

A dolescence

Building Relationships and Resilience

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Firstly,
an analogy for
working with middle
schoolers



Know the adolescent brain

Stephen Fry-

"He has glaring faults and they have certainly glared at us this term"

Norman Wisdom

"The boy is every inch a fool but luckily for him for him he's not very tall"

Judi Dench

"Judi would be a very good pupil if she lived in this world"

Three big changes :

1. The ability to reproduce
2. Identity formation
3. Rational thinking



The Adolescent Brain

Synaptic pruning

30,000 synapses per second

Implications :

wonky decisionmaking
you are their frontal lobes
*use it or lose it - habits lay
down pathways*



Don't Waste Your Breath

Teenagers are like a very powerful, juiced up sports car with great acceleration, terrific lines, great sex appeal but very poor brakes...



Implications for Education

* Adolescents are NOT mini - adults

* Expecting them to show a lot of forethought is like expecting goldfish to recite Shakespeare

* The brain is re-structuring to become more efficient- teach them to work smarter not harder

Don't Waste Your Breath

Highly emotional but

lousy at reading emotions

Warning-
wide mood

Love intensity, high drama,
horror, reactive

swings !

Arguing with a teenager is
like mud wrestling a pig

Stay clear of secondary signals

Particularly
bad at
reading fear
in others

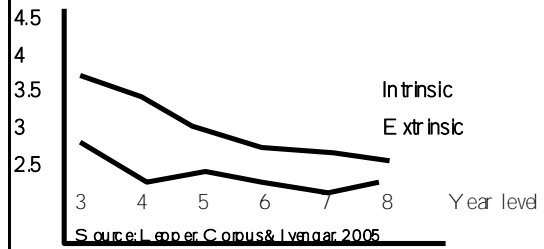


Implications for Education

- * relevance, relevance, relevance !
- * values- generosity & love
- * diversify and intensify relationships
- * Stunted roots and clipped wings

Boys Control Sense of humour
 Girls Interesting Likes me
 Is the model of having secondary teachers interacting with 150-240 students the best we can come up with?

Motivation



The Adolescent Brain

Changes in serotonin and melatonin levels

- * less pleasure
- * stay up and wake up later



Practical Intelligence Projects

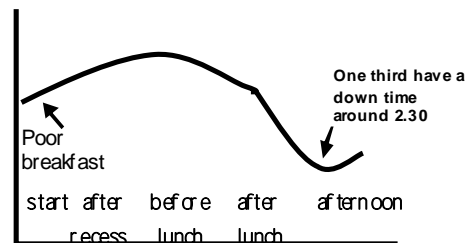
- Focus on skills that develop success
- Teach strategies to increase engagement and outcomes
- Conduct action research on the development of habits



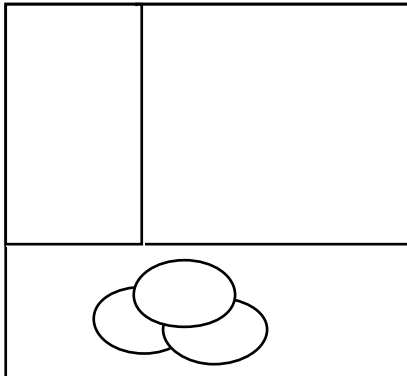
Practical Intelligence Projects

Only a third of middle schoolers find school interesting always or mostly.
 27.5% of boys and 16% of girls are seriously disengaged
 22.5% feel welcome, valued, respected at school only occasionally or never
 22% watch TV for more than 3 hours a day and 14% also spend more than 3 hours playing computer games

Concentration Pattern



Note Taking for Memory Enhancement



Give your memory a hand



Don't Waste Your Breath

- * More easily stressed
- * Estrogen amplifies this
- * More impaired under stress conditions



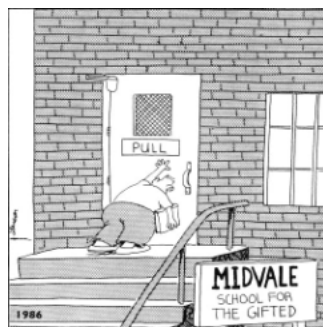
Don't Waste Your Breath Poor Risk Assessment

- * can't see long-term consequences
- * can't see long term goals
- * susceptible to role models
- use peer groups as a positive force
- * dislike complexity, love simplicity



Don't Waste Your Breath

Adolescents are very patterned creatures



Don't Waste Your Breath Poor Risk Assessment

- * In decision making studies, adolescents respond like adults
- * In real life- they don't
- * Euphoric mix of peer group and stimulation means they get lost in the moment
- * It takes them more alcohol to realise they are drunk

The Neuro-chemistry of Student Engagement

The Neuro-chemistry of Engagement

Please stand up, move 8 paces away from where you are.

On your way, say hello to someone, you don't know

When you get to the 8th step form a group of 5.

The Neuro-chemistry of Engagement

In your group, work out who has a birthday earliest in the year, second earliest and so till the last in the year.

The Neuro-chemistry of Engagement

Could the person whose birthday is earliest in the year please put your hand up?

Now all together please make the sound "yiii-ha!!!"

The Neuro-chemistry of Engagement

Could the person whose birthday is second in the year please put your hand up?

Now all together please make the sound "yikes"

The Neuro-chemistry of Engagement

Could the person whose birthday is third in the year please put your hand up?

Now all together please make the sound "uh-oh"

The Neuro-chemistry of Engagement

Could the person (or people) whose birthday is latest in the year please put your hand up?

Now all together please make the sound " ahhhhhhh"

Yi-haa's- dopamine

Good for pleasure & motivation

Helps people change states

Approaches adult levels at 6-9years then lowers in adolescence

Increases attention

↑ by challenge, problem- solving, social interaction, rewards, repetitive movements, high protein, tyrosine, omega 3 and 6, drugs

Yikes- adrenaline

Revved up. Red cordial high.

Amygdala hi-jack. Burn the candle at both ends

Less flexibility, harder to change state.

↓ repetition, sleep, less stimulation, ritual, safety

↑ by time trials

3. Uh-oh's- cortisol

Stress hormone-released with adrenaline

Lowers language, suppresses immunity

Lessens ability to change tack

Snappy, easily rattled

↑ by threat, fewer resources, fluoro lights.

↓ Lower sugar intake, water

4. Ahhh- serotonin

Feel good, anti-depressant

The slow high

Calm decision making

↑ sleep, exercise, diet, time, caffeine and aspartame.

↓

The Neuro-chemistry of Engagement

Please make your sound !

Then

Explain to one other person what your chemical does.

Dopamine developers in classrooms

Particularly associated with directing attention
 Family patterns
 repetitive movements - brain gym, theatre sports
 challenges - charting progress
 problem-solving - puzzles Rewards- win-bins
 social interaction- birthday, shoe friends etc.

Adjusting adrenaline in classrooms

Reduces neurogenesis
 This is the way we do things here
 Increase tasks involving asking questions, seeking help
 Use quiet times
 Games like tag, existential tag, evolution (for amygdala hijacks)

Changing cortisol in classrooms

Can disrupt declarative memory
 Children who have had high prednisone may have problems
 Reduces the ability to filter irrelevant materials
 Impairs performance of males on tasks not involving rewards
 Inhibits neurogenesis

Safety & ritual	Pointing out the main idea
Memory consolidation	Games in selecting main ideas
Water	Rewards

Serotonin surges in classrooms

Feedback and accomplishments
 Sufficient time
 Choice and control (rubrics)
 Social investigations (eg find someone who...)
 Exercises- theatre sports, hakka

Neuro-genesis

Trauma & Brain damage	Contrast & difference New learning Challenges	<u>Enrichment</u> Intrigue & experiencing differences Physical activity
High feedback	Low to moderate stress	Sufficient time
Repetition	Complexity	
Ample rest	Coherece and meaning	

(source: Gazzaniga, 2004)

Survival Skill



Know how to work with tricky kids

Tricky Kids

Whatever it takes!

- The manipulator
- Domination and control
- Bullies but plays cute to adult.
- Ambitious and goal focused
- Under-parented
- Can be cortisol cowboys/girls



Tricky Kids

The negotiator- wheeler-dealer

humour- always ready to deal

Battle fuels adrenaline

Tries to control by resisting

Will set classroom management

Needs to know the bottom line

Remove the audience



Tricky Kids

Winston Churchill Syndrome

Increase their dopamine through challenge

I will fight you anywhere

Defiant and stubborn

Cuts off his nose to spite his face

May self-sabotage

Competitive



Tricky Kids

The counter- how many? Who?

Determined

Economic rationalist of emotions

Sibling rivalry

Don't debate for long

Need to increase serotonin

Show affection



Tricky Kids No Fear

15% of children are fearless

Uninhibited, spontaneous adrenaline junkies

High sensation seekers, risk takers

Get lost a lot!

Get good medical coverage

Build judgement

NO frontal lobes!!!!



Tricky Kids

Passive resistance

Homework, what homework?

Vague and secretive

Disorganised, slow motion

Infuriating

Can need more adrenaline and serotonin-active caring



If you want your children to be brilliant read them fairytales. If you want them to be more brilliant read them more fairytales-

Albert Einstein

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Imprinting a Culture on Your School

- * Three coherent messages
- * Requests lead to greater compliance
- * Proximal Prompts
 - * Modelling desired behaviours
 - * Public promises
 - * Offer solutions to the fears of childhood- social exclusion, rejection & isolation
- * Procedures routines habits



Improving Student Outcomes

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