

TESTING THE EFFICACY OF THE INTEGRATIVE EDUCATION TRAINING MODULE

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What is IETM?

IETM – known as Integrative inquiry is the process of integrating the knowledge gained from research, course learning, and book learning with the wisdom gained from intuition, sensing, and the mindful experiencing of emotions *with* the ability to embrace the unknown. With the ability to integrate multiple sources of information through generative questions and other training methodologies, participants of integrative inquiry are able to manage stress and creatively problem solve while experiencing ambiguity. This all leads to the promotion of peace and compassion through their conscious-choice making.

Defining Constructs

- Attention regulation
- Emotion regulation
- Cognitive regulation

Defining Constructs

- **Attention regulation** (Lutz, Slagter, Dunne, Davidson, 2008)
 - Focus on breath or one word → Detect Distracting Stimuli
→ Redirect Attention gently and without judgment
 - Primary tools to train include focused breathing, focused movement, and body scan
 - Goal is to focus on one object (thought, feeling, or sense) at a time and simply “observe” fully with the body and the mind and acknowledge without judgment

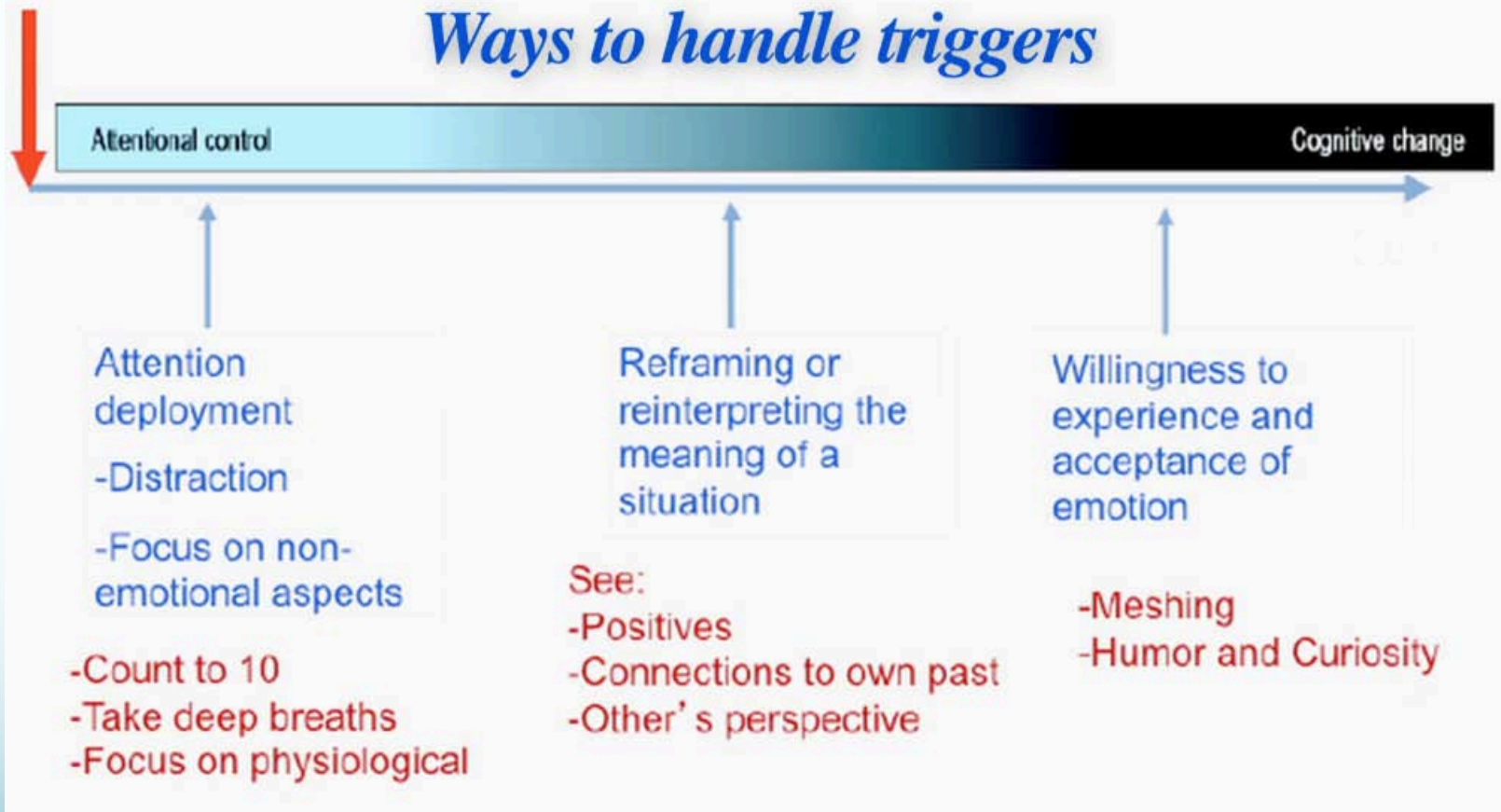
Defining Constructs

- **Emotion regulation** (Grolnick et al,1996)
 - Using attention regulation to observe one object (thought, feeling, or emotion) at a time, then discern what is welcomed and unwelcomed; then choose a response, rather than a reaction
 - If welcomed, simply be with the thought, feeling or emotion fully
 - If unwelcomed, pause, inquire, and choose that which is more welcomed
 - Trained first with attention regulation, then with journaling, scenario emersion, and coaching through the scenarios
 - Goal is to recognize the thought, emotion, and feeling recognizing that you are not your feelings.

Defining Constructs

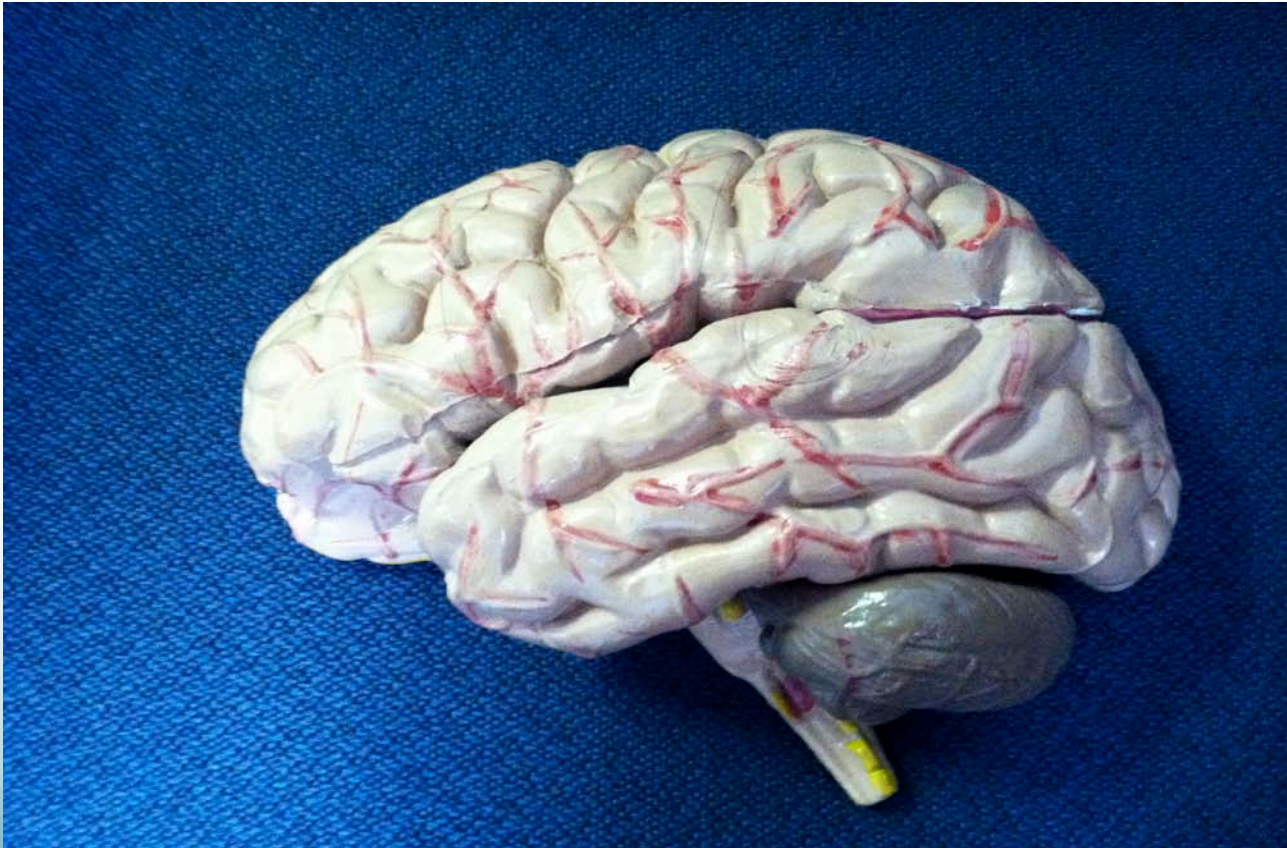
- **Cognitive regulation**
 - Building on attention and emotion regulation, being able to use words to describe the reasoning process of conscious choice making and articulate the ability to take responsibility for all choices and their consequences
 - Trained first with attention and emotion regulation, then with journaling, scenario emersion, and coaching through the scenarios using self-authorship advising tools
 - Goal is to invite meaning making of all that is being felt, thought, experienced, and taking responsibility for all of that as your own

Defining Constructs



The Neuroscience Behind IETM

Birth of the Idea...Neuroplasticity

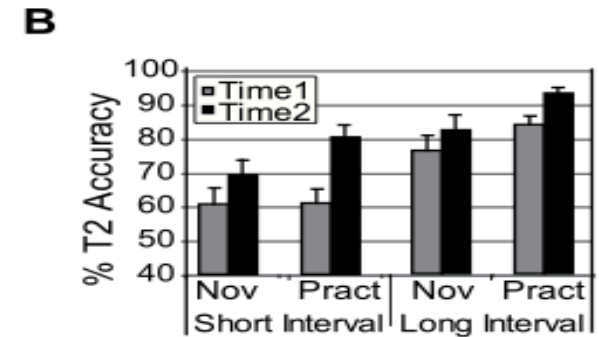
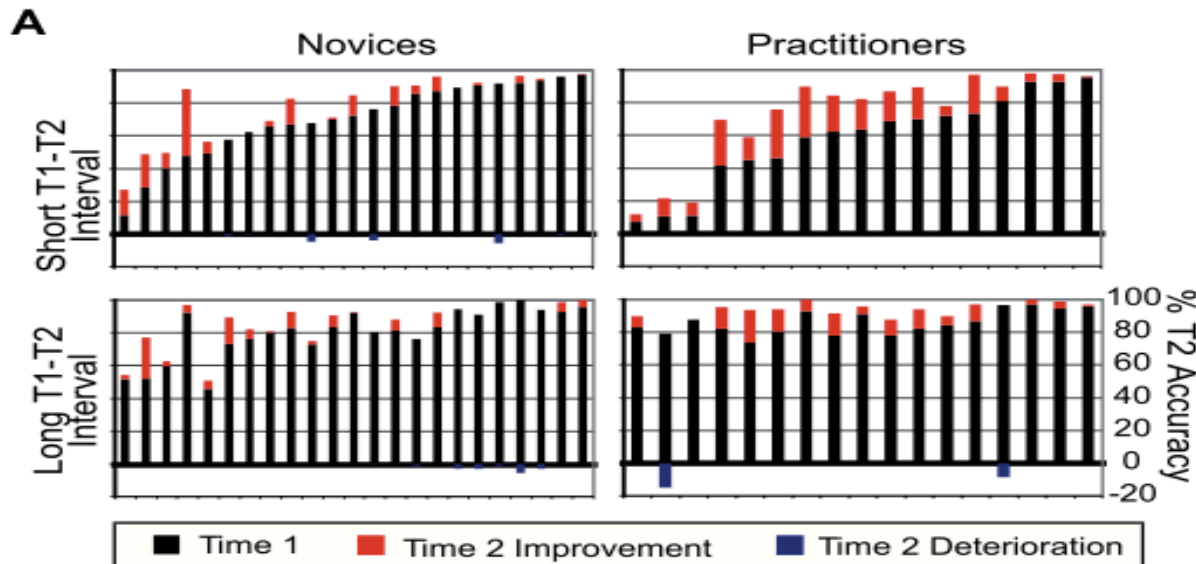
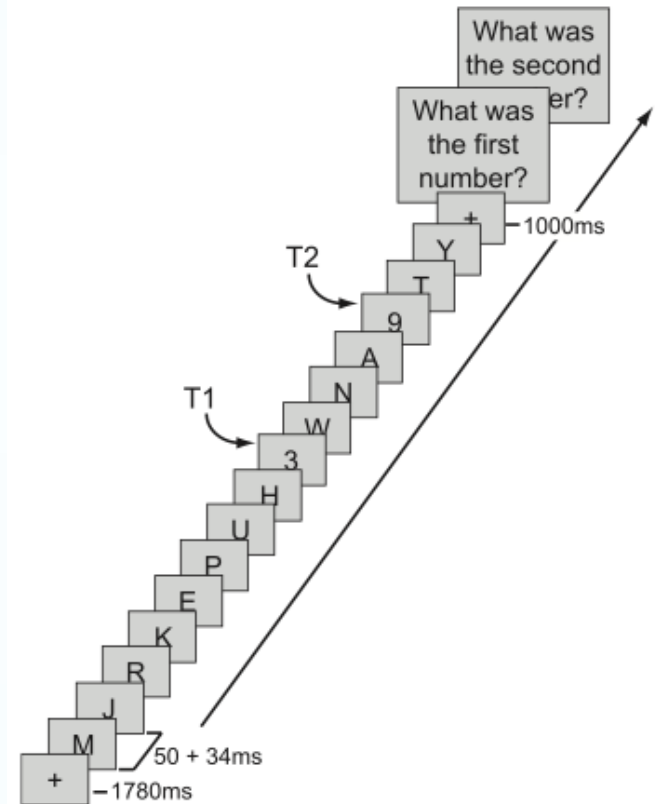


(Alvarez & Emory, 2006;
Chan, Shum,
Toulopoulou, & Chen,
2008;
Chiesa, Calati, Serretti,
2011; Goldin & Gross,
2010; Hölzel, Carmody,
Vangel, Congleton,
Yerramsetti, Gard, &
Lazar, 2011; Kozasa,
Sato,
Lacerda, Barreiros,
Radvany, Russel,
Sanches, & Mello, 2012;
Lutz, Slagter,
Dunne, & Davidson,
2008; Todd,
Cunningham, Anderson,
& Thompson, 2012)

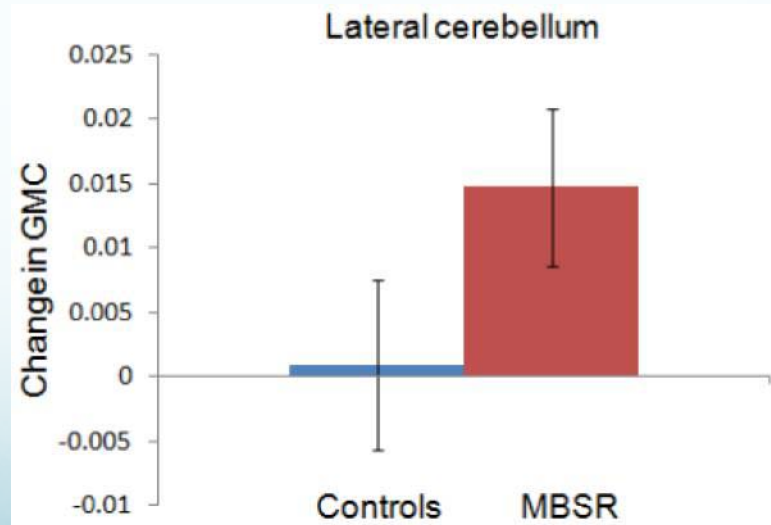
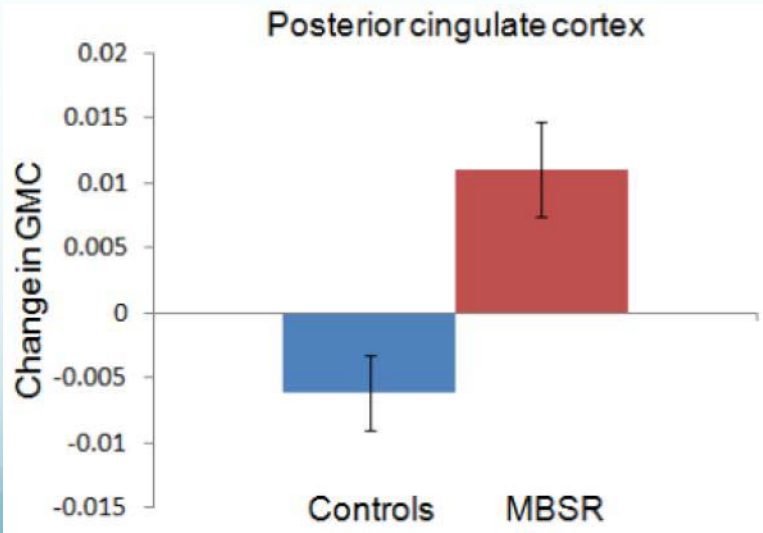
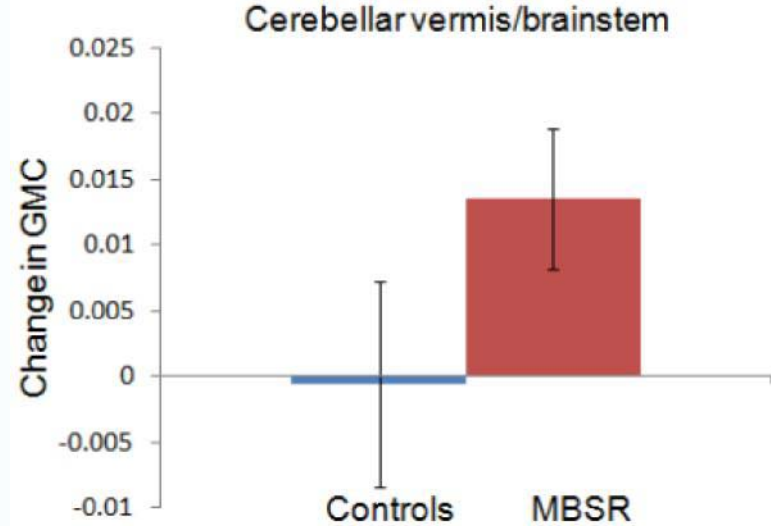
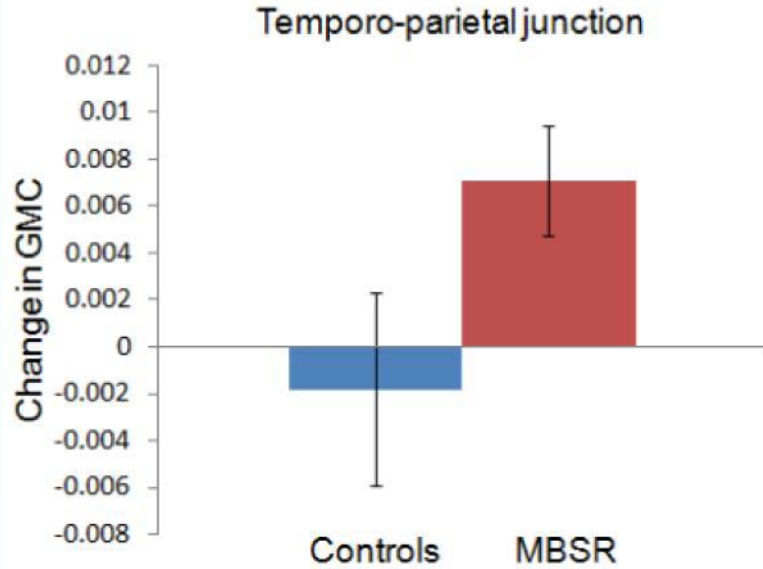
Attentional Blink

Slagter, Lutz, Davidson, et al., 2007, *PLoS Biology*

- Processing T2 depends upon the efficient processing of T1
- Through mental training, increased control over the allocation of limited processing resources may be possible

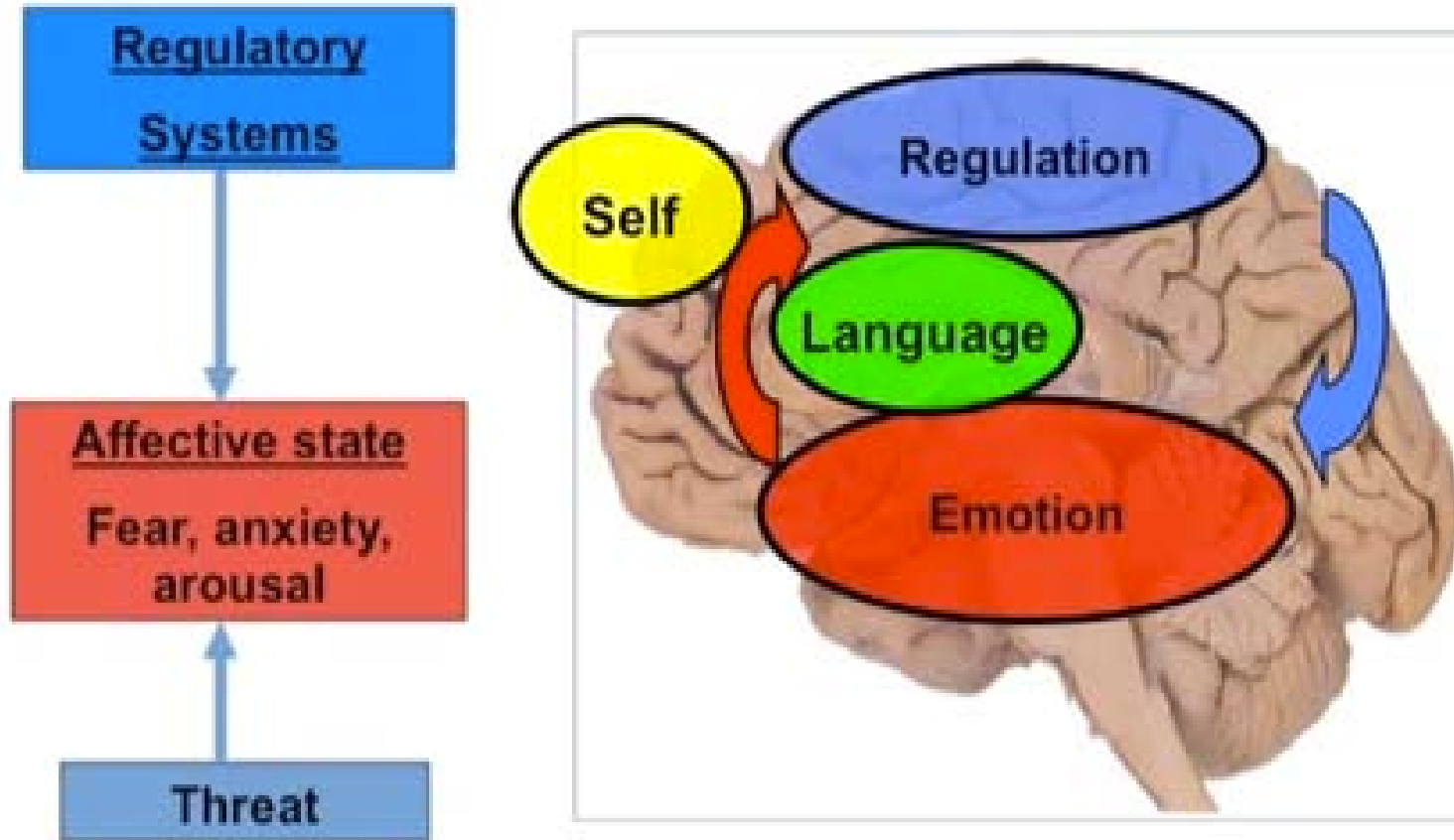


Morphological Change



Defining Constructs

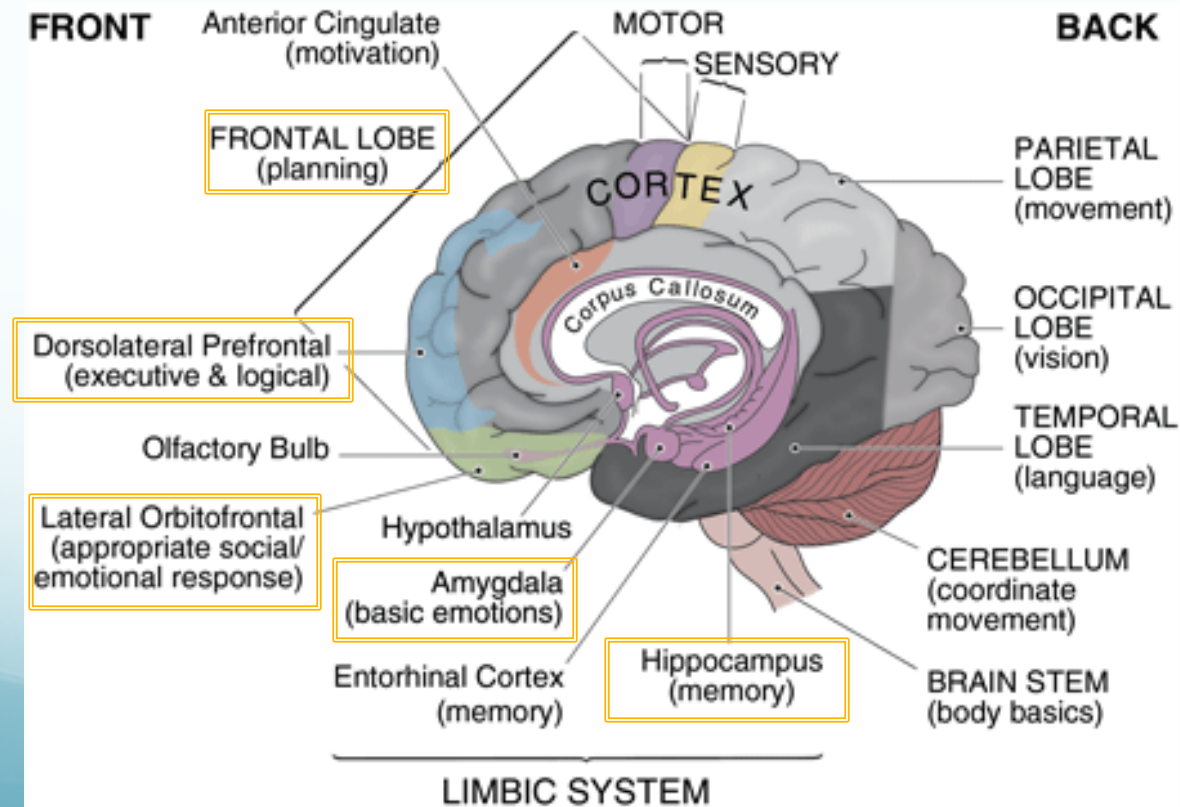
Emotion regulation



Revisiting Constructs

- **Cognitive Regulation**

- Includes attention and emotion regulation
- Neurological changes in areas localized for:
 - Attention (e.g., Anterior cingulate cortex)
 - Emotion (e.g., Insula, dPFC, vmPFC, amygdala)
 - Cognition (e.g., mPFC, posterior cingulate cortex)



Some Training Techniques Have Produced Results

- Results of MBSR Tools (Goldin, 2010)
 - Increased attention, emotion, cognitive regulation
 - Reduce stress, anxiety, depression symptoms
 - Amplify immune function
 - Replicated in multiple populations
- Results of Self-Authorship Coaching Tools
 - Not made systematic yet, so not tested yet

PROBLEM STATEMENT

- Higher Education is not meeting expectations of employers for undergraduate students (AAC&U, 2009)
- Stress and anxiety are impeding students' learning ability (Lesch, 2007; Puttwain, 2011)
- Critical thinking is not improving among students who are completing 2- and 4- year degrees (Arum & Roska, 2011)
- Virtually no national critical thinking data for graduate students

SIGNIFICANCE OF STUDY

- IETM may be an affordable and accessible solution to fundamental problems as it is designed to be either
 - a face-to-face,
 - hybrid, or
 - online training modelthat could be incorporated into any research sequence or course.

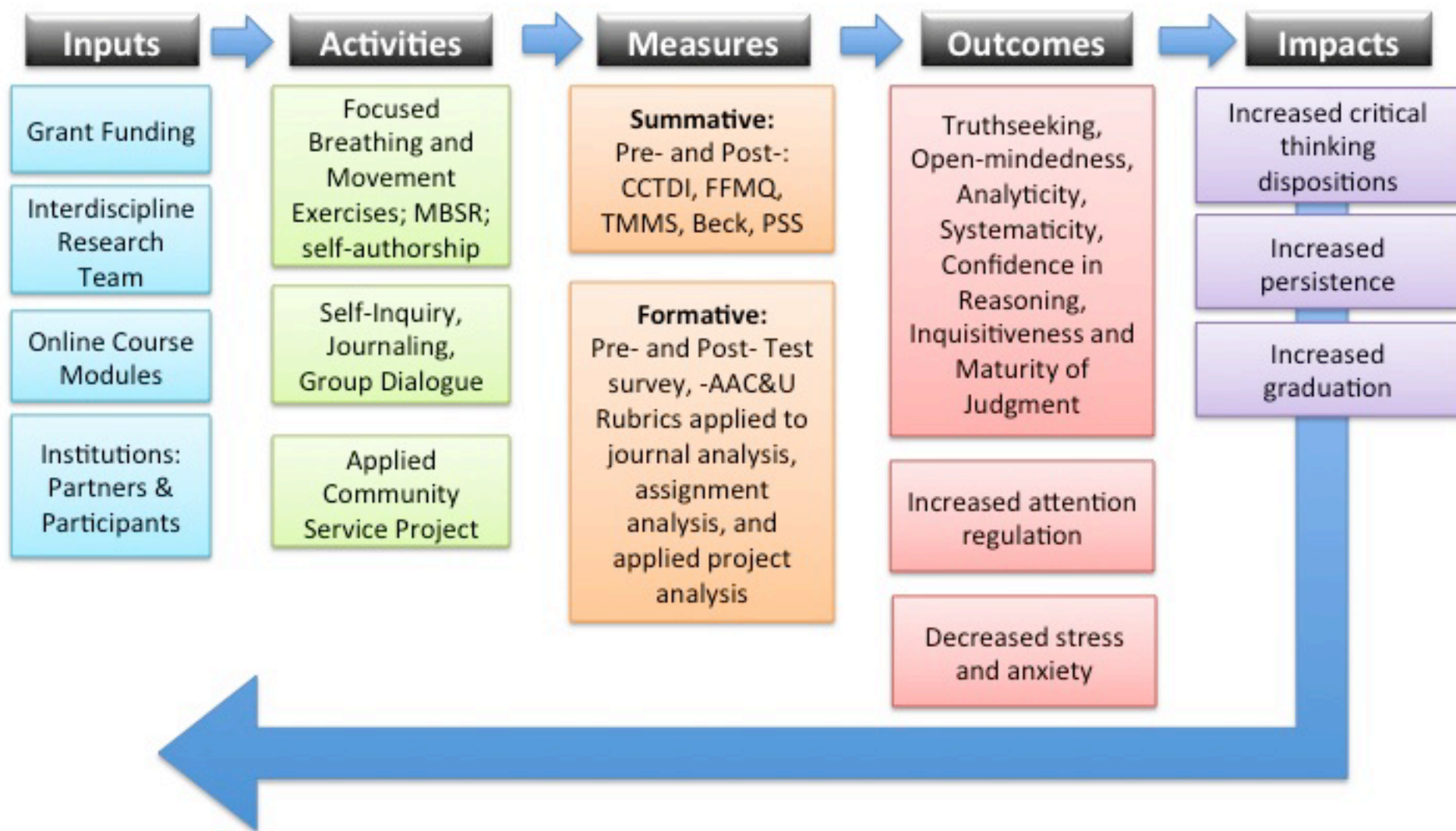
PURPOSE

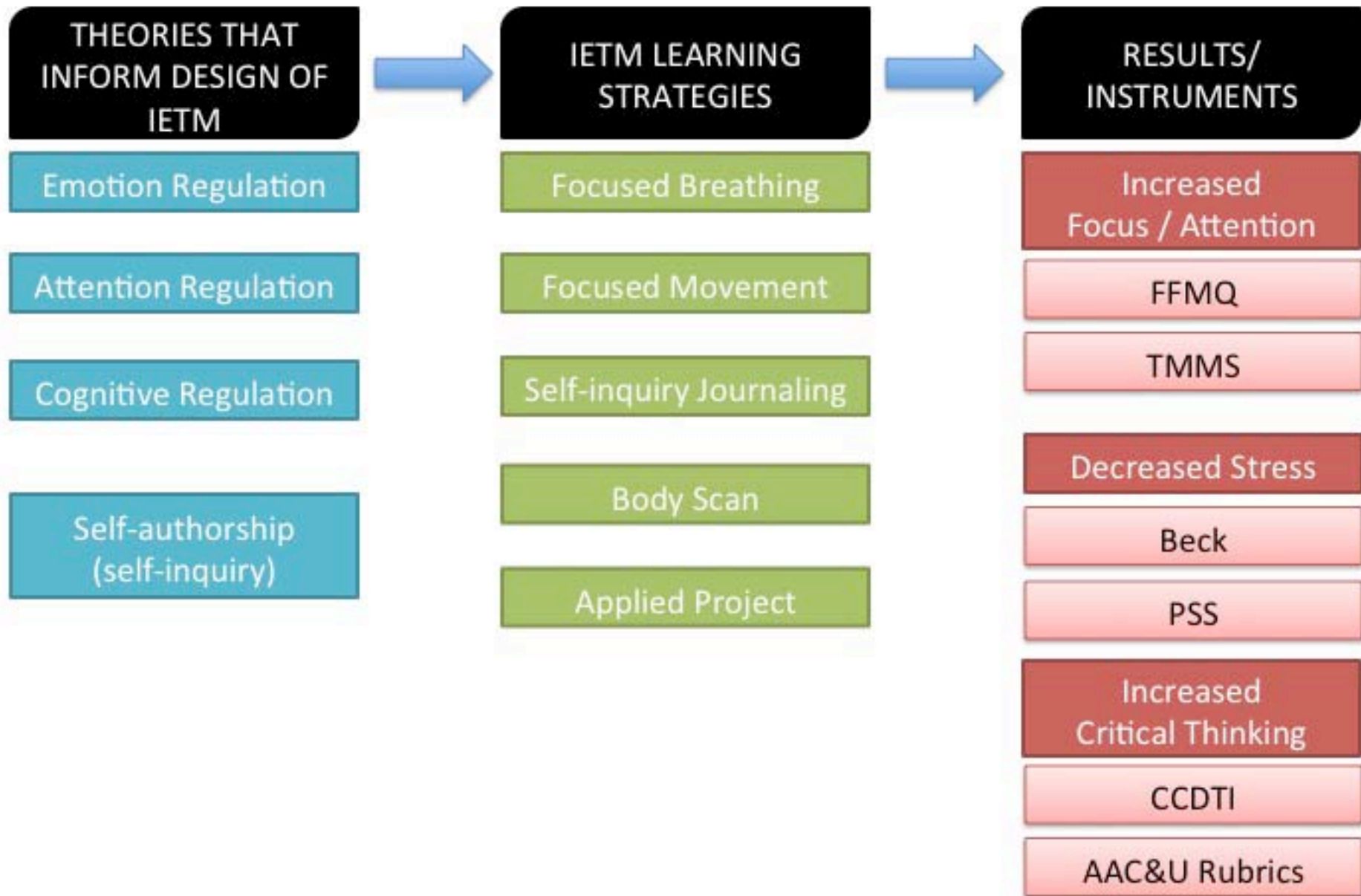
- **Evaluate an Integrated Education Training Model (IETM) ability to**
 - enhance postsecondary education students' critical thinking dispositions
 - reduce their stress
 - increase their persistence in and completion of postsecondary education.
- **Training is designed to enhance**
- attention, emotion, and cognitive regulation skills,
- **Increase educational achievement via critical thinking dispositions and perhaps skills.**
- Truthseeking,
 - Systematicity,
- Open-mindedness,
 - Confidence in Reasoning,
- Analyticity,
 - Inquisitiveness, and
 - Maturity of Judgment

HYPOTHESIS

- Participants who complete IETM will have a statistically significant
 - improvement in their ability to pay attention/keep focus.
 - improvement in their critical thinking dispositions.
 - decrease in perceived stress.

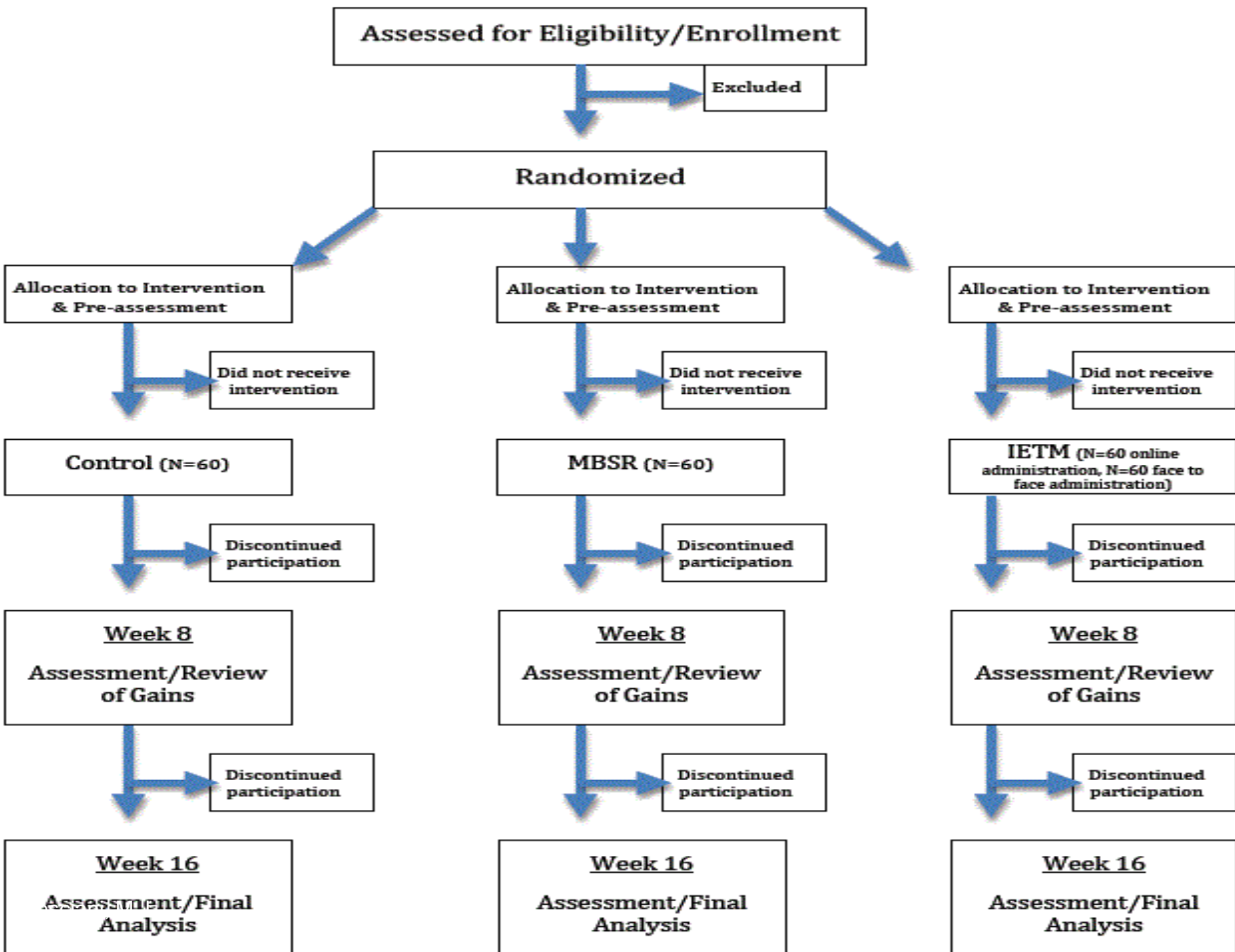
Table A: Integrative Education Training Module (IETM) Logic Model





SUBJECT SELECTION

- Age 19+
- Undergraduate
- Graduate
- Diverse ethnicity, gender, but not major
- **Institutions**
 - **San Diego State University**
 - MESA Engineering Program (MEP)
 - Pi Beta Phi Sorority (Current, Pilot)
 - **San Diego City College**
 - Puente Program
 - **Southwestern Community College**
 - Mathematics, Engineering, Science Achievement (MESA)
 - University Louis Stokes Alliance for Minority Participation (LSAMP)
 - Minority Access to Research Careers (MARC) Programs
 - **Maybe UCSD**
 - Minority Access to Research Careers (MARC)



SUMMER 2012 PILOT FINDINGS

- Delivery change in Curriculum
- Added Email reminders
- Added Instructional and Practice Videos
- Emphasized Commitment to Practice
- Added 45 Minutes of Focused Movement at beginning of class for undergraduates

Summary

- Students learning and development is not meeting expectations
- IETM may be an accessible and affordable solution
- Increase attention, emotion, cognitive regulation
- Decrease stress and anxiety
- Potential increase in critical thinking dispositions
- Resulting potentially in increased access, persistence, and graduation

QUESTIONS / FEEDBACK

- What do you see as Potential Weaknesses and challenges in this design?
- What do you see as the strengths of this design?
- Do you have any Methodology/ Instruments suggestions?
- Anything else?

Resources

- Mindfulness - <http://www-psych.stanford.edu/~pgoldin/Mindfulness.html>
- UCSD - <http://health.ucsd.edu/specialties/mindfulness/Pages/default.aspx>
- SILI - <http://www.siyli.org/take-the-course/siy-curriculum/>
- Rushing to Yoga Foundation – www.rushingtoyoga.org





Questions?

Contact Marilee J. Bresciani, Ph.D. at
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