Promoting Students’ Academic Buoyancy, Adaptability, and Engagement in Higher Education

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The Matthew Effect

“For unto every one that hath shall be given, and he shall have abundance; but from him that hath not shall be taken away, even that which he hath”

- Matthew 25:29
Personal Potential Network

PERSONAL POTENTIAL NETWORK IMPORTANT MEANS BY WHICH TO BUILD AND SUSTAIN ACADEMIC SUCCESS

PERSONAL BESTS

RELATIONSHIPS

PERSONAL POTENTIAL

ACADEMIC BUOYANCY

MOTIVATION & ENGAGEMENT

ADAPTABILITY

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What is Motivation and Engagement?

Students’ energy and drive to learn, work effectively, and achieve – and the thoughts and behaviours that reflect this

What is Academic Buoyancy?

Ability to deal with setbacks at school, academic challenge, and schoolwork pressures
Motivation and Engagement are Separated into

- **Boosters**: Reflect enhanced motivation and engagement
- **Mufflers**: Reflect impeded or constrained motivation and engagement
- **Guzzlers**: Reflect reduced motivation and engagement

**Motivation & Engagement Wheel**

- **BOOSTER THOUGHTS**
  - Valuing focus
  - Planning
  - Study management
  - "Confidence"
  - "Commitment"
  - "Composure"
  - "Control"
  - "Coordination"

- **GUZZLERS**
  - Self-sabotage
  - Uncertain control
  - Failure avoidance
  - Anxiety
  - Persistence
  - Disengagement
GENDER AND AGE EFFECTS

MES – Junior School (MES-JS)

MES – High School (MES-HS)

MES – Uni/College (MES-UC)

Forthcoming Review Article

Ordered at www.lifelongachievement.com
HIGH SCHOOL

SELF-BELIEF:
Gender x Non-Linear Age Effect (sig)

MES-HS: N=21,579

Mean

Girls
Boys

12-13yrs 14-15yrs 16-18yrs
Age Group

Engagement, Buoyancy, Higher Education

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**LEARNING FOCUS:**
Gender x Non-Linear Age Effect (sig)

MES-HS: N=21,579

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Mean (Girls)</th>
<th>Mean (Boys)</th>
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<tr>
<td>12-13yrs</td>
<td>6.5</td>
<td>5.5</td>
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<td>14-15yrs</td>
<td>5.5</td>
<td>4.5</td>
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<tr>
<td>16-18yrs</td>
<td>4.5</td>
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**VALUING:**
Gender x Non-Linear Age Effect (sig)

MES-HS: N=21,579

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</table>
PLANNING: Gender x Non-Linear Age Effect (sig)

MES-HS: N=21,579

TASK MANAGEMENT: Gender x Non-Linear Age Effect (sig)

MES-HS: N=21,579
PERSISTENCE:
Gender x Non-Linear Age Effect (sig)

MES-HS: N=21,579

ACADEMIC BUOYANCY:
Gender x Non-Linear Age Effect (sig)

N=21,579
ANXIETY:
Gender x Non-Linear Age Effect (sig)

MES-HS: N=21,579

DISENGAGEMENT:
Gender x Non-Linear Age Effect (sig)

MES-HS: N=21,579
UNIVERSITY/COLLEGE

Females vs Males: Adaptive (sig effects)

N=420; 2 Universities

Mastery orientation
- Females: 67
- Males: 83

Planning
- Females: 64
- Males: 58

Task management
- Females: 74
- Males: 67

Valuing
- Females: 59
- Males: 66

Academic Buoyancy
Females vs Males: Impeding/Maladaptive (sig effects)

N=420;
2 Universities

<table>
<thead>
<tr>
<th>Anxiety</th>
<th>Uncertain Control</th>
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<tbody>
<tr>
<td>Females</td>
<td>Males</td>
</tr>
<tr>
<td>71</td>
<td>83</td>
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<tr>
<td>82</td>
<td>47</td>
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Younger vs Older: Boosters (sig effects)

<table>
<thead>
<tr>
<th>Learning focus</th>
<th>Planning</th>
<th>Task management</th>
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<tbody>
<tr>
<td>Females</td>
<td>Males</td>
<td>Females</td>
</tr>
<tr>
<td>&lt;-20yrs</td>
<td>86</td>
<td>63</td>
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<tr>
<td>20+yrs</td>
<td>86</td>
<td>65</td>
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<td>77</td>
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<table>
<thead>
<tr>
<th>Persistence</th>
<th>Valuing</th>
<th>Self-belief</th>
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</thead>
<tbody>
<tr>
<td>Females</td>
<td>Males</td>
<td>Females</td>
</tr>
<tr>
<td>&lt;-20yrs</td>
<td>70</td>
<td>82</td>
</tr>
<tr>
<td>20+yrs</td>
<td>76</td>
<td>85</td>
</tr>
<tr>
<td></td>
<td></td>
<td>80</td>
</tr>
<tr>
<td></td>
<td></td>
<td>83</td>
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</tbody>
</table>
Younger vs Older: Mufflers/Guzzlers (sig effects)

Fear of Failure
- <20yrs: 46%
- 20+yrs: 41%

Uncertain Control
- <20yrs: 90%
- 20+yrs: 49%

Self-sabotage
- <20yrs: 41%
- 20+yrs: 38%

Disengagement
- <20yrs: 53%
- 20+yrs: 49%

N=420;
2 Universities

Younger vs Older: Engagement (sig effects)

Class Participation
- <20yrs: 69%
- 20+yrs: 76%

Future Intent
- <20yrs: 79%
- 20+yrs: 83%

N=420;
2 Universities
Strategies Targeting Parts of the Wheel Relevant to Engagement and Buoyancy

- Self-belief
- Persistence
- Fear of Failure, Self-sabotage
- Control

Increasing Self-belief (1)

Challenge common negative thinking traps

- Turning positives into negatives
- Mega-generalising
- Black and white thinking
- Mountain building
- Mistaking feelings for facts
Increasing Self-belief (2)

Strategies for maximising success:

- **‘Chunking’**
  a) Breaking work into bite size chunks
  b) Seeing the completion of each chunk as a success

- **PROCESS** definitions of success (PBs, improve, effort, skill dev’t, learning)

- Explaining things more than once but in different ways

- Approaching students individually to check understanding/one-on-one

- Giving students choice of questions/topics to answer

- Giving students choice of mode of undertaking assignments
  (PowerPoint, essay, multimedia, role play)

Increasing Persistence

- Encourage students to be clear about what want to achieve
  (short- and long-term) – REMEMBER: set goals that are:

  - Achievable, Believable, Clear, and Desirable (ABCD)
  - Specific, Measurable, Achievable, Realistic, Time-bound (SMART)
  - Personal Best (PB) Goals (later slide)

- Talk through previous challenges and how they were overcome
  – what did you THINK and what did you DO?
Fear of Failure and Self-Sabotage

✓ Courageous and constructive view of mistakes
  - launch pad for success
  - diagnostic info
  - window for improvement

✓ Reduce link between performance/achievement and worth as a person
  - get worth from numerous parts of life (including uni)

Increasing Control

✓ Increase emphasis on 1. effort, 2. strategy, and 3. attitude + reduce emphasis on external factors (luck, easy/tough marking etc.)

✓ Reduce uncertainty in class - clear objectives and expectations

✓ Feedback makes it clear why particular mark and how to improve

✓ Show students previously completed examples of good work – set homework that asks students to review this quality work (eg. find five good things about this essay + 2 things to improve it)
Adaptability

University/College

- Start university
- New university
- Transition from one year to another
- Different lecturers and different subjects
- Unfamiliar tasks and requirements
- Changing academic, personal, and social tasks/demands
### Adapability

**The World**

- Industry will be reshaped around environmental demands and pressures
- Medical advancements will extend the human lifespan
- Pharmaceutical developments will present new possibilities for human performance and functioning
- Communications technology will be reshaped around fiber optics and extreme bandwidth
- High-level globalized computing networks will accelerate information production and application
- New technologies will allow greater access to cultural phenomena
- Expansion of electronic databases and resources will transform education and lifelong learning

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### Three Components

**Adapability**

- **Regulate/Adjust Thinking**
  - Think about situation in different way
  - Adjust assumptions/expectations/attitude

- **Regulate/Adjust Behaviour**
  - Seek out new/more information, help, resources
  - Different course of action, new schedule

- **Regulate/Adjust Emotion**
  - Minimise frustration, disappointment, fear, anger
  - Draw on/maximise enjoyment, fun, curiosity
PB Goals

- Personal best (PB) goals are specific, challenging, and competitively self-referenced targets

- PB goals may take two forms:
  - ‘process PB goals’
  - ‘product PB goals’
**PB Process Goals**

Examples of process PBs include:

- reading one more book for the present assignment than on the previous assignment
- preparing for a test at the weekend when previously no study had been done at weekends
- being less anxious for the next test than the previous test
- asking a lecturer for help when previously the lecturer had been avoided
- spending an extra hour doing study than usual

**PB Product Goals**

Product PBs include:

- getting a higher mark in end of year exams than in the half yearly exams
- making greater dissertation progress than prior progress
- getting more answers correct in one’s statistics assignment
Motivation and Engagement

PB Goals

- PB (Growth) Goals must be shown to benefit all student groups (first do no harm!)
- Eg. Important to show yield for those with at-risk students

PB Goals and Learning Disabilities

<table>
<thead>
<tr>
<th>Motivation and Engagement</th>
<th>PB Goals Correlated with ....</th>
<th>Literacy</th>
<th>Numeracy</th>
<th>Homework Completion</th>
<th>Class Participation</th>
<th>Future Plans</th>
<th>Persist</th>
<th>Dosegange</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADHD (N=87)</td>
<td></td>
<td>.34 (12%)</td>
<td>.24 (6%)</td>
<td>.52 (27%)</td>
<td>.50 (25%)</td>
<td>.69 (48%)</td>
<td>.66 (44%)</td>
<td>-.57 (33%)</td>
</tr>
<tr>
<td>Non-ADHD (N=3200)</td>
<td></td>
<td>.16 (3%)</td>
<td>.16 (3%)</td>
<td>.43 (19%)</td>
<td>.50 (25%)</td>
<td>.58 (34%)</td>
<td>.59 (35%)</td>
<td>-.52 (27%)</td>
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(% Explained Variance between PBs and Factor)

N=3,287 high school students (Martin, in review)
Personal Bests

- PB Worksheets etc at www.lifelongachievement.com
- Increase emphasis on personal excellence
- Reduce focus on comparisons with others
CONNECTIVE INSTRUCTION
(following from centrality of teacher-student relationships)

Connective Instruction

- Relationship Between Student and Teacher
  - “Interpersonal Relationship” (the Singer)

- Relationship Between Student and Message
  - “Substantive Relationship” (the Song)

- Relationship Between Student and Teaching
  - “Pedagogical Relationship” (the Singing)
How Pedagogy Impacts Achievement, Motivation, and Engagement

PEDAGOGY

STUDENT’S CONNECTION TO:
1. TEACHER
2. MESSAGE/CONTENT/ASSESSMENT
3. TEACHING

ACHIEVEMENT
MOTIVATION
ENGAGEMENT

Relationship with Teacher
(the Singer – ‘Top 10’)

1. I make an effort to listen to my students’ views
2. A good teacher-student relationship is one of my priorities
3. I try to give my students input into things & decisions that affect them
4. I enjoy working with young people
5. Where appropriate I try to have a sense of humour with my students
6. I try to get to know my students
7. I explain the reasons for rules that are made and enforced
8. I try to show no favouritism
9. I accept my students’ individuality
10. I have positive but attainable expectations for students
Relationship with Message (the Song – ‘Top 10’)

1. I aim to set work that is challenging but not too difficult
2. Where possible, I aim to set work that is important or significant
3. I aim to inject variety into my teaching content
4. I aim to inject variety into my assessment tasks
5. I aim to provide students with interesting work
6. I use broad and authentic (relevant and meaningful) assessment
7. I try to ensure that my teaching content is not boring to young people
8. In class and assigned work, I reduce monotony as much as possible
9. Where possible I draw on material that is fun to learn
10. Where possible I use material that arouses my students’ curiosity

Relationship with Teaching (the Singing – ‘Top 10’)

1. I try to get students to do something well as much as possible and provide support needed for them to do this
2. I have multiple indicators of success in schoolwork (marks, effort, reaching goals, improving)
3. I provide clear feedback to students focusing on how they can improve
4. I try to make sure all students keep up with the work and give opportunities to catch up or go over difficult work
5. I make an effort to explain things clearly and carefully
6. I aim to inject variety into my teaching methods and reduce repetition or monotony
7. I encourage my students to learn from their mistakes
8. I aim for mastery by all students
9. I show students how schoolwork is relevant and/or meaningful
10. I don’t rush my lessons or my explanations
Final Reflection

Personal Potential Network

- MOTIVATION & ENGAGEMENT
- ACADEMIC BUOYANCY
- PERSONAL POTENTIAL
- RELATIONSHIPS
- PERSONAL BESTS
- ADAPTABILITY
‘Take 3’

Have a look over the Personal Potential Network

Take 1. In your individual teaching, what 1-2 Parts do you think would be most useful to your girls for them to achieve to their potential?

Take 2. How can you implement them within your Faculty / School / Department?

Take 3. How can you implement them across the University?

Where To From Here?
CHAPTERS:
- Fear and failure in class
- Disengagement and helplessness
- Fear of success
- Perfectionism
- Courage in the classroom
- Personal bests (PBs)
- Rock-solid self-esteem
- Coping with competition
- Seizing control in class
- Teacher-student relationships
- Building classroom success

Available at Co-Op stall [here](#)

MOTIVATION AND ENGAGEMENT SCALE

- 44-items
- Assesses each part of the Wheel
- Completed in class or individually
- Used for diagnosis
- Used for benchmarking
- Comes with Test User Manual
- Comes with Student Score Sheet

Order at: [www.lifelongachievement.com](http://www.lifelongachievement.com)

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