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LEARNING

PROGRAMMING

PROGRAMING IS:

THINKING ABOUT THINKING





PROGRAMMING IS

# FRAMING THE PROBLEM





# TWO TRAINS:

- Train A leaves the station at 2:15, going 20 miles per hour
- Train B Leaves the station at 3:00, going 45 miles per hour
- When do they collide?





# THE HARD WAY:

TRAIN A LEAVES THE STATION AT 2:15, GOING 20 MILES PER HOUR  
TRAIN B LEAVES THE STATION AT 3:00, GOING 45 MILES PER HOUR

B  
X: 0

45 MPH

A  
X: 15

20 MPH





# THE EASY WAY: REFRAME THE PROBLEM

TRAIN A LEAVES THE STATION AT 2:15, GOING 20 MILES PER HOUR  
TRAIN B LEAVES THE STATION AT 3:00, GOING 45 MILES PER HOUR



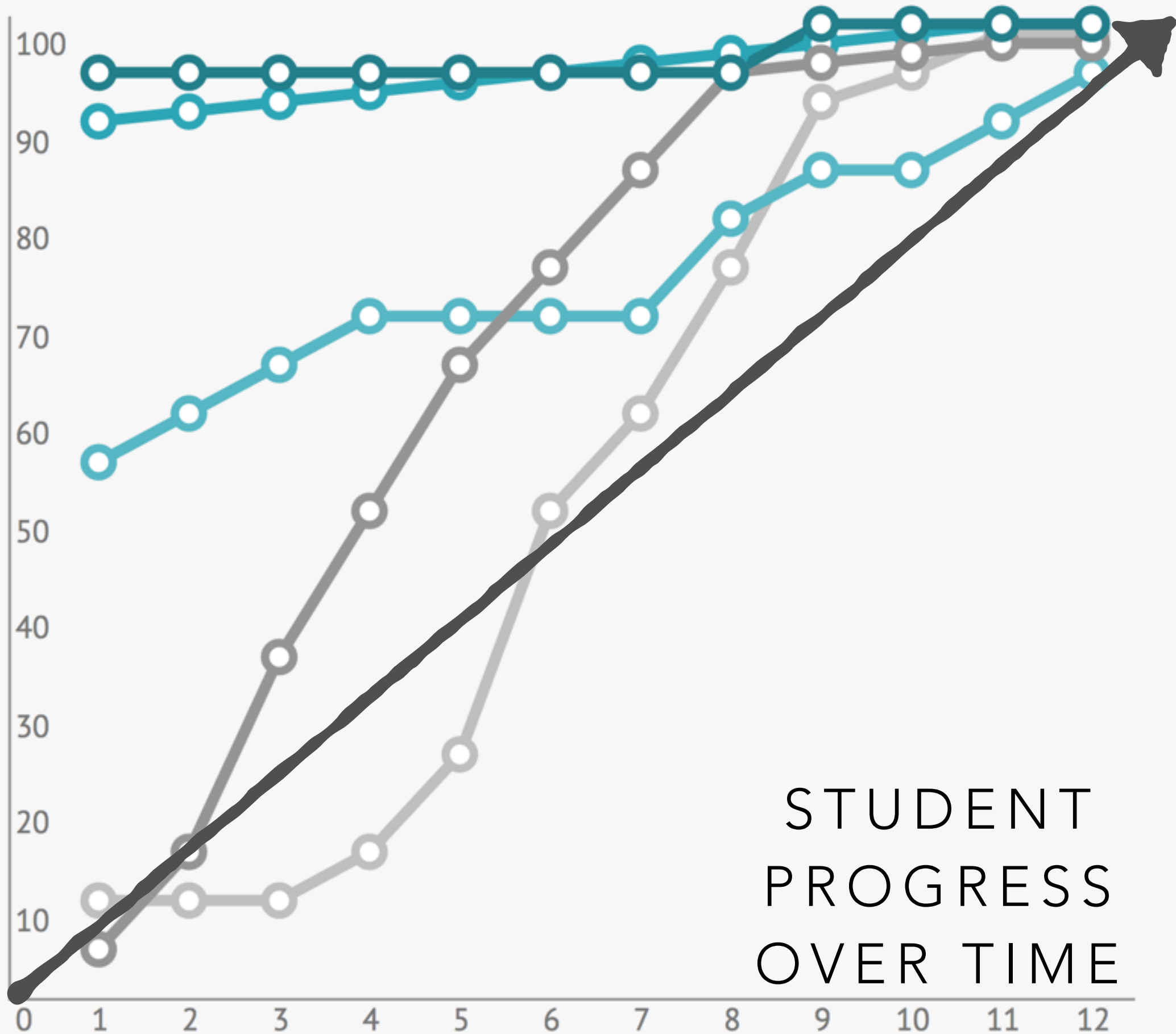




# THE LEARNING PROCESS

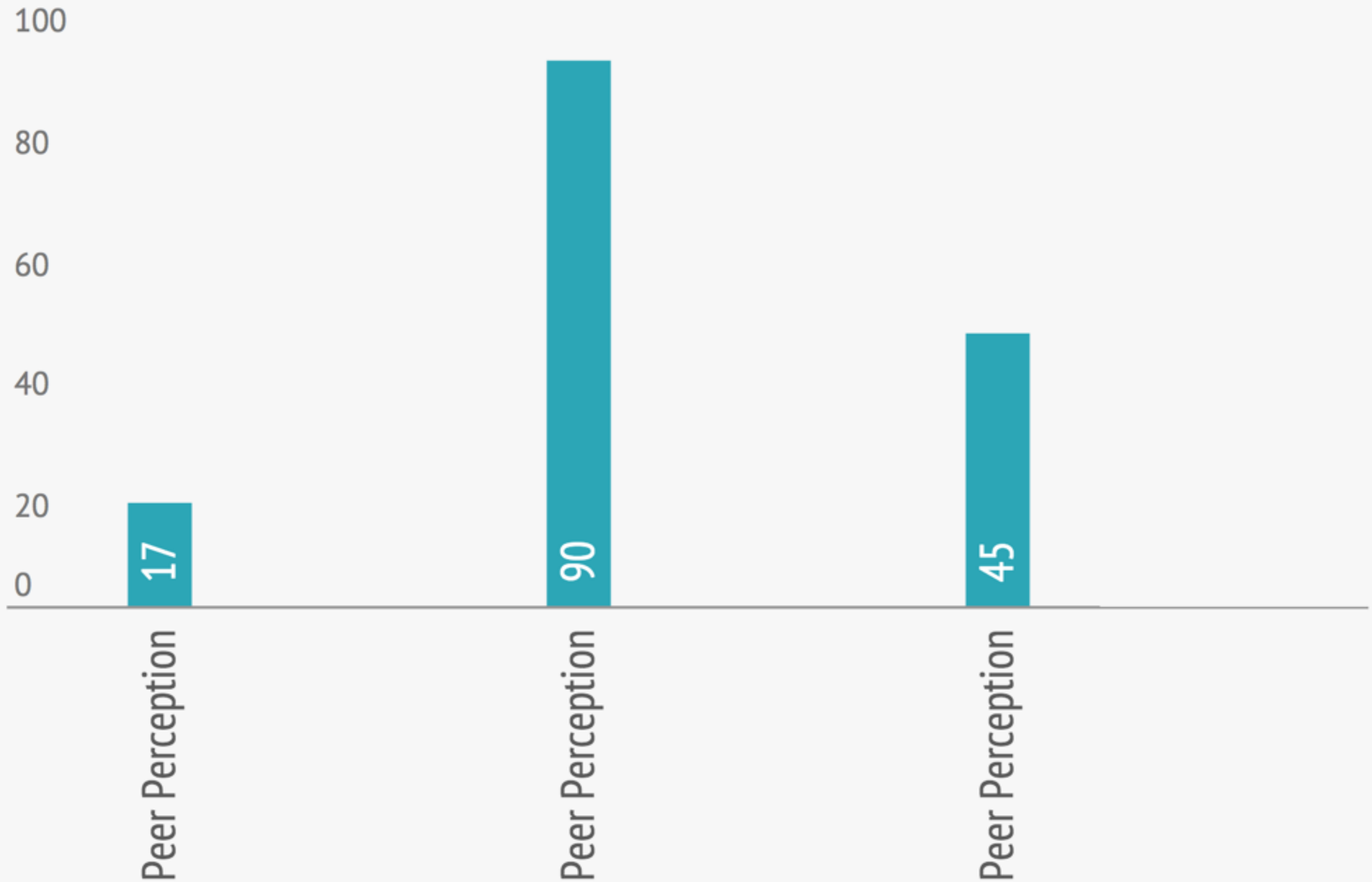


# AIM UP AND TO THE RIGHT



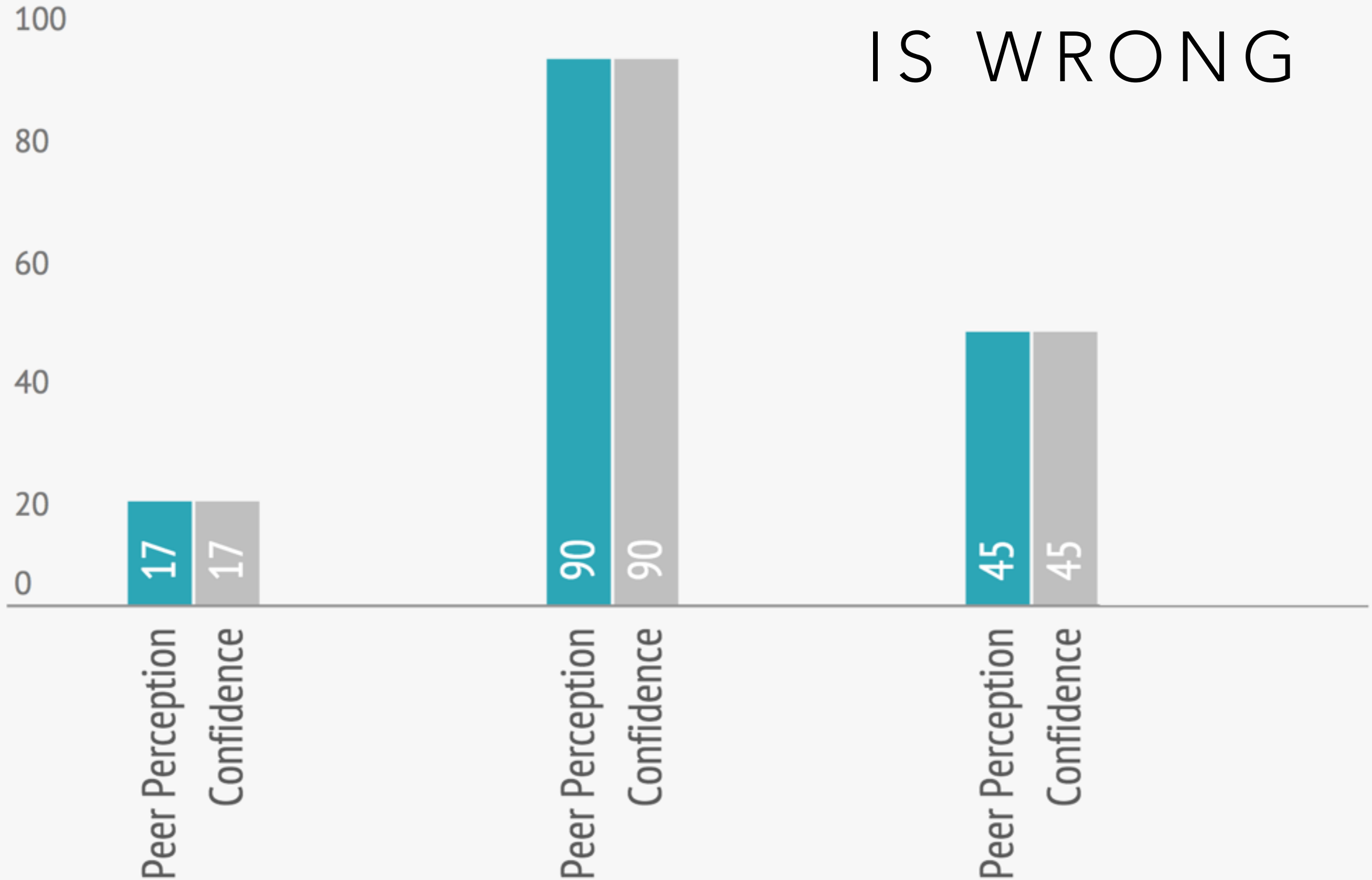


# THE STUDENT PERCEPTION



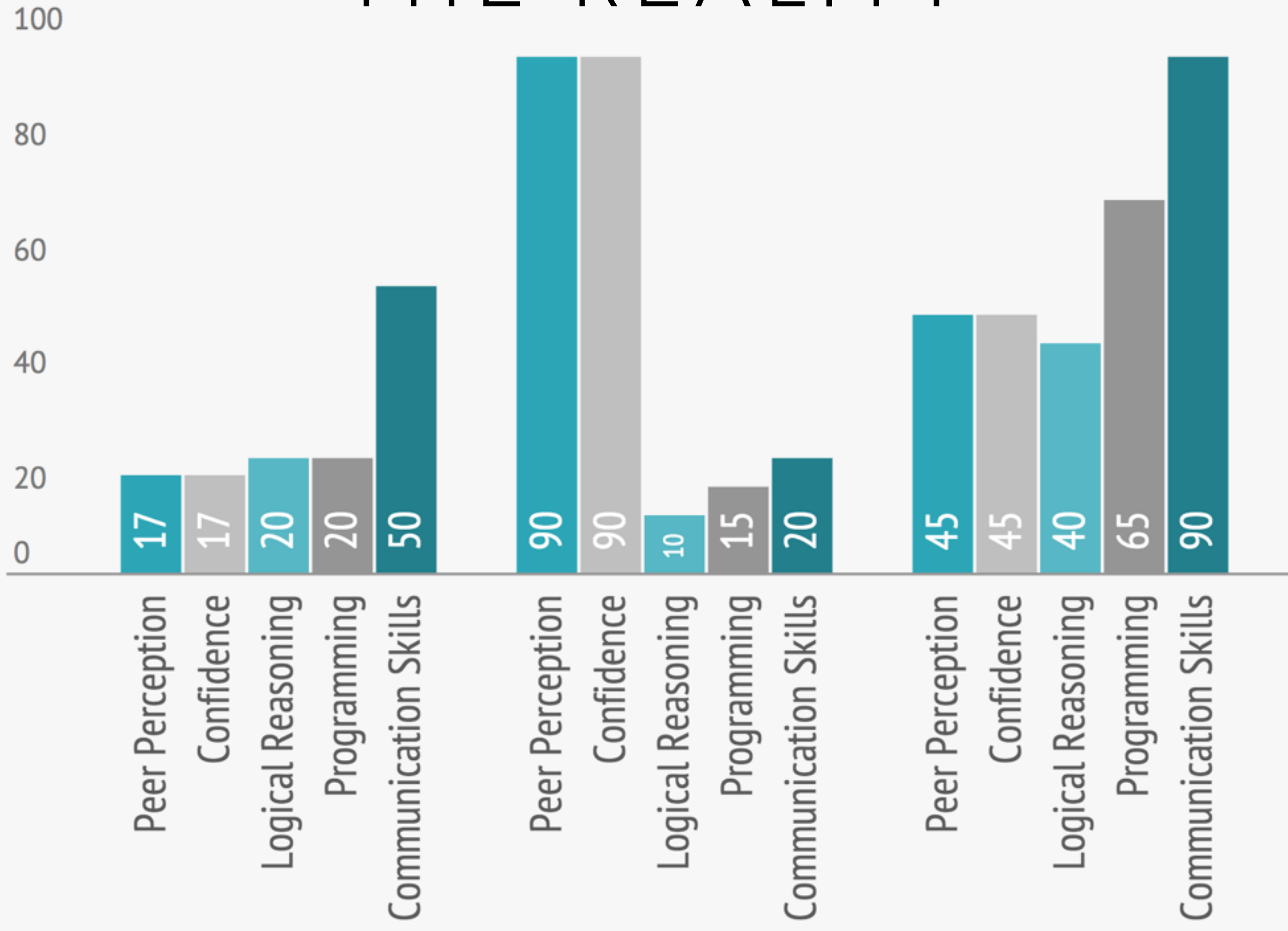


# THE STUDENT PERCEPTION IS WRONG



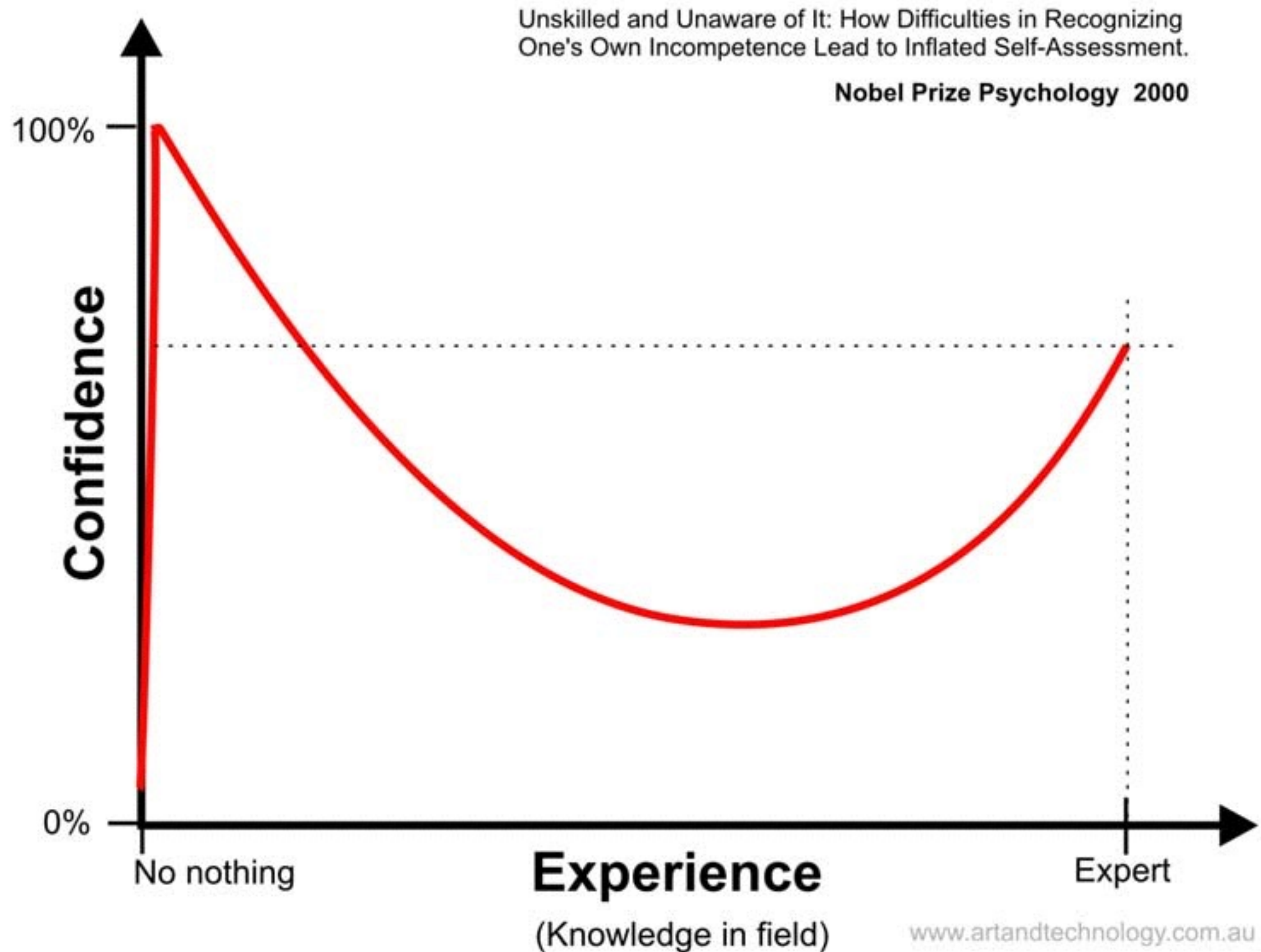


# THE REALITY





# THE DUNNING-KRUGER EFFECT





DON'T PANIC

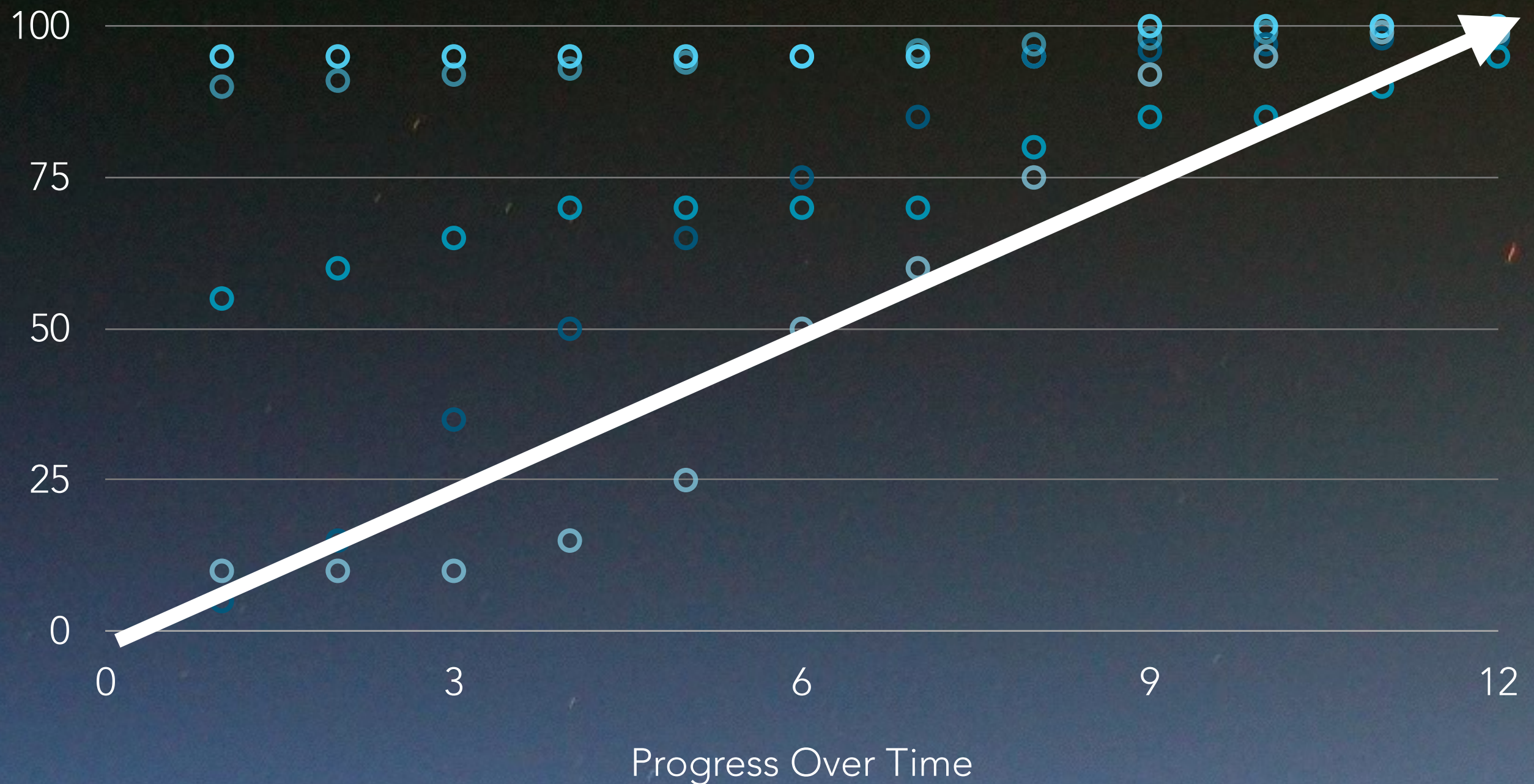


# YOU'RE NOT DUMB



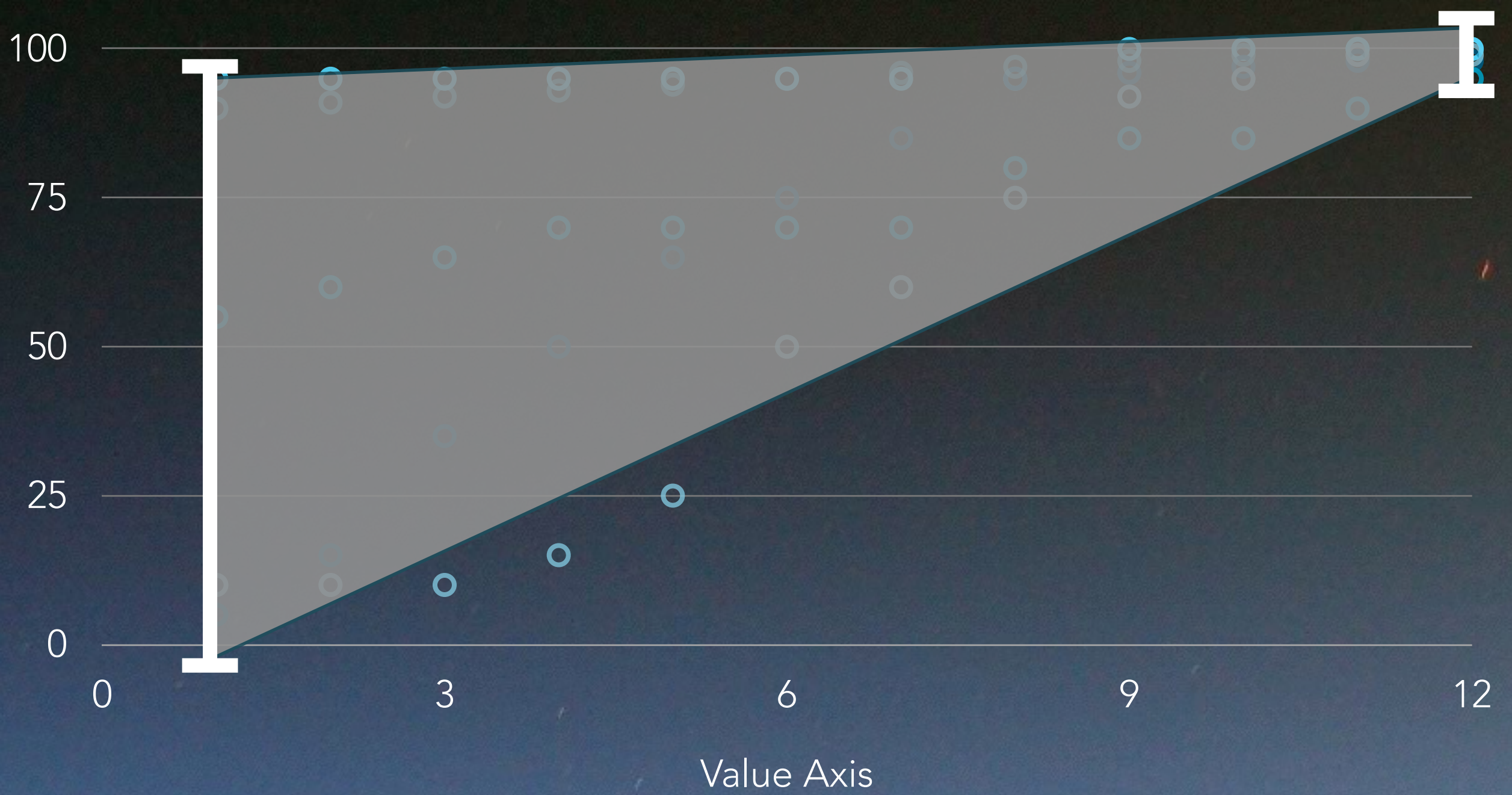


# YOUR JOB IS TO GET UP AND TO THE RIGHT





# MY JOB IS TO GET YOU BUNCHED UP





YOU HAVE TO  
DO IT, NOT  
READ IT





# DON'T DISTRACT YOUR PEERS

NO: SOCIAL MEDIA, GAMING, SMS, IM, SLEEPING.

YES: LISTENING. ASKING QUESTIONS. TAKING NOTES, ON PAPER.





A misty, foggy landscape with a white picket fence in the foreground and dense trees in the background. The scene is hazy and atmospheric, with the fog obscuring the details of the trees and the ground. The fence is a simple white picket style, running along the edge of the path. The overall tone is quiet and contemplative.

THERE ARE [ADJECTIVE] QUESTIONS.  
ASK THEM ANYWAY

**SERIOUSLY.**



# OTHER THINGS

- Daily schedule (breaks/etc.)
  - It will vary
  - Break Schedule (Ask!)
  - Tomorrow proves the rule
- Absences:
  - Scheduling appointments
  - Illness
- Starting Your Toolbox:
  - Backups
  - Display Adapters
- When to ask questions
  - Hint: not while I'm eating
  - In class vs. Outside of class
- Your Tools:
  - Nutrition
  - Patience
  - Resilience
  - Sleep
- Time Expectations



# IMAGE CREDITS:

Girl with Camera: <http://www.flickr.com/photos/skippy/208393621/>

Train Station: <http://www.flickr.com/photos/brostad/2764467121/>

Train Tracks: <http://www.flickr.com/photos/pagedooley/3351663193/>

Citadel: <http://www.flickr.com/photos/47283811@N06/11653306543/>

Girl with Hands on Ears: <http://www.flickr.com/photos/bolonski/6899771379/>

Graphs created with: <https://infogr.am>

Tent in the Mountains: default Keynote stock imagery

Dodo: <http://www.flickr.com/photos/arminflickr/55192044/>

Starry Evening: [http://www.flickr.com/photos/izzie\\_whizzie/1172195060/](http://www.flickr.com/photos/izzie_whizzie/1172195060/)

Foggy Day: <http://www.flickr.com/photos/alicepopkorn/8141067886/>