

Mindset student activities

Your brain started to form after the first 6 weeks of your development as an embryo. The number of cortical neurons (nerve cells) in your brain and how quickly they can process information is thought to be the basis of human intelligence (Roth and Dickie, 2005). Your human brain has areas dedicated to certain functions for example solving problems, processing sensory information, language, daydreaming and storing memory.

The neuroscientist Spreng (2009) analysed many brain studies to understand how the brain changes as we learn. Functional magnetic resonance imaging was able to show how the blood flow increased in certain relevant areas of the brain when we first learn something new.

When we start to learn something for the first time, the neurons send the necessary information to each other. When we practice and do the same thing repeatedly achieving mastery it takes increasingly less effort for them to communicate. Effectively, due to practice, the neurons start to co-ordinate their activities and behave as though they are wired together. The physical process of what happens in the brain as we learn is called myelination. This involves more of the fatty tissue myelin being added to the brain which increases the strength of neural impulses. Studies on the brains of musicians have shown a correlation between the number of hours of practice they have done and the amount of myelin in their brain. You can read more about the effect of learning on the brain in an online article in the publication *Science News for Students*. Accessed online 21/07/16 and available at <https://student.societyforscience.org/article/learning-rewires-brain>.

We all know that the functions of our brain can be impaired by the aging process or by brain injury or disease. The important question for you as a learner in higher education is whether you believe that it is also possible to go in the other direction and thus boost brain functions and increase your skills, memory and intelligence?



The self-theory of intelligence is sometimes referred to as Mindset. Research suggests that it is possible to have a fixed or a growth mindset (Dweck, 2006). People who have a growth mindset believe that their most basic abilities can be developed through dedication, practice and hard work. Adopting this approach means that your brain and your talent become the floor and not the ceiling of what you can achieve.

Perhaps none of us are always operating with a fixed or a growth mindset but more realistically we go between the two depending on how we are feeling, our levels of energy or anxiety and how important it is that we succeed with any situation or task. Not looking for short cuts, trying to be positive in your outlook and accepting that you can always do more, may improve your academic performance.

As you progress through this mindset activities worksheet you will be invited to differentiate between statements which represent a fixed and a growth mindset. Once you understand the difference between these you may be able to challenge yourself to further improve as a learner by developing more of a growth mindset and a 'can do' approach.

Take a look at the following letters **SUCCESSISNOWHERE** and write down the phrase that you see in the box below.

Look at the following statements and choose if they represent a growth or a fixed mindset.

I have never been good at maths	
With a bit more effort my essay writing would improve	
If I work harder next time I will pass the re-sit	
I'm not clever enough to understand this	
Plan B will be better than Plan A	
I give up too early	
Deadlines help me to focus	
This module is too hard	
I should never have started this course	
I can learn from my mistakes	

In her book on mindset, Dweck (2006) recommends a process for changing your mindset. She suggests that when faced with a challenge you should initially pause to hear your fixed mindset voice, this might be trying to protect you from failure and embarrassment. It is important to recognise that although you hear it you don't have to listen to it because you have a choice. Continuing through the process then you can respond to your fixed mindset voice with a growth mindset voice and then use this voice to take positive action.

Consider the following fixed mindset statements being made by a student in higher education and by applying the 'change mindset process' provide alternative growth mindset statements for each.

Fixed Mindset Statements	Alternative Growth Mindset
I can't write essays	
The other students understand this better	
The lecturer gave me too low a mark	
This is the best I can do	
It wasn't my fault that I missed the deadline	
There is too much work to do to pass	
I never sleep well the night before an exam	
I'm aiming for the pass mark of 40%	
I ignore feedback when I get coursework back	
There is no point going to the exam, I will just wait and do the re-sit	
Attending the revision tutorial would be a waste of time	
I lose an hour a day travelling to university	
It's hard to get in on time for the 9am lecture	
I hate group work. Other people hold me back	
Only my core modules are interesting	

Can you think of a situation you have faced as a learner where you think you gave up too early. Briefly describe this situation in the box below.

Applying what you have learned about the growth mindset, suggest an alternative way that you could have approached the situation to achieve a more positive outcome.

Finally, let us go back to the letters that you looked at earlier, remember they were

SUCCESSISNOWHERE

You wrote down the following phrase:

There are two ways to separate these letters each providing a very different phrase, one negative and one positive. The majority of people see the first version.

SUCCESS IS NOWHERE

SUCCESS IS NOW HERE

The scientific evidence confirms that it is possible to develop the capacity of your brain. If you accept that with enough effort and a careful and well thought through plan, you can work on improving your existing abilities. Challenges in higher education can become opportunities to 'grow' through as well as 'go' through your academic journey.

References

Dweck, C. (2006) '*Mindset: the new psychology of success*', New York, Ballantine Books. Accompanying website resources are available at <http://mindsetonline.com/abouttheauthor/index.html> [accessed 18/07/16].

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