Teaching & Learning

Alex Cronin

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Contact Hours

- Lectures:
  - As per time table.
- Labs:
  - As per time table. You may not swap labs without written consent from me.
  - They start in the first week.
- Office Hours:
  - By appointment only. Please contact me with specific issues you would like discussed, if they are very basic that is not a problem. I just want you to come ready to learn. And if it is private please you can say that.

Support

- Moodle Forums:
  - Every day – use them every day
  - Email filters – set up appropriate ones
  - Support others do not do it for them - this is a serious offence.
- Extension request due to ilness or serious issue
  - Notify me via email & submit documentation to Aine. Documenation available on topic 2 on the Computer Science Faculty Page on moodle http://moodle.griffith.ie/course/view.php?id=2324
- Email:
  - Subject: Module Name - Full time/Part time - Student number: Personal Issue

How I run lectures (slide 1 of 2)

- Lectures
  - Arriving on time is essential for you and me!
  - We will start with an MCQ or student led group revision session.
  - I will talk and listen a lot and I would like you to also.
  - You will be interacting with yourself (mindfully), a partner, a group, the entire class.
  - Do not fear giving a wrong answer. I won't bite
  - Some of the discussions will not have a right or wrong answer

How I run lectures (slide 2 of 2)

- I'd rather have you try many times and get things wrong/right than just try the only times when you get things right.
- If you have a query about anything at any time please stop me immediately and ask.
- I am not looking for your to ask good questions, you are hear to learn how to do that.

How I run labs (slide 1 of 2)

- I'm hands off in labs.
- I'll wander around the lab to see how students are progressing with the provided programming text and also the assignments, and project.
- Call me over whenever you need help at any point in time.
- Call me over too often at the beginning so I can help you to learn to ask better questions of yourself, your partner, your group and the internet.

How I run labs (slide 2 of 2)

- In the early labs I expect you to work through the provided programming text.
- I would **strongly** suggest that you do not copy paste code from the text but type it out instead.
- If you copy paste you will learn nothing
- By typing it out fully you will quickly learn the patterns of GUI development
- Personal Experience is one of the best teachers you will ever have take advantage of it.

What I would like of you in this course

- I would like you to to be interactive in lectures and labs. Interaction is good and you'll retain a lot more information if you do.
- Don't be afraid to speak up when you ask a question or give a reply.
  - I'd like to hear you clearly as would your class mates
- You will benefit from doing a lot of self and group learning and study
  - Particularly the programming text

My Teaching And Learning Philosopy

- Books
  - Make it Stick by Peter C. Brown
  - Mindset by Carole Dwek
  - Peak by Anders Ericsson
- How I learned
  - Started listening to Ted Talks then got addicted
  - Started listening to Brian Johnston on his “Philosophers Notes” you tube channel and got addicted.
  - Listened to the audio books and bored people with the insights at every opportunity.

The Science of Successful Learning

Embrace difficulties

STEP 01

The more effort required to retrieve, the more learning takes place.

Avoid illusions of knowing

STEP 02

Familiarity is not mastery. We are drawn to immediate, short term gains, not slower, effortful, long term retention.

To learn, retrieve

STEP 03

Periodic practice and testing strengthens retrieval routes. Test yourself rather than constantly re-reading notes.

Space it out, mix it up

STEP 04

When testing yourself, variety, and a little time to forget, raises the challenge of retrieval and results in greater retention.

Move beyond learning styles

STEP 05

We have multiple intelligences and by drawing on a wide variety, you improve retention.

Make it Stick

Increase your abilities

STEP 06

Embrace a growth mindset, practice like an expert and construct memory cues.

Elaborate

STEP 07

Find different layers of meaning in new material by explaining ideas in your own words and by making connections.

Generate

STEP 08

Attempt to answer a question or solve a problem before being shown the solution. Wade into the unknown and puzzle through it.

Reflect

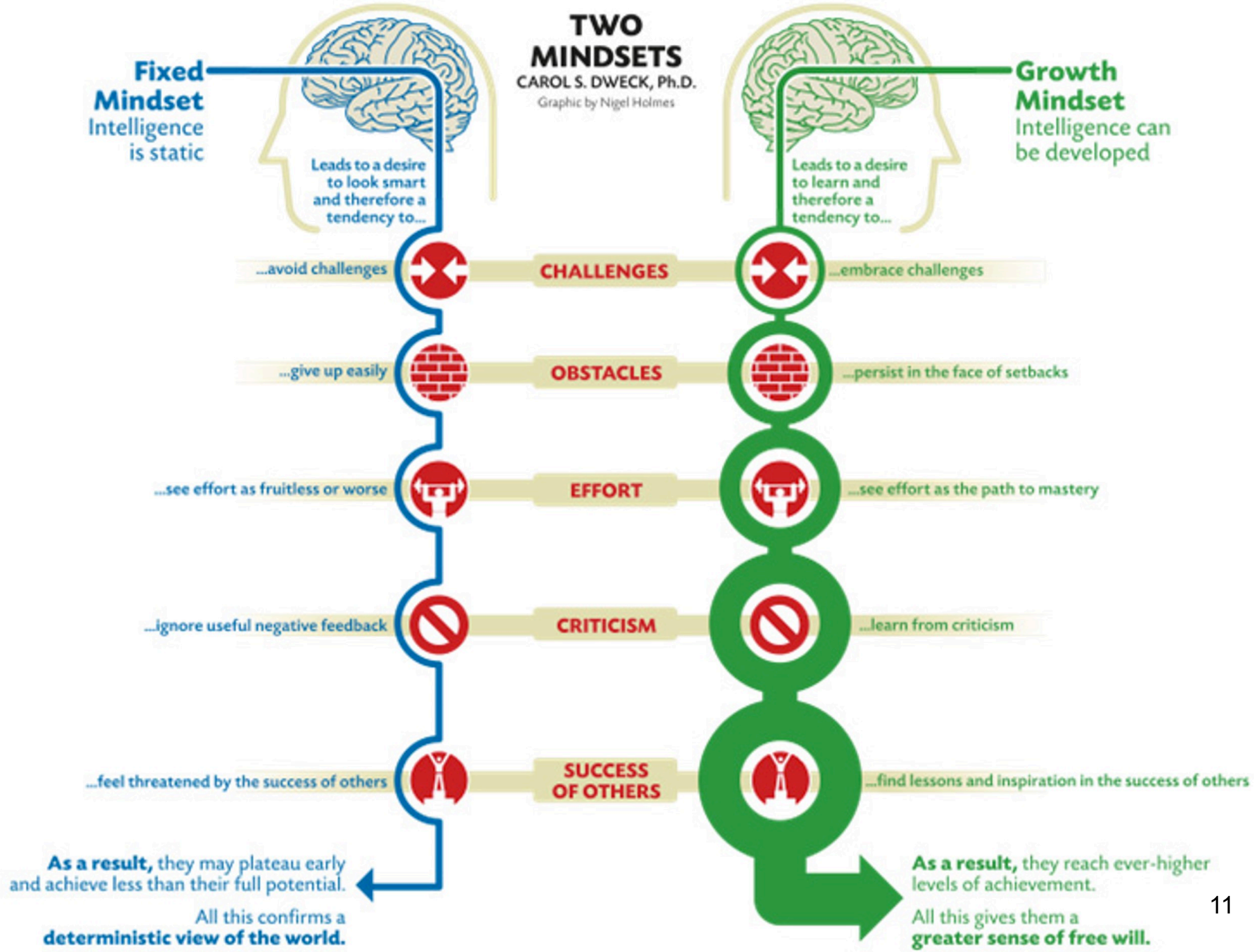
STEP 09

Combine elaboration and retrieval by recalling learning, connecting learning and reflecting on the success of the learning.

Calibrate

STEP 10

Use objective measures, such as tests or expert feedback, to clear away illusions and adjust the accuracy of your judgements of your learning.


TWO MINDSETS
CAROL S. DWECK, Ph.D.
Graphic by Nigel Holmes
Fixed Mindset
Intelligence is static
Growth Mindset
Intelligence can be developed
Leads to a desire to look smart and therefore a tendency to...
Leads to a desire to learn and therefore a tendency to...
...avoid challenges
CHALLENGES
...embrace challenges
...give up easily
OBSTACLES
...persist in the face of setbacks
...see effort as fruitless or worse
EFFORT
...see effort as the path to mastery
...ignore useful negative feedback
CRITICISM
...learn from criticism
...feel threatened by the success of others
SUCCESS OF OTHERS
...find lessons and inspiration in the success of others
As a result, they may plateau early and achieve less than their full potential.
All this confirms a deterministic view of the world.
As a result, they reach ever-higher levels of achievement.
All this gives them a greater sense of free will.

The 4 Different Kinds of Practice (from Anders Ericsson *Peak* 2016)

1. Naive Practice

What most people do. You take up some new activity; practice it a little bit, maybe get some lessons; and do the same things over and over until you reach a *comfort zone*. At that point you stop improving.

2. Purposeful Practice

A concerted effort to improve some skill by:

- Having a well-defined specific goal
- Keeping the focus on that goal
- Using feedback to improve performance
- Frequently getting out of your comfort zone

3. Proto-Deliberate Practice

Some domains lack the pre-existing knowledge and objective measures of success required for true deliberate practice. Still, you can approximate the benefits of deliberate practice in these domains by doing 3 things:

- Find an expert (or experts) whose performance clearly outstrips that of others in that domain.
- Figure out what they do differently
- Try to develop training routines that allow you to follow their lead

In short, try to make up for the lack of informed knowledge that is needed for deliberate practice.

4. Deliberate Practice

This is purposeful practice of an informed kind (i.e. in a domain with objective standards for success and well-known training techniques). It has 7 elements

- Developing skills that others have figured out, using practice regimens designed by coaches/teachers.
- Consistently moving outside your comfort zone
- Having well-defined specific goals
- Using full attention and conscious actions
- Using feedback and modification to reach your goals
- Developing effective mental representations
- Building upon your preexisting skillset

Weak — **A Spectrum of Practice Possibilities** — Strong

Group & Individual Revision Questions

- How do you learn in lectures?
- How do you learn in labs?
- How do you learn in other environments?
- How could you learn more effectively?
- Why do you not do it this way?
- What one thing could you easily change that would start you learning more effectively?
- For next week : What is a “mission statement” and why might it help you study more effectively?