schools as it is done in such a way that sends a strong signal that effort will not change how pupils perform. Too often there is little flexibility for moving between groups, and expectations are too low in the lowest ability groups.

Dweck's research takes this further and argues that changing children's views about how their intelligence can grow can change how they perform in the classroom. Her studies conclude that children who have a 'fixed mindset' (*"I'm no good at this and never will be"*) do less well than those who be-

lieve that improvement is possible through effort (*"I can develop my ability in this subject and I can succeed"*). This hypothesis is now being tested in England in a trial supported by the Education Endowment Foundation.

Teachers will be trained in the importance of teaching pupils about the malleability of their intelligence (e.g. praising effort rather than intelligence). Incidentally the project will involve Portsmouth Football Club's study centre.

Moreover, effort appears to be particularly important for poorer pupils. Sociologist, John Goldthorpe, has published research suggesting a weaker link between IQ and later life outcomes for those from poorer backgrounds. The Sutton Trust is supporting further exploration by Goldthorpe on this fascinating topic.

In his latest book, Dylan William goes so far as to suggest that teachers should replicate the practice of the best sports coaches, who see their job not just identifying talent but also nurturing and even producing it. Often they get more out from the athletes than the athletes themselves believed they ever could achieve. Perhaps more pupils would then benefit from the educational inspiration that my children witness at the Arsenal's Emirates stadium.

(Retrieved from: <http://www.suttontrust.com/news/blog/giving-pupils-a-sporting-chance/>)

## Praising Gifted Youngsters May Backfire

(BBC News: Published July 2008)

Praising children for their intelligence may backfire and leave them ill-equipped to cope with failure, researchers have warned.

A new study suggests complimenting children for their intelligence and academic performance may lead them to believe **good test scores and high grades are more important than learning and mastering something new.**

### Vulnerable to setbacks

While praise is intended to encourage children, it leaves them **ill-prepared for coping with setbacks**, according to the research published in the Journal of Personality and Social Psychology.

Psychologists at Columbia University, New York, conducted six studies of 412 11-year-olds in which they compared children praised for intelligence with those praised for effort and hard work. They looked at children under conditions of failure as well as success.

They found commending children for their intelligence after good performance might backfire by making them highly performance-oriented and thus extremely vulnerable to the effects of subsequent setbacks.

On the other hand, children who were **commended for their effort concentrated on learning goals and strategies for achievement.**

The researchers found children commended for their ability when they were successful learned to believe that intelligence is a fixed trait that cannot be developed or improved. They blamed poor performance on their own lack of intelligence.

When children praised for their hard work performed poorly, they **blamed their lack of success on poor effort and demonstrated a clear determination to learn strategies** that would enhance subsequent performances.

### High achievers worry

Study head Dr Carol Dweck said: "*Praising children's intelligence, far from boosting their self-esteem, encourages them to embrace **self-defeating behaviors**, such as worrying about failure and avoiding risks.*"

"However, when children are taught the value of concentrating, strategising, and working hard when dealing with academic challenges, this encourages them to **sustain their motivation, performance, and self-esteem.**"

The studies demonstrated that children who are praised for their intelligence learn to value performance, while children praised for their effort and hard work value learning opportunities.

### Bright girls overpraised

The researchers believe that their findings may demon-

"I've missed more than 9000 shots in my career. I've lost almost 300 games. 26 times, I've been trusted to take the game winning shot and missed. I've failed over and over and over again in my life. And that is why I succeed" (Michael Jordan)

strate why bright young girls who do well at first often perform poorly in upper grades. They note that in their desire to bolster young girls' confidence in their abilities, educators have praised them for their intelligence which, these studies have shown, could have an undesired impact on their subsequent motivation and performance.

Labelling children as gifted or talented may also have a negative impact on them. Such labelling may be the cause of children becoming overly concerned with justifying that label and less concerned with meeting challenges that enhance their learning and mastery skills.

They may begin to believe that academic setbacks indicate that they do not deserve to be labelled as gifted.

### Teaching implications

The authors advise that teaching programmes should emphasise **meeting challenges, applying effort, and searching for new learning strategies.**

When students succeed, attention and approval should be directed at their effort and hard work. Children should be praised for how they do their work rather than for the final product or their ability, the researchers say.

Retrieved from: <http://news.bbc.co.uk/1/hi/health/130126.stm>

"But it's a journey and the sad thing is you only learn from experience, so as much as someone can tell you things, you have to go out there and make your own mistakes in order to learn" (Emma Watson)