

“We need to help children find natural ways for body and mind to combat the pressures of modern living and to find better ways to help focus their minds on matters of importance...Meditation is a proven means for stilling the mind, encouraging mindfulness, and providing optimum conditions for generative thinking and reflection” (Fisher, 2006).

The Problem:

We live in a chaotic, over-stimulated, overburdened, media-saturated, multi-tasking world moving at a dizzying pace. My students experience these stressors first hand. From the mentally and physically demanding project-based learning (PBL) environment to the mountain of extracurricular activities, my students are burning both ends of the candle. Compacted by the stressors of being a typical sixteen year old, the levels of anxiety and pressure to perform in the classroom continues to climb.

Countless numbers of my students have approached me, anxiety-ridden and panicked, most lamenting over their stress to perform in our school-wide Exhibition, feeling pressure from their families and their peers to achieve. The familial and societal pressures can end up being too much for one to handle, forcing them to completely shut down. Many students today lack the stress management tools and effective coping mechanisms required to deal with the stressors of a 21st Century adolescent, and many of our schools are failing to provide adequate support. Students require support in the development of emotion regulation skills in order to successfully navigate the everyday stressors of their lives. Development of these skills can also help to provide optimum conditions for learning in the classroom (Fisher, 2006).

As a graduate student and a student-teacher, I can relate to my students’ often overwhelmed sentiment. According to Dr. Amy Saltzman, “learning to balance the emotional demands of teaching with other professional and personal pressures is central to the teacher’s art, and vital to professional longevity” (2010). It is our duty as educators to leave unnecessary tension and stress outside of the classroom, creating a positive, low-anxiety, welcoming learning environment for students to thrive.

How do *I* combat the inevitable stressors of life in the 21st Century? I have committed myself to a personal practice of *mindfulness*. In my own studies and personal journey of becoming a yogi, I have learned to allow for the quiet to come in through a seemingly simple exercise. For ten minutes, every morning, I sit with my eyes closed

and just breathe. I become a conscious observer of my own thoughts. I wonder, what happens when my students are offered an opportunity for a mindfulness practice in the classroom? What happens when students are provided quiet, *Mindfulness Time* to simply stop, breathe and think?

Mindfulness, as defined by Stephen Whitmarsh (2013), is “a tool, or set of attentional and metacognitive functions used for the introspective investigation of present moment experiences.” Defined by Thich Nhat Hanh, “When we are mindful, deeply in touch with the present moment, our understanding of what is going on deepens, and we begin to be filled with acceptance, joy, peace and love” (1992). Or put more simply, mindfulness is “paying attention to your life, here and now, with kindness and curiosity” (Saltzman, 2010).

A practice of mindfulness opens the door to an understanding of ones’ own strengths, weakness and “blind spots”. Developing a deeper understanding of self also allows for greater acceptance and compassion towards others. Provided the opportunity to learn the *how* and the *why* individuals respond differently in a given situation, coupled with mindful activities such as meditation, could help provide the tools necessary to navigate their pressure-filled lives. Through the integration of meditation, a time for quiet, reflective, non-judgmental awareness, students are able to take charge of their learning *and* their emotions. Today’s youth is afflicted with overloaded circuits, suffering from the dangerous combination of high stress and ineffective stress management tools. What happens when we simply press the pause button, stop, breathe and think?

The Analysis:

“Stress: We’ve all felt it. Sometimes stress can be a positive force, motivating you to perform well... But often it's a negative force. If you experience stress over a prolonged period of time, it could become chronic — unless you take action” (American Psychological Association, 2014).

What is stress? It is a “biological and psychological response experienced on encountering a threat that we feel we do not have the resources to deal with” (McLeod,

2010). For our students, external stressors can create the pressure to perform. According to my 10th grade students, these stressors include: pressure for exemplary grades, family and peer conflicts, over-scheduled itineraries of after-school sports and activities, dating and relationships, and body image issues. Another common stressor, according to my students and my own observations, is the collaborative PBL environment, forcing students to heavily rely on each other in order to succeed in school. Successful execution of our school's semester-long projects hinges on students' ability to work collaboratively with their peers. Students, however, are never taught how to be a contributor in a group setting, nor are instructed on how to deal with peer conflict. The ability to identify one's emotions, understanding what is going on inside of, and the interconnectedness of, the body and the mind, is the first step to being an effective group member, and is an essential life skill that is often overlooked in our schools.

Since 2007, the American Psychological Association has, "commissioned an annual nationwide survey as part of its Mind/Body Health campaign to examine the state of stress across the country and understand its impact" (APA, 2014). The *Stress in America* survey "measures attitudes and perceptions of stress among the general public and identifies leading sources of stress, common behaviors used to manage stress and the impact of stress on our lives" (APA, 2014). The campaign emphasizes the interconnectedness of the mind and body, educating the public on the "connection between psychological and physical health and how lifestyle and behaviors can affect overall health and wellness" (APA, 2014). According to the *Stress in America* survey, 42 percent of teens report to not doing enough to manage their stress, while 51 percent say stress management is very or extremely important to them. 55 percent of teens surveyed only set aside time to manage stress a few times per month or less, and 13 percent admit to never allotting time for stress management (APA, 2014). Teens lack the support to develop effective stress management methods. These numbers underscore the need to provide students the tools necessary to manage stress and to encourage them to be mindful in their interactions with others.

"Knowing others is one indicator of emotional intelligence, but knowing ourselves is possibly the principal sign of wisdom" (Cashman, 2014).

In recent years, the western culture has been inundated with the eastern practices of mindfulness, meditation and yoga. The concept of *mindfulness*, however, has existed for centuries, “threading its way through history as one of the pre-eminent precepts in life” (Cashman, 2014). Let’s go back to ancient Greece, to Plato’s *nosce te ipsum*, or “know thyself”. Plato expresses the basic human need for self-awareness. This introspective awareness allows one to still the mind, slowing down the incessant chatter of our chaotic world. This also allows for taking charge of one’s emotions, ultimately freeing one from the crippling stress and anxiety, opening up the possibility for happiness and contentment.

Businesses such as Lululemon, the yoga apparel giant, and CorePower, the ever-expanding yoga studio, are seemingly taking over the world, new storefronts popping up in a town near you. Tech giants such as Google and Twitter offer in-house mindfulness training courses. Tools for Peace’s “Stop, Breathe & Think” and The Huffington Post’s “GPS for the Soul” offer readily available, free applications to download to any of your devices. Even The Marine Corps is testing Mind Fitness Training in order to encourage soldiers to relax. The term *mindfulness* may have become the latest buzzword of our generation, however it should not be discredited for its’ recent surge in popularity.

Today, a multitude of programs are actively introducing mindfulness interventions into our schools. A pioneer of this movement has been Jon Kabat-Zinn, the founder of the Mindfulness-Based Stress Reduction program, or MBSR. This eight-week mindfulness program “focuses upon the progressive acquisition of mindful awareness” (Grossman, 2010), adapted from the teachings of the Vietnamese Zen Buddhist monk Thich Nhat Hanh. SMART in Education (Stress Management and Relaxation Techniques in Education) has been created to support teacher social-emotional competence and student social-emotional development. The Hawn Foundation and their MindUp curriculum “teaches social and emotional learning skills that link cognitive neuroscience, positive psychology and mindful awareness training utilizing a brain centric approach” (MindUp, 2013). The David Lynch Foundation implements the Quiet Time program to improve academic performance and reduce stress violence in low-income urban schools (David Lynch Foundation, 2014). The Center for Wellness and Achievement in Education, or the CWAE, also employs a Quiet Time program as a “high

impact stress reduction and readiness-to-learn program...providing two restful fifteen minute periods each day to reduce stress and promote life balance” (CWAE, 2014). All of these programs, as well as the many others, are supported by hard data proving the benefits of a mindfulness-based curriculum. There is something to be said about simply slowing down, powering down our devices in order to power up our minds.

While these programs are gaining momentum, many of our schools are still left in the dark. The mindfulness and meditation movement has not fully gained traction nationwide. Some schools and districts may avoid jumping on board due to lack of information about the benefits, or perhaps shying away from the movement due to potential controversy. I will later discuss the challenges encountered by the Yoga Program of the Encinitas Union School District. I believe with more exposure of the benefits, backed by science and hard data, the districts, administrators, parents and students will have no excuse but to adopt mindfulness and meditation programs into more of our schools.

“Becoming is better than being”—Carol Dweck, *Mindset: The new psychology of success*

A student’s mindset can also influence his or her self-perception and self-awareness. According to Carol Dweck, mindsets are, “beliefs about yourself and your most basic qualities”. Dweck outlines two distinct mindsets: fixed and growth. A fixed mindset “assumes that our character, intelligence and creative ability are static givens which we cannot change”. A growth mindset, on the other hand, is the belief that intelligence can be developed through effort. “The view you adopt for yourself profoundly affects the way you lead your life. It can determine whether you become the person you want to be and whether you accomplish the things you value” (Dweck, 2007). Dweck serves on the leadership board for PERTS (Project for Education Research That Scales), an applied research center at Stanford University that provides interventions targeting students’ academic mindsets (PERTS, 2014). According to the High School Study conducted by PERTS, students reading and discussing the concept of a growth mindset, followed by a “writing exercise to summarize the scientific findings in their own

words”, has a positive impact academic performance in core academic courses (PERTS, 2014).

“Explaining how the brain works is especially important for students who believe that they are ‘not smart’ and that nothing they do can change that” (Willis, 2009).

Another method to promote mindfulness and encourage self-awareness can be achieved through brain-based learning strategies. According to celebrated neurologist and classroom teacher Dr. Judy Willis, “teaching students the mechanism behind how the brain operates and teaching them approaches they can use to work that mechanism more effectively helps students believe they can create a more intelligent, creative, and powerful brain” (2009, p.1). Understanding how the brain works also demonstrates to students that, “striving for emotional awareness and physical health is part of keeping an optimally functioning brain” (Willis, 2009). Brain-based teaching combines neurology, psychology, cognitive science and other fields, guiding instruction based on how the brain works. Human existence relies on the brain; we cannot exist without it. We should follow the plea of Eric Jensen: “Everything we do uses our brain; let’s learn more about it and apply that knowledge” (2014). Expanding training of brain-based learning strategies from teachers to students, we will all be equipped with the invaluable knowledge of how the brain works.

Dr. Richard Davidson, a neuroscientist, author, professor and founder of the Center for Investigating Healthy Minds at the University of Wisconsin-Madison, is known for his pioneering research on the impact of contemplative practices, such as meditation, on the brain. Meditation serves as a tool to cultivate positive emotions while helping to manage negative ones. In 2004, Davidson, along with the Dalai Lama and the Mind and Life Institute, conducted research of eight Tibetan monks, tracking brain waves during meditation. “Using an electronic scanner, the researchers found that the monks were producing a very strong pattern of gamma waves...that is associated with concentration and emotional control (Carey, 2005). The research suggests that compassion and altruism are human qualities that can be cultivated through “mental training” (Carey, 2005).

According to Davidson's 2013 study investigating the effects of intensive mindfulness practice, practitioners of meditation and mindfulness experience "specific molecular changes in the body", as well as experience, "rapid alterations in gene expression" (Sakai, 2013). Davidson found that differences in the brain were "clearly measurable" and that "participants actually engaged in more altruistic and compassionate behavior" as a result of the meditation and mindfulness training (Davidson, 2013). This study supports the concept of neuroplasticity, or the brain's ability to continuously form new neural connections, and the transformative power of mindfulness practices.

The Plan of Action:

"Enthusiasts argue that trying to prepare students for the 21st Century with 19th Century technology is like teaching people to fly a rocket ship by having them ride bicycles" (Collins & Halverson, 2009, p.9)

My proposed plan of action is neither from the 21st nor the 19th century. Meditation, yoga and the concept of mindfulness have existed since roughly 500 BCE. This movement is not claiming to reinvent the wheel. Rather, it has not been until recent years that researchers have began examining the efficacy of these practices in a school setting.

A mindfulness-based curriculum is at the core of my proposed educational reform. As mentioned previously, Jon Kabat-Zinn has been a pioneer of mindfulness research with his groundbreaking Mindfulness-Based Stress Reduction program, or MBSR, starting in 1979. This eight-week intensive training in mindfulness meditation is, "based on ancient healing practices" and is "ideal for cultivating greater awareness of the unity of the mind and body, as well as of the ways the unconscious thoughts, feelings and behaviors can undermine emotional, physical and spiritual health" (Mindful Living Programs, 2014). MBSR offers a combination of the Eastern philosophies and Buddhist practices of mindfulness, meditation and yoga, together with the Western methodologies of science and psychology to provide a comprehensive intervention treatment. This multi-faceted approach has universal applicability and has proven to be beneficial for the treatment of anxiety, depression and overall emotional well-being of its' patients. When

introduced into a school setting, our students could reap the same benefits at this critical point in their lives.

Such programs have recently been tried out in some of our local schools. For example, the Encinitas Union School District unveiled a yoga program in 2012. The program, funded by a \$533,000 grant from the K.P. Jois Foundation, now known as the Sonima Foundation, allows the district to implement a yoga program at all nine district schools (EUSD, 2012). The Jois Foundation is a nonprofit organization founded in memory of Sri K. Pattabhi Jois, who is credited for bringing Ashtanga yoga to the western world. Ashtanga Yoga is a rigorous practice of synchronizing the breath with a progressive series of postures. The program also includes the development of an “integrated wellness program that includes components on physical fitness, wellness and life skills” (EUSD, 2012).

In December of 2012, shortly after the program’s unveiling, a small but vocal group of parents raised their arms in disapproval of the program as a religious indoctrination, starting an online petition to remove yoga from the district’s curriculum. The National Center for Law and Policy (NCLP) filed a lawsuit on behalf of a family who’s child attends one of the EUSD schools, suing for “civil rights violations resulting from its inherently and pervasively religious Ashtanga yoga program” (Nikias, 2013). Dean Broyles, the president and chief council of the NCLP, and the attorney representing the family, expresses their belief that, “it is a situation where the state is endorsing religious beliefs and practices” (Nikias, 2013). Opponents of the yoga program argue it is a violation of the First Amendment and infringement of the separation of church and state. According to Mary Eady, the mother of a first grader, the yoga program is not purely physical exercise, rather it is “teaching children how to think and how to make decisions...teaching children how to meditate and how to look within for peace and for comfort...as a tool for many things beyond just stretching” (Carless, 2012). The aggressive accusation of yoga as religious indoctrination undermines the benefits of such a program, diverting attention from the ways yoga and meditation can provide the necessary tools to combat stress and promote emotional and physical wellbeing in our youth.

In June of 2013, the court ruled in favor of the Encinitas Union School District, ruling that indeed there is religion in Ashtanga Yoga, however EUSD had effectively stripped its' program of these elements. An appeal filed shortly after the ruling was rejected. On April 23, 2014, the Sonima Foundation, previously known as the Jois Foundation, announced the yoga program's expansion to other districts in California, as well as other states including five schools in New York, six schools in Houston, Texas.

The Center for Education Policy and Law (CEPAL), here at University of San Diego's School of Leadership and Education Sciences (SOLES), was contracted to research the effects of the yoga program for 5700 students in the Encinitas Union School District. CEPAL's wide data collection effort provides a potential guiding framework for my educational reform. Prior to this study, much of the data regarding the effects of yoga in schools had been correlational, qualitative and small in scale. Their initial goals were to make causative statements regarding the effect of a yoga program in a K-5 school setting through a randomized control trial that would yield both quantitative and qualitative data.

EUSD and the Sonima Foundation countered CEPAL's proposed goal of a randomized treatment and control trial, wanting yoga exposure to all students. Thus, the program was unveiled in five district schools for the full year, while the control group of schools only received yoga for the second semester. The data collection methodology strived for quantitative data, including student, parent and teacher surveys, as well as biometric data measuring resting heart rate, body mass index and biomass trajectory, and the grade 5's Fitnessgram performance. The qualitative data collected included interviews and focus groups with the yoga instructors, classroom teachers and parents.

According to Dr. Fred Galloway, however, CEPAL encountered many challenges and limitations during this research. First, collection of the quantitative biometric data proved to be a challenge. The study necessitated recording the resting heart rate of 5700 students daily. The solution was for students in grades three through six would take their own pulse over fifteen seconds, then multiply by four. Kindergarten, first and second grade students would not be relied on to take their own pulse. Though this was determined prior to beginning the program, it proved to be a logistical nightmare. This deemed this data "worthless" (Galloway, 2014). Measuring students' biomass trajectory

was also a struggle, as many students and parents were both uncomfortable and unwilling to be weighed and measured publically.

Another limitation of the study was the low survey response rates. Teachers were set to be surveyed three times in the first ten weeks of the study. According to Galloway, participation rates were less than stellar, with roughly one out of five teachers completing the surveys. Parental participation was even less, coming in with a participation rate between two and five percent. Examining the cause for such low participation rates is critical in this educational movement. The lack of involvement from teachers could be due to a sense of overwhelming change and loss of control, or perhaps their rotations and schedules were being altered without proper notice. Parents' low participation rates could be attributed to busy schedules and over-burdensome surveys, or perhaps a conflict of belief, as detailed in the lawsuit against EUSD. The support from teachers and parents is critical in the success of my educational reform action plan.

As demonstrated by the lawsuit, the unveiling of a yoga program in a school could be seen as a violation of their First Amendment right. The judge ruled that Ashtanga yoga is religious, but the program has been sufficiently stripped of religious components. On one hand, some parents argue the program is a violation of the separation of church and state, and despite the judge's ruling, religion cannot be completely stripped from the Ashtanga practice. On the other hand, devoted yogis are up in arms, arguing stripping Ashtanga of religion in part strips the practice of its' meaning, its' guts, and its' benefits. This educational reform movement necessitates a difficult balancing act in order to gain support from all sides. Providing a more holistic approach, through the integration of both Eastern and Western philosophies, as modeled by Kabat-Zinn's MBSR program, could help in this.

The challenges and limitations encountered by this study should be used to provide essential framework in designing my action plan. According to Amanda Datnow, one should "act when the evidence is clear and compelling rather than selectively choosing data points to make a case" (2014, p.292). Additionally, one should, "consider in advance how people will respond to new ways of working and anticipate potential problems" (2014, p.292). The technological and logistical challenges, including the methods for surveying and collecting biometric data, indicate further work needs to

be done in order to efficiently and effectively collect usable data and support the forming of causative statements regarding the effects of a yoga in a school setting. A reform such as this also requires incredible support and open communication between the students, teachers, parents, district, stakeholders and the IRB. It also requires extensive and comprehensive training for the yoga instructors, as well as the classroom teachers.

Using this study as a guiding framework, with an understanding of its' challenges and limitations, will support my plan for integrating a meditation and mindfulness program into high schools. Ironing out this type of research, with a wide data collection effort for both quantitative and qualitative data is essential. With this data, we can further support the argument for meditation, yoga and mindfulness in our schools. With more exposure of the benefits, backed by science and this hard data, the districts, administrators, parents and students will have no excuse but to adopt mindfulness and meditation programs into more of our schools. The benefits of such program on today's youth, including increased and improved health and wellness, self-esteem and behavior, far out weigh the challenges one may face.

Works Cited

- American Psychological Association (2014). *Stress in America: Are Teens Adopting Adults' Stress Habits?*
- Blackwell, A., Bowes, L., Harvey, L., Hesketh, A. J. & Knight, P. T. (2001) Transforming Work Experience in Higher Education. *British Educational Research Journal*, 27, 269-285.
- Carey, B. (2005). *Scientists bridle at lecture plan for Dalai Lama*. The New York Times Company. Retrieved from <http://www.nytimes.com/2005/10/19/national/19meditate.html?pagewanted=print>
- Carless, W. (2012). *Yoga class draws religious protest*. Retrieved from <http://www.nytimes.com/2012/12/16/us/school-yoga-class-draws-religious-protest-from-christians.html>
- Cashman, K. (2014). *Return on Self-Awareness: Research Validates the Bottom Line of Leadership Development*. Forbes. <http://www.forbes.com/sites/kevincashman/2014/03/17/return-on-self-awareness-research-validates-the-bottom-line-of-leadership-development/>
- Collins, A., & Halverson, R. (2009). *Rethinking Education in the Age of Technology: The Digital Revolution and Schooling in America*. New York, NY: Teachers College Press.
- Datnow, A., Park, V. (2014). *Data Driven Leadership*.
- Dewey, J. (1933) *How We Think*, New York: D. C. Heath. Classic and highly influential discussion of thinking.
- Dweck, C.S., Walton, G.M., and Cohen, G.L. (2011). *Academic tenacity: Mindsets and skills that promote long-term learning*. White paper prepared for the Gates Foundation. Seattle, WA.
- Encinitas Union School District (2012). *EUSD Yoga Program: Frequently asked questions*. Encinitas, CA.
- Fisher, R. (2006). *Still thinking: The case for meditation with children*. Elsevier (146-151).
- Galloway, F (2014, June 24). Personal Interview.
- Grossman, P., Niemann, L., Schimdt, S., Walach, H. (2010). *Mindfulness-based stress reduction and health benefits: a meta-analysis*. Focus on alternative and complementary therapies. Royal Pharmaceutical Society of Great Britain.

- Hanh, T.N. (1992). *Peace is every step*. Bantam.
- Inoue, N (2012). *Mirror of the mind: An introduction of mindful ways of thinking*. New York: Peter Lang Publishing.
- Jensen, E. (2014). *What is Brain-based learning?* Retrieved from <http://feaweb.org/brain-based-learning-strategies>
- Kabat-Zinn, J. (1990). *Full Catastrophe Living: Using the Wisdom of your Mind to Face Stress, Pain and Illness*. New York: Dell Publishing.
- Krantz, D.S., Thorn, B., Kiecolt-Glaser, J. *How stress affects your health*. Washington, DC. American Psychological Association.
- Levine, M. (2002). *A mind at a time: America's top learning expert shows how every child can succeed*. Ne York: Simon & Schuster.
- Lucas, M (2012). *Rewire your brain for love*. Washington, DC. Hay House.
- McLeod, S. A. (2010). What is the Stress Response. Retrieved from <http://www.simplypsychology.org/stress-biology.html>
- Nikias, M (2013). *Yoga lawsuit: Encinitas Union School District in California sued over class*. Retrieved from <http://abcnews.go.com/US/yoga-lawsuit-encinitas-union-school-district-california-sued/story?id=18561237>
- PERTS (2014). *Changing mindsets to raise achievement: Evidence from the Stanford University project for education that scales: Executive summary*. Stanford, CA.
- Platzer, H., Snelling, J. & Blake, D. (1997) Promoting Reflective Practitioners in Nursing: a review of theoretical models and research into the use of diaries and journals to facilitate reflection. *Teaching in Higher Education*, 2 (2), 103 - 121.
- Sakai, J. (2013). *Study reveals gene expression changes with meditation*. Retrieved from <http://www.news.wisc.edu/22370>
- Saltzman, A. (2010). *Mindfulness: A teacher's guide*. <http://www.pbs.org/thebuddha/teachers-guide>
- Shook, A. (2014, June 24). Personal Interview.
- Whitmarsh, S. (2013). *Nonreactivity and metacognition in mindfulness*. Radboud University Nijmegen.
- Weng, H. Y. (2013). *Compassion training alters altruism and neural responses to suffering*. Association for Physiological Science. Sage Publishing.

Willis, J (2009). *How to teach students about the brain*. ASCD. Retrieved from www.radteach.com.