Research Supporting the Educational Value of *Exam Performance*[1]

Key Ideas. The *Exam Performance* Program is an eLearning program that trains students to perform better in high stakes situations – academic testing, standardized admissions exams, and licensing/professional exams. It is beneficial for students from Grade 4 through college.

Exam Performance is based on peak performance training techniques derived from the fields of neurology, clinical psychology and sports psychology. *Exam Performance* helps students train to be calm, confident and focused so they perform at their best during exam conditions, when a peak performance mindset matters most. The program incorporates techniques used by top athletes and professionals who train to perform at their best while under pressure.

The *Exam Performance* Program is premised on the reality that academic exams and standardized tests not only test to see how much of the tested material students know. They also test to see how well students can perform while under the rigor and demands of exam conditions (often including time pressure and sometimes involving "high stakes).

- Students who are unprepared to handle both the stress and mental rigors of the testing situation are not "fully" prepared for what is being tested and risk panicking and not performing to their highest ability, which can possibly lead to disappointing exam scores.
- The program is especially helpful to those students who say/believe "I don't test well," "I'm not a good test taker," or "I suffer from test anxiety."

The *Exam Performance* Program is a great tool for educators in this 21st Century landscape.

Who Can Benefit from the *Exam Performance* Program

Exam Performance is designed for any student or test taker facing an academic exam or standardized test–including not only tests given in K-12 schools, but also college or graduate school admissions exams, or professional or licensing exams.

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[1] ©2016, *Exam Performance*, Los Angeles, CA. Material updated and adapted by Christine Mason, *Exam Performance* Chief Teaching and Learning Officer, from Jamieson, J. (2016). *Maximizing student achievement: A review of the process-focused exam performance program to improve student performance and achievement.* White paper available from *Exam Performance*, Los Angeles, CA.

Exam Performance is:

- Recommended for students in Grades 4 through college (with teacher or parental guidance in Grades 4-12)
- An excellent program for *independent use* by college and university students
- A tool for educators, parents, and students to improve student academic achievement and testing performance.

It can be used alongside traditional test preparation programs as it focuses on the psychological and neurological component.

High Stakes Standardized Tests are Stressful

- Historically, test preparation has a narrow focus on improving outcomes (test scores) rather than identifying and understanding mechanisms that determine or improve performance.
- The unilateral focus on performance outcomes limits the development of preparation programs based on intermediate psychological constructs such as arousal or affect. However, contrary to lay beliefs, stress is not always negative.
- There are both maladaptive *and* adaptive types of stress responses.
- *Exam Performance* addresses ***what students do in the moment to modify/improve their experience of stress during high stakes standardized tests and other high pressure, evaluative environments***

The Mind–Body Link

There are many ways in which students' stress level can affect their performance. Stress can be adaptive when it cues the individual to prepare for an upcoming event. In such circumstances the individual may enter a situation in an alert mode —— ready to take in the necessary input to handle whatever comes his or her way. However, stress is often maladaptive. In the short term, stress can interfere with memory, ability to study efficiently when trying to prepare for a test, retrieval of information, and ability to focus or concentrate. Short term stress may also manifest with physical symptoms such as shortness of breath, a racing heart, and 'brain fog" or confusion or interference with ability to think clearly. Over a longer term, stress can lead to mental anguish, states of agitation or depression, procrastination or avoidance, and even physical sickness.

What *Exam Performance* Program Does

- *Exam Performance* addresses student engagement, self efficacy, motivation and mindset
- *Exam Performance* improves emotional self regulation and enables peak cognitive performance in stressful testing situations. It helps students train to develop a peak performance state of mind when one is calm, confident, and focused.

- It bolsters the psychological confidence that maximizes performance
- It can help produce higher scores when one learns to manage the stress of testing
- It helps prevent students from feeling test anxiety in the first place.
- Using principles from sports psychology, helps to develop a "champion" mindset and helps test takers get into the "zone" for optimal test performance.

How *Exam Performance* Works

The *Exam Performance* Program consists of:

- 6 workshop videos
- A corresponding participant (student) workbook
- 10 daily training videos
- A teachers' manual that includes instructional suggestions and recommendations for group or individual lessons
- Supplemental materials available at the *Exam Performance* web site

The *Exam Performance* Program can be customized and is available as:

- An individual skill building program
- Professional development package for teachers, parents and administrators
- A package for schools and districts with group trainings for students.

Exam Performance identifies options for the individual user. To obtain best results, users will want to view some of the videos (such as the relaxation video clips) repeatedly. We recommend that users develop a schedule for practicing strategies, such as the recommended positive affirmations (self talk) or breathing exercises.

Modules. To improve test takers' mindsets during and leading up to high stakes tests, the *Exam Performance* Program provides students with a series of training techniques and exercises presented in online modules. *Exam Performance* is rooted in empirical, scientific theory. Similar to Ellis' Rational Emotive Behavioral Therapy (REBT) and core concepts from Cognitive and Behavioral Therapy (CBT), the modules included in the *Exam Performance* Program seek to maximize achievement by focusing on altering mindsets and cognitive reframing during stressful performance situations.

- *Exam Performance* tackles a domain of test performance – psycho-situational factors that are untapped by traditional preparation programs.
- Using scientific evidence, *Exam Performance* creates a Champion Mindset and growth mindset in test takers.
- By altering students' mindsets about stressful testing and exam situations, *Exam Performance* gives students the opportunity to realize their potential and successfully apply their skills and knowledge.

- More specifically, *Exam Performance* outlines four characteristics of the Champion Mindset: dedication, confidence, optimism, and stress management.

Background

Stress, Test Preparation, and Test Taking

Unfortunately, test preparation does little to address test takers' experience of stress and/or their mental mindsets leading up to and during testing. So, students who think they are preparing for high stakes standardized tests are left experiencing threat or bad stress leading up to and during their exams, with no information as to how to combat that stress. In lieu of addressing psycho-situational factors and students' mindsets, the business of test preparation has focused almost exclusively on the techniques or skills test takers need to succeed to that certain outcome – a test score.

Anxiety Prior to a Test

Students who are preparing for high stakes standardized tests may experience threat or negative stress leading up to and during their exams, with no information as to how to combat that stress.

- Students high in math anxiety, for example, perceive that they do not have the coping resources (knowledge, preparation, ability, etc.) to meet the situational demands of high stakes math exams.
- Prolonged exposure to high levels of cortisol takes a toll on the major regulatory systems — such as the cardiovascular, metabolic, and immune systems — and on the brain (Dubrovsky, 1997).
- When under stress, our bodies enact a threat response, constricting their vasculature, releasing cortisol, and impairing cognitive performance as less blood gets to their brain. Thus, for the subset of students who are highly math anxious, understanding the role of stress in testing situations can go a long way towards helping improve the outcomes for these students.

Both athletic contests and exam situations can be acutely stressful, demanding goal directed responding, and requiring physiological arousal and "good or adaptive stress" to maximize performance.

Champion Mindset

Cognitive and mental processes play a pivotal role in determining athletic performance. For example, baseball hitters on successful streaks might say they are "In the Zone." The batters report being able to see the ball better, executing their swings more fluidly, and anticipating pitches more accurately.

These “In the Zone” moments contrast with times when batters are not performing well, or slumping. The two mindsets that accompany hot streaks and slumps mirror the two types of stress covered earlier: challenge and threat. Like challenge or good stress states, athletes experience approach motivation when they are “In the Zone” as they strive to perform well. Alternatively, during slumps athletes often focus on “not performing poorly” rather than “trying to do well.” This elicits avoidance motivation and results in threat or bad stress responses.

- Recent research on “choking under pressure” highlights the import role of mindsets in determined athletic performance (Beilock, 2011). In the choking literature, threat mindsets cause athletes to engage in efforts they believe will get them out of their slump (“slump-busting”).
- A slumping athlete might try to “go back to basics” and exert a lot of effect executing each component of his/her athletic skill (e.g. a baseball swing) as well as possible. The problem is that trying to perform each component well can interfere with the flow or the automaticity of athletic skills.
- Paradoxically, the harder an athlete tries to get out of a slump, the worse the athlete may perform. On the other hand, if the athlete is in the midst of a hot streak and is experiencing good stress, a baseball swing or other sequences of movements can become automatic and completed with an ease of motion and timing. These are facilitated by an increased readiness and arousal.
- The first seminar module of *Exam Performance* focuses on getting “In the Zone,” which the program identifies as an optimal state of mind for maximizing test performance. The video-aided material leads students through exercises and examples illustrating times when performance flowed naturally. Many of the concepts in this first module are derived from research on what sports psychologists refer to as flow – a state of consciousness where people become totally immersed in an activity (Csikszentmihalyi, 1997).

Regulating Stress

Research indicates that individuals who get “In the Zone” even outperform people who remain relaxed. Thus, experiencing the right kind of stress is better than keeping calm as a tester does not harness the physiological benefits of stress.

- When sympathetic activation (or stress arousal) is accompanied by approach motivation during testing situations, individuals exhibit improvements in performance and cognitive functioning, as compared to people who experience avoidance-motivated stress.
- However, during stressful tasks, including standardized tests, increases in stress arousal facilitate the mobilization of oxygenated blood to the brain and periphery, thereby improving performance. If a person remains completely relaxed, he/she cannot benefit from the adaptive functions of stress. *By promoting adaptive stress responses, test takers can be confident, focused, and optimistic during their high stakes standardized tests.*

- A growing body of scientific evidence clearly demonstrates that “good stress” – or adaptive stress — is better than “no stress” during demanding testing situations (Dienstbier, 1989; Jamieson et al., 2013; Shiota & Levenson, 2012).

In preparing for *high-stakes tests, mindsets about ability and intelligence are especially important because an individual’s beliefs about his/her ability to perform well can have a profound effect on the individual’s scores.* Students possessing growth mindsets believe that intelligence and academic ability can be developed through preparation and hard work (Dweck,1999). These students seek to develop their abilities and skills in comparison to individuals with fixed mindset who focus on proving their intelligence and avoiding failure (Dweck, 2006).

The Role of Relaxation, Visualization and Mindfulness

Relaxation techniques such as deep, paced breathing and mindfulness mediation will help bring students back to equilibrium and relax. These can help offset the stress prior to, during, and after demanding test situations.

- **Visualization** techniques are common in the sports psychology literature. These methods typically encourage athletes to imagine a successful sequence of events. By creating positive mental imagery, the athlete will be more likely to experience approach motivation (“trying to win” or striving towards a goal), rather focusing on avoiding failure which disrupts the flow and impairs performance (Beilock, 2012).
- Somewhat tangential to training and establishing positive, approach motivated mindsets in test takers are **relaxation and breathing** exercises.
- Relaxation and breathing can help reduce stress, enabling individuals to think more clearly and with more ease.

Mindfulness meditation is the nonjudgmental awareness of experiences in the present moment (Kabat-Zinn, 1990). The first component of this approach is the regulation of attention to breathing. Mindfulness activities range from greater awareness of one’s environment, to awareness of experiences, awareness of breath, and body scans (i.e., how do I feel? how is my breathing? am I tensing up or relaxed?). Mindfulness may involve turning inward to be more aware of self, to being more observant of the external world, to a greater awareness of self and others in various situations.

- Mindful individuals perceive increases in stress, but remain calm as they let the feeling wash over them.
- A meta-analysis of over 1,348 students instructed in mindfulness found the greatest positive results when mindfulness practices were more frequent or extensive (Zenner, Herrnleben-Kurz, & Walach, 2014).
- A meta-analysis of 24 studies found mindfulness treatments to be superior over other (control) conditions, especially for students who displayed symptoms of

long-term stress or psychological problems (Zoogman, Goldberg, Hoyt, et al., 2015).

Reframing

Another technique to manage stress involves reframing the situation to interpret events in a more positive light. Reframing the meaning of stress inducing cues and/or distancing oneself from stressful situations improves responding by decreasing stress arousal and helping people to relax.

- For example, Blackwell, Trzesniewski, and Dweck (2007) found that middle school students who attended an eight-session workshop teaching them that the brain is like a muscle and grows with effort displayed a sharp increase in math achievement for the rest of the school year, an effect not shown by students who attended a workshop that taught them only study skills.
- In another study, compared with controls, participants who reframed their situation scored 65 points higher on their actual GRE tests and reported that arousal on the day of the test had aided their performance

Special Benefits the *Exam Performance* Program Offers

The *Exam Performance* Program is evidence based. Thus, components of the program shift with new developments in scientific research and evolve along with students and their testing needs.

- The benefits of improving students' test performance can extend far beyond those testing situations.
- The visualization, relaxation, and meditation techniques can reduce overall stress and be useful in a wide array of life circumstances.
- Mindfulness "decreases toxic stress and impulsivity and increases attention, emotion regulation, classroom engagement and compassion." All of these are skills that students can benefit from as they are encouraged to control and monitor their own states of being as learners.
- One Northern California low-income middle school has incorporated mindfulness practices into its daily lessons and has seen drops in detentions and referrals, and increases in student's ownership of their own behavior.
- The reframing exercises can assist in helping individuals reframe any problem area in a more positive light.
- Helping students to realize their academic potential can enhance student persistence in future classes (Richardson, Abraham, & Bond, 2012).

For further information or to order contact *Exam Performance* at (888) 778-6113 admin@examperformance.com