

# Teenagers and their brains

What motivates them most, and why?

Dr Sarah McKay | Neuroscientist



health  
dopamine  
pregnancy  
girl  
orgasms uterus  
mind grey  
female  
woman  
sex stress dementia male  
fertility brain pill  
childhood neuron  
PMS periods love oxytocin  
matter oestrogen  
menopause puberty ovaries  
breasts mental depression







Bian et al 2017



Hoekzema 2016



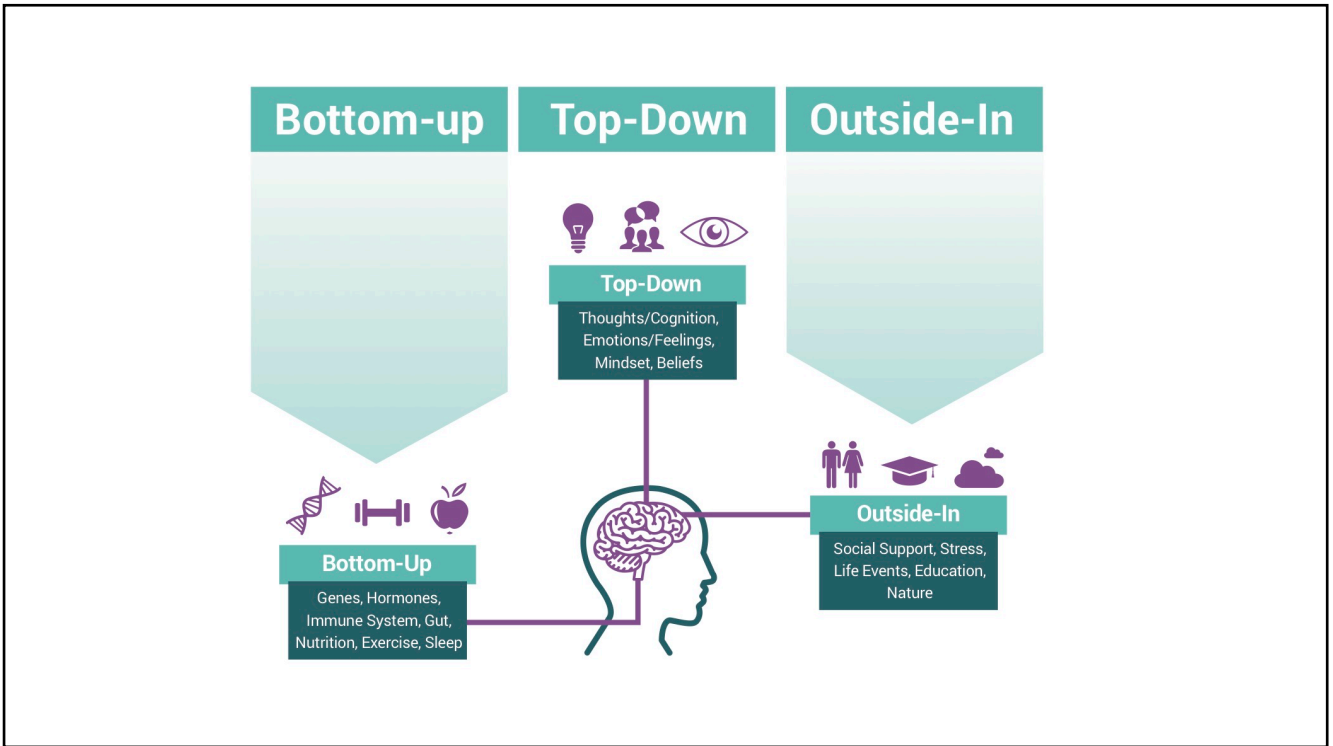






He aha te mea nui o te ao.  
What is the most important thing in the world?

He tangata, he tangata, he tangata.  
It is the people, it is the people, it is the people.



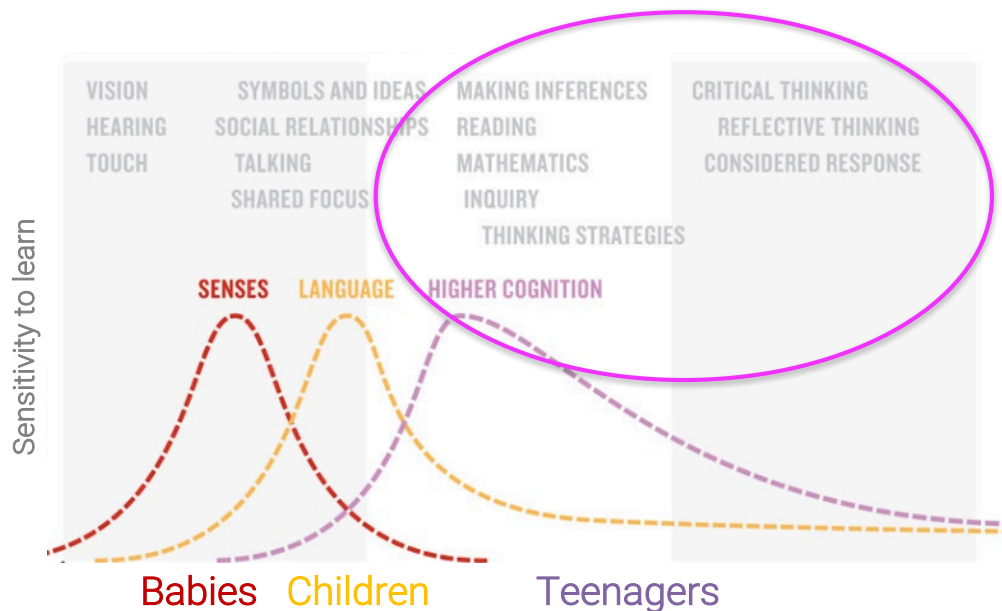


*The “teen brain”*  
is often ridiculed as an  
oxymoron—an example  
of biology gone wrong.



# *The “teen brain”*

is at its peak for learning from  
experience — an example of  
biological good timing!





## *The “teen brain”*

is **HIGHLY** motivated ....  
when the cause matters.





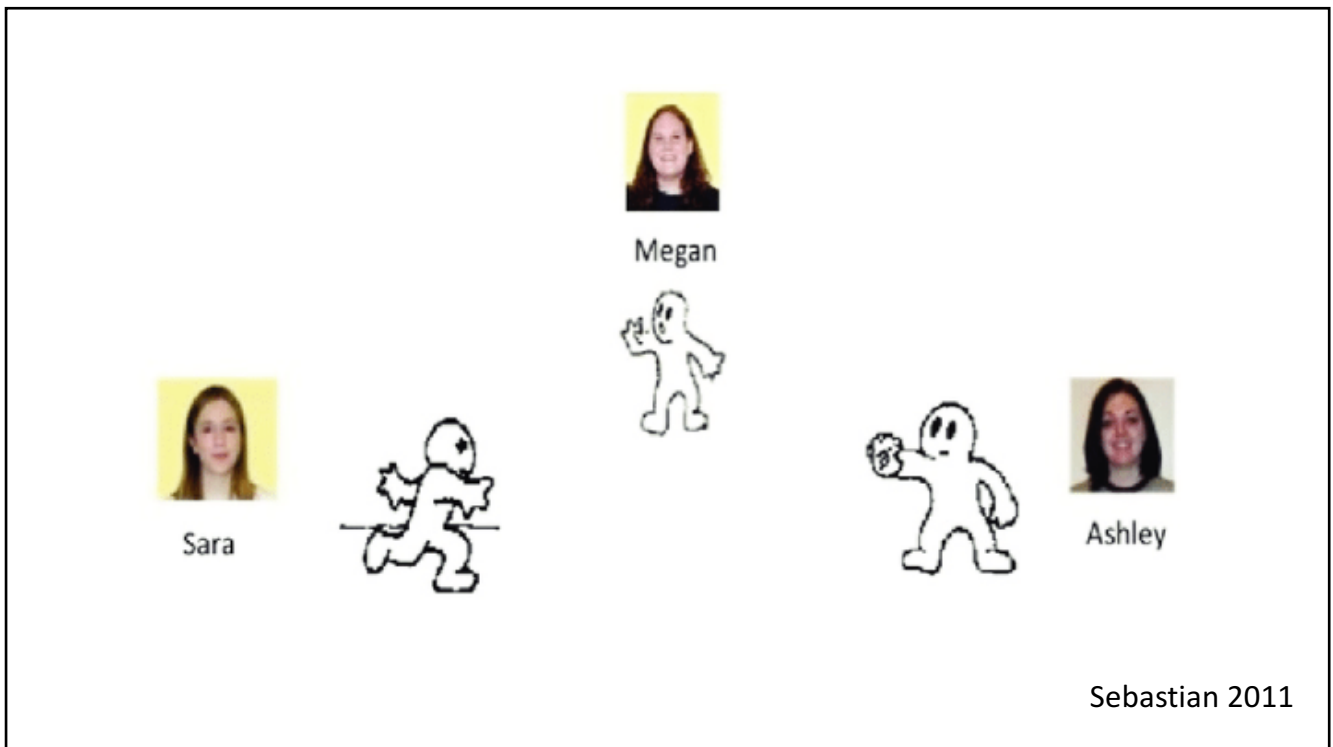




# Teen brain facts

(that researchers actually agree on)

1. Brain development continues till mid-20s
2. Girls *slightly* faster than boys
3. Emotional brain matures faster than cognitive brain
4. Social brain circuits are plastic + sensitive
5. Reward brain circuits plastic + sensitive







## Lots of dopamine

- +++++ reward seeking & motivated
- +++++ novelty seeking
- +++++ risk (excitement) seeking
- +++++ sensitivity to social evaluation (& loss)

How can you feed  
the teen brain's need for  
novelty + risk-taking + excitement +  
social reward *in* the classroom?

Goals are usually things we *want*  
but are *hard to achieve*.

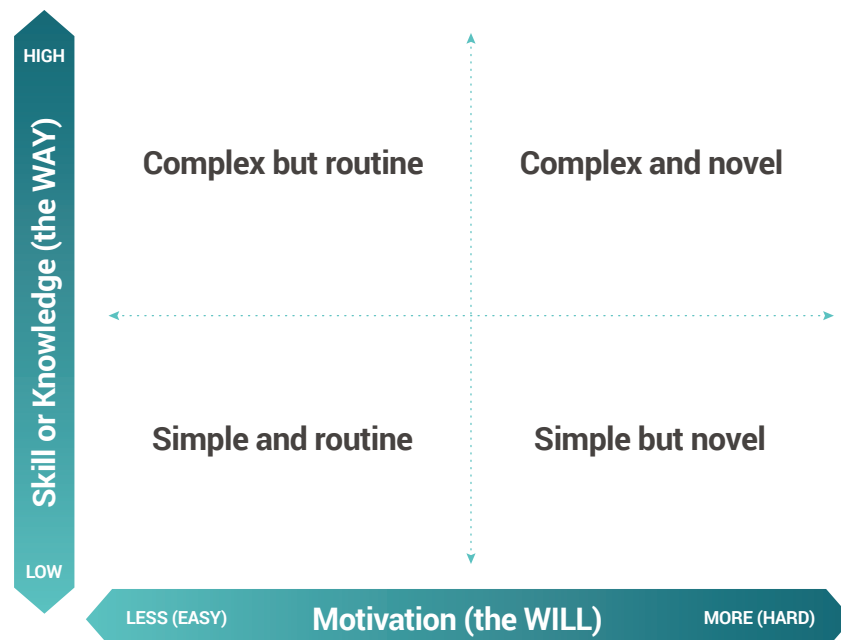


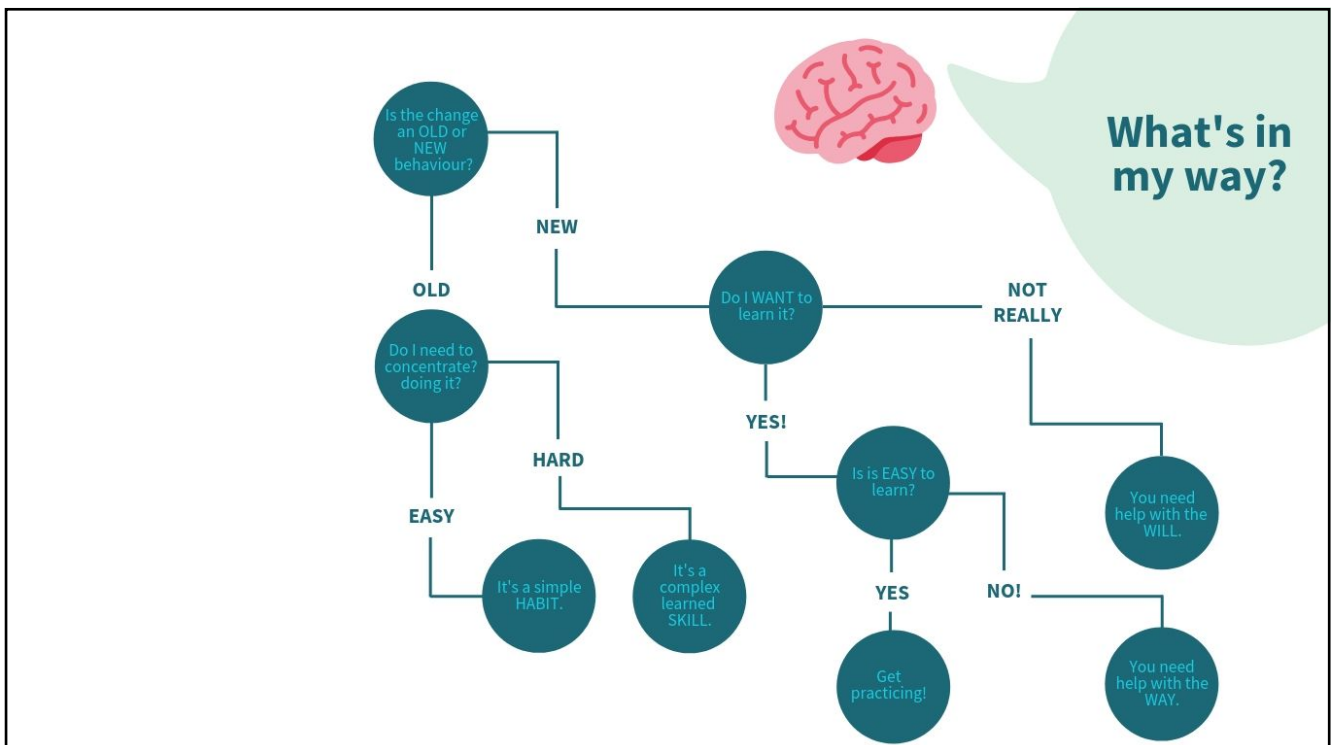
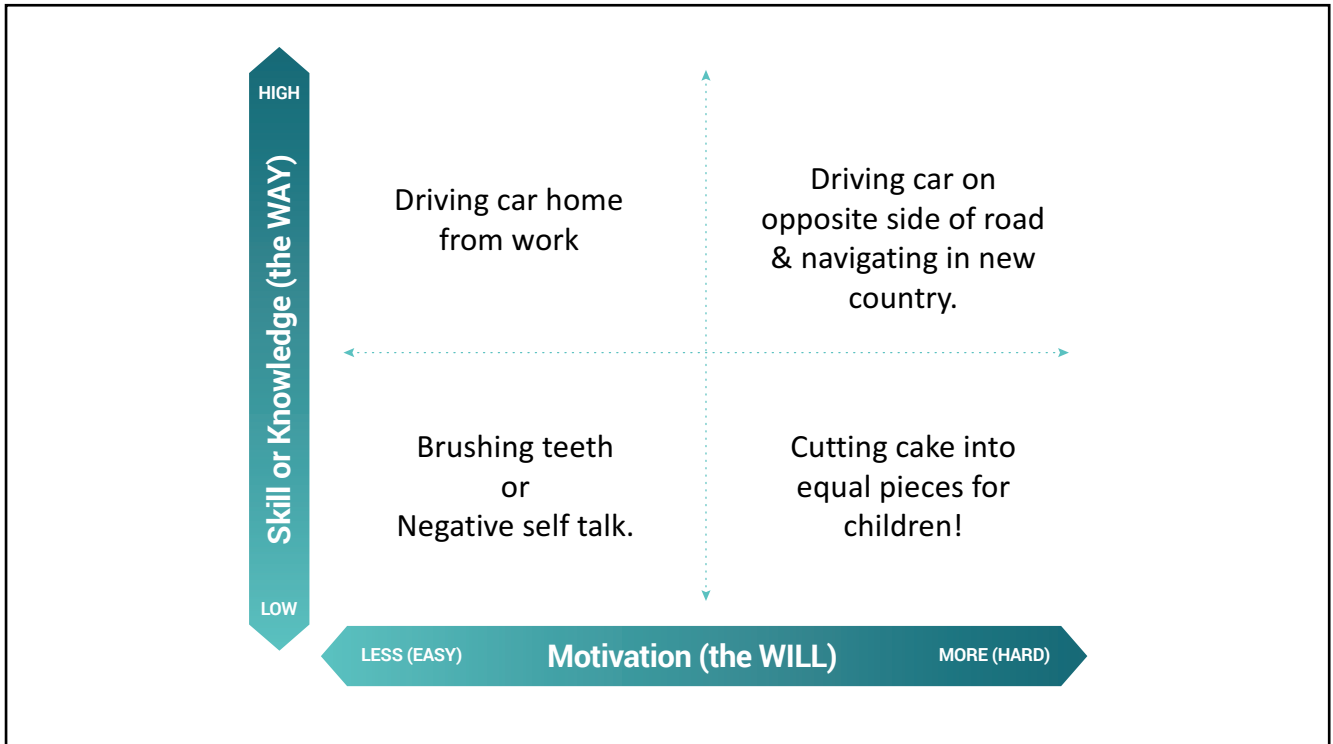


The “WILL” are emotional & motivational factors or drive to get you towards the goal.

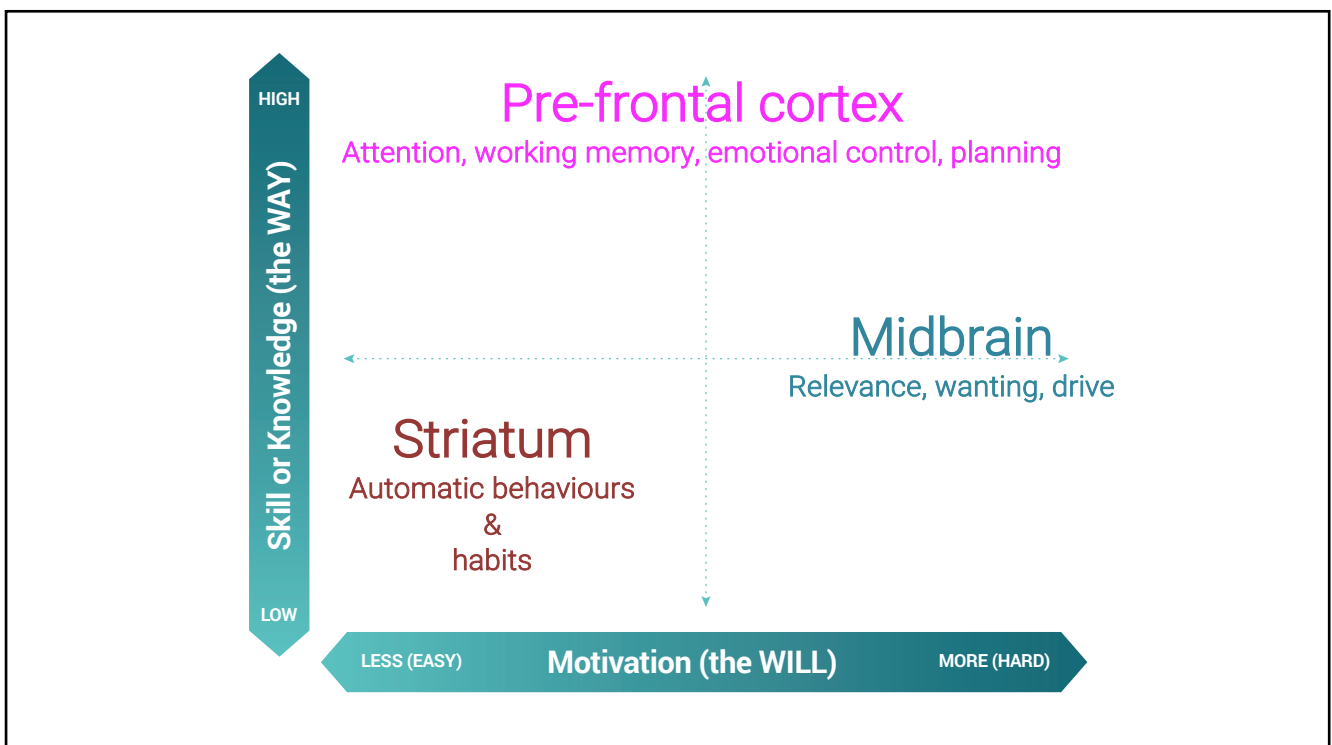
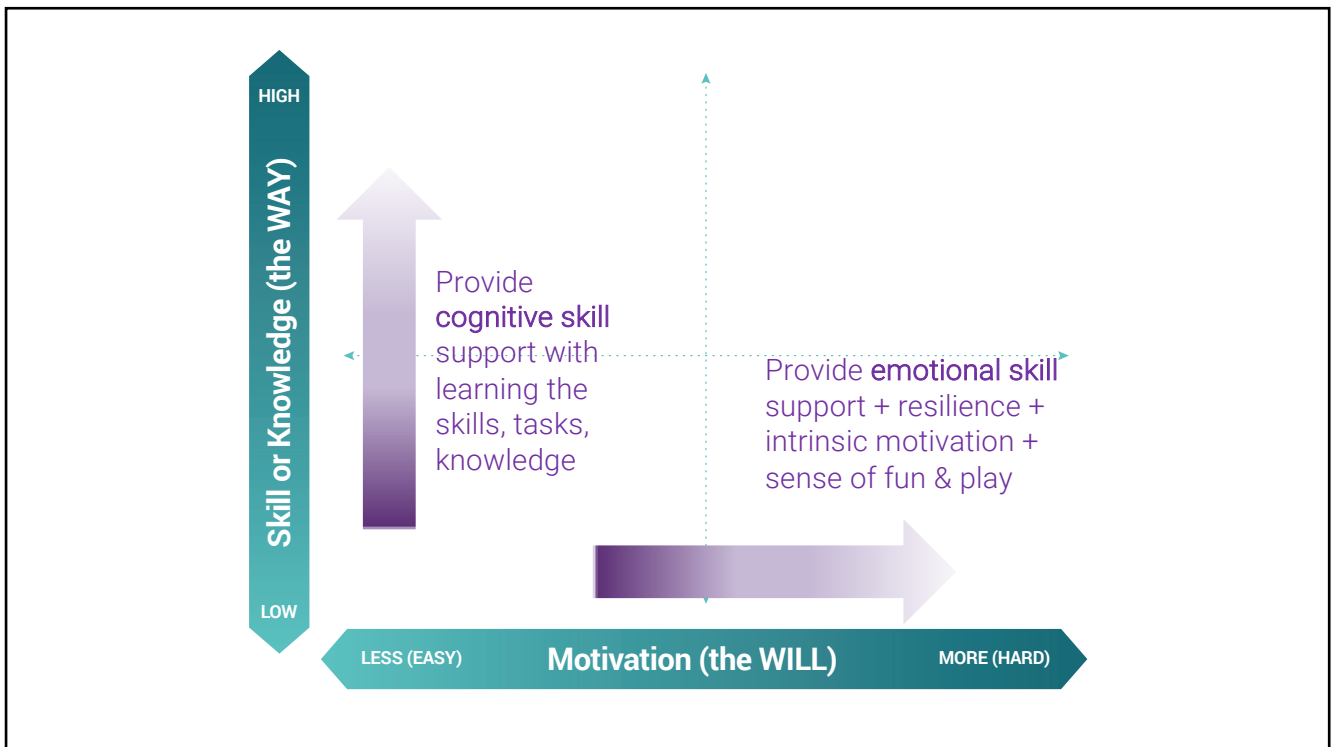
The “WAY” set of skills, knowledge or abilities that will get you there.

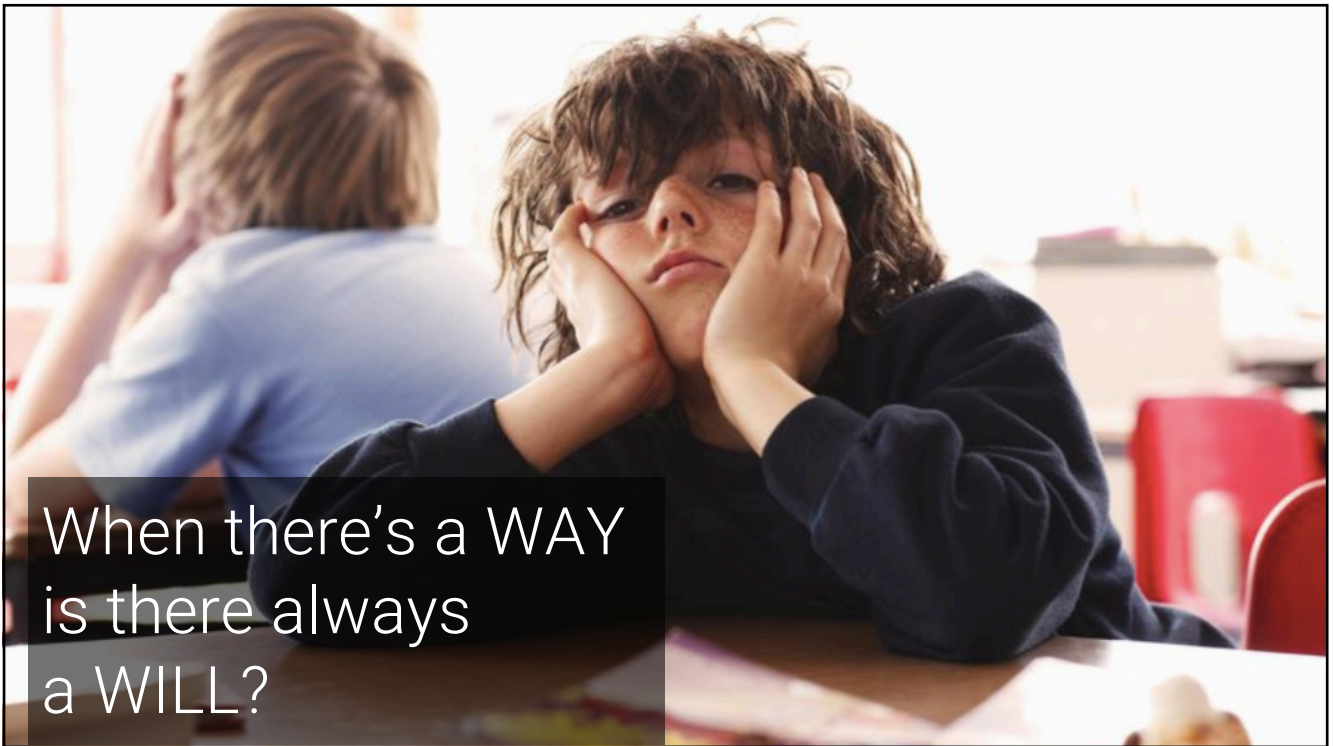
Elliot T. Berkman 2018













What happens when we play?





Play = Flow State

Taking small risks in a low stakes  
environment

# What happens when we play?

1. Challenge to overcome
2. Seek out what makes you 'feel' strong & happy
3. Battle the 'bad guys'
4. Seek out & complete quests
5. Work with allies / team
6. Adopt a position / identity / ego
7. Go for epic wins

SuperBetter McGonigal 2015

## Access intrinsic motivation via flow & play.

- Use competition wisely
- Find trustworthy allies
- Discover 'strengths' or superpowers
- Re-frame goals into quests
- Incorporate choice
- Surprise students with bonuses



Success in pursuing long-term academic, athletic or artistic goals, for example, typically requires motivation to practice the relevant skills and a desire to persevere through difficulties.

Teenage brains are primed for such success.

If early childhood is seen as a major opportunity a sensitive period for learning, so too should adolescence.

Pick my (post-peak) brain:



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*Insta @sarahmareemckay*

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