

Growth Mindset and Grit

Peter



UNIVERSITY OF
AUCKLAND
Waipapa Taumata Rau
NEW ZEALAND

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Agenda



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- Course Overview Summary
- T-Shaped Engineers
- Marks Plus Mindset
- Growth Mindset
- Grit
- Putting It All Together

Sem 2 Summary

ENGGEN 403

COURSE OVERVIEW

Course Directors

Professor Ashvin Thambyah
Mr. Peter Rachor



Course Coordinator

Amanda Di Ienno



60% Group work

- Team Canvas
- Team Project Report
- Systems Report & Video Pitch

40% Individual

- Personal Goal Setting
- Lecture Participation
- Quiz One
- Quiz Two
- Team Peer Reviews
- Personal Reflection

Need to contact us? Use the [Contact Form](#)



Lectures

- Monday & Tuesday
11am - 12pm
- Thursday 12pm - 1pm



Week-long Projects

- Team Project
- Systems Project

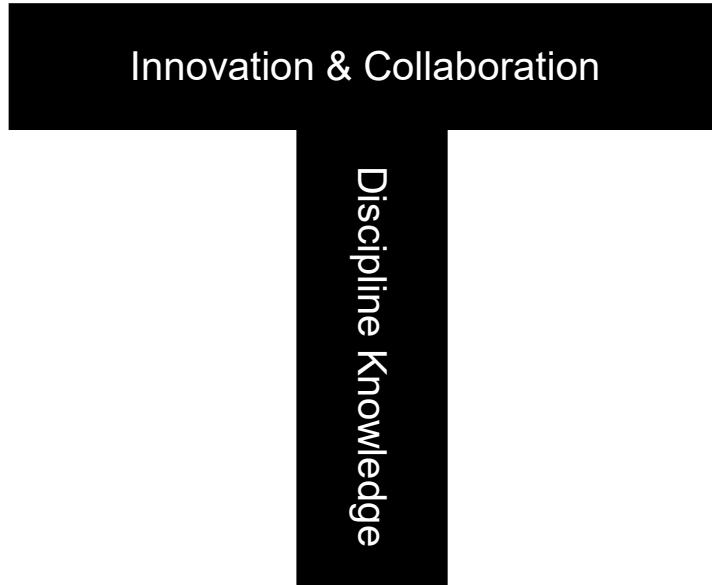
Challenges
&
Systems
Thinking

Solution
Analysis

Project
Execution

Systems
Week

T-Shaped Engineers



Skillset, Mindset and Practice

"T-shaped people " are those with a depth of knowledge in at least one discipline and a breadth of knowledge about innovation that allows them to work effectively with professionals of other disciplines to bring their ideas to life"

*– Tina Seelig, Director
Technology Ventures Programme
Stanford School Of Engineering*



T Shaped Thinking



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"Teaching engineering fundamentals in the classroom is important, but it's not enough," said Richard Miller of (US) National Academy of Engineering. "Solving our planet's Grand Challenges requires engineering expertise, but they won't be solved by engineers alone." Doubling down on even more hard sciences and math will not help. Instead, we need to incorporate new elements into engineering students' education to give them both the skillset and the mindset needed to become leaders in addressing societal challenges."



Washington Accord

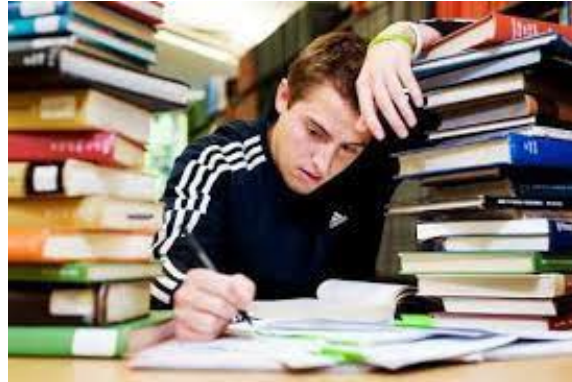
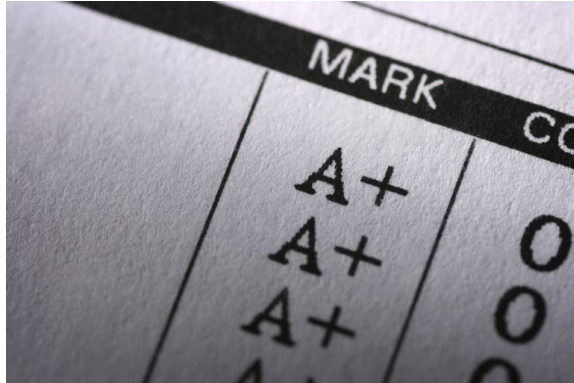


Marks Plus Mindset



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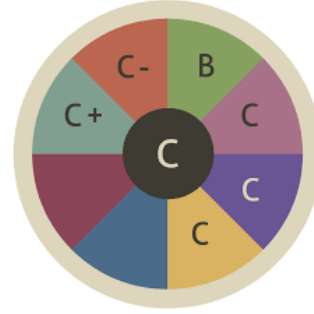
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Growth Mindset

Write down/type into your phone or computer:

- Something you have always been good at
- Something you feel you will never be good at
- Something you weren't initially weren't good at, but became good over time

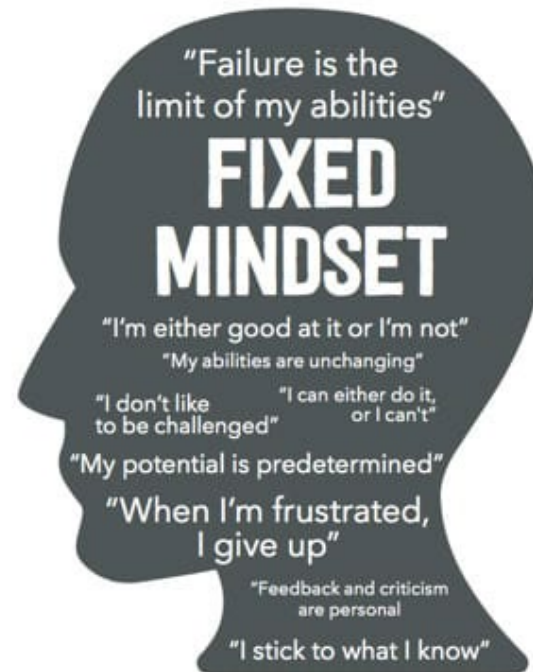


Growth Mindset



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Fixed Mindset

- I am bad at...
- I'm not as smart as...
- I'll never understand...
- I'm going to fail...

It might be uncomfortable
noticing your fixed mindset for
the first time – *this is normal!*

Growth Mindset



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Neuroplasticity

- Brain can be moulded (like plastic)
- What we focus on and how we discipline our thoughts and attitudes encourages brain growth in those areas
- New neural pathways are made



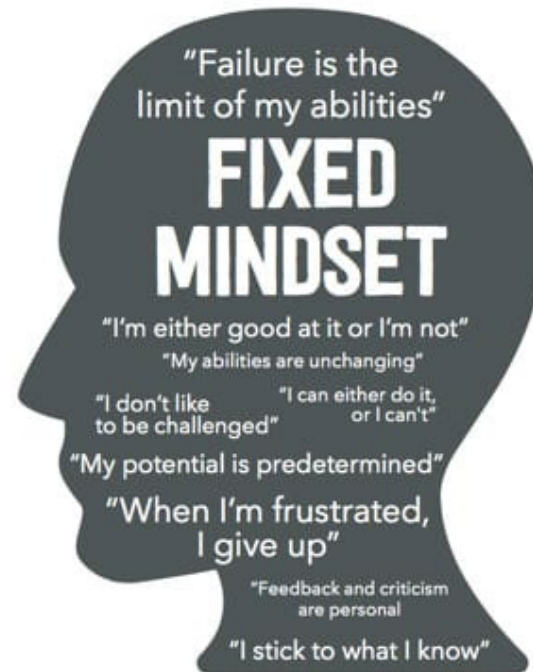
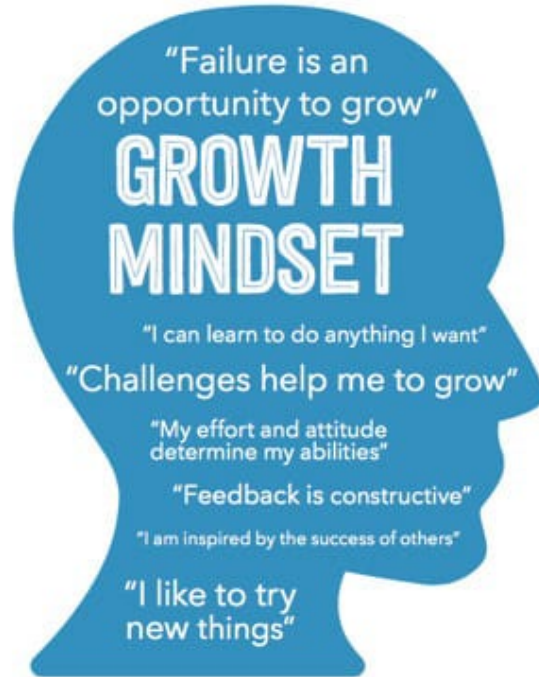
Not Yet.

Growth Mindset



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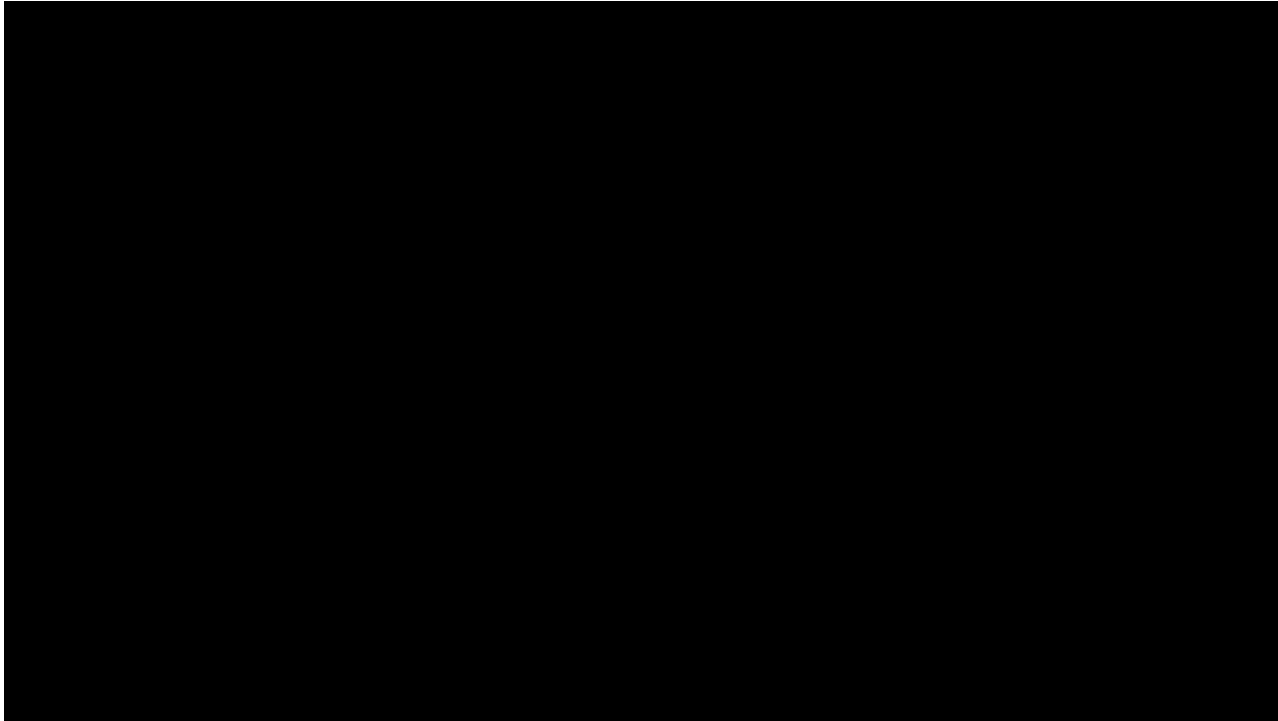
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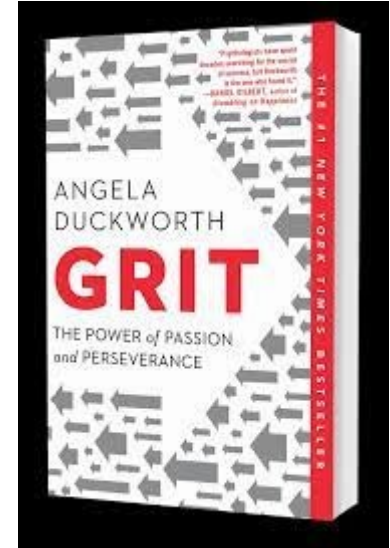
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Takeaways

- Being willing to take feedback, no really, be willing!
- Take on things that you may not be good at...not yet
- Challenges help me grow
- It's not a case of you have it or you don't
 - It's a work in progress – always!
- Don't reward things for the sake of it
 - It's a work in progress – always!
- Don't just say it...live it



- Passion and Perseverance For Goals Over A Long Period Of Time
- Talent Doesn't Make You Grittier – Unrelated, or Even Inversely Related
- Failure Is A Temporary Condition

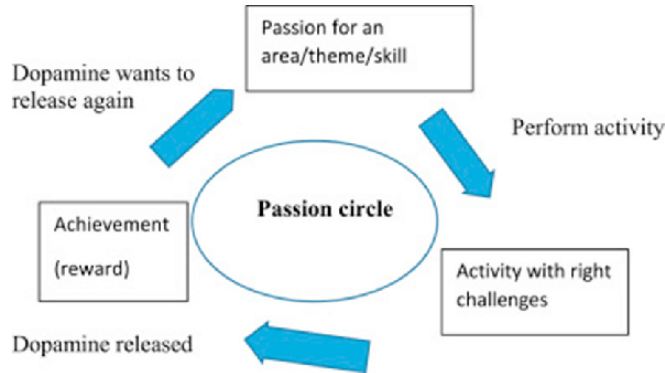


Four Key Pillars

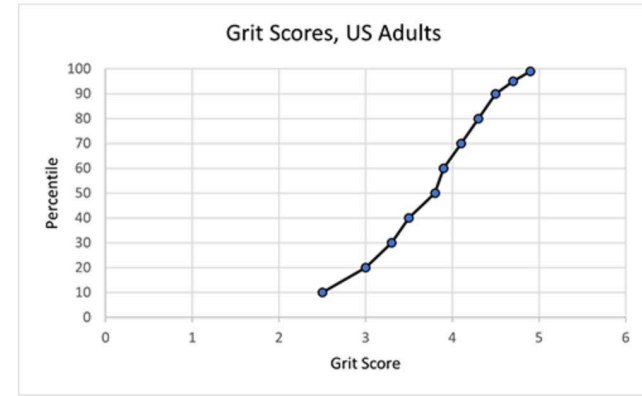
1. Passion and interest
2. Deliberate practice
3. Sense of Purpose
4. Sense of Hope



Grit Scale



Big Five Dimension	Grit-S	Consistency of Interest	Perseverance of Effort	Grit-O
Conscientiousness	.77*	.64*	.74*	.73*
Neuroticism	-.40*	-.32*	-.42*	-.37*
Agreeableness	.24*	.18*	.25*	.23*
Extraversion	.20*	.12*	.26*	.19*
Openness to Experience	.06	-.02	.14*	.07



How'd you do?
(scores are not fixed!)

How to Grow Your Grit

"Learning to stick to something is a life skill that we all have to develop." – Angela Duckworth

Interest

"Whatever it is that you want to do, you'll find in life that if you're not passionate about what it is you're working on, you won't be able to stick with it." – Jeff Bezos

Angela used the question: "what makes people successful and why?" to stay interested in her work and get through graduate school.

What question will compel you to stay gritty?

"Every gritty person I've studied can point to aspects of their work they enjoy less than others, and most have to put up with at least one or two chores they don't enjoy at all. Nevertheless, they're captivated by the endeavor as a whole." – Angela Duckworth

Practice

"You must zero in on your weaknesses, and you must do so over and over again, for hours a day, week after month after year. To be gritty is to resist complacency. 'Whatever it takes, I want to improve!' is a refrain of all paragons of grit, no matter their particular interest, and no matter how excellent they already are." – Angela Duckworth

Love the act of improvement, be better than you were yesterday and resist complacency.

The effort that you apply each day counts twice towards achievement. How? **Effort x Talent = Skill, Skill x Effort = Achievement**

Purpose

Angela surveyed over 16,000 Adult Americans and found the following to be true:

"Grittier people are dramatically more motivated than others to seek a meaningful, other-centered life. Higher scores on purpose correlate with higher scores on the Grit Scale." – Angela Duckworth

The desire to aid to the wellbeing of others is likely to sustain your interest and make you grittier.

How can you connect what you do to the well-being of others?

Hope

"Grit depends on a different kind of hope. It rests on the expectation that our own efforts can improve our future." – Angela Duckworth

Grit requires an enduring belief that your skills are malleable and not set in stone.

Modern science shows that our brains continue to grow well past childhood. Daily experience continuously shapes the adult brain.


Ditch the idea of having fixed abilities and recall time when you learned something you thought you never could: driving a car, learning a new sport, learning a new software program, etc.

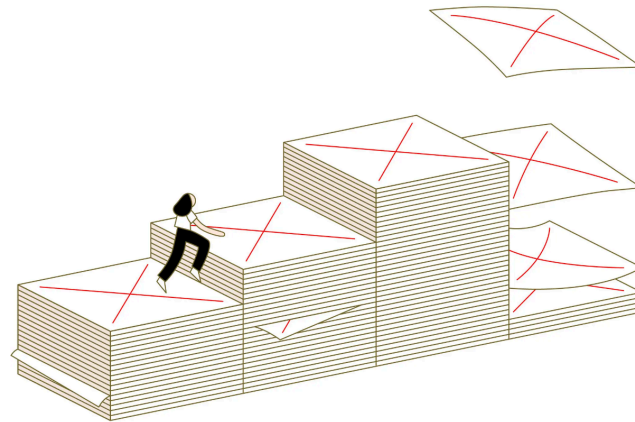
- Takeaways
- Perseverance, resilience, mental toughness, unyielding attitude leads to success in achieving life goals
- Ability to delay instant gratification in favour of long-term success
- People with high levels of grit are better able to find solutions when problems and challenges arise
- Hang in there!

The New York Times

Do You Keep a Failure Résumé? Here's Why You Should Start.

Failure isn't a roadblock. It's part of the process.

 Share full article

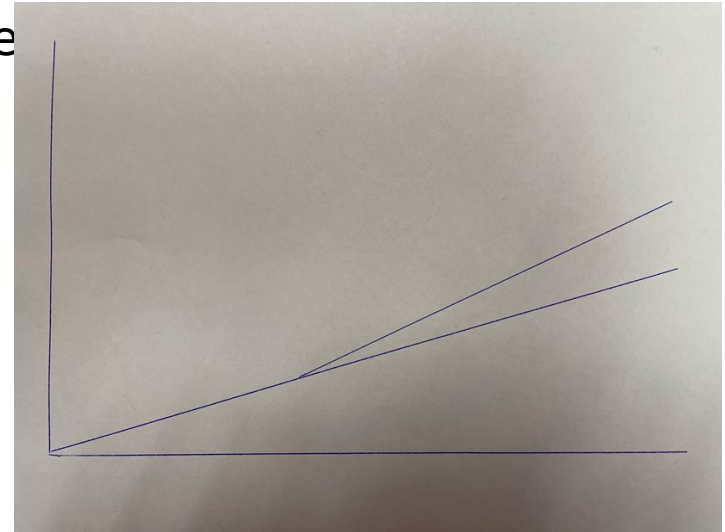


Rose Wong

Tuesday, 16 July 2024

Practising Growth

- ENGGEN 403 provides an excellent place to practice Growth Mind set and Grit
- Think about how you might integrate these your goal setting
- Consider how you might approach the two team projects after reflecting on Growth Mindset and Grit
- Is this just common sense?
Sure, but validated by research
- If it important to you, begin change within next 24 hours!



Ed Sheeran



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REMINDER



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Personal Goal Setting assignment

Due Friday 19 July @ 10 PM

(Accepted on Canvas until 11:59 PM)

Questions?



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