

EXERCISE Growth Mindset – Theory of Intelligence

Activity Have students fill out the **Mindset – Theory of Intelligence** handout.

Purpose Illustrate what mindset is, how it impacts us and how we can change it. Also, distinguish between Growth Mindset and Innovator Mindset

Recommended with: Trail 3

Estimated Time Required 10-15 minutes

Key Points

We all carry around a great many mental models or theories, and we probably haven't given much thought to some of them. Yet, they can have a profound effect on how we behave.

Mindset is a choice. Whether we have a Growth or a Fixed mindset, an Innovator or a Status Quo mindset, Mindset is something we determine for ourselves, and most of us already have, but we can change that mindset if we want.

Mindset is frequently subconscious or at least unexamined. So, in order to change it we have to somehow become aware of our options.

When we recognize our subconscious assumptions, we gain the ability to make conscious choices about our mindset.

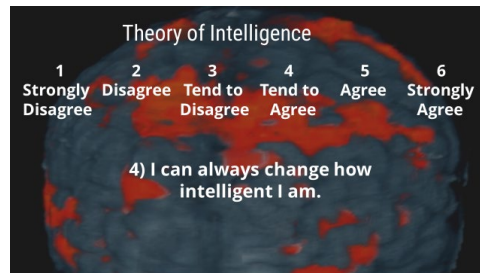
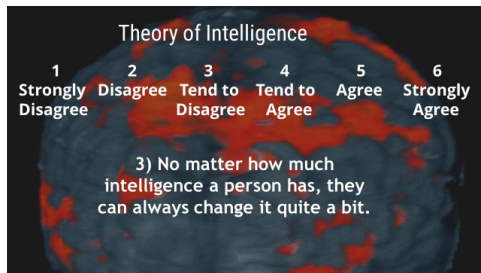
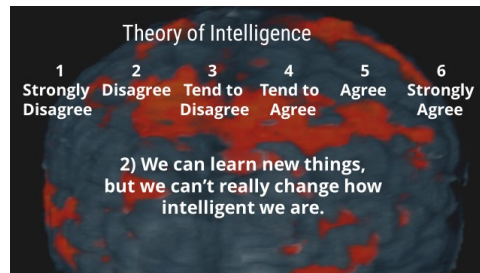
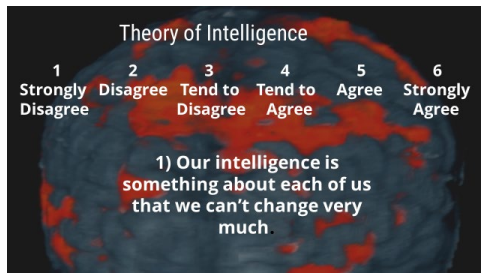
Important Note: Growth vs. Fixed mindset is a useful illustration of how mindset works, partly because students can identify with it and its implications. But *it has not been found to be predictive of innovation success* and it is *not* the same distinction that Innovator Mindset makes. *There is no correlation between a Growth Mindset as measured by Dweck's scale and an Innovator Mindset.* ($r = 0.0$) Students should use it to understand the concept of mindset, but not to describe or gauge their innovativeness.

References: Dweck Carol S. Mindset, *The New Psychology of Success* [Book]. - New York : Ballantine Books, 2006.

Dweck Carol S, Chui Chi-yue and Hong Ying-yi Implicit Theories and Their Role in judgements and Reactions: A World from Two Perspectives [Journal] // *Psychological Inquiry*. - 1995. - 4 : Vol. 6. - pp. 267-285.

Stauffer, D.A. (2015b), "Evaluating mindset as a means of measuring personal innovativeness", *International Journal of Innovation Science*, Vol. 7 No. 4, pp. 233-248.

Model Script I want you to rate each of four statements with a score of one through six, with one meaning you strongly disagree with the statement, six meaning you strongly agree and increments in between. [Use slides to display items.]



Read each of the four statements and have students score each one.



Scoring Add together your first and second items, to give yourself an “A” value.

Add together your third and fourth items, to give yourself a “B” value.

If your “A” value is larger, that indicates that you tend to have a “Fixed Mindset.” That doesn’t mean that you are set in your ways. It simply means that you believe intelligence is largely fixed and unchanging.

If your “B” value is larger, that indicates that you tend to have a “Growth Mindset.” That you believe intelligence can be developed.

Note This is part of the classic nature/nurture debate that has long raged among psychologists and there is no universal agreement. If anyone asks you to define what you mean by “intelligence,” tell them that is what you are asking them to do—give their preferred definition of intelligence.

Explanation This is a shortened version of an actual research survey that has been used to measure the mindset of students. It’s based on the work of Stanford Education Psychologist Carol Dweck, who has spent some 40 years researching how mindset impacts the way students perform in school, and her findings are very interesting.

Some of us tend to see our level of intelligence as a largely fixed attribute, while others see intelligence as something we have the power to change about ourselves. I doubt that most of us have spent much time pondering that question. We've simply adopted one perspective or the other without really thinking much about it. It's just an assumption we make, but one with some significant implications.

For example, Dweck describes a child who breezes through elementary school, making excellent marks with very little effort. The child's parents and/or teachers praise that success, telling them that they are "smart" or perhaps "gifted". The child develops a high level of confidence, but that confidence is based partly on the perceived ease of the work. When the child gets a little older and the work becomes more challenging, the mental model is that "easy" equates with "smart" and conversely "difficult" means "stupid" or at least less smart. So instead of rising to the challenge, the child resists doing the more difficult work and academic performance drops.

Dweck's research has found that when a child is praised for effort instead of ability the child tends to develop the attitude that one can get smarter by working at it. So doing challenging work becomes a means of getting smarter, rather than a threat to one's abilities. A child with this kind of mental model is more likely to embrace new challenges and work through them.

The issue isn't which mental model is "true". There's truth to be found in both perspectives. Yes, some people have more innate ability than others. And yes, we all need to develop our abilities. Still, one mental model is much more motivating than the other. It's more useful in terms of helping us learn and achieve.

Implications Dweck has identified a number of implications of this choice between two mindsets.

Those with a strong fixed mindset are more susceptible to holding stereotypes, presumably assuming that if intelligence is fixed, then so are other personal attributes.

Students with a strong fixed mindset are, by their own admission when surveyed, are more likely to cheat on a test, apparently because they feel pressured to keep up the appearance of being smart.

Students with a strong fixed mindset, when asked what makes them feel good about themselves, will typically say something like: performing better than other students. Students with a growth mindset are more likely to say something like: helping other students learn something.

We can debate whether the "Fixed Mindset" or the "Growth Mindset" is correct. However, one may be more helpful in meeting our objectives.

Dweck has successfully prompted measurable shifts in students' mindset. In one experiment, she did this by providing two groups of students with different sets of fabricated research (a ruse which was later disclosed to them). One set claimed to have conclusive evidence that intelligence is unchanging, and another set claimed to have definitive evidence that intelligence changes. She found predictable shifts in the average mindset scores for each group, based on the material they were provided.

Dweck's most significant contribution may be the body of work demonstrating 1) how influential mindset is on our values, beliefs and behaviors, and 2) that mindset can be changed with conscious effort. This is the theoretical framework and the research findings that provide a foundation for Innovator Mindset.