

FROM THE SENIOR SCHOOL DIRECTOR OF TEACHING AND LEARNING

One of the challenges of understanding our brains is that they remain hidden from view. We don't see them grow and change the way other parts of our bodies grow and change. I have watched my children grow taller each year and they now are on the verge of overtaking me! Sometimes new clothes are barely worn a handful of times before they no longer fit! This all occurs in plain sight. Less obvious, and out of sight, is that their brains have also grown at an enormous rate.

Brain growth happens at a neurological level. Each brain on average has between 80 – 100 billion neurons. Racing through our neurons are electrochemical signals, carrying our thoughts and knowledge. It is essentially our intelligence.

Much of recent research of the brain has concluded that your intelligence can be changed. Brain capacity can grow much like weightlifting grows muscles. The process of struggling with new concepts and work leads to a growth of electrochemical signals and in turn neurons grow and develop. If the brain only deals with simple concepts, it does not grow. It needs to be challenged with challenging work. Heavier weights lead to more muscles.

Some conclusions from this research are:

- All students have the potential to increase their intelligence with hard work.
- More challenging subjects and concepts will lead to greater growth.
- When you get things wrong and really process why, your brain will grow the most.

 $Continuous\ effort-not\ strength\ or\ intelligence-is\ the\ key\ to\ unlocking\ our\ potential.$

(Liane Cordes)

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