“How To Keep Smart Kids Motivated”

Lights Of My Life

Columbia Pre-med Dropouts
Nature or Nurture?

Which
Contributes The
Most To Talent
?

Match The Quote

“If I have done the public any service, it is due to my patient thought….”

Match The Quote

“999 failures? No, an invention of 1000 steps....”
Match The Quote

“It’s fine to celebrate success but it is more important to heed the lessons of failure....”

Match The Quote

“There are times when increasing knowledge is accompanied by less rather than more insight.

... We have much work to do”

Match The Quote

“I’ve failed over and over and over again, that is why I succeed.....”
Ask The Right Question

How Can We Teach Our Kids How To Fail?

Motivation Workshops
1. Mindset
2. Self-Regulated Learning
3. Resilience Training
4. Attentive Listening
5. “In The Zone”

Tonight: Mindset
• Sixty Second Book Club
• Five Minute Brain Science
• Mindsets of Success
• Deep Practice: The Talent Code
Sixty Second
Book Club

Who: Outliers

- Opportunity
- Culture
- Persistence

- Canadian Premier Hockey
- Czech Premier Soccer
- 10,000 Hour Rule
- Bill Gates
- Gladwell’s Mom
Why: Defining Academic Success

Beyond Admissions
• Staying In College
• Thriving In College

Rigors of College

• UC System-wide
• 28 Average ACT
• 78% College Grad Rate
• 78,000 Freshman
• Weighted HS GPA

Correlated to Staying In College

- Time Management Skills  .366
- Academic Self-confidence  .359
- High School GPA  .246
- Cognitive Skills  .124
- Achievement Motivation  .066
- General Self-esteem  .050

SOURCE: http://escholarship.org/uc/item/7306z0zf
Thriving In College

- Academic Self-confidence .496
- High School GPA .448
- Cognitive Skills .388
- Achievement Motivation .303
- Time Management Skills .159
- General Self-esteem .046

Five Minute Brain Science

“Neuron”

- 100 Billion
  - About 1 pound at birth
  - Generates 25 watts of electricity
- All Actively Used
“Synapse”
- Brain 'Connections'
- 1,000 To 100,000 Per Neuron
- Born With 500 Miles
- Add 2500 Miles By Age 25
- Ten Million-Trillion-Trillion
  Possible Connections Per Brain
  \(10,000,000,000,000,000,000,000,000,000\)
- Impossible To Fully Develop

“Neurogenesis”
- Neuro = Brain Cell
- Genesis = Born
- Neurogenesis
  = How New Brain Cells Grow

“Neuroplasticity”
- Neuro = Brain
- Plasticity = Flexible Change
- Neuroplasticity
  = How A Brain Rewires Itself
### “Fight or Flight”

- Response to Excess Stress
  - Cortisol
  - Adrenaline
  - Amplifies Emotions
  - Starves Good Judgment
  - Restricts Brain Growth
  - Slows Metabolism

### “Automaticity”

- Automatic Brain Functions
- Requires Little Conscious Thought
- Permits Multi-Tasking
- Conscious Mind = 40 bits per sec
- Subconscious = 11 million per sec

### Automaticity Examples

- Running Down Steps
- Smells Like Snow
- But .....  
  Don’t Text and Drive

**Today:**

- Spelling Bee
- Memory Game
Spelling Bee
- Adults Face Kids
- Kids Watch Parents

NEXT ...... Memory Game

Shirt  Pear  Giraffe

All Talent Originates in Our Brains
When: The Code of Great Performance

Deep Practice
- Elite Athletes
- Classical Musicians
- Pop Singers
- Top Students

Meadowmount Academy
- Joshua Bell
- Yo-Yo Ma
- Itzhak Perlman

Spartek - Moscow
- 15 Clay Courts
- 1 Indoor
- Closed in Winter
- Anna Kournikova
- Yevgeny Kafelnikov
- Marat Safin
Septien Music

Ashlee Simpson
Ryan Cabrera
Demi Lovato

When:

Locate “The Golden Second”

Just After An Error
Brain Most Open To Growth

The Golden Second
How We Respond to Errors:

Embrace and Correct?

...... or ......

Recoil and Avoid?
**Vocabulary of Deep Practice**

<table>
<thead>
<tr>
<th>Frequent</th>
<th>Uncommon</th>
</tr>
</thead>
<tbody>
<tr>
<td>● “Focus”</td>
<td>● “Natural”</td>
</tr>
<tr>
<td>● “Repeat”</td>
<td>● “Effortless”</td>
</tr>
<tr>
<td>● “Mistake”</td>
<td>● “Genius”</td>
</tr>
<tr>
<td>● “Attention”</td>
<td></td>
</tr>
<tr>
<td>● “Tiring”</td>
<td></td>
</tr>
<tr>
<td>● “Edge”</td>
<td></td>
</tr>
<tr>
<td>● “Connect”</td>
<td></td>
</tr>
</tbody>
</table>


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What About The Pre-Med Students?

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**What: Mindset**

**What We Believe About Our Brain**

- Fixed Mindset
- ... or...
- Growth Mindset
Self-Beliefs

“Fixed”
- Hard-Wired Brains
- “Natural” Talents
- Weakness = “Wired Differently”
- “Deflated” By Obstacles

Self-Beliefs

“Growth”
- Natural Talents Are Starting Point
- Weaknesses Can Improve
- New Challenges Are Energizing

Organic Chemistry Victims

Natural Talents
“I’m gifted – it can’t be me - so there must be something wrong with this course.”

Weaknesses
“The instructor isn’t a very good teacher. He needs to give us this material differently.”

New Challenges
“No one is ever going to need this information in real life.”
Organic Chemistry Survivors

Natural Talents
“My raw talent got me here, now I need to get to work”

Weaknesses
“Looks like I need to join a study group”

New Challenges
“It’s cool to master harder material”

Failure Response

Fixed Mindset
− Negative Feedback is An Attack
− Fight or Flight
− Emotions Amplify
− Judgment Wanes

Growth Mindset
− Negative Feedback Guides Growth
− Solving New Challenges = Energizing
Fixed vs. Growth Mindsets

Response To Negative Feedback

Summary
WHO  Outliers of Success
WHY  Thrive in Learning
WHEN The Golden Second
WHAT Growth Mindset

NEXT ...

How: Upcoming Workshops
1. Mindset
2. Self-Regulated Learning
3. Resilience Training
4. Attentive Listening
5. "In The Zone"
How: Mindset

85% of Parents Agree

“It’s Important To Tell Children That They Are Smart.”

Mindset Of A 10 Year Old

Experiment 1: Assign Intentionally Easy IQ Problem

Control Group: “Wow, that’s a really good score.”

Intelligence Praise: “Wow, that’s a really good score. You must be smart at this.”

Effort Praise: “Wow, that’s a really good score. You must have tried really hard.”

Mindset Of A 10 Year Old

Three Groups Assembled by Type of Praise

Step 2: Assign impossible problem.

Then 3: Assign a third, easy problem.
Number of Problems Solved

Trial 1 (before failure) vs. Trial 3 (after failure).

Source: Dweck at NAIS Feb 2009

Students Who Misrepresented Their Scores

Type of Praise Given

“Fixed” Mindset

- “Trophy” Driven
- Wants to Appear Talented
- Avoids Work That Is “Too Hard”
- “Exhausted”
- Denies Mistakes
- Conceals Errors and Deficiencies
“Growth” Mindset

- Learns Because Loves Learning
  - "Enjoys the Game"
- Views Hard Work as Key to Growth
  - "Energized"
- Embraces Mistakes
- Refocuses For Next Challenge

... Celebrity Examples?

How To Unlock A Mindset

- Praise the Growth Process
- Turn Toward Weakness
- Understand Intensity Versus Stress
- Invest in Growth

Praise The Process

- It’s O.K. To Struggle
  - But Not O.K. to Quit
- Watch Out For Fixed-Mindset Messages
  - "Smart"
  - "Natural"
  - "Genius"
  - "Effortless"
Praise The Process

- Downplay Trophies
  - Test scores
  - Grades
  - Awards
- Limit Empty Praise
  - ‘Great’
  - ‘Awesome’

Praise the ‘Process’

- “You really studied for your English test and your improvement shows it.”
- “You read the material over several times, you picked out the main points, and you tested yourself on them. It really worked!”
- “I like the way you tried all kinds of strategies on that math problem until you finally got it.”
- “I like that you took on that challenging project for your science class.”
Praise the ‘Process’

“*You did that so quickly and easily and still got the ‘A’...*

... *I’m sorry it was too easy for you. Let’s find something more challenging you can learn from next time.*

---

Turn Towards Weakness

☞ Create A Culture of Growth
  - Not A Culture of Talent
☞ Build Self-Tolerance For Small Mistakes
  - Actively Solving Small Problems
  - Helps Avoid Big Problems

---

Turn Towards Weakness

☞ Intervene Early for Symptoms
  - Confidence
  - Motivation
  - Focus
  - Avoidance of Reading
Turn Towards Weakness

- Symptoms Are Different from Causes
  - Many Girls ‘Internalize’
  - Many Boys ‘Externalize’

Maximize Intensity, Not Stress

<table>
<thead>
<tr>
<th>Low Intensity</th>
<th>High Intensity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Stress</td>
<td>High Stress</td>
</tr>
<tr>
<td>Feels:</td>
<td>Feels:</td>
</tr>
<tr>
<td>&quot;Indifferent&quot;</td>
<td>&quot;Energized&quot;</td>
</tr>
</tbody>
</table>
| "Uninspired"  | "Accomplished"
| "Spinning Wheels" | "Burned-Out"
| "Frustrated"  | "Helpless"    |

Invest in Growth

Deep Practice Academic Coaching:
- Brain Training
- Strengthen Efficiency
- Improve Focus
- Build Resilience
Deep Practice Skills Training

- Motivation Via Confidence
- Confidence Through Competence
  - Authentic
  - Culture of Growth
  - Return on Investment

Elements of Deep Practice

1. The Right Kind Of Practice
2. Coaching By The ‘Matrix’
3. Total Focus

The Right Kind of Practice

‘Progressively Challenging’

- Chunks
- Layers
- Intensity
- Locate “The Golden Second”
A Great Personal Coach

100% Individualized
► One on One
► Watchful
► "Trains" Through Skill Matrix
► Relentless
► But...
  – Excessive Stress is The Bad Guy

Auditory Automaticity

 af  bad  ict
 ek  daf  eft
 il  fab  uld
 om  cal  alt
 un  lam  omp
Total Focus

Training Concentration
- Selective Attention
- Sustained Attention

Visual-Spatial Automaticity

Overland Park Examples

<table>
<thead>
<tr>
<th>Efficiency &amp; Focus</th>
<th>Resilience</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kyle</td>
<td>Grant</td>
</tr>
<tr>
<td>Catherine</td>
<td>Andrea</td>
</tr>
</tbody>
</table>
Overland Park Examples

Common Features
- Grades Okay
- Student Confidence Low
- Growing Family Stress
- Causes Different From Symptoms
- “Whatever It Takes” Family Spirit

Upcoming Workshops
1. Mindset
2. Self-Regulated Learning
3. Resilience Training
4. Attentive Listening
5. “In The Zone”

Small Group Workshops
- Hands-on
- Specific Case Studies
- We’ll Come to You For 20 or More
- No Charge
- Vote Tonight
Our Brains Grew Tonight!

Students:
- Are You Fixed or Are You Growth?
  - Growth
- How Should You Handle The Golden Second?
  - Embrace
- What’s The Best Kind of Practice?
  - Challenging

Our Brains Grew Tonight!

Parents:
- What Should We Praise?
  - The Process
- Where Do We Turn To Solve Problems?
  - Towards Weakness
- We Seek To Maximize?
  - Intensity, Not Stress
- We Invest In Our Kids’?
  - Growth

Questions?

SOURCE: Scientific American, p 50, March 2008
## Cognitive vs. Curriculum

<table>
<thead>
<tr>
<th>&quot;Processing&quot; Skills</th>
<th>Acquired &quot;Knowledge&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auditory</td>
<td>Science</td>
</tr>
<tr>
<td>Visual</td>
<td>History</td>
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<tr>
<td>Executive</td>
<td>Grammar</td>
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<tr>
<td>Memory</td>
<td>Phonics</td>
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<tr>
<td>Attention</td>
<td>Vocabulary</td>
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<tr>
<td>Logic</td>
<td>Conclusions</td>
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<tr>
<td>Processing Speed</td>
<td>Computation</td>
</tr>
<tr>
<td></td>
<td>Word Problems</td>
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</table>

![Diagram showing Cognitive vs. Curriculum concepts](image)