



Queen Mary

University of London

Science and Engineering

Enabling Success: Taking control of your degree

Some differences between school and university

School

- Teacher says, pupils do
- Tightly defined learning objectives
- Constrained learning
- Tick box answers in assessments

University

- Lecturers guide, students explore
- Open ended learning objectives
- What if... learning
- Mix of assessments
 - all require knowledge and understanding
 - some require you to create an answer

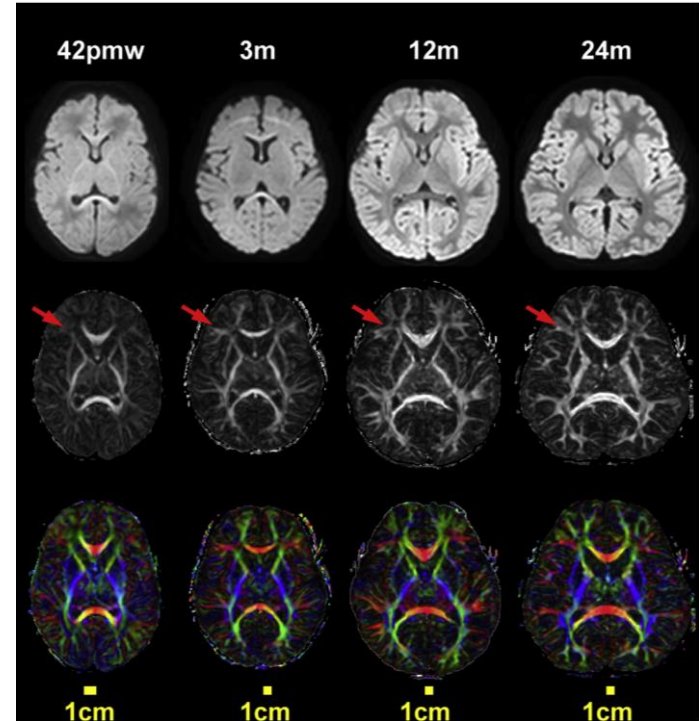
**This session is about how you think
so that you can do well at university.**



- Is the baby's "conversation" a sign that they are stupid? Why?

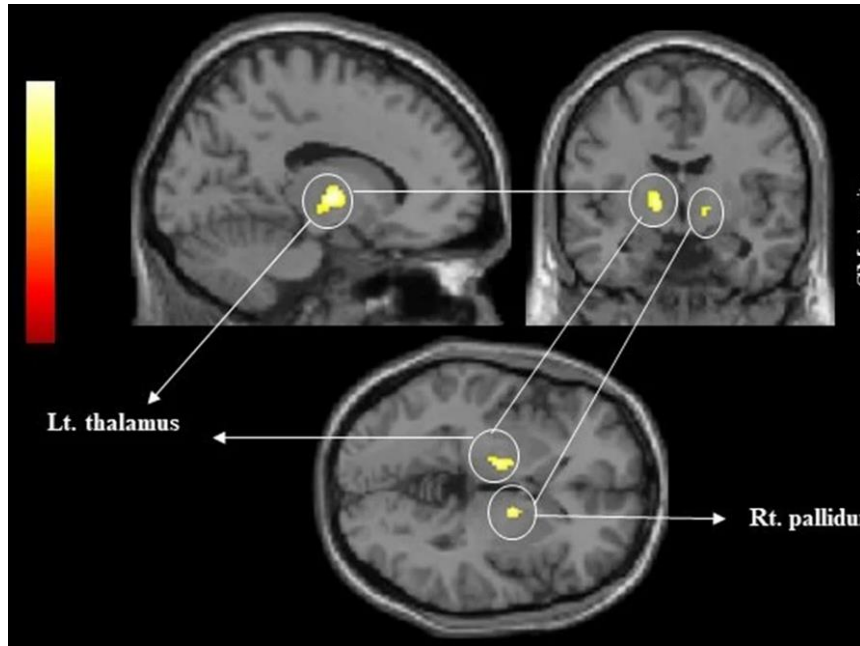
Human brain development in infancy

- How the brain grows is strongly affected by the experiences and interactions with other people and the world.



Ouyang et al (2019) *NeuroImage* 185: 836-850

Neuroplasticity and development in the adult brain



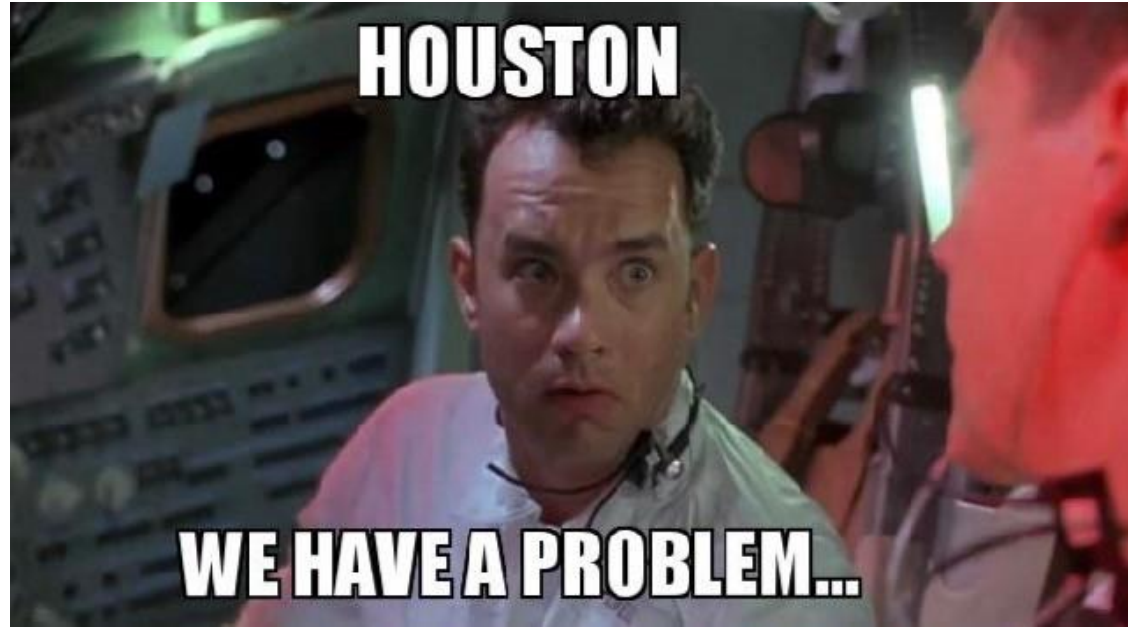
- Even as adults, when you learn, you grow neural connections.
- The more connections you have, the more you can do.
- What was once hard becomes possible.

Kumar et al (2021) Scientific Reports 11: 9712

Which statement do you agree with more?

- Menti

If you chose mostly “A” statements:



... but you can fix it. This session is the first step.

If you chose mostly “B” statements...



... you probably agree with the following:

- Effort is required to build new skills
- You are inspired by other people’s success
- You embrace challenges
- You accept (and learn from) criticism
- You persevere in the face of failure

This is known as the growth mindset.

The “A” mindset:

If you chose mostly As then you probably:

- Don't see a relationship between your effort and success/failure
- Want others to think you're smart / successful / talented
- Feel threatened by other people's success
- Either ignore feedback or you choose to not do what other people advise you to do
- Prefer to find other challenges, rather than overcome the current challenge

The “A” mindset:

Some examples of thinking in this mindset:

- “being smart” identifies who you are - people are either smart or not smart.
- I should be doing medicine / studying at another university because I deserve it.
- I have to study lots of hours and memorise lots of information to get A grades and then I will be smart / a good person / meaningful.
- People who get straight As are just talented at studying

These students have a growth mindset. How do they study?



Some behaviours of students with a growth mindset

- Seek help when they struggle
- Start assignments well before the deadline
- Go through the asynch materials before lectures
- Study in chunks throughout the semester (and don't just cram before the exams)
- Study with peers who also study well
- Balance study with socialising, sleep and looking after themselves
- Seek out (and act on) feedback
- May be upset with bad marks but will try to learn from the experience
- Doubt is a call to do more work
- Attend lectures to learn
- Seek out new info & experiences
- Try different ways of studying until they find ways that work for them – and fit the assignment
- Manage time to complete assignments

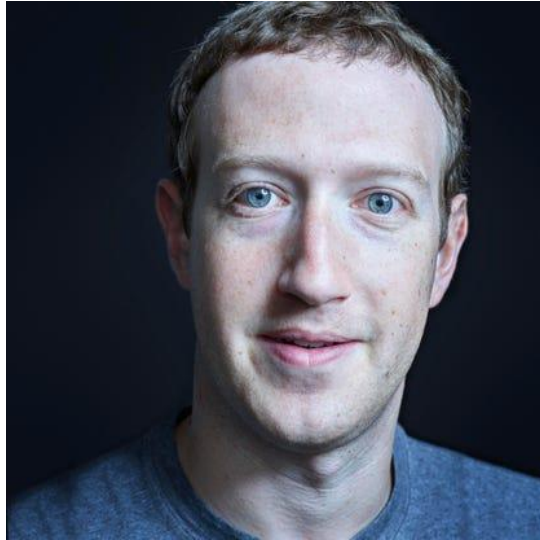
Part 2

Octavia E. Butler



- Worked as a telemarketer, a dishwasher, and a potato chip inspector while writing at night
- Multiple years of rejection only
- From 1978 able to live off her writing
- Now one of the most successful sci-fi authors of all time

Mark Zuckerberg



- Often cited as an example of instant success
- His programming skills were self-taught
- Before Facebook he wrote various software:
 - Chat systems
 - Study tools
 - Music platforms
 - Games

Randy Pausch's last lecture



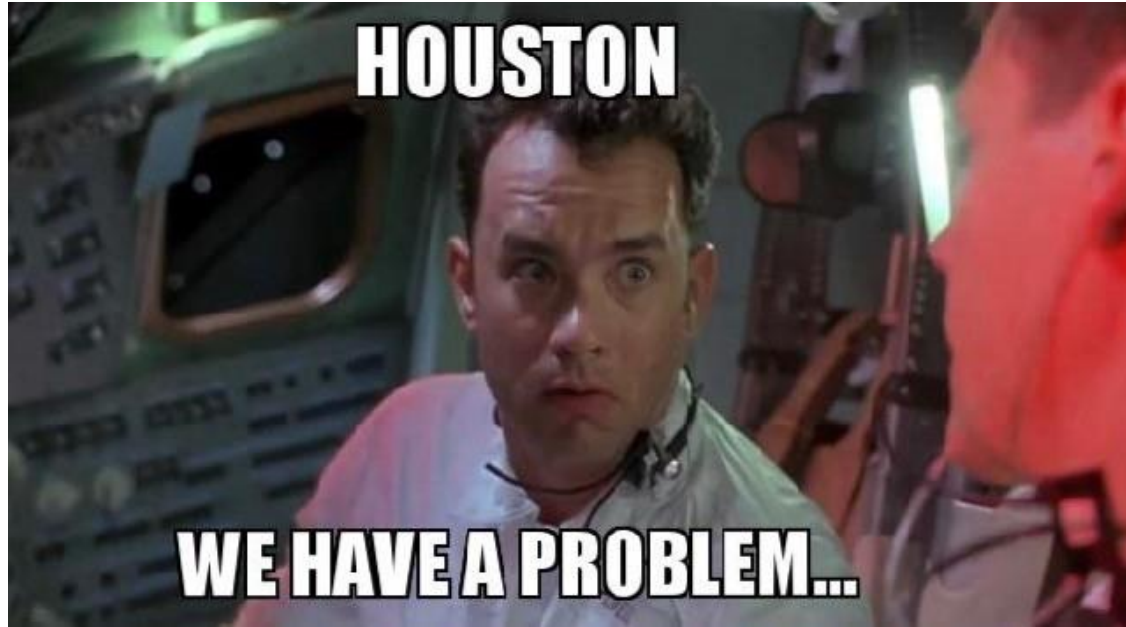
YouTube: the last lecture
Randy Pausch (76 minutes)

**The brick walls are there for a reason.
The brick walls are not there to keep us out.
The brick walls are there to give us a chance
to show how badly we want something.
Because the brick walls are there to stop
the people who don't want it badly enough.
They are there to stop the other people.**

Which statement do you agree with more?

- Menti

If you chose mostly “A” statements:



... but you can fix it. This session is the first step.

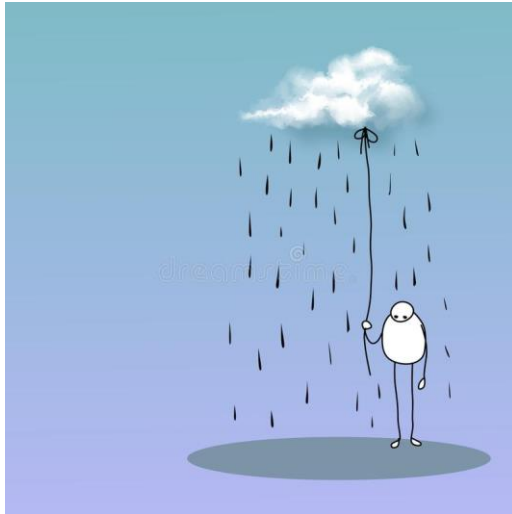
If you chose mostly “B” statements...



Features of an internal locus of control:

- I make things happen: I set concrete goals and make them happen
- Motivation *follows* behaviour
- Construct your own reality

“A” statements and the external locus of control



- Things happen in your life because of things outside of your control
- Mistakes are caused by other people
- Why bother trying? Whatever is meant to happen, will happen.

Why an internal locus of control is important at university

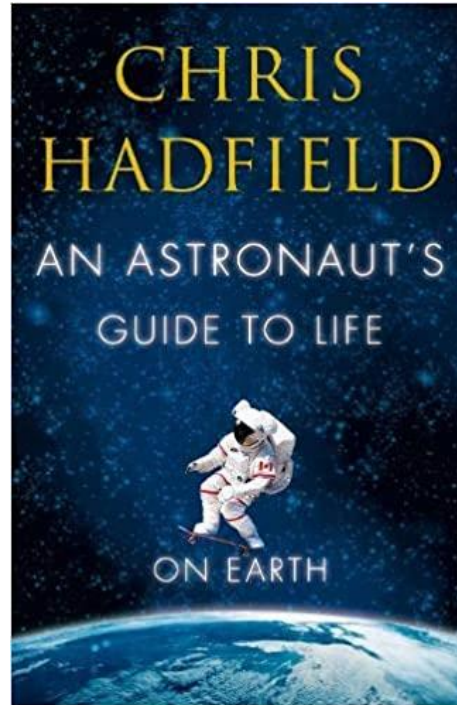
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Chris Hadfield



What would an astronaut do?

These students have an internal locus of control. How do they study?



Things you do when you study with an internal locus of control

- Start assignments well before the deadline and then manage time to complete them on time
- Go to the library and get the textbook before everyone else does; if it's not there, request it
- Decide on the balance between study, socialising, sleep and looking after themselves
- Find the information you need about your modules / assignments / studies / career
- Seek out new info and experiences
- When things don't work out, seek information on what went wrong and fix the problem
- Find out how assignments will be assessed and make sure you have the skills / knowledge / resources to meet the criteria
- Decide to make the most of your time at uni
- Approach other people to study together

Take home message number 1:

Grow your mind by using it in the right way

- Embrace challenges
 - Persist in the face of setbacks
 - See effort as the path to mastery
 - Learn from criticism
 - Find lessons and inspiration in the success of others
- Avoid challenges
 - Give up easily
 - See effort as fruitless
 - Ignore useful negative feedback
 - Feel threatened by the success of others



This is the fixed mindset – avoid!

Take home message number 2:

Take control of your studies

- Create your identity as a science student and act like you are a science student
- Be active not passive: in lectures, watching videos, all of your studying, developing your CV...

What will you do (differently) because of this session?



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