



## **MINDSETS: DEVELOPING TALENT THROUGH A GROWTH MINDSET**

By Carol S. Dweck, Stanford University

Coaches are often frustrated and puzzled. They look back over their careers and realize that some of their most talented athletes—athletes who seemed to have everything-- never achieved success. Why? The answer is that these athletes didn't have everything. They didn't have the right mindset.

In my research, I have identified two mindsets that people can have about their talents and abilities. Those with a *fixed mindset* believe that their talents and abilities are simply fixed. They have a certain amount and that's that. In this mindset athletes may become so concerned with being and looking talented that they never fulfill their potential.

People with a *growth mindset*, on the other hand, think of talents and abilities as things they can develop—as potentials that come to fruition through effort, practice, and instruction. They don't believe that everyone has the same potential or that anyone can be Michael Phelps, but they understand that even Michael Phelps wouldn't be Michael Phelps without years of passionate and dedicated practice. In the growth mindset, talent is something you build on and develop, not something you simply display to the world and try to coast to success on.

Almost every truly great athlete-- Michael Jordan, Jackie Joyner-Kersey, Tiger Woods, Mia Hamm, Pete Sampras-- has had a growth mindset. Not one of these athletes rested on their talent; they constantly stretched themselves, analyzed their performance, and addressed their weaknesses. In the recent Olympics, silver-medal swimmer Dara Torres (age 41) and gold-medal marathoner Constantina Tomescu-Dita (age 38) defied myths about age through their training and dedication.

Research has repeatedly shown that a growth mindset fosters a healthier attitude toward practice and learning, a hunger for feedback, a greater ability to deal setbacks, and significantly better performance over time. How do the mindsets work and what can coaches do to promote a growth mindset? Before addressing these issues, let me first answer some other questions that I am often asked about the mindsets.

### **Questions About the Mindsets**

Which mindset is correct? Although abilities are always a product of nature *and* nurture, a great deal of exciting work is emerging in support of the growth mindset. New work in psychology and neuroscience is demonstrating the tremendous plasticity of the brain—its capacity to change and even reorganize itself when people put serious labor into developing a set of skills. Other groundbreaking work (for example, by Anders Ericsson) is showing that in virtually every field—sports, science, or the arts—only one thing seems to distinguish the people we later call geniuses from their other talented peers. This one thing is called practice.

Are people's mindsets related to their level of ability in the area? No, at least not at first. People with all levels of ability can hold either mindset, but over time those with the growth mindset appear to gain the advantage and begin to outperform their peers with a fixed mindset.

Are mindsets fixed or can they be changed? Mindsets can be fairly stable, but they are beliefs, and beliefs can be changed. Later on, I will describe workshops that have altered people's mindsets and had a real effect on their motivation and performance.

## **How Do The Mindsets Work? The Mindset Rules**

The two mindsets work by creating entire psychological worlds, and each world operates by different rules.

### ***Rule #1.***

In a fixed mindset the cardinal rule is: Look talented at all costs. In a growth mindset, the cardinal rule is: Learn, learn, learn!

In our work with adolescents and college students, those with a fixed mindset say, "The main thing I want when I do my school work is to show how good I am at it." When we give them a choice between a challenging task they can learn from and a task that will make them look smart, most of them choose to look smart. Because they believe that their intelligence is fixed and they have only a certain amount, they have to look good at all times. Those with a growth mindset, on the other hand, say "It's much more important for me to learn things in my classes than it is to get the best grades." They care about grades, just as athletes care about winning the game, but they care first and foremost about learning. As a group, these are the students who end up earning higher grades, even when they may not have had greater aptitude originally.

Our studies show that it is precisely because of their focus on learning that growth mindset students end up with higher performance. They take charge of the learning process. For example, they study more deeply, manage their time better, and keep up their motivation. If they do poorly at first, they find out why and fix it.

We have found that mindsets play a key role in how students adjust when they are facing major transitions. Do they try to take advantage of all the resources and instruction available, or do they try to act as though they don't care or already know it all? In a study of students entering an elite university, we found that students with a fixed mindset preferred to hide their deficiencies, rather than take an opportunity to remedy them—even when the deficiency put their future success at risk.

### ***Rule #2.***

In a fixed mindset, the second rule is: Don't work too hard or practice too much. In a growth mindset, the rule is: Work with passion and dedication—effort is the key.

Those with a fixed mindset believe that if you have natural talent, you shouldn't need much effort. In fact, having to work hard casts doubt on your ability. I believe that this is why so many enormously talented athletes never fulfill their potential. They are often the ones who have coasted along, winning with little effort, while the other athletes were sweating, struggling, and practicing. The fixed mindset "naturals" never learn to work, so that when they later reach their limits, they cannot cope. From Michael Lewis' wonderful book, *Moneyball*, we all know the story of the super-

talented Billy Beane, who was a colossal failure in the major leagues because he didn't think he should have to learn or try.

Those with a growth mindset know they have to work hard, and they enjoy it. They understand that effort is what ignites their ability and causes it to grow over time.

I get letters from former child prodigies in many fields. They were led to expect that because of their talent, success would automatically come their way. It didn't. In the world of Olympic sports, we do not do our young athletes a favor by allowing them to believe that great talent alone will transport them to the medal stand.

Recently we conducted a small study of college soccer players. We found that the more a player believed athletic ability was a result of effort and practice rather than just natural ability the better that player performed over the next season. What they believed about their *coaches'* values was even more important. The athletes who believe that their coaches prized effort and practice over natural ability were even more likely to have a superior season.



### **Rule #3.**

In a fixed mindset, the third rule is: When faced with setbacks, run away or conceal your deficiencies. In a growth mindset, the rule is: Embrace your mistakes and confront your deficiencies.

We have found over and over that a fixed mindset does not give people a good way to recover from setbacks. After a failure, fixed-mindset students say things like "I'd spend less time on this subject from now on" or "I would try to cheat on the next test." They make excuses, they blame others, and they make themselves feel better by looking down on those who have done worse. Everything but face the setback and learn from it.

It was so interesting to see in the last Olympics how many champions prevailed in events that were at some point not their strong suit. Chris Hoy, the Scottish gold medal cyclist saw his specialty eliminated from the Olympics and had to reinvent himself. He did not sit and lament his fate or blame others; he got to work.

## How Are Mindsets Communicated?

Mindsets can be taught by the way we praise. In many studies, we have gotten a very surprising result. Praising children's or adolescents' intelligence or talent puts them into a fixed mindset with all of its defensiveness and vulnerability. Instead of instilling confidence, it tells them that we can read their intelligence or talent from their performance and that this is what we value them for. After praising their intelligence or talent, we found that students wanted a safe, easy task not a challenging one they could learn from. They didn't want to risk their "gifted" label. Then, after a series of difficult problems, they lost their confidence and enjoyment, their performance plummeted, and almost 40% of them later lied about their scores. What *should* we praise?

We found that praising students' effort or strategies (the *process* they engaged in, the *way* they did something) put students into a growth mindset, in which they sought and enjoyed challenges and remained highly motivated even after prolonged difficulty. Thus coaches might do well to focus their athletes on the process of learning and improvement and to remove the emphasis from natural talent. A focus on learning and improvement tells athletes not only what they did to bring about their success, but also what they can do to recover from setbacks. A focus on talent does not.

We have also directly taught students the growth mindset. We have been developing a software program, called Brainology, in which students learn all about the brain and how to make it work better. Further, they learn that every time they stretch themselves and learn something new, their brain forms new connections, and over time they increase their intellectual ability. Research has shown repeatedly that teaching students the growth mindset strongly enhances their motivation and their achievement.

Coaches can identify their fixed mindset athletes by asking them to agree or disagree with statements like this: "You have a certain level of athletic ability, and you cannot really do much to change that;" "Your core athletic ability cannot really be changed;" and "You can learn new things, but you can't really change your basic athletic ability." They can also ask their athletes to complete this equation: Athletic ability is \_\_\_\_% natural talent and \_\_\_\_% effort/practice. They can then work on fostering a growth mindset in their players who place an undue emphasis on fixed ability.

## What About Coaches' Mindsets?

Of course, coaches themselves can have a fixed mindset. These coaches may convey to their teams that they value natural talent above all, they may spend little time with the athletes they deem less talented, and they may be intolerant of feedback from others (since they may see feedback as impugning their own ability). Research by Peter Heslin and his colleagues shows that business managers with a fixed mindset have qualities like this. However, after workshops that teach them a growth mindset, these same managers are more eager to help their employees develop and become more receptive to feedback from others.

A growth mindset coach is also more likely to foster teamwork and team spirit. When a coach has a fixed mindset, players will be eager to impress the coach with their talent and will vie to be the superstar in the coaches' eyes. However, if athletes know that their coach values passion, learning, and improvement, these are things that players can work together to produce.

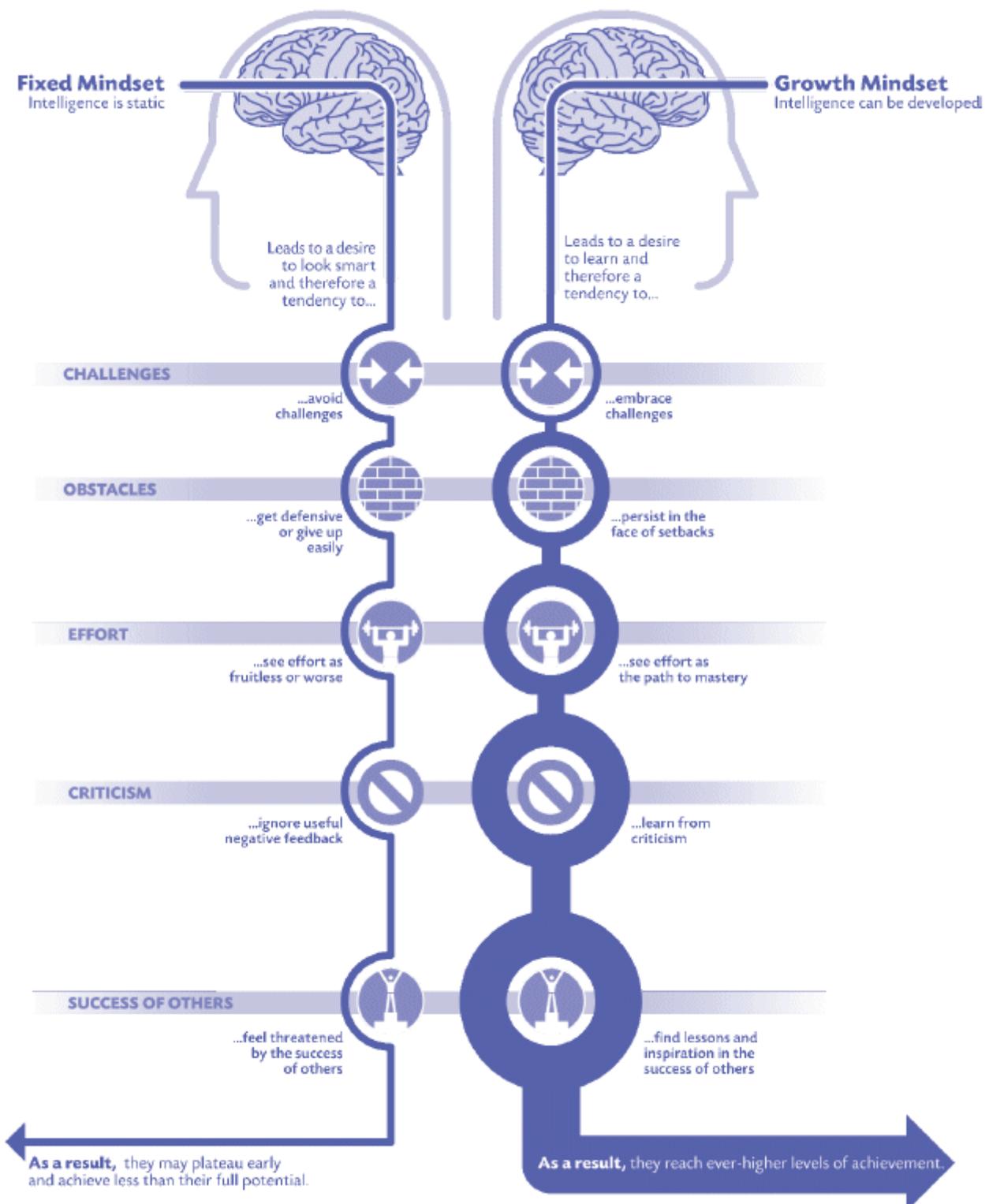
## Conclusion

At the level of the player, a growth mindset allows each individual to embrace learning, to welcome challenges, mistakes, and feedback, and to understand the role of effort in creating talent

At the organizational level, a growth mindset is fostered when coaching staffs present athletic skills as acquirable, value passion, effort, improvement (and teamwork), not simply natural talent, and present themselves as mentors and not just talent judges.

When coaching staffs have a fixed mindset, their job is simply to find the talent. When they have a growth mindset, their job is to inspire and promote the development of talent. It is in this mindset, I believe, that they will nurture a new generation full of Olympic athletes the likes of Michael Phelps and Nastia Liukin, athletes who love their sport and bring it to the highest level.

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**DIAGRAM OF MINDSETS BY NIGEL HOLMES**