

QUIET TIME PROGRAM REPORT

San Francisco, California

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Center for Wellness & Achievement in Education & SFUSD Research, Planning, & Accountability Department

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I. EXECUTIVE SUMMARY

A large body of research developed over the last several decades indicates that stress compromises cognitive function, emotional well-being, physical health, and behavior. Specifically, stress causes or contributes to: anxiety, depression, anger, violence, bullying, PTSD, self-harm (e.g. cutting), suicide, lack of motivation, low self-esteem, low self-control, brain impairment, ADHD, OCD, lack of creativity, poor memory, and inability to think critically --- all issues that impair learning. As a result, developing effective strategies for addressing the problem of stress in our educational system is of paramount importance. Our ability to realize educational success is heavily influenced by our ability to reduce stress and enhance the underlying social, emotional, and cognitive capacity of students, teachers and administrators.

This data report evaluates the CWAE Quiet Time program in the San Francisco Unified School District (SFUSD). Quiet Time is a stress reduction and readiness-to-learn program designed to counteract the stress-related challenges confronted by youth and adults today and provide an intervention that meets the need described above. By relieving tension and enhancing cognitive function, the program is intended to support healthy social-emotional development, positive school climate, and higher academic achievement. Quiet Time involves the introduction of two restful 15-minute periods into the school day in which students have the opportunity to experience a peaceful break in their lives, providing a counterbalance to the hyper-stimulating tension of urban culture. The students have the option to learn and practice an evidenced-based stress reduction and cognitive development technique known as Transcendental Meditation® (TM), or do another quiet activity, such as sustained silent reading (SSR) or quiet sitting (QS).

The Quiet Time program began in SFUSD at Visitacion Valley Middle School in the spring of 2007. Since that time, the program was introduced into one additional middle school and two high schools. In parallel to the Quiet Time program implementation, meditation-based wellness and leadership development trainings were provided in the central district offices of SFUSD and to individual teachers and administrators at several schools throughout the district. The Center for Wellness and Achievement in Education (CWAE), a 501c3 tax exempt corporation, is the SFUSD community based organization that implements the Quiet Time program in collaboration with SFUSD schools.

Over the last seven years CWAE coordinated with the SFUSD Research, Planning and Accountability Department and the Quiet Time schools to perform extensive evaluation of the Quiet Time program utilizing school data, psychological tests, and surveys. Additionally, an independent evaluation was recently conducted by WestEd. In this paper, seventeen studies are used along with descriptive data to discern with as much accuracy as possible the program impact. The research on Quiet Time, though not comprehensive, is expansive in scope. It suggests positive impact on students, teachers and administrators in a wide range of areas, summarized in table 1 below.

Table 1: Summary of Findings

Academic Domain	Social-Emotional and Culture-Climate Factors		Admin & Teacher Development
↑ CST-Math	↓ Suspensions	↑ Attendance	↑ Resilience
↑ CST-ELA	↓ Anger	↑ Resilience	↑ Emotional Intelligence
↑ High School API	↓ Anxiety	↑ Social Emotional Competency	↑ Brain Integration
↑ GPA	↓ Depression	↑ CST-ELA --- EL students	↓ Burnout/ Emotional Exhaustion
(Academic growth greatest in lower performing groups)	↓ Fatigue	↑ Self Esteem and Happiness	↓ Mood Disturbance
	↑ Focus	↑ Self Control	↓ Anxiety, Depression, Anger

In aggregate, the data represents a substantive body of evidence supporting Quiet Time as a program that enhances the social, emotional, and cognitive capacity of students, teachers and administrators. This foundational impact supports the effectiveness of other academic, social-emotional, and culture-climate initiatives.

II. INTRODUCTION

As John Dewey highlighted there are two poles in the educational process: the objective pole and the subjective pole. The objective pole is the content or curriculum being taught. The subjective pole is the learner, the student. For many decades modern educational systems have been predominantly focused on the objective pole, the content and how it is being delivered. The fields of cognitive and behavioral neuroscience inform us that the subjective pole, the state of the student, is equally important in determining successful educational outcomes.

At the basis of both poles of learning is conscious awareness, the awareness of the student and the teacher. The clarity of mind, focus, creativity, memory, stability, emotional intelligence and motivation of the student and the teacher fundamentally inform the level of learning and growth in the classroom.

As described by neuropsychologist William Stixrud PhD, there are two main conditions for optimal learning:

- i. The optimal *internal condition* for learning is that the student is calm and alert;
- ii. The optimal *external condition* for learning is high challenge, low threat.

The quality of awareness of the student determines whether she is calm, alert and ready to learn. The quality of awareness of the teacher informs her capacity to deliver engaging, challenging lessons, in a manner that does not threaten or create an environment of fear.

Stress compromises cognitive function, behavior, emotional well-being, and physical health of both the student and the teacher, impairing both poles of the learning process and the optimal learning conditions. Stress compromises a student's focus, calm, alertness; it impairs a teacher's ability to teach creatively, attentively, and empathically.

The Quiet Time (QT) program is a stress reduction and readiness-to-learn program that enhances the social, emotional and cognitive development of students and faculty, supporting both poles of the educational process. Quiet Time provides students two restful 15-minute periods each day to reduce stress, balance their lives, and increase calm and alertness in class. In Quiet Time students have the option to learn and practice a scientifically validated stress reduction and brain development technique known as Transcendental Meditation® (TM). If students choose not to practice TM during Quiet Time, they do another quiet activity such as sustained silent reading (SSR) or quiet sitting (QS).

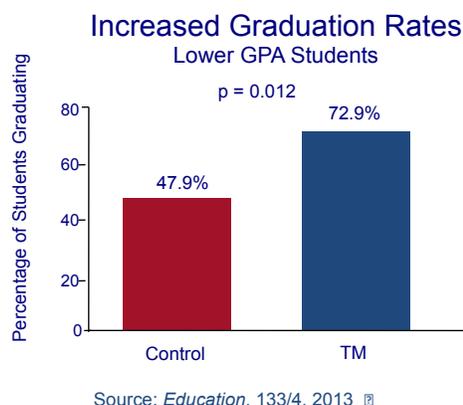
The TM technique is offered because research shows it is a particularly useful tool for reducing stress and enhancing brain function. Comparative research at Stanford and other institutions indicate that it is highly effective at reducing trait anxiety and increasing creativity and intelligence relative to other forms of meditation or relaxation (*Journal of Clinical Psychology* 45, 1989; *Anxiety, Stress, and Coping* 10, 1997; *Intelligence* 29/5, 2001; *Psychological Bulletin*, 138, 2012; *Journal of Alternative and Complementary Medicine*, 19/10, 2013). Brain research indicates that it promotes higher frontal EEG coherence and brain integration that supports higher cognitive processes, conscious awareness, attention, memory, perception, and fine motor control (*Biological Psychology*, 61, 2002; *Consciousness and Cognition*, 11, 2010).

In summary, the rationale for the QT program is that student learning and behavior, and teacher and administrator ability to teach and lead, can be improved by reducing stress and enhancing overall neurophysiological functioning.

Student - Subjective Pole: TM → increases brain coherence → increases calm alertness → increases learning capacity
Teacher - Objective Pole: TM → increases brain coherence → increases calm alertness → increases teaching capacity

SFUSD is among the growing number of school districts across the United States utilizing meditation for student and faculty health and development. Previous published research in schools located in other states have shown holistic and

integrated benefits (*Children & Schools*, 32/3, 2010). A published study on high school graduation rates found a 15% difference in on-time graduation in favor of students practicing TM compared to controls (*Education*, 133/4, 2013). With the low-academically performing students, the findings showed a 25% difference in graduation rates (see chart).



Other studies have shown reduced suspensions and rule infractions, decreased psychological stress, increased emotional intelligence and cognitive intelligence, and decreased blood pressure in students practicing meditation (*Health and Quality of Life Outcomes*, 1, 2003; *Children & Schools*, 32/3, 2010; *American Journal of Hypertension*, 17/4, 2004). Research on ADHD students also showed reduced symptoms associated with ADHD and increased brain integration (*Mind & Brain - The Journal of Psychiatry*, 2, 2011). A recent health study on teachers, at a school for students with behavioral problems, found reduced teacher burnout, including emotional exhaustion, perceived stress, and symptoms of depression (*The Permanente Journal*, 18/1, 2014).

HISTORY OF THE QUIET TIME PROGRAM IN SAN FRANCISCO AND SCHOOL CHARACTERISTICS

The Quiet Time program began in the San Francisco Unified School District in spring 2007. It was introduced to the 6th and 7th grade classes at Visitacion Valley Middle School (VVMS). Since then, the Quiet Time program has been implemented in all grades at VVMS and introduced to three other schools—Everett Middle School (fall 2008; discontinued after 3 years upon school restructuring), O’Connell High School (fall 2010), and Burton High School (spring 2011). In addition, CWAE has offered meditation-based wellness and leadership development programs to administrators in SFUSD district offices and to some principals and teachers at other schools.

**Table 2: Quiet Time School Student Characteristics
Percent Student Enrollment by Group**

	Visitacion Valley	Everett	O’Connell	Burton
African American	21.8	22	14.3	14.2
Asian	33.1	5.3	10.4	30.4
Filipino	12.5	4.1	7.3	20.8
Hispanic or Latino	16.3	58.9	61.8	25.5
Pacific Islander	10.1	1.5	0.5	4.6
White	1.9	4.7	2.4	0.9
Socioeconomically disadvantaged	88.3	84.5	75.4	70
English Learners	42.4	55.4	52	39.7
Students with Disabilities	18.7	18.2	14.8	14.4

Source: SFUSD School Accountability Report Cards 2010/11

III. RESEARCH METHODOLOGY

In performing education research and evaluation, it is difficult to clearly determine the impact of any individual program in a school, because there are numerous confounding factors. If a school change is observed, is the change due to the program being evaluated or is it due to the new principal, the new dean, the new teacher, the new incoming students, or the new *other program*? For example, if a school's Academic Performance Index (API) score goes up or down, does that mean that the new program is impacting the API change? The answer is that you do not know. It might be, or the change may be caused by other factors. A large influx of new students with a different baseline performance level, for example, will often have the largest impact on the API change in any particular school. A new principal can also have a huge impact on all school outcomes, positively or negatively.

As a result, in the evaluation of Quiet Time, controlled research designs were used in conjunction with descriptive and qualitative data in an attempt to account for these confounding factors and discern with as much accuracy as possible the program impact. The specific methods of investigation included randomized controlled trials, matched controlled studies, unmatched controlled studies, and descriptive data. Most of the research consists of prospective studies including a baseline test and post-test.

The studies explored the impact of Quiet Time as a whole and also investigated the specific impact of meditation. The general hypotheses were twofold: (i) that the QT program as a whole would have positive impact on student and school outcomes; and, (ii) that TM would have the most impact on stress reduction, social/emotional growth, and academic development relative to reading or other QT activities.

The types of data used to investigate the impact of the Quiet Time program included: school data, standardized psychological tests, and surveys. The school/district data included: academic achievement test scores, suspensions, attendance, grades, and Academic Performance Index (API). The standardized psychological tests included: Rosenberg Self-Esteem Scale; Spielberger Children's Anxiety Inventory; Wagnild and Young's Resilience Scale, Profile of Mood States (POMS); Devereux Student Strengths Assessment (DESSA); Strengths and Difficulties Questionnaire (SDQ); NIH (National Institutes of Health) PROMIS inventory; Pittsburg Quality of Sleep Index; Bar-On Emotional Quotient Inventory; Perceived Stress Scale; and the Maslach Burnout Inventory. Surveys were administered to school staff and students assessing the impact of meditation practice on a wide range of psychological, health, and behavioral factors.

There are seventeen studies that contribute to the data findings on the Quiet Time program. Below is a brief overview of the studies and their designs. There is a summary table of the general findings in the table at the end of this section. Detailed outcomes of these studies are described in the next two sections of this paper: *Student Findings*, and *Administrator, Staff and Faculty Findings*.

I. California Standards Test (CST) Scores in Low-Academically Performing Students: A Controlled Study Comparing Quiet Time Students to Non-Quiet Time Students at VVMS

I.1. Study Objective: The objective of this study was to evaluate the effects of the Quiet Time program on standardized academic achievement, using CST math and English test scores.

I.2. Method: Participants in this study included 189 students (125 meditating students and 64 non-meditating control students) who were below proficiency level in either math or English at baseline on the California Standards Test (CST). All students attended VVMS and continued with the school's standard curriculum and instruction.

Meditating students attended the sixth and seventh grades and practiced TM at school for 15 minutes at the start and end of the school day in their Quiet Time class period for three months prior to the administration of the CST post-test. Non-meditating control students attended the eighth grade, which did not participate in the school's Quiet Time program. The control group was selected to control for school climate factors such as principal leadership, faculty morale, curriculum and instruction policies and other school rules and

policies that may have influenced academic achievement, as well as controlling for key student demographic factors such as racial and ethnic group composition and socioeconomic status. The control group also served to control for testing effects and possible regression to the mean. All students in the sixth, seventh, and eighth grades who had CST academic achievement scores for both the Spring of 2006 (prior year, baseline) and Spring of 2007 (current year, post-testing) were included in the study. Change in English and math scale scores from baseline to post-test were analyzed using analysis of covariance (ANCOVA), co-varying for baseline dependent variable scores. Chi square statistics were used to determine differences between groups on the percentage of students who improved at least one performance level on English and math. The weakness of the study is that the test and control students, although in the same school, did not have the same teachers.

In addition to CST scores, 55 of the Quiet Time students in the experimental group were also administered the Spielberger Anxiety Inventory. Post-test scores were compared to baseline after 3 months of meditation practice.

II. Study Investigating the Impact of QT on Anxiety and Self-Esteem for Students at VVMS and Everett – Within Group Analysis

II.1 Study Objective: The purpose of this study was to assess changes in trait anxiety and self-esteem in students participating in the QT programs over a six-month period. This was the first study to measure self-esteem in students practicing the QT.

II.2 Method: A total of 333 students in the QT program were included in this study. All students were measured at baseline, prior to beginning the QT program, and again after six months, using the Rosenberg Self-Esteem scale and the Spielberger Anxiety Inventory – trait scale. Students served as their own self-control.

III. Multi-day Suspensions – Comparison between QT and non-QT Students at VVMS

III.1 Study Objective: The purpose of this study was to evaluate the impact of QT on multi-day suspensions. In the first year of implementation of QT at VVMS, the 6th and 7th grades engaged in QT and the 8th grade did not and was an in-school control. Due to observations of the Principal that the QT students were much more orderly and engaged, while the non-QT student remained more chaotic and unfocused, the school analyzed suspension data. The Principal wanted to analyze multiday suspensions, as these were the ones usually associated with fighting and the most serious.

III.2 Method: Multi-day suspension data for all 6th, 7th and 8th grade students was collected for the fall of 2006 and compared to the spring 2007, the first semester of QT implementation for the 6th and 7th grade. Changes from fall 2006 to spring 2007 for the QT grades were compared to the non-QT control grade. Aggregate number of multi-day suspensions was used for each grade. Individual student data was not maintained, so thorough statistical analysis was not possible.

IV. VVMS GPA Analysis

IV.1 Study Objective: The purpose of this study was to evaluate the change of GPA over the prior year and to investigate changes in lower performing students relative to the whole school population.

IV.2 Study Method: The study method was to compare the change in GPA of the whole student body to the change in GPA of African American students over a one-year period. The GPA of the whole school population in fall 2007 (n=324) was compared to the GPA of the whole school population in fall 2008 (n=299). This change was then compared to the change over the same period for African American students at the same school, n=89 in fall 2007 and n=82 in fall 2008.

V. Study Investigating the Impact of QT on English Proficiency in English Learners (EL) at VVMS

V.1 Study Objective: The purpose of the study was to investigate the impact of meditation on English proficiency in EL middle school students.

V.2 Study Method: A total of 75 public middle school students (48 meditating students and 27 controls) who reported a non-English language as the language spoken at home and who were below proficiency in English at baseline were included in the study. Change in student scores on the California Standardized Test and Reporting (STAR) English scale were compared over a one-year period. Students who met the above criteria and who began the practice of meditation during the academic school year were compared to non-meditating controls from the same school. All students continued with their standard classroom instruction for English Learners.

VI. Controlled Study Investigating Impact of Meditation on CST Test Scores at Everett Middle School

VI.1 Study Objective: The purpose of this study was to assess the impact of practice of TM on standardized test performance.

VI.2 Study Method: Students who were regular in their meditation practice, defined as meditating at least 8 times a week in the 2010/11 school year, and who had taken the California Standards Test (CST) in spring 2010 and 2011 at Everett served as the experimental group (n=37). Everett students who took the CST at Everett in both the spring of 2010 and 2011 and who had not learned to meditate, or had learned and were practicing one time per week or less, served as the non-meditating control (n=45). This study looked at outcomes on both the math and English standardized tests.

VII. Study Investigating Regularity of Meditation Practice in QT and GPA at Everett Middle School

VII.1 Study Objective: The purpose of this study was to assess impact of regularity of TM practice on grades.

VII.2 Study Method: Students who had been at Everett Middle School in both the 2008-09 school year and the 2009-10 school year (n=188) were broken into four groups based on their regularity with TM practice in Quiet Time: 0-1 meditations/week; 2-4 meditations/week; 5-7 meditations/week; and 8+ meditations per week. The student dosage data was logged daily by the teachers overseeing the QT classes. This study utilized a regression analysis to assess impact of meditation regularity on GPA change between 2008-9 and 2009-10.

VIII. Study Investigating the Impact of QT on Self-Esteem, Grit, Trait Anxiety and Mood Disturbance at O'Connell High School – Within Group Analysis

VIII.1 Study Objective: The purpose of this study was to assess changes in self-esteem, grit, anxiety, and total mood disturbance in student practicing the QT program over a five-month period. This was the first QT study to evaluate, grit, or perseverance, which is an indicator of life and academic success, according to Dr. Angela Duckworth, researcher at University of Pennsylvania and author of the scale.

VIII.2 Study Method: A total of 99 students took part in this study. All students were administered the Rosenberg Self-Esteem scale, the Duckworth GRIT scale, the Profile of Mood States, and the Spielberger Anxiety Inventory (trait) at baseline, prior to beginning the QT program, and again after approximately five months.

IX. Matched Control Study Investigating Impact of Meditation on GPA and Attendance at O'Connell High School

IX.1 Study Objective: The purpose of this study was two-fold: 1) to examine the effects of regular TM practice on grades and attendance for students matched by grade level and GPA (after first 6-week grading period); 2) to assess whether there were differential effects of TM practice for low performing students.

IX.2 Study Method: The experimental group comprised all O'Connell students grades 9 through 12 in the 2010-11 academic year who were regular twice a day with their meditation over a 5-month period, n = 56, based on meditation records kept by the Quiet Time staff. The control group was created by matching non-meditating students from the same grade with test subjects based on closest fit with the test subject's first grading period GPA. The study assessing grades used the initial 6- week grading period as baseline and

GPA for the spring semester as the outcome. The attendance study used fall semester absences as baseline and spring semester absences as the outcome.

The study of low-performing students utilized the students from the whole study who had a baseline GPA below 3.0 (n=24 for experimental group and n=28 for control group). The average GPA was very close for both of these low-performing groups, 2.14 for the experimental group and 2.08 for the control.

X. Controlled Trial Investigating the Impact of Meditation on Psychological Health in Burton High School Students

X.1 Study Objective: To investigate the impact of meditation on student psychological health.

X.2 Study Method: A total of 77 ninth-grade students (55 meditating students and 22 reading students) were administered the Spielberger Children's Anxiety Inventory (trait scale), the Mental Health Inventory (MHI)-5, and the Strengths and Difficulties Questionnaire (SDQ) emotional symptoms scale at baseline (prior to instruction in meditation in February 2011) and again at three-month post-test. The study included all 9th grade students for whom research permissions were received.

XI. Randomized Controlled Trial Investigating the Impact of Meditation on Psychological Health, Attendance, Emotional Intelligence and Academic Performance at Burton High School - 2011/2012 School Year

XI.1 Study Objective: The purpose of this study was to assess the impact of practice of TM on a host of psychological and school variables in a well-controlled study.

XI.2 Study Method: The trial randomly assigned 98 9th grade students who had expressed an interest in learning TM and received parental permission for inclusion in research to either an immediate-start or delayed-start group (n=49 in each group). After randomization in the fall of 2011, but before TM instruction, both groups were administered a test packet that included: the SDQ Emotional Symptoms Scale; the NIH PROMIS (anger, anxiety, depression, and fatigue subscales); a battery of social emotional measures; and the Pittsburg Quality of Sleep Index. Students were administered the same packet in April of 2012. School variables included attendance, grades, suspensions and ELA test scores. Teachers also evaluated students' social and emotional competence using the Devereux Student Strength Assessment (DESSA).

XII. Controlled Study Investigating Impact of QT on Social and Emotional Intelligence of VVMS Students - 2011/2012 school year

XII.1 Study Objective: The purpose of this study was to assess the impact of practice of Quiet Time on a host of psychological and school variables in a controlled study.

XII.2 Study Method: All 6th grade students who learned to meditate at VVMS in fall 2011 and had research permissions (n=76) served as the experimental group. Martin Luther King (MLK) 6th grade students with research permissions (n=62) served as controls. MLK is the nearest middle school to VVMS and has the most similar student population to VVMS of any middle school in the SFUSD.

In the fall of 2011 at baseline, both groups were administered a test packet containing the following tests: the SDQ Emotional Symptoms Scale; the NIH PROMIS (anger, anxiety, depression, and fatigue subscales); the Bar-On emotional intelligence index (EQI); the CAMS-R scales of mindful attention and self-compassion; and the Pittsburg Quality of Sleep Index. Students were administered the same packet in April of 2012. School variables included attendance, grades, suspensions and ELA test scores. Teachers also evaluated students' social and emotional competence using the Devereux Student Strength Assessment (DESSA). Teachers rated each of the students on the DESSA scale before TM instruction in October at baseline. The same teachers at the end of the study again rated students in April at post-test.

XIII. Study Investigating Impact of Meditation on Student Stress and Resilience at Burton HS

XIII.1 Study Objective: The objective of this study was to investigate the impact of TM on anxiety and resilience in Burton 9th grade students.

XIII.2 Study Method: A total of 145 9th grade school students were included in the evaluation of social/emotional competence. Students from the Burton Quiet Time program (n=103) were compared to 9th grade control students from Mission high school (n=42). In the fall of 2012, before any Burton 9th graders had received meditation training, and after 6 months of meditation practice, all students were tested on a battery of measures including the Spielberger Trait Anxiety Inventory, the Wagnild Resilience Scale (15), the Profile of Moods States, Self Control, and the Bar-On Emotional Quotient Inventory. This study was completed by WestEd.

XIV. ELA Test Scores at Quiet Time High Schools Compared to Non-QT Control Schools

XIV.1 Study Objective: The purpose of this study was to investigate the impact of the QT program on high school English language art test scores.

XIV.2 Study Method: School-wide student data was used to compare two Quiet Time high schools, O'Connell and Burton (n=785), to two matched control schools, Mission and Marshall (n=774). Analysis of covariance was used, controlling for baseline scores. This analysis was performed by WestEd.

XV. Comparison of 2 QT High Schools vs. Other SFUSD Comprehensive High Schools - API and Suspensions

XV.1 Study Objective: This study investigated the effects of the Quiet Time program on the California academic performance index (API) growth and suspension rate (mean days).

XV.2 Study Method: Burton and O'Connell high schools, two schools, which implemented the Quiet Time program, were compared to 12 of the San Francisco Unified School District (SFUSD) high schools not involved in Quiet Time programs. The two Quiet Time schools began implementation of the Quiet Time program during the Spring 2011 academic year, with full implementation occurring at the start of the 2012-13 academic year. For the purposes of this study, the school years from 2004-05 to 2009-10 were considered the "baseline" period (in which no Quiet Time programs were being implemented), 2010-11 to 2011-12 school years were considered the "transition" Quiet Time period (in which both Burton and O'Connell began implementation of the Quiet Time program), and the school year 2012-13 as the "full implementation" period (in which all grade levels were practicing the Quiet Time program throughout the entire school year).

API growth scores were used as the outcome variable in this study. Repeated-measures analysis of covariance was used, with aggregated baseline scores as the covariate, aggregated transition and full implementation scores as the dependent variables, and group (Quiet Time vs. non-QT controls) as the independent variable. The alpha level was set at .05, two-tailed.

XVI. Randomized Control Trial Investigating the Impact of Meditation on Teacher Burnout, Perceived Stress, and Resilience

XVI.1. Study Objective: The purpose of this study was to evaluate the effects of the TM on teacher stress, burnout and resilience. This study was conducted by WestEd in collaboration with SFUSD and CWAE.

XVI.2. Methods: Seventy-eight teachers, administrators, and support staff at one high school and two middle schools in the SFUSD volunteered for the study. Volunteers were randomly assigned one of two conditions: the TM technique treatment group or a delayed implementation control group with equal numbers per treatment per school site. Participant ages ranged from 22–76 years; the average age of volunteers was 44 years (SD = 13.43). Eighty-two percent of the volunteers were teachers. The other volunteers included administrators (6.8%), clerks (6.8%), and security staff (4.1%). Sixty-four percent of the participants were female.

The following measures were used in the study: Maslach Burnout Inventory (MBI), Profile of Mood States (POMS) – Brief, Perceived Stress Scale (PSS), NIH PROMIS battery, and The Resilience Scale. ANCOVA was used in all analyses, with the corresponding pre-test measure included as a covariate. The study was conducted by WestEd.

XVII. Randomized Controlled Trial Investigating the Impact of TM on Administrator Stress, Emotional Intelligence, and Brain Function

XVII.1 Study Objective: The objective of this study was to investigate the impact of TM on central office administrator psychological health, stress, EI (emotional intelligence), and brain function.

XVII.2 Study Method: A total of 96 central office administrators were randomly assigned to the experimental group (n=48) or delayed start control group (n=48). Psychological tests included the Profile of Mood States (POMS), Perceived Stress Scale, and the Bar-On Emotional Quotient Inventory (EQ-I).

EEG tests were administered to assess brain coherence and integration. Tests were performed at baseline and after four months at post-test.

Table 3: Summary of Main Quiet Time Studies - Design and Outcomes

School	Design	Dates	N	Control Group	Study Duration	Academic Domain	Social-Emotional and Culture-Climate Factors
I. VVMS	Control students within same school Baseline/Post-test Design Quality: Medium	2006 to 2007	189	Non-QT students within same school	One year	↑ CST- Math and ELA scores	↓ Anxiety (QT student post-test relative to baseline)
II. VVMS	Within Group Analysis Baseline/Post-test Design Quality: Low	2008 to 2009	333	none	5 months		↓ Trait Anxiety ↑ Self-Esteem
III. VVMS	Observational/Descriptive Comparing QT Students to Non QT students within same school Baseline/Post-test Design Quality: Low	2006 to 2007	299	Non-QT students within same school	One year		↓ Multi-day suspensions
IV. VVMS	Observational/Descriptive comparing student GPA over one year Baseline/Post-test Design Quality: Low	Fall '07 to Fall '08	299	None	One year	↑ GPA	↑ African American Student GPA greater than general school population
V. VVMS English Learners Substudy	Controlled study of below proficiency EL students within same school Baseline/Post-test Design Quality: Medium	2006 to 2007	75	Non-QT EL students	One Year		↑ CST-ELA scores in EL students
VI. Everett MS	Control students within same school Baseline/Post-test Design Quality: Low	2010 to 2011	82	Reading students within same school	One year	↑ CST	
VII. Everett MS	Regression Study on dose effect of meditation as a predictor of GPA change Baseline/Post-test Design Quality: Low	2009 to 2010	188	Non-meditating students within same school	One year	↑ GPA	
VIII. O'Connell HS	Within Group Analysis Baseline/Post-test Design Quality: Low	2010 to 2011	99	none	5 months		↓ Total Mood Disturbance ↓ Trait Anxiety ↑ Grit ↑ Self-Esteem
IX. O'Connell HS	Matched control within school same school Baseline/Post-test Design Quality: Low	2010 to 2011	112	Reading students matched for baseline GPA/ grade	5 months	↑ GPA	↓ Absences

X. Burton HS	Controlled study of students within same school Baseline/Post-test Design Quality: Medium	Spring 2011	77	Reading students	3 months		↓ Depression ↓ Emotional Symptoms
XI. Burton HS	Randomized controlled study of students within same school Baseline/Post-test Design Quality: High	2011 to 2012	84	Reading control	4 mos.	↑ CST-ELA scores	↑ Attendance ↓ Anger ↓ Fatigue ↓ Emotional Symptoms ↑ Sleep Quality
XII. VVMS	Controlled study using matched control school Baseline/Post-test Design Quality: Medium	2011/12	138		6 mos.		↑ Social and Emotional Competency ↑ Attendance
XIII. Burton HS	Controlled study of QT students at Burton compared to non-QT students at Mission Baseline/Post-test Design Quality: Medium	2012 to 2013	178	Non-QT students attending Mission	6 mos.		↓ Anxiety ↑ Resilience ↓ Mood Disturbance
XIV. Burton & O'Connell HS	Controlled study of QT schools compared to non-QT schools Baseline/Post-test Design Quality: Medium	2012 to 2013	1559	Students at non-QT schools (Mission/Marshall)	One Year	↑ CST-ELA ↓ Suspension mean days	
XV. Burton & O'Connell HS	Observational study of QT schools compared to non-QT District High Schools Repeated Measures Design Quality: Medium	2004-05 to 2012-2013 acad. years	14 total schools (2 QT, 12 Non-QT)	Non-QT District schools with >3 years of baseline data, standard curriculum	2004/05 to 2009/10 baseline, 2010/11; 2011/12 transition; 2012/13 full implementation	↑ API-Growth ↓ Suspension mean days	
XVI. Lowell, MLK, Francisco Teacher Study	Randomized Controlled Trial of teachers within 3 schools Baseline/Post-test Design Quality: High	2012 to 2013	78	Wait-list usual care control	4 mos.		↑ Resilience ↓ Perceived Stress ↓ Burnout/ Emotional Exhaustion
XVII. District Administrators and Staff – Central Office	Randomized Controlled Trial of District Administrative Staff Baseline/Post-test Design Quality: High	2009 to 2010	98	Wait-list control	4 mos.		↑ Emotional Intelligence ↓ Perceived Stress ↓ Mood Disturbance ↑ Brain Integration

IV. STUDENT FINDINGS

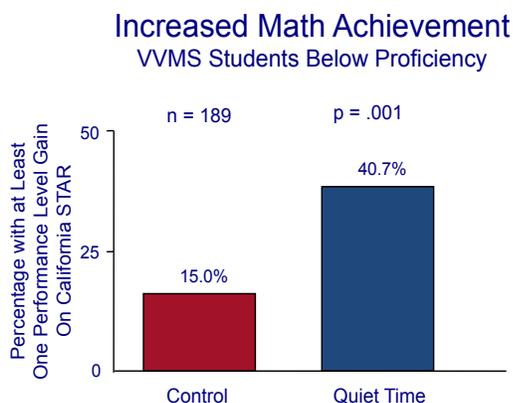
This section reviews the research outcomes for students in two main areas: (A) academic domain, and (B) social-emotional and culture-climate factors.

A. ACADEMIC DOMAIN

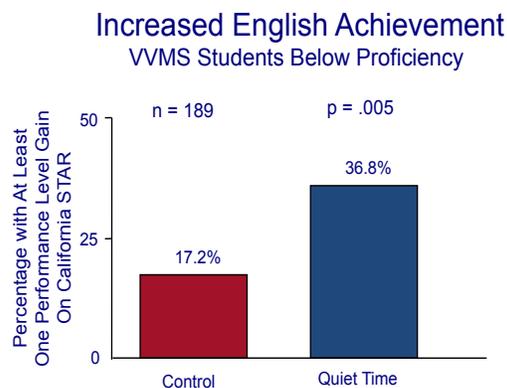
The research investigating the impact of the Quiet Time program in the academic domain is divided into three sections: standardized test scores, API analysis, and GPA studies. It is very difficult to assess impact of a program on academic dimensions using aggregate school data, because numerous factors impact change of overall academic achievement in a school. These factors include the baseline performance level of new incoming students, principal leadership, teacher effectiveness, etc. Controlled studies were used along with descriptive data to help discern the impact of the Quiet Time program as a whole, and of the meditation practice specifically, on academic achievement.

STANDARDIZED ACADEMIC ACHIEVEMENT – TEST SCORES

Summary: Improved English and Math Test Scores for QT Students at VVMS – Study I



Source: *Education*, 3/4, 2011 – Study I

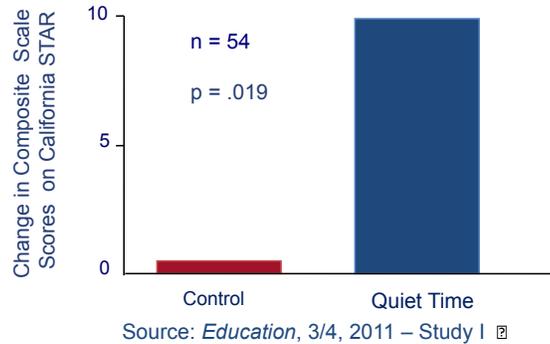


Source: *Education*, 3/4, 2011 - Study I

The above charts show that QT students at VVMS had a greater increase in Math and English standardized test scores compared to non-QT control students in the same school. A total of 189 students (125 QT students and 64 non-QT control students) who were below proficiency level at baseline in English and math were evaluated for change in academic achievement, using the California Standards Tests (CST). Quiet Time was implemented for three months prior to post-testing.

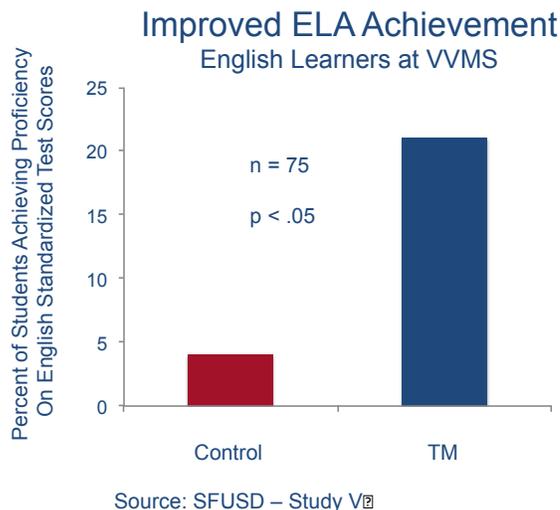
Results indicated improvement for QT students compared to controls on English scale scores, math scale scores, and composite scores (p values $< .002$). For math, 41% of the meditating students improved at least one performance level compared to 15% of the non-meditating controls ($p < .001$). For English, 37% of the meditating students improved at least one performance level compared to 17% of the controls with $p = .005$. A matched-control subgroup yielded similar results. Results of the study indicated that it is feasible to have at-risk students regularly engaged in QT at school and that meditation may help racial and ethnic minority students improve academically, thereby helping to close the achievement gap. The QT students also showed a significant decrease in trait anxiety from baseline to post test. This research was published in a peer reviewed journal (*Education*, 3/4, 2011).

Increased Composite STAR Test Scores Below Basic and Far Below Basic Students - VVMS



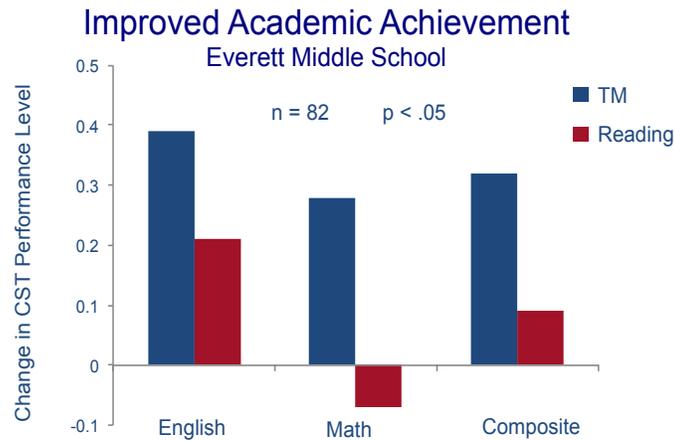
The chart above shows the change in combined math and ELA scores for students who had baseline scores in the lowest two performance levels: below basic and far below basic levels (*Education, 3/4, 2011*).

Summary: Improved English Proficiency in English Learners (EL) at VVMS - Study V



A subgroup of 75 middle school students (48 meditators and 27 non-meditators) from Study I, who reported a non-English language as the language spoken at home and were below proficiency in English at baseline were included in the analysis. Students who met the above criteria and began the practice of TM during the academic school year were compared to non-meditating controls from the same school on the California Standardized Test - English scale. All students continued with their standard classroom instruction for English Learners. Findings indicated a substantial improvement in English performance level scores in the meditating students compared to controls ($p < .05$). Approximately 21% of the meditating students attained proficiency in English on the one-year post-test compared to 4% of the non-meditating students ($p = .044$). (*Conference Presentation: American Federation of School Administrators (AFSA) meeting, Las Vegas, NV, July 2009.*)

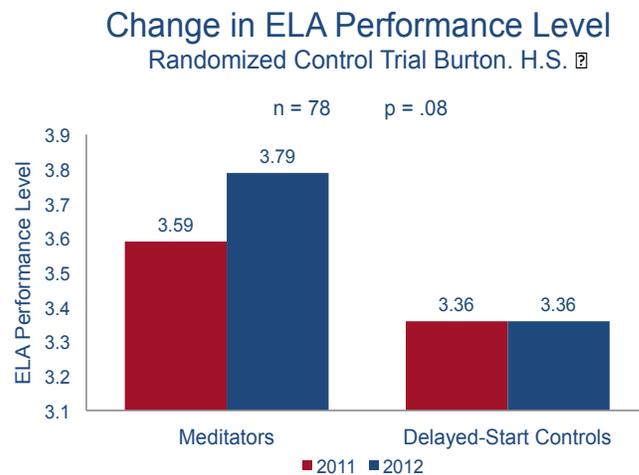
Summary: Improved Academic Achievement at Everett Middle School – Study VI



Source: SFUSD – Study VI

A total of 82 students (37 meditating students who were regular in their meditation practice and 45 reading students) were evaluated for change in standardized academic achievement based on the California Standards Test (CST) administered in the Spring of 2010 and 2011. For this study, regular meditation was defined as practicing at least eight times per week; non-meditation control was defined as never being instructed in meditation or meditating one time or less per week. For composite academic achievement (math and English), there was a significant improvement in performance level scores for the meditating students (mean change = +0.32 of a performance level) compared to the non-meditating students (mean change + 0.09; p = .049). The meditating students improved +0.28 of a performance level in math and +0.39 of a performance level in English, after adjusting for baseline dependent scores. The non-meditating students showed a change of -0.07 in math and +0.21 in English, after adjusting for baseline.

Summary: Increased ELA Scores in Randomized Control Trial at Burton High School - Study XI



Source: SFUSD – Study XI

The above chart shows that ELA test scores of meditating students increased more than reading students over the course of one year. Seventy-eight 9th grade students were randomly assigned to two groups at the beginning of the school year: 39 in TM group and 39 in a delayed-start control SSR group. CST English Language Arts scores in 2012

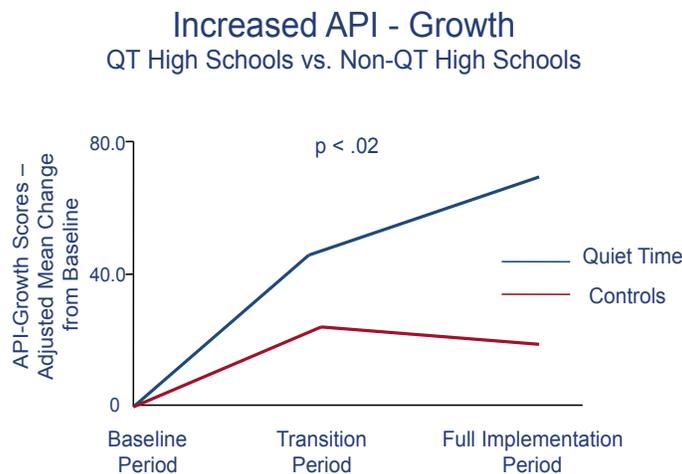
were compared to prior year scores. At post-test, adjusting for baseline scores, students practicing meditation had an adjusted mean score of 3.71 compared to controls' adjusted mean post-test score of 3.44 ($p < .08$). (Note: The CST has five levels—1=Far Below Basic; 2=Below Basic; 3=Basic; 4=Proficient; 5=Advanced.) The meditating students showed an adjusted improvement of .21 compared to no change for the reading students. This is one of the more rigorous research outcomes as it controls for many confounding factors through randomization. All students were in the same school with the same teachers and administrators, and all students expressed an interest in learning to meditate (controls for self selection). Half of the students meditated and half the students performed sustained silent reading. Although the results were not quite statistically significant at $p = .08$, they are trending toward significance.

Summary: Higher ELA Test Scores at QT High Schools vs. Non-QT Control High Schools – Study XIV

ELA test data for all students at the two Quiet Time high schools, O’Connell and Burton ($n = 785$), were compared to all of the students at two matched control schools, Mission and Marshall ($n = 774$). Analysis of covariance, controlling for baseline scores, showed a significantly higher English Language Arts score at post-test for the combined Quiet Time schools (adjusted mean = 334.14) compared to combined control schools (adjusted mean = 328.43) with $p < .001$. The study was performed by WestEd.

ACADEMIC PERFORMANCE INDEX

Summary: Greater API-Growth for Quiet Time High Schools vs. non-Quiet Time High Schools – Study XV



Source: SFUSD – Study XV

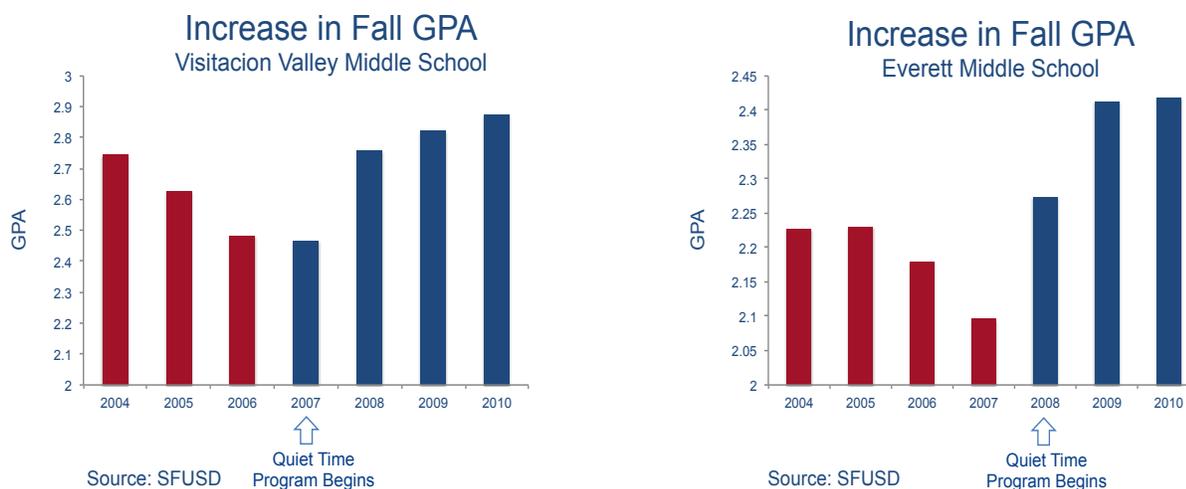
The above chart shows a statistically significant greater growth in API score in the two Quiet Time high schools vs. the other SFUSD comprehensive high schools. The Academic Performance Index (API) measures the academic performance and growth of schools on a variety of measures, including standardized academic achievement (primarily the CST and California High School Exit Exam tests), attendance, graduation rate and other indicators of school progress. API scores for each school are calculated annually by the California Department of Education. API scores range from a low of 200 to a high of 1000. Burton and O’Connell high schools, both Quiet Time schools, were compared to the rest of the San Francisco Unified School District (SFUSD) high schools not utilizing Quiet Time. For the purposes of this study, the school years from 2004-05 to 2009-10 were considered the “baseline” period (in which no Quiet Time programs were being implemented), the 2010/2011 and 2011-12 school years were considered the “transition” Quiet Time period (in which both Burton and O’Connell began gradual implementation of the Quiet Time program), and the school year 2012-13 as the “full implementation” period (in which all grade levels were practicing the Quiet Time program throughout the entire school year). API reflects growth over a one-year period for each district

school. The data was sourced from the SFUSD Office of Evaluation in January 2014. Two Quiet Time schools, Burton and O’Connell, and 12 other SFUSD district high schools were included in the analysis (standard format comprehensive high schools were included; Ida B. Wells, Downtown High, Independence High were not included due to different school schedule. SF International was not included because it is a new school with only one year of baseline data). Repeated-measures analysis of covariance was used, with aggregated baseline scores as the covariate, aggregated transition and full implementation scores as the dependent variables, and group (Quiet Time vs. control) as the independent variable.

Results indicated a significant difference in Quiet Time schools compared to control schools on API-growth over time [F(1,12) = 7.25, p = .020]. Overall, from baseline to “full implementation” there was an increase of 70.67 adjusted API-growth for the two combined Quiet Time schools compared to 19.01 adjusted API-growth for the combined control schools. It is relevant to note that change for API scores increase more for low performing schools for a given increase in test scores compared to higher performing schools. This factor may have impacted the above results.

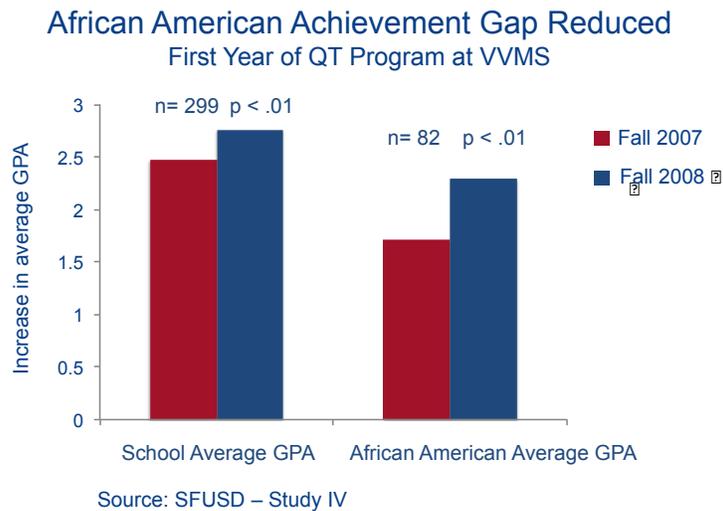
GRADE POINT AVERAGE

Summary: School-wide GPA at QT Middle Schools Trends Up – Descriptive Data



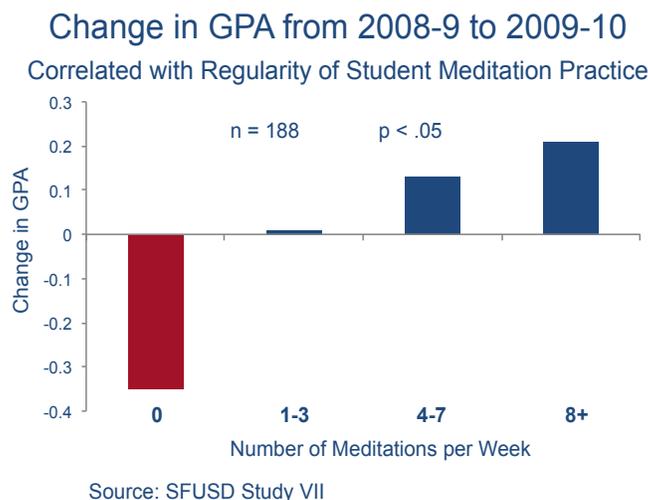
The charts above show that for both Quiet Time middle schools, there was a general trend towards improved grade point average from the start of the implementation of the program. For VVMS, the GPA had been trending down and the year prior to implementation of Quiet Time (2006-07) the school had an average fall GPA of 2.48. The fall GPA for the school year 2010-11 was 2.88, an increase of 0.40 over the first four years of Quiet Time. In the case of Everett, the GPA had also been trending down and the year prior to implementation of the Quiet Time (2007-08) the school had an average GPA of 2.10. The fall GPA for the school year 2010-11 was 2.42, an increase of 0.32 over the three years after implementation of the Quiet Time. During these periods both schools had the same principals and there were no other major structural changes (e.g. dramatic shift in make-up of student population; restructuring of school staff; new principal).

Summary: African American QT Students GPA Increase More than Other QT Students at VVMS – Study IV



The above chart shows improvement in GPA (excluding PE) for Fall 2007 and Fall 2008 academic school years school-wide (n = 299) and for African American students (n = 82) with p values < .01. For the entire school, the average GPA increased from 2.47 to 2.76, an improvement of 0.29 — a 10.5% increase. For the African American students, the average GPA increased from 1.71 to 2.29, an improvement of 0.58 — a 33.9% increase. This large improvement in GPA over one year suggests the potential of the Quiet Time program to support closing of the achievement gap for low-performing at-risk students.

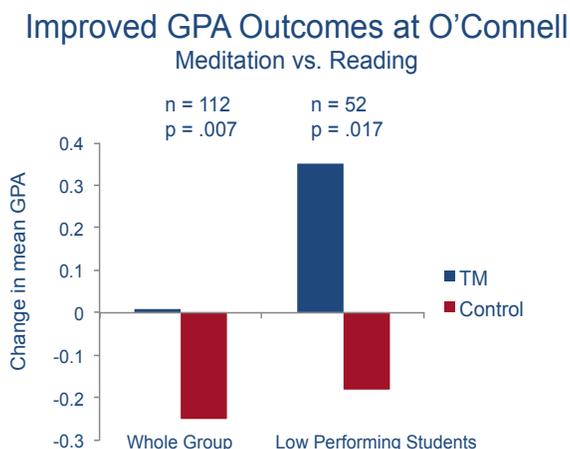
Summary: Regularity of Meditation Practice in QT Correlated with GPA at Everett Middle School—Study VII



The findings displayed in the above chart suggest a dosage effect from TM practice. Change in GPA from the 2008-09 school year to the 2009-10 school year was significantly correlated with regularity of meditation practice. This study examined change in GPA of all students who had been at Everett Middle School in both the 2008-09 school year and the 2009-10 school year (n=188). The students were categorized into four groups based on their regularity with TM practice in Quiet Time: 0-1 meditations/week; 2-4 meditations/week; 5-7 meditations/week; and 8+ meditations per week. This student data was logged daily by the teachers overseeing the QT classes. Regression analysis showed a highly significant positive correlation (p < .01) between regularity of meditation practice and change in GPA. Of

special interest, the students meditating 8+ times/week in 2009-10 had the lowest average GPA in the 2008-09 school year and the highest average GPA in the 2009-10 school year.

Summary: Improved GPA at O’Connell High School – Study IX



Source: SFUSD – Study IX

This study found that the GPA of meditating students at O’Connell High School increased significantly more than matched control reading students. A sub-analysis of this study looking only at the lowest performing students found that the contrast between meditators and controls was even greater than for the population as a whole (see above chart). A total of 112 high school students (56 meditators and 56 readers) matched for GPA after the first 6-week grading period and for grade level were included in the study. Meditating students were defined as students meditating 8 times or more per week in Quiet Time at school. The average first grading period GPA for the total sample was 2.81. Change in GPA was evaluated over the course of the school year. Meditating students (mean change = +0.04) showed a significant improvement in GPA compared to non-meditating controls (mean change = -0.32; $p = .007$). No interaction effects were found with grade level, indicating that the change in GPA was consistent across grade levels.

For those students who had a GPA below 3.0 ($n = 52$), there was a significant improvement in GPA in students practicing meditation (mean change = +0.35) compared to reading controls (mean change = -0.18; $p = .017$). No interaction effects were found with grade level.

Section Summary

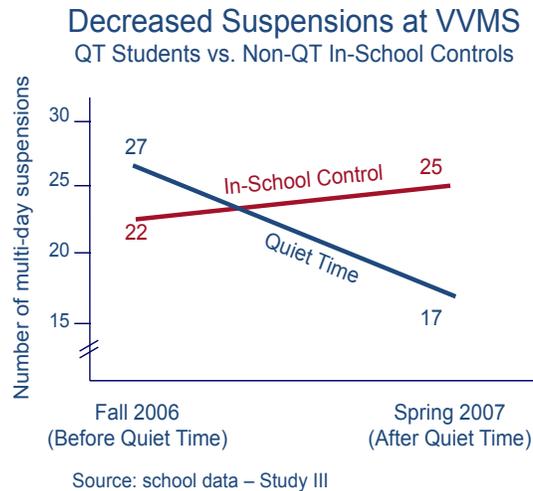
In aggregate, the research in this section suggests that the Quiet Time program has a positive impact on academic achievement, both standardized test scores and GPA. The data specifically suggests that the practice of TM increases GPA and test scores. The greatest impact is on the lower performing student groups, suggesting that the program helps close the achievement gap. Multiple studies reinforced similar findings. More research is recommended on a larger scale with randomized control trials to confirm the outcomes.

B. SOCIAL-EMOTIONAL AND CULTURE-CLIMATE FACTORS

The research investigating the impact of Quiet Time and meditation practice on social-emotional and culture-climate factors is divided into four sections: suspensions, attendance, standardized psychological tests, and student surveys.

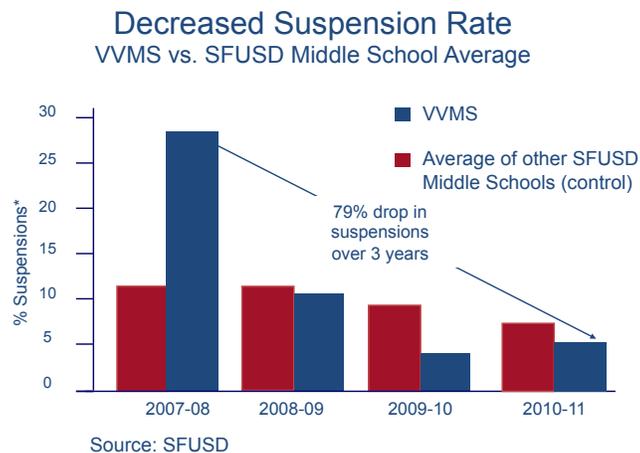
SUSPENSION RATES

Summary: Reduced Multi-day Suspension Rates at VVMS - QT Students vs. In-School Controls – Study III



The above chart indicates that students participating in QT had a suspension rate reduction of 43% from fall to spring relative to non-QT students in the same school. School records were used to track multi-day suspensions from fall to spring over the same school year. Multi-day suspension rates for the 6th and 7th grades, participating in the QT program, were compared to rates for the 8th grade, which did not begin the Quiet Time program. Combined suspensions for the 6th and 7th grades dropped from 27 to 17, compared to an increase from 22 to 25 for the 8th grade control. Although individual student data was not maintained, and therefore rigorous statistical analysis could not be performed, this result is nevertheless informative, particularly because all of the students were in the same school. (Conference Presentation: American Federation of School Administrators meeting, Las Vegas, 2009.)

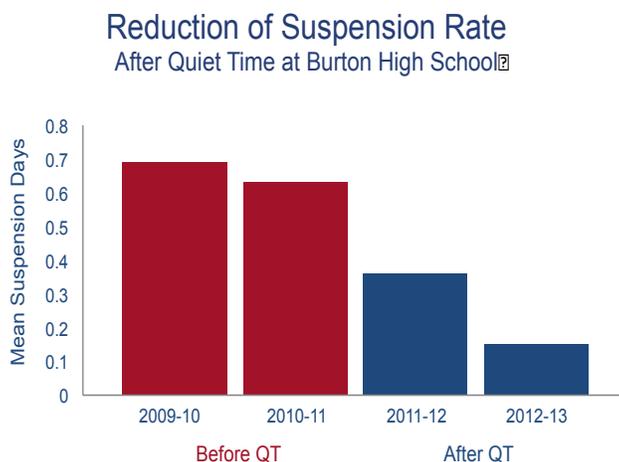
Summary: Drop in Suspensions Rate at VVMS – Descriptive Data



*% suspension calculated as total number of incidents divided by total school enrollment

The above trend chart shows a large drop of suspensions at VVMS after the full implementation of the QT program. Prior to the beginning of the Quiet Time program, VVMS had one of the highest suspension rates in SFUSD. In the 2007-08 school year, the first full year of the Quiet Time program at VVMS, the suspension rate (defined as total suspensions over student population) was 28%, more than twice the SFUSD average for middle schools. Three years later, in the 2010-11 school year, the suspension rate was about 6.0%, (compared to the middle school average of approximately 8%). The three-year decrease at VVMS represents a 79% drop in suspensions. During the pre and post period the school had the same principal and no major reconstitution of staff or students.

Summary: Drop in Suspension Rate at Burton High School – Descriptive Data

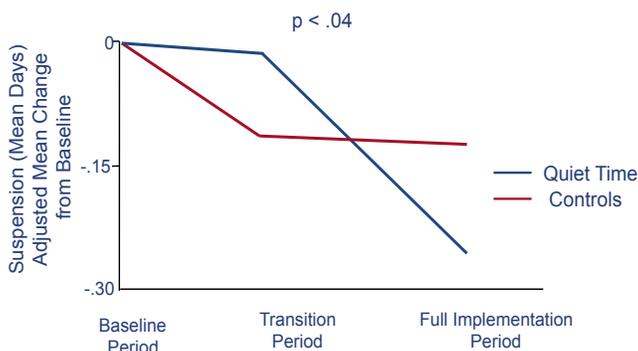


Source: SFUSD

Prior to the beginning of the Quiet Time program at Burton High School, the school had one of the highest suspension rates in San Francisco. In the 2011-12 school year, the first full year of the Quiet Time program at Burton, the suspension rate, in this case defined as mean days, reduced by 45% compared to the average rate of the prior two years. In 2012-13 the rate again dropped by 58%, a total of approximately 77% over the average rate of the two baseline years. During the two baseline years and test years the school had the same principal and the same suspension policies and practices.

Summary: Decreased Suspension Rate at QT High Schools vs. non-QT SFUSD High Schools – Study XV

Decreased High School Suspension Rate QT High Schools vs. Other SFUSD High Schools



Source: SFUSD – Study XV

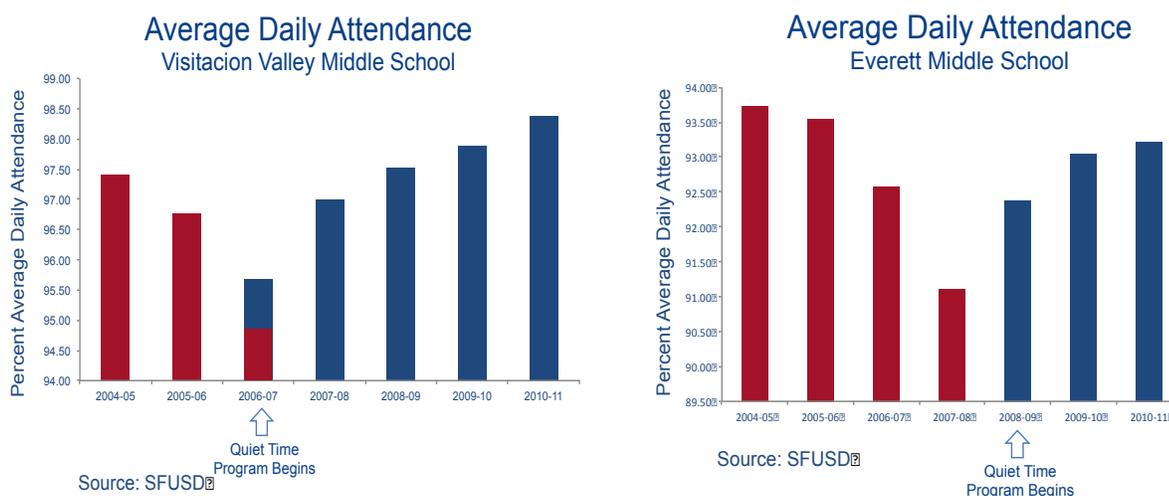
The above chart indicates a greater drop in suspension rates in the QT high school vs. non-QT control high schools in SFUSD. Schools records were used to track school-wide suspensions (mean days) over a period of nine years. Burton and O’Connell high schools were compared to the rest of SFUSD high schools not engaged with Quiet Time. For the purposes of this analysis, the school years from 2004-05 to 2009-10 were considered the “baseline” period (in which no Quiet Time programs were being implemented), 2010-11 to 2011-12 school years were considered the “transition” Quiet Time period (in which both Burton and O’Connell began gradual implementation of the Quiet Time program), and the school year 2012-13 as the “full implementation” period (in which all grade levels at both schools were practicing the Quiet Time program throughout the entire school year).

The two Quiet Time schools, Burton and O’Connell, and 12 SFUSD district high schools were included in the analysis. Repeated-measures analysis of covariance was used, with aggregated baseline scores as the covariate, aggregated transition and full implementation scores as the dependent variables, and group (Quiet Time vs. control) as the independent variable). Significant differences in suspension reduction were found in Quiet Time schools compared to usual care controls [$F(1,12) = 5.26$; $p = .04$; two-tailed]. From baseline to “full implementation” there was a reduction of -.26 adjusted mean days for the Quiet Time schools compared to -.12 days for the control schools.

Summary: Reduction of Suspension Days at QT High Schools vs. Non-QT Control High Schools – Study XIV
 Suspension rate (mean suspension days) for all students at two Quiet Time high schools, O’Connell and Burton (n=1151), were compared to students at two matched control schools, Mission and Marshall (n=1166). Analysis of covariance, controlling for baseline scores, showed an adjusted mean difference between groups of -0.76 ($p < .05$) indicating a significant reduction in suspension rate for the Quiet Time schools. The study was performed by WestEd.

SCHOOL ATTENDANCE

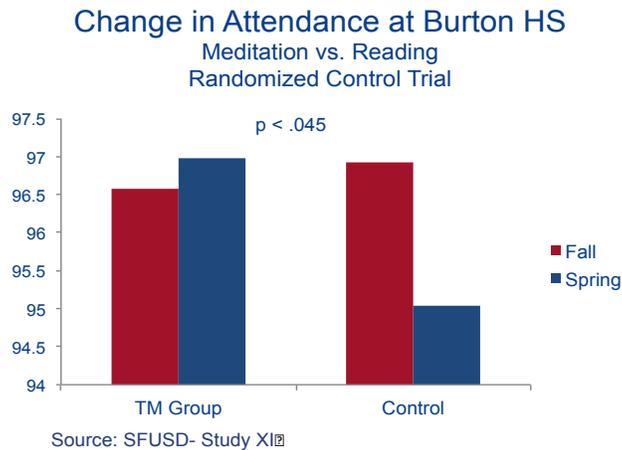
Summary: School-wide Attendance at QT Middle Schools Trends Upward - Descriptive



The above charts indicate that attendance at both QT middle schools increased after the start of the program. During the evaluation period, both schools had the same principals and there were no other major structural school changes (e.g. major reconstitution of staff or student population). For Visitation Valley, the year prior to full implementation of Quiet Time (2006-07) had an average attendance of 95.68%. The average attendance for the school year 2010-11 was 98.37%. This represents a change in absenteeism of 4.3% to 1.6%, which is a 62.3% decrease.

In the case of Everett, the year prior to implementation of the Quiet Time (2007-08) the average attendance was 91.10%. The average attendance for the school year 2010-11 was 93.22%. This represents a change in absenteeism from 8.9% to 6.8%, a 23.8% decrease.

Summary: Increased Attendance for Students Practicing Meditation vs. SSR at Burton High – Study IX

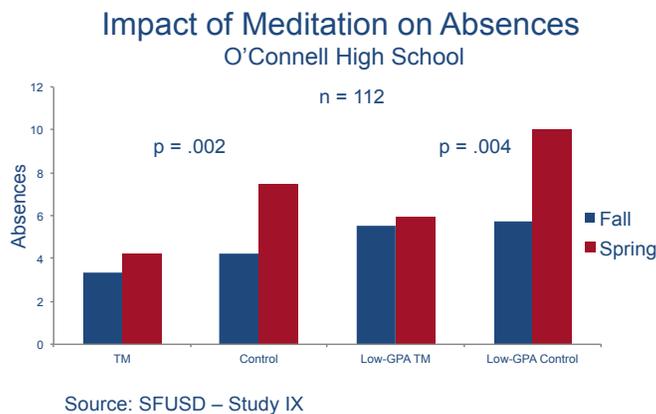


The above chart indicates that attendance for meditating students went up from fall to spring and attendance for reading students in the same grade and the same QT classes went down from fall to spring. Seventy-six students at Burton were tracked for daily attendance from Fall 2011 to Spring 2012, using a randomized controlled design, the same students evaluated in the ELA Burton RCT analysis. Attendance for those practicing meditation (n = 40) increased from 96.57 to 96.97 percent while the attendance for those students who read in QT (n = 36) decreased from 96.63 to 95.03 percent (p < .045).

Summary: Improved Attendance for VVMS Students Compared to MLK Control Students – Study XII

A total of 167 students from Visitation Valley Middle School and Martin Luther King (MLK - control school) were tracked for daily attendance from Fall 2011 to Spring 2012. (This study was performed during a year where both VVMS and MLK had absorbed many students from the recently closed neighboring Willie Brown Middle School.) It is common for attendance to drop from fall to spring. VVMS attendance increased from 96.220 to 96.617 percent, while MLK daily attendance decreased from 98.131 to 95.896 percent over the same period of time (p < .027).

Summary: Reduced Absenteeism at O’Connell High School – Study IX



The chart above shows fewer absences for regular meditating students vs. reading control students. A total of 112 high school students (56 meditators and 56 readers) matched for the first grading period GPA in fall 2010 and grade level were included in the study. The average number of fall total absences for the total sample was 3.786. Change in total spring absences was evaluated compared to fall absences. Students who learned to meditate and were regular in their practice (mean change = +0.78 days) showed a significant difference in total absenteeism compared to non-meditating SSR controls (mean change = +3.46 days; $p = .002$). There was a relative improvement of 2.68 days. There was no significant interaction effect with grade level, indicating that the results were consistent across grades.

The largest difference was in the lower performing groups. For the lower academically-performing students ($n = 46$; $GPA < 2.81$; average total Fall absences = 5.89 days), there was a significant difference in total absenteeism in the TM group (mean change = +0.37 days) compared to non-meditating reading controls (mean change = +4.17 days; $p = .004$). There was a relative improvement of 3.80 days. There was no interaction effect with grade level. These findings indicate a relative improvement in attendance in lower-academically performing at-risk students.

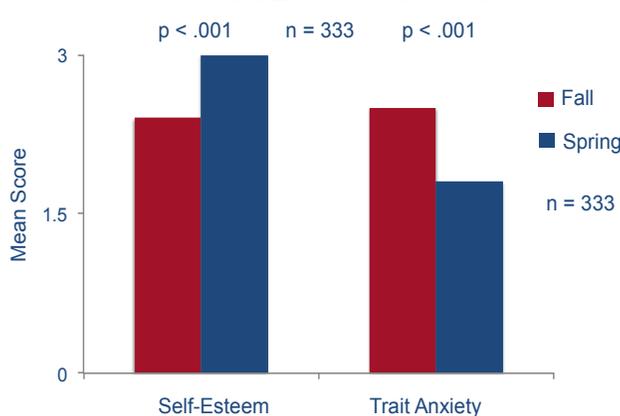
PSYCHOLOGICAL OUTCOMES

Summary: Decreased Trait Anxiety at Visitation Valley Middle School Within Group Analysis – Study I

Fifty-five students in the sixth and seventh grades at Visitation Valley Middle School were administered the Spielberger Children’s Anxiety Inventory (trait scale). Baseline testing was administered prior to students beginning the Quiet Time program. After three months of practice students were then post-tested. A reduction in trait anxiety was observed in both sixth grade ($p = .003$) and seventh grade students ($p = .057$). (*Education*, 3/4, 2011).

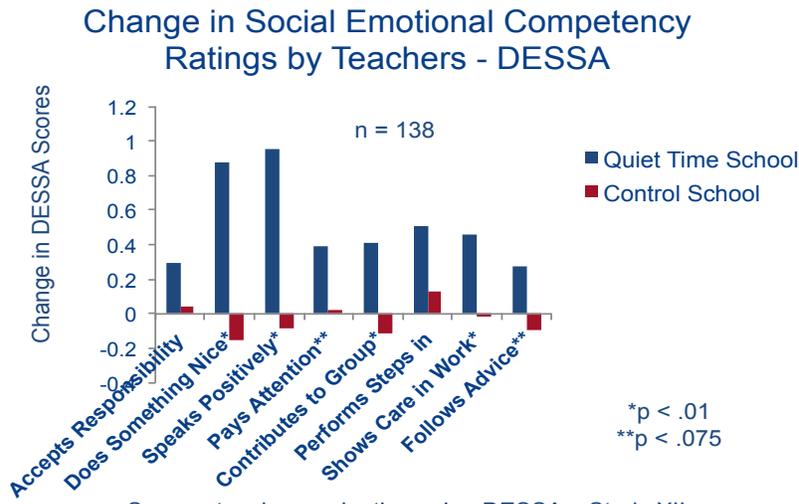
Summary: Decreased Anxiety and Increased Self-Esteem at VVMS and Everett – Study II

Increased Self-Esteem and Deceased Anxiety
VVMS and Everett Middle School



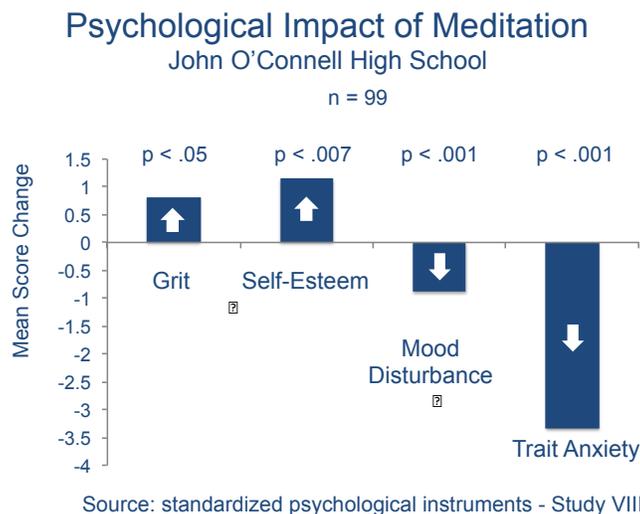
A total of 333 middle school students from both Visitation Valley and Everett middle schools were evaluated on the Rosenberg Self-Esteem scale and the Spielberger Children’s Anxiety Inventory (trait scale) over the course of an academic school year with pretest and post-test. Students were given these test instruments prior to beginning the meditation training in September 2008 and again at the end of the school year in May 2009. Findings for the combined schools indicated a significant improvement in self-esteem ($p < .001$) and a reduction in trait anxiety over the school year ($p < .001$) relative to their own baseline. (Conference Presentation: *AFSA Meeting*, Las Vegas, NV, July 2009.)

Summary: Increased Social-Emotional Competencies in VVMS Students vs. Controls - Study XII



The chart above indicates that VVMS QT students increased in several social-emotional competencies vs. controls from a matched middle school. The Devereux Student Strengths Assessment (DESSA) teacher rating scale was administered at VVMS and Martin Luther King middle schools at baseline and post-test over the course of one school year. Compared to baseline scores, teachers rated students at VVMS higher at post-test (mean change = 4.171) compared to teacher ratings of students at MLK (mean change = -0.255) with $p < .001$. Improvement in emotional competency was most pronounced in the areas of relationship skills, optimistic thinking, goal-directed behavior, and decision-making.

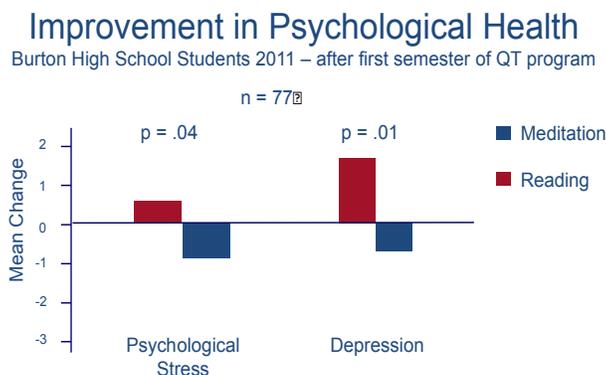
Summary: Improved Social-Emotional Competence and Psychological Health in OC Students – Study VIII



The above chart indicates an improvement in social emotional competence and mental health for QT students at John O’Connell High School over the course of an academic school year. A total of 99 students were measured at baseline, at the beginning of the school year prior to learning meditation, and again at the end of the school year, approximately 5 months later on the Duckworth GRIT scale, the Rosenberg Self-Esteem scale, the Profile of Mood States, and the Spielberger Anxiety Inventory (trait scale). Findings indicated a significant increase in grit (mean pretest=25.50, mean post-test=26.31; $p=.05$) and self-esteem (mean pretest=29.17, mean post-test=30.31; $p<.007$). They indicated a

significant decrease in total mood disturbance (mean pretest=6.81, mean post-test=5.83; $p < .001$) and trait anxiety (mean pretest=36.20, mean post-test=32.86; $p < .001$).

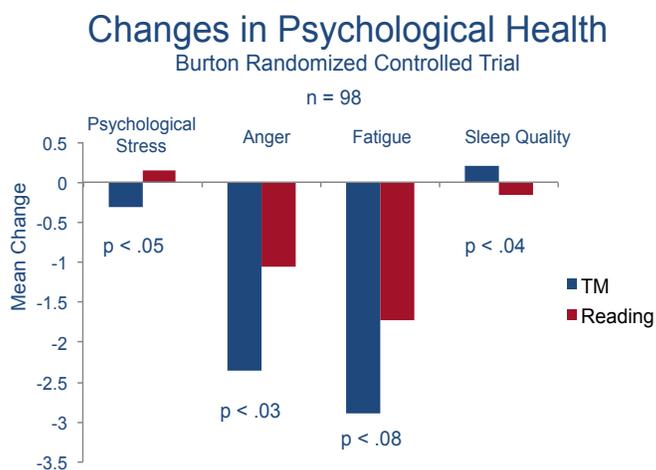
Summary: Decreased Depression and Psychological Stress in Burton High School Students – Study X



Source: standardized psychological instruments – Study X

The above chart indicates that a statistically significant reduction in depression and psychological stress due to meditation practice. A total of 77 ninth-grade students (55 meditating students and 22 reading students) were administered the Spielberger Children’s Anxiety Inventory (trait scale), the Mental Health Inventory (MHI-5, a measure of depression), and the Strengths and Difficulties Questionnaire (SDQ) emotional symptoms scale (measuring psychological stress) at baseline (prior to instruction in meditation) and again at three-month post-test. A significant reduction in depressive symptoms ($p = .01$) and psychological stress ($p = .04$) was found in the meditating students compared to reading controls over three months. A trend toward significance was found for trait anxiety ($p = .09$). Hyperactivity went down in meditating students, but it was not statistically significant relative to reading students.

Summary: Randomized Controlled Study at Burton Indicates Improved Psychological Health – Study XI



Source: standardized psychological instruments – Study XI

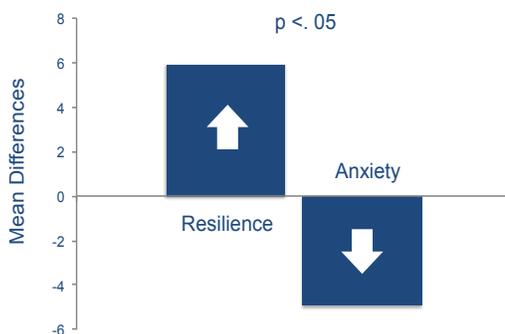
The above chart indicates that meditating students had a statistically significant reduction in emotional symptoms (overall psychological distress) and anger, and a significant improvement in sleep quality compared to reading students. Both meditating and reading QT students had a reduction in fatigue, with a greater drop for meditating students that was trending toward statistical significance between groups.

Standardized tests were administered at baseline at the beginning of the school year and students were randomly assigned to learn meditation or practice sustained silent reading in Quiet Time. Post-testing took place approximately six months later. Results on the psychological stress measures used in this study showed decreased emotional symptoms (psychological distress), using the Strengths and Difficulties Questionnaire (SDQ) in the meditating students (mean change=-.343) compared to an increase in the reading students (mean change=.175) with a $p < .053$. Anger, using the NIH (National Institutes of Health) PROMIS inventory, was found to decrease in the TM students (mean change=-2.799) compared to controls (mean change=-.606) with $p < .027$. NIH PROMIS fatigue scale showed a marginal decrease in the meditating students (mean change=-3.94) compared to controls (mean change=-.667) with a $p < .083$. Analysis of quality of sleep data, using the Pittsburg Quality of Sleep Index, showed improvement in meditating students (mean change=.200 compared to reading students with a mean change=-.167) with a $p < .036$.

There was also a significant within group effect on the Bar-On emotional intelligence total scale for both the meditation and reading students ($p < .05$). Both groups also experienced significant within-group increases on the Devereux Student Strengths Assessment, a teacher rating of social-emotional competence. There was also a significant within-group effect on self compassion for the TM group only ($p = .01$) and for the reading group only on mindfulness attention ($p = .01$). These findings suggest that the Quiet Time program has a positive psychological impact on both meditating students and those who rest or read.

Summary: Increased Resilience and Decreased Trait Anxiety in Burton QT Students vs. Matched Controls – Study XIII

Impact of Meditation on Resilience and Anxiety
Controlled Study with Burton Students



Source: Psychological Tests and WestEd – Study XIII

The chart above shows a statistically significant increase in resilience and significant decrease in anxiety for Burton 9th graders relative to control students at Mission High School. A total of 145 high school students were included in the evaluation of social/emotional competence. Students from the Burton Quiet Time program ($n=103$) were compared to control students from Mission high school ($n=42$). After 6 months, all students were post-tested on a battery of measures. Significant results in favor of the students learning the TM program compared to controls were found on resilience (TM, adjusted post-test mean = 76.00; Control, adjusted post-test mean = 70.07; $p < .05$) and trait anxiety (TM, adjusted post-test mean = 32.9; Control, adjusted post-test mean = 37.82; $p < .05$). Effect sizes were 0.46 on resilience and -0.84 on trait anxiety, indicating moderate to large effects due to practice of meditation over six months. A dose effect was also found in terms of regularity of meditation practice and resilience scores. Those students who meditated more regularly tended to have higher post-test resilience scores than those who were less consistent. The study was conducted by WestEd.

STUDENT SURVEY RESULTS INDICATING IMPROVED SCHOOL CLIMATE

Summary: QT Impact on Social, Emotional, Cognitive Capacity and School Climate - Student Surveys

A broad sample of middle and high school Quiet Time students were surveyed. They were asked to respond to the following statements with a number 1 through 5 (1 represents “Not at all,” 3 represents “Somewhat,” 5 represents “Very much”). The following table presents the percentage of students who reported a 3, 4, or 5 in response to the corresponding statements. More than 90% of the students at each of the Quiet Time schools reported at least one positive result from the Quiet Time meditation practice as represented by statements 2-12. More than 75% of students reported three or more positive results from meditation practice, which indicates holistic benefit.

Table 4: Student Quiet Time Program Survey - Summary

	O’Connell n=210	Vis Valley n=247	Burton n=65	Everett n=119
1. Meditating is easy for me.	91%	95%	98%	92%
2. Meditating makes me feel less stressed.	79%	85%	97%	73%
3. Meditating helps me focus better in school.	68%	84%	94%	70%
4. Meditating helps me get along with my friends better.	63%	82%	86%	62%
5. Since I started meditating, I am happier.	65%	82%	91%	60%
6. Since I started meditating, I sleep better.	63%	81%	91%	58%
7. Since I started meditating, I am less angry.	66%	80%	92%	56%
8. Meditating makes me feel more self-confident.	62%	79%	82%	60%
9. Since learning to meditate I get more of my work done, at home and at school.	63%	81%	86%	61%
10. I feel that meditation has helped me with my academic study.	65%	81%	86%	63%
11. Since learning to meditate I argue and fight less with others.	63%	88%	83%	53%
12. Since learning to meditate I feel I am making healthier choices in my life.	66%	92%	85%	55%

Section Summary

In aggregate, the data above suggests that the Quiet Time program and TM practice has a positive impact on suspension rates, attendance and a broad set of social-emotional factors, including reduced anxiety, anger, fatigue and an increase in resilience, sleep quality, self esteem, grit, emotional intelligence, relationship skills, optimistic thinking, goal-directed behavior, and decision-making. Additional research is recommended to further delineate the nature of the impact and the effect over longer periods of time.

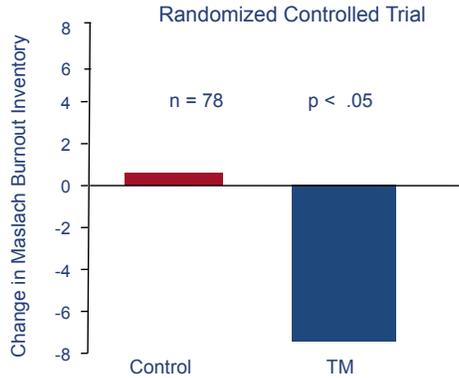
V. ADMINISTRATOR, FACULTY AND STAFF FINDINGS

The research investigating the impact of TM practice as a wellness and leadership development tool for SFUSD staff is divided into three sections: (i) standardized psychological tests on stress, mental health, and emotional intelligence; (ii) EEG tests on administrators; and (iii) teacher and administrator survey results.

STRESS, MENTAL HEALTH, and EMOTIONAL INTELLIGENCE

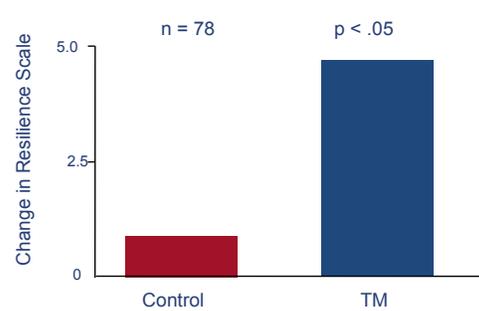
Summary: Reduced Teacher Burnout and Increased Resilience – Study XVI

Decreased Teacher Burnout and Emotional Exhaustion



Source: WestEd – Study XVI

Increased Teacher Resilience



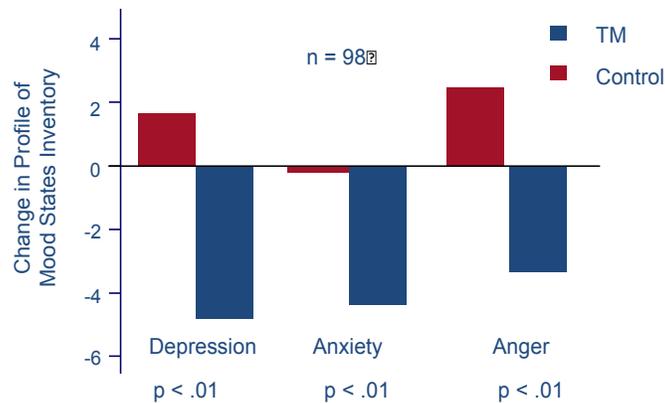
Source: WestEd – Study XVI

The above charts indicate a statistically significant increase in resilience and reduction in burnout relative to controls. Seventy-eight teachers, administrators, and support staff at one high school and two middle schools in SFUSD volunteered for the study. Volunteers were randomly assigned to one of two conditions: the TM training group (immediate start) or a delayed start control group. Results indicated that over a 4-month treatment period, the meditation practice produced significant reductions in emotional exhaustion ($p \leq .01$; $d = -.57$), fatigue ($p \leq .01$), and perceived stress ($p \leq .01$; $d = -.94$), and a significant increase in resilience ($p \leq .05$; $d = .53$). Source is WestEd.

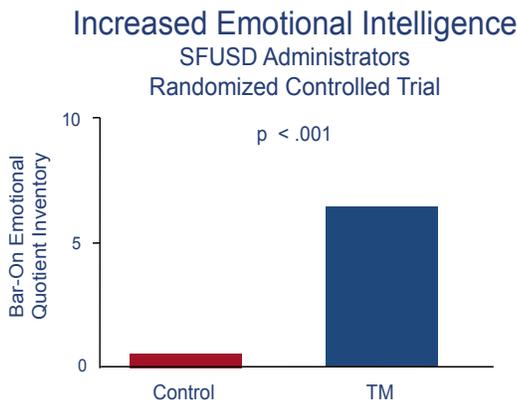
Summary: Improved Mental Health and Increased EQ in SFUSD Administrative Staff – Study XVII

Decreased Psychological Distress

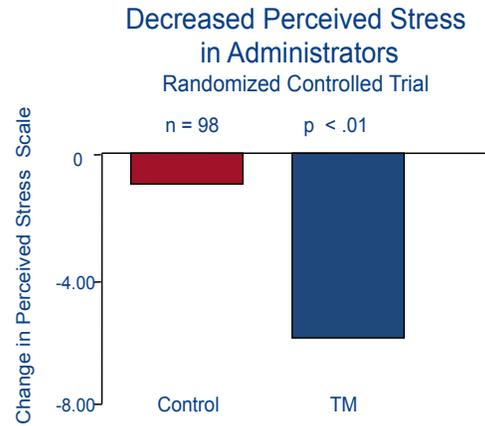
Randomized Controlled Trial of SFUSD Administrators



Source: Profile of Mood States Standardized Test - Study XVII



Source: Bar-On EQI Standardized Test – Study XVII

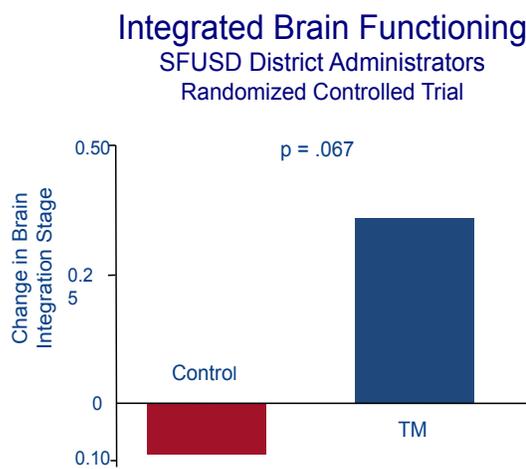


Source: Perceived Stress Scale – Study XVII

The charts above indicate that meditation practice significantly improved mental health and emotional intelligence of administrators. This randomized controlled trial evaluated the effects of TM compared to wait-list controls on perceived stress, mood disturbance, and emotional intelligence – a comprehensive set of emotional skills. Ninety-six participants from the central offices of SFUSD were randomly assigned to either immediate start of the meditation program or to a delayed start wait-list control group. Subjects learning meditation were instructed to meditate for 20 minutes twice a day. Results indicate a significant decrease in depression, anxiety, anger, perceived stress and an increase in total emotional intelligence and intrapersonal skills, stress management, adaptability, and positive mood subscales ($p < .05$). The effect size for total mood disturbance was $d = -0.80$ (anxiety subscale $d = -0.70$; depression subscale $d = -0.79$; anger subscale $d = -0.62$), Perceived stress reduction was $d = -0.57$. Emotional intelligence was $d = 0.46$. These findings have important implications for administrator health and job performance. Research indicates that higher emotional intelligence correlates with greater leadership capacity and work productivity (*International Journal of Applied Science*, 2/3, 2011; *Journal of Leadership Studies*, 5/4, 2012).

BRAIN INTEGRATION

Summary: Increased Brain Integration in SFUSD Administrative Staff - XVII



Source: EEG tests – Study XVII

The above chart suggests an increase in brain integration in SFUSD administrators as a result of the practice of meditation. Brain integration is a measure of enhanced electroencephalograph (EEG) coherence, or coordination between different parts of the brain, e.g. the left and right prefrontal cortex. Increased frontal alpha coherence is associated with greater creativity and faster processing speeds. In this study, a subset of administrators in the randomized controlled trial referenced above had brain integration monitored using EEG while responding to a computer stimulus both prior to learning meditation and at 4-month post-test. The results combined measures of coherence in the pre-frontal cortex, alpha/gamma power ratio, and brain preparatory response into one brain integration score. Meditating subjects had an average increase in brain integration stage of .38 compared to a decrease of -.10 change in brain integration stage for controls, with a $p = .067$ trending toward significance. The finding suggests the meditation practice enhanced healthy brain function of administrators.

FACULTY SURVEYS INDICATE IMPROVED COGNITIVE FUNCTION & WELL-BEING

Summary: Impact of Meditation on Teacher and Administrator Social, Emotional, and Cognitive Capacity

The following survey was filled out by 37 teachers and administrators who had learned TM at one middle school and two high schools in SFUSD at the end of the 2012/13 school year. They were asked to respond to the following statements with a number 1 through 5 (1 represents “Not at All,” 3 represents “Somewhat,” 5 represents “Very Much”). The following table presents the percentage of teachers and administrators who reported a 3, 4, or 5 in response to the corresponding statements. *More than 90% of the teachers and administrators reported three or more positive results from meditation practice*, which reflects the broad benefit produced by the technique.

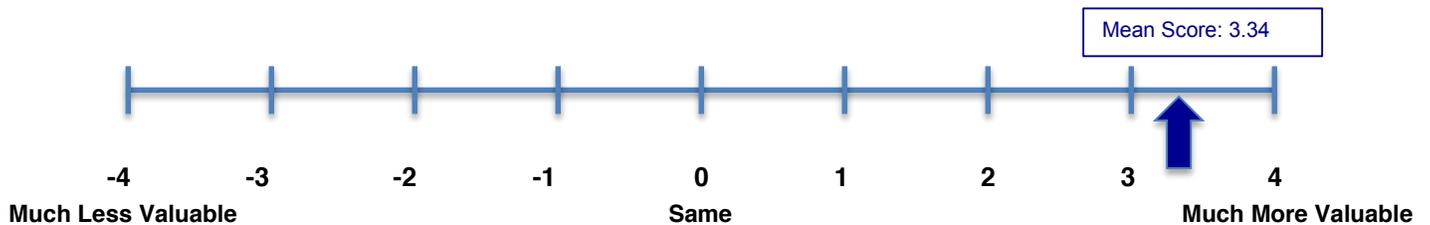
Table 5: Teacher and Administrator Survey on Impact of Meditation - Summary

1. As a result of my meditation practice, I have experienced greater clarity of mind.	95%
2. As a result of my meditation practice, I have less fatigue.	86%
3. As a result of my meditation practice, I feel less stressed.	97%
4. Practicing meditation has improved my relationship with co-workers.	76%
5. Practicing meditation has improved my relationship with family and friends.	78%
6. As a result of my meditation practice, I have experienced greater productivity at work.	81%
7. As a result of my meditation practice, I feel fewer frustrations during the day.	92%
8. As a result of my meditation practice, I am happier.	92%
9. As a result of my meditation practice, I sleep better.	63%
10. As a result of my meditation practice, I have experienced one or more health benefits.	55%
11. As a result of my meditation practice, I feel I am more centered and have greater ability to focus.	84%
12. As a result of my meditation practice, I am less angry.	89%
13. As a result of my meditation practice, I have greater patience.	95%
14. As a result of my meditation practice, I feel more in control of my life.	78%
15. Practicing meditation has been valuable for me.	95%

Summary: TM Rated as a Highly Valuable Professional Development Program by Teachers & Administrators

A separate survey question asked the same 37 teachers and administrators at the end of 2012-13 year to compare the TM course to other professional development courses they had taken. The scale ranged from -4 (much less valuable) to +4 (much more valuable). On this eight point scale, the average rating was 3.34, with over half giving the highest rating of 4. Some added comments to their ratings included “*off the chart*” and “*the most valuable by far.*”

Survey on TM Training – Average Ranking Relative to Other Professional Development Programs



Section Summary

In aggregate, the data above suggests that the TM practice has significant positive effects on teacher and administrator mental health, cognition, and social-emotional intelligence. The findings are important because these factors have foundational impact on teaching effectiveness and leadership capacity. They also support reduced absenteeism due to illness, reduced turnover, and professional retention.

VI. QUALITATIVE OBSERVATIONS

Over the course of the last seven years, hundreds of hours of interviews with students, teachers, administrators, and parents were conducted, along with many written statements in surveys and letters. Education, health, and public policy experts also visited, observed, and evaluated the program. Below are several comments from these different constituencies. These qualitative reflections provide additional insight into the nature of the impact of the QT program that cannot be fully characterized by quantitative data. They were chosen to provide perspective and context to the quantitative data. They were not randomly selected, though they reflect common themes expressed in the hundreds of interviews.

A. STUDENTS

I used to be really fidgety, I used to move a lot, couldn't stay in my seat for very long. Now after meditating I can sit down for a whole class without standing up. Before Quiet Time it was hard for me to concentrate; after Quiet Time, I could concentrate very well.

- 7th grader, Visitacion Valley Middle School

Before Quiet Time, it was mayhem here. A lot of fights going on, basically everyday. People were not friendly, they were mean. When I learned it I noticed it was different, because TM is not just closing your eyes, it is deeper than that. It makes you feel better, makes you more energized and it takes away all your stress. It really, really helps.

- 7th Grader at Vistacion Valley Middle School

Before STAR testing, I was nervous, but they allowed us to do Quiet Time right before the testing and I was so much more calm. I could think about the problems we were doing and really race through it, because it helped me focus in on what I was doing instead of stressing out about the outcome. I used to have bad migraines and after Quiet Time I didn't have them any more.

- 8th grader, Visitacion Valley Middle School

I use to have an acute case of insomnia. It was very difficult. Sometimes I didn't sleep until 4 am, or maybe not at all. I would always feel tired, and sometimes I wouldn't have enough energy to even pick up a pencil. I went to my doctor and he said that I needed to find a way to reduce my stress.

At first I was very skeptical about Quiet Time, and I didn't really want to do it. But after about a month I started to feel a lot better. I could sleep at 10 pm, or whenever I want. Now I have a lot more energy, and can focus on my lessons. We were studying some things I didn't understand, but after Quiet Time, when we reviewed the material, it really made sense to me.

"I also noticed that compared to last year, there are a lot less fights going on. People used to fight over really little things or start arguing in the middle of class. Now that doesn't happen, or not as much. I don't fight with my sisters as much at home, either.

- 8th grade, Everett Middle School

I've been meditating in Quiet Time for about one year. I am more relaxed now and that seems to have made it easier for me to concentrate in class and do my homework. Last year I got some C's, but this year I've been getting all A's and B's. It's also improved my relationships with people. I don't fight with my sister or my friends. And there are also less fights at school, they used to happen on a regular basis, but now I haven't seen a serious fight in a long time.

- 8th grader, Everett Middle School

I used to feel overwhelmed with school and trying to balance my life at home. I would get angry, argue with my parents and bully people at school. Since I started Quiet Time, I am less stressed, more focused in class, happier, more friendly, and I don't bully people any more. My grades used to be F's, but now I am trying to get D's and C's and Quiet Time has been helping me to do that.

- 8th grader, Everett Middle School

I am doing better in school since I learned meditation. I would say my grades are up and I feel calmer and not angry at home any more, as I used to be a very angry child. I can study better, I have more focus in class, and I've been doing my work more. I was doing very well in math, but now my teacher says I am doing extremely well, I am the top student in the class.

- 10th grader, O'Connell High School

Before I was meditating, I could feel the stress on my shoulders, I always walked around with things on my mind. But every time I meditated, I could feel that weight lifted off my shoulders a little bit more, and that made it easier to think, easier to study, easier to play sports, and just made my mind a whole lot clearer.

- 10th grader, O'Connell High School

When I first heard about meditating I thought it wasn't going to work. I guess marijuana was a big part of our life. We would always do it. But after Quiet Time, some of us who used to do drugs have stopped using them, and our lives went from being lazy, to being active.

- 12 grader, O'Connell High School

I used to come to school, sit down, but not really listen to the teachers. But now after Quiet Time, I am more energetic, more awake and able to understand the topics that I never did before. I don't know how it's possible but after I meditate I feel relieved, comfortable, stress-free, as if I just slept for the whole day.

"There was a period where I didn't have time to meditate, because my school work was bunching up, so I stopped for about a week. I just felt frustrated, and in my AP Biology class I completely gave up. I didn't understand it so I just stopped trying and said ok, I'm lost, what's the point in trying to keep up.

"But then I started meditating again and my grade began to go up because I was turning my work in on time. I was staying on track and my teacher complimented me, saying I was doing much better.

- 12th grader, O'Connell High School

Whenever I feel fatigue, tiredness, pain, and upset the best medicine for me is to meditate. Meditation helps me kick out the laziness.

- 12th grader, O'Connell High School

When I meditate, it feels like I awoke from a sleeping state into a well rested state of mind. I feel happy and uplifted. Meditation lets you focus on the most important thing, yourself.

- 12th grader, O'Connell High School

(After meditation) I feel everything is so clear now and there is nothing confusing about what I must do to have long lasting happiness in life. Meditation has cleared the stress and biases I had for a long time.

- 12th grader, O'Connell High School

I felt my body becoming energized, my mind becoming stronger, and my patience growing. I discovered my own independence. I was able to proudly meditate in any environment. Whether it was with or against my peers, I became

fully committed to meditation.

- 12th Grader, O'Connell High School

Meditation is the main source of my positivity and enthusiasm. Simply meditating everyday, twice a day assisted me in performing my best in both academics and athletics. Although I was drowning in mountains of work, meditation gave me a helping hand and pulled me away from negativity and stress. Meditating in the afternoon before games made an astounding difference to my athletic performance.

- 12th grader, O'Connell High School

I think it would be cool if my parents and I meditated as a family. Meditation changed my life forever.

- 12th Grader, O'Connell High School

I am attentive, but at the same time calm, not only in my classes, but outside of school as well. Now I'm a much cooler person and the things that would upset me don't bother me anymore.

- 12th grader, O'Connell High School

Meditating became a daily routine even when I'm at home during the weekend.

- 12th grader, O'Connell High School

Once I began meditating twice a day, I saw how much clearer my mind became and how I saw things differently. Meditation isn't something that takes away your time, but rather something that gives you more time in the end.

- 12th grader, O'Connell High School

My grades were getting better, my social life improved, and I was able to develop a more calm, patient demeanor. I can simply meditate and come back stress free again.

- 12th grader, O'Connell High School

Through meditation, I am able to dive deeper into my core and find my meaning of life. It feels as if I am finding each piece of puzzle waiting to be put together. With meditation I learned that anything is possible. When everyone meditates, I believe that is when peace will come and everyone will live in harmony.

- 12th grader, O'Connell High School

You can walk into the meditation class frowning and walk out with the biggest smile ever.

10th grader, O'Connell High School

When I meditate, I experience calmness. I am just relaxed and ready to have a great day. All the negative things I am thinking just go away. It helped me do better in school because I became more focused, more awake. I was listening to the teacher more, could do my work better, and not have to ask so many questions.

- 9th grader, Burton High School

I used to be a horrible student during my freshman and sophomore years. I had bad grades, I used to cut classes, and then once I started to meditate, I started doing much better. Now I am an A or B student. I don't cut classes or get any bad grades.

- Erica, 11th grade, Burton HS

B. TEACHERS

I have worked at Visitacion Valley Middle School for the last 14 years. In the first seven years of my tenure at Vis, the school climate was dominated by stress and fighting. Tension was always high, with our two security guards and one uniformed police officer engaged with helping manage the incidents. Fighting throughout the school and particularly in PE was a daily reality. Sadness, anger and fear were dominant student emotions. When we started Quiet Time, things started to shift. Usually the fighting level stayed the same or increased from fall to spring. In the 6th and 7th grade, where we first implemented Quiet Time, the fighting in PE went down about 60% in the spring over fall. In the 8th grade control, where we did not implement Quiet Time in the first semester, fighting stayed at the normal levels or increased. It was an obvious effect.

As the program continued, the whole school became more peaceful and functional. We used to have fighting every day with about one major fight every other week. For the last 4 years we have had very few fights. I can't remember the last major fight with a student getting injured, expelled, and/or arrested --- a previously common experience. The Quiet Time program has had BIG impact. Students, teachers, and administrators are all more functional. The program should be made available to every school.

- Barry O'Driscoll, Director of Physical Education, Visitacion Valley Middle School 1988 - present

Many years ago, an Instructional Reform Facilitator (IRF) told me about the meditation program at Vis Valley Middle School. I was working as a history teacher at Mission High School and I was stunned by the story. My husband was at James Lick and I could not even imagine getting one kid to sit still for one minute much less an entire school for 15 minutes twice a day. I am currently the teacher librarian at Vis Valley Middle School and adore it. I feel so lucky to be here and to now see this program in action. It is wonderful.

Every morning the 6th grade PE teacher uses the library to meditate with his homeroom. I have seen firsthand how this program works. In the beginning of the year the 6th graders just hung out and talked in homeroom. Then each student learned to meditate. The teachers who taught the process were very compassionate and gentle with the students. They came in prepared and brought in the students to learn about Quiet Time, how to meditate, and why to do it. Slowly, I watched the homeroom grow from a rowdy group of kids to a group of students that could sit in silence for 15 minutes. Imagine, in this era, city kids sitting quietly. It is incredible. Some students are not actively meditating, but they are sitting in silence, which is very important for young people so used to a constant onslaught of information. How are they to process life if they are constantly being attacked with sounds, sights, and data? I will sometimes sit with the students and meditate. At first I was nervous because I thought 'what if they threw something at me or made fun of me?' I learned that trust is so important to the process. I have yet to see any student do anything disrespectful to another student. It is even more impressive when the entire 8th grade class meditates together every Wednesday morning. Many of the students come to school with fear and stress and yet they can sit with eyes closed with over a hundred of their peers in quiet. They may not see the purpose because they are teenagers, but they are planting seeds – seeds of trust, calmness, and most important reflection.

The Quiet Time staff is an essential part of the culture of the school. They are wonderful, dependable and compassionate. What a great resource for the students at Vis Valley!"

- Callen Taylor, Teacher at Visitacion Valley Middle School

I am writing this letter to express the positive impact and importance of the Quiet Time Program at Visitacion Valley Middle School. I have been a paraprofessional and special education teacher at Visitacion Valley Middle School for the past three years and have seen tremendous changes in the school's climate over that short period of time. The Quiet Time program has had a large impact on decreasing anger and violence, while promoting focus, kindness, happiness, self-esteem, compassion, health, independence, and maturity amongst our student population. Many of my

students struggle with behavioral issues due to their disabilities. Quiet Time gives many of them a chance to cope with the stressors of school and life in a safe, productive environment.

Personally, I have also seen reductions in stress and overall anxiety levels after I began meditating on a regular basis and my relationships with my students, friends and family have become more positive and rewarding. The professionalism of the Quiet Time staff is remarkable. All members of the QT team from the Center for Wellness and Achievement in Education are responsible, positive and respectful role models for all students at VVMS to look up to.”

- Eric Harper, Special Education Teacher at Visitacion Valley Middle School

My name is Rose Ludwig, and I am an 8th grade teacher at Visitacion Valley Middle School. I have been at VVMS for 5 years, including one year as a student teacher. My first year of student teaching was also my first year in San Francisco, so when I was given my assignment, I knew nothing of the school’s perceived reputation or difficult population. When I arrived at VVMS, I experienced a school climate that was warm, welcoming, inclusive, and awash in a sense of community. The 8th grade students interacted and looked out for the 6th grade students in a way that was, and still is, unprecedented. Later, as I learned more about the surrounding community and heard my school repeatedly described as a ‘war zone’ did I realize that the perception of the larger San Francisco community and the reality of the work happening at Vis are mismatched.

I attribute the positive school climate at VVMS largely to our Quiet Time program. The students get to start and end their day with mental peace and clarity, something that translates into their academic performance and relationships with others. In my experiences and conversations with other middle schools and middle school teachers, VVMS’ student population is unique in their kindness, compassion, and overall happiness.

Furthermore, the positivity of the Quiet Time program and their staff aligns with our efforts at Restorative Practices, and the staff also provides additional adult support and mentoring to students who so desperately need as many strong, involved role models in their lives as possible. Personally, I have benefitted from the Quiet Time program as well. Meditation is a part of my life, and it has enabled me to be a more prepared, patient, and thoughtful teacher and person.

I cannot overstate the benefits that Quiet Time has brought to Vis as a school and to me both personally and professionally. I only wish that all schools were able to have such an enriching program.

- Rose Ludwig, 8th Grade Language Arts Teacher at Visitacion Valley Middle School

I’ve been at Everett for 2 years. Last year we had fights going on all the time. This school year is not quite over, we have eight days left, but we have not had any blood shed here so far on our campus.

Quiet Time has worked wonders. Some students for instance, liked to throw things at lunch, but now for no particular reason, they have stopped throwing things. I believe that Quiet Time slows you down and helps you to think.

- Tony Ballard, Security Guard and Athletic Coach at Everett Middle School 2006 - 2010

When I chose this profession I had no idea what being a “teacher” really entailed. Formally I was trained to be a teacher, but mentally I was not. No one ever taught me skills to help myself. Ultimately this caught up to me. During one extremely challenging year teaching in San Francisco, I knew I had to find something to help me be more focused, compassionate and at peace with myself and my students. It just so happens at this time I received an email from the Center for Wellness and Achievement in Education (CWAE) about the TM Stress Management Training. For me this was a sign. I responded immediately and soon after was trained in TM.

I cannot express enough how crucial meditation has been for me. After going through the initial training I started meditating twice a day for 20 minutes at a time. These 20 minutes are my solace. They help me reconnect, de-stress, and just be. It is the only time in the day that is my time. It has been 3 years since that first training and I can truly say that it has changed my life. I am a better person and educator because of it. In my classroom I have more patience and do not get overly stressed like I did in the past. I am more compassionate and can better empathize with my students. My students know that I meditate and often times comment on my calm demeanor. When crazy things happen in class, which often they do in middle school, I am able to focus myself and be calm. Recently a student remarked, 'Ms. H, how do you do that? You are not freaking out like other teachers? I think it is because you meditate.' I could not agree with her more.

As for the intensive in-residence trainings, or I like to call them, the meditation retreats, they truly are incredible. If I could, I would go to a weekend retreat every month. It is the one and only thing that I have ever done that truly benefits my mind, body, heart and soul. Every time I go on a retreat I come back refreshed and excited about teaching. Because of my time there, I am a better educator who can do my job to my maximum capacity.

TM is the missing tool that all educators, if they choose, should have. For me, it has been the greatest gift. Every person, especially those who are educating our youth and our future, should be given this opportunity.

- Audra Hollingsworth, Teacher at Everett Middle School 2011 to present

QT provides a space for students to take a break from the constant stimulation they experience in their lives. It allows them a moment of peace and equanimity that allows for learning to take place. For the students who meditate, the Quiet Time program at Burton has successfully impacted students' ability to perform at a higher level.

On a personal level, my daily meditations allow me to be more centered and flexible with my students. Meditation alleviates a considerable amount of workplace stress. I am also more forgiving of my colleagues and peers.

- Brendan Furey, Teacher at Burton High School

In my experience with the QT program, students greatly benefit from meditation in many ways. When students feel better about themselves and their place in life, they tend to feel motivated to keep this feeling going, and do so by focusing on school. In fact, the students in my advisory who regularly meditate are all doing well academically (currently earning no F's). I do feel that meditation has a direct affect on them emotionally, and a by-product of this is improved academic achievement.

As a teacher, I have found QT to be a huge benefit cognitively and emotionally. I find that I am far more patient with my students, and as a result have been able to create deeper and stronger relationships with them. QT has really helped me enjoy teaching more, and I attribute this to a reduction in fatigue. It has given me the energy and clarity necessary to realize the true potential within myself.

- Steven V. Bonaccorso, Language Arts Teacher and Department Chair at O'Connell High School 2009 to present

I am glad to find that all the "frazzle" is gone. It has been replaced by a smoothness that makes it easier to do what needs to be done every day and to enjoy the doing. I wake up more easily. I don't get the little spurts of adrenaline that used to accompany nervous, anxious thoughts. This is the single most effective stress-reduction activity I've ever tried. And it's so easy!

- Michelle Winter, Teacher at Lowell High School

C. ADMINISTRATORS

I was Principal at Visitacion Valley Middle School for 12 years. In the first 7 years we implemented numerous programs to support our students: various types of counseling, afterschool tutoring, PTSD intervention, support for students with incarcerated parents, special academic programs, restorative practices, educational programs for parents, etc. We saw some modest improvement, but we still had major problems, particularly with stress, violence, and poor classroom engagement. Every day was intense and challenging with constant fighting and tension. After we started Quiet Time, the stress and violence quickly started to drop and the positive engagement in learning was evident. All the other programs started to be more effective. Quiet Time is like an umbrella that helps all the other programs in the school be successful. Though it took some time, the change wasn't modest; it was dramatic.

In the first semester we had the 6th and 7th grade students engage in Quiet Time. The 8th grade did not. I noticed the two Quiet Time grades became more calm and engaged. Suspension levels in the 6th and 7th grades starting going down and the 8th grade went up. During STAR testing, the 6th and 7th grade students were noticeably more orderly and focused, much more so than I had ever seen in my 7 years at the school. The 8th graders were as rambunctious and chaotic as usual. That's what gave me the thought that we should look at student suspension levels and test scores. We saw that in both dimensions, the Quiet Time students were improving relative to the 8th grade controls.

Over the next few years our school was transformed in a major way. Our suspensions went down about 80% over three years. Our school became a truly happy, productive place. Our teachers and students reported to me that they looked forward to coming to school every day! It was remarkable. I stayed on my last two years, when I could have retired, because I was enjoying the experience so much. I wasn't burned out --- I was invigorated. My blood pressure went down significantly due to the meditation my last few years as an urban school principal --- not up!

Quiet Time is unequivocally the most effective program I have come across in 40 years of education for reducing stress and supporting student success. It takes time and must be implemented with fidelity by all staff. But if done properly, the program enhances student well-being and readiness-to-learn in a profound manner. This program is literally saving lives and provides students a developmental tool for school and throughout life.

- James S. Dierke, Visitacion Valley Middle School Principal 1991 - 2012
NASSP National Middle School Principal of the Year 2008

I have been an educator in SFUSD for 35 years, and helped bring the Quiet Time program to Visitacion Valley Middle School. I have now been doing the meditation for 2 1/2 years, and have been on at least 6 of the weekend in-residence training courses. The meditation has helped me learn to cope a lot better with the stresses of being a school administrator. I am able to focus more, do things in a more orderly manner, and be more thorough. My relationships with staff have improved.

I have heard comments that some people think meditation must be religious, but I don't find anything religious about it. It is just a way to sit down and quiet the mind. I haven't seen anything detrimental. I haven't changed my religion. I still believe pretty much what I've always believed, but have been able to cope better with life.

As far as the school district is concerned, I would highly recommend they consider adopting meditation as part of the routine for all the schools, not just for the personal benefits to individual students, but for the effects on the whole schools' success, in terms of grades, test scores and student behavior. It is good for the teachers too, helping them improve their skills, find better ways of attending to students, and coping with the stress of educating children. The positive results even spread into the community.

- Aurora Maramag, Assistant Principal at VVMS 2002 - 2009

Why does it make sense to have Quiet Time in the schools? Because the effects that we see are just tremendous. The students themselves talk about how they can focus better, how they feel good about themselves. I've heard them say things like, 'Now I can sleep at night.' We have definitely seen a decrease in our suspension rate, in our referral rate, and an increase in test scores.

I've been at two schools now where we have started Quiet Time. The key to the effectiveness of the program is that the administration and the teachers work together to implement with consistency and fidelity --- then you get great results. I have seen first hand how powerfully this program has affected our community and, most importantly, our students.

- Antoinette Marracq, Assistant Principal at Everett Middle School 2007 - 2009 and Visitacion Valley 2010 – 2013

The QT staff has taken on a huge commitment to our students to help bring mindfulness to our school. They work day in and day out with students and staff to teach such an important element of every day life. This is so important for our students' social-emotional development. Our students, more than others, come from some of the most stressful living conditions and this program has been able to provide SE support in a valuable way.

WE at Visitacion Valley Middle School are so grateful and so lucky to have the QT program at our school. I feel very blessed and grateful that we have such a partnership!

- Gloria Minares, Principal at Visitacion Valley Middle School 2012 - present

This is my eleventh year in education and my seventh with SFUSD and I have seen many programs come and go over the years. I have seen programs put into place, but not offered the support to be successful over the long-term. QT is a strong program because the QT staff ensures that students are provided with the tools and environment to be successful in their meditation practice twice a day, every day.

I'm sure you are aware of the data that the QT has been collecting that shows a correlation between meditation and lower suspension rates and higher test scores. I also believe there is a strong positive impact on the staff, which in turn, has a positive effect on students. I hope that the district continues to support this program and sees the valuable impact that it has on creating an environment that facilitates the implementation of our Tier 1 interventions and proactive classroom management strategies.

- Kevin Odle, Instructional Reform Facilitator at Visitacion Valley Middle School 2011 - present

We have children who have one parent families, we have children whose parents are incarcerated, we have children who are in foster homes, we have children who are homeless ... These are inherently stressful situations, and it's very difficult to learn if you are stressed, it shuts the mind down.

So when Quiet Time was brought to my school, I thought it would be a great tool and strategy to help some of the students deal with their day-to-day, not only in school, but outside of school as well. Reducing stress and having them have a moment of peace, because some of their world is so turbulent, that when they walk through the door, that turbulence just comes right in with them. It's almost like a tornado, going from room to room, floor to floor, and it needs to be dissipated. I found that Quiet Time was an effective way to get students to calm down, become more focused, and relax. It is a way that people of any age can go within themselves and have that inner peace and quiet, which then creates the optimal condition for anyone to function. And just like the stress goes from person to person, the peace and the lack of stress goes from person to person.

The role of a school administrator is multi-faceted and extremely complex. Every day, even before 8 in the morning, I can encounter at least 10 situations, and then I still have a long day to go because I am usually here until 7 or 8 at night. I

find that the meditation keeps me focused and balanced, and if I am leading the ship, I need that. People ask me how I can stay so calm even in severe situations, and meditation is one way I do that.

Before the (annual standardized) test, we had the students do Quiet Time, which settled them down, kept them focused and gave them the energy and endurance to be able to sit for hours of testing. Teachers commented that it was some of the best testing they had seen in years.

After implementing Quiet Time, our school had the most gains on the API of any middle school in the district, which was 40 points, based on the state tests. We went from being a 1/10 ranked school, meaning the lowest 10% compared to statistically similar schools statewide, to a 4/10 ranked school, or the 30-40% level. There was no other movement in the district in this regard, except for our school. We still have a ways to go, but that was a great accomplishment, and Quiet Time was the addition that we hadn't had in years past.

– Richard Curci, Principal at Everett Middle School 2008 – 2012

Prior to Quiet Time, Burton High School had been one of the highest suspending schools in the district for several years running. In the first two years of my tenure as principal, we instituted several practices to address the challenge of discipline issues and suspensions. Though these approaches were research-based, there was perhaps some very modest impact, but it was not significant, and our suspension rate remained very high.

In the first full year of Quiet Time, in my third year as principal, our suspensions went down 50%. In the next year they went down another 50% (a total of 75% in two years). We had the same principal, same deans, same suspension practices. The only major change during this time was implementing Quiet Time. This is a remarkable transformation.

QT has contributed in big ways in how we have approached the building of a school culture and climate that is safe, calm, and highly conducive to learning and growth. I see more focus, enthusiasm, and positive interactions between students and teachers. Although I was highly skeptical of QT at first, now I am strongly supportive. It is a key component of our school transformation model. It provides a system-wide stress reduction intervention that helps all of our students and staff to be healthier, happier, and more effective. In turn, it makes all of our school initiatives more successful.

- Bill Kappenhagen, Principal at Burton High School 2009 - present
SFUSD Principal of the Year 2009/10

I have been working at Burton High for 20 years, and for many years the school was highly volatile with many misbehaving students and deeply stressed adults. Since the establishment of QT five years ago, our school climate has steadily moved to in the positive direction. Burton's suspension rate has steadily declined and students' behaviors have improved significantly: increased calm, more friendly interactions, and greater focus. The program is highly valued and recommended by both students and adults on campus.

Now more than seventy percent of Burton's students and staff (administrators, faculty, and support staff) have learned to meditate. The peaceful impact of the meditation has helped transform our school into a high functioning learning environment. Personally, TM has made me calmer and more peaceful in my approach to a very stressful and challenging position as the chief disciplinarian at Burton. As a result, I am much more effective in my job. By reducing my stress levels, the meditation has also enabled me to sleep well at night and improved my overall health. I'm truly grateful to the QT staff for teaching us meditation, giving us a tool that can improve our health and lives!"

– Ron Lee, Assistant Principal at Burton High School 2011 - present

Results became apparent quite quickly. After training just half of the student body, I began to hear from security staff, and I also noticed myself, that during the transition period after Quiet Time, the halls were much calmer. Then

students told me that they are sleeping better, finding it easier to focus and teachers mentioned that behavior in the classroom has improved, that some of the students who had previously been acting out, have been doing so less.

I often get questions from parents who ask me: why Quiet Time? Why a meditation technique? Is this the best way to use instructional time? My response to them is always the same: I brought this program to John O'Connell, because it is data driven, and the research shows that it reduces stress, that it improves cognitive performance, so we are giving the students a tool that improves all aspects of their academic and personal lives.

– Richard Duber, Principal at O'Connell High School – 2009 – 2011

The TM Wellness and Leadership Development program for administrators in SFUSD provided by the Center for Wellness and Achievement in Education is by far the most valuable professional development I have ever received as an educator. I am healthier and a much more effective administrator as a result of the training and practice. Within a month, I was sleeping better, thinking and expressing myself more clearly. I was able to be a better listener. I felt more present and confident in my everyday life than I ever had.

- Patricia Dieterich-Theel, Assistant Principal at Francisco Middle School 2011 - present

I have been in education for 47 years, and worked in urban settings most of my career. Frankly, I didn't believe there was any way 6, 7 and 8th graders could sit quietly for 15 minutes at a time, but I was wrong, and anything that can have this much effect in a school, increasing the concentration and focus of the students, reducing the stress of the teachers, should be looked into very closely.

- Patricia Gray PhD, SFUSD Principal and Assistant Superintendent 1993 - 2012

The majority of Longfellow Elementary School staff was fortunate to be trained in TM as part of a research study in 2010. I noticed that as we practiced meditation, we individually and collectively became more calm, centered, and able to teach and administrate. At the beginning of 2012 school year, while our overall API increased by 20 points after hovering around 800 for years, our Latino and African American students gained 50 points on their API. This was a phenomenal increase for our students with an achievement gap!

While we're not sure whether it was meditation or the combination of our implementing innovative alternative programs in language arts, math and other subject areas, which enabled our students to make such a great leap, it is difficult to increase even 3 points let alone 50! I believe it was the combination of TM and our independent approach to school curriculum that enabled our students to move forward. The daily practice of meditation enabled me to be more reflective than reactive. It enabled me to use myself more consciously --- to be calm, yet truthful. Being a principal is one of the most stressful, difficult and impactful jobs that can touch, change and improve students' lives. Meditation is a tool to enable us to be the most effective that we can be.

– Phyllis Matsuno, Principal at Longfellow Elementary School 2... - 2...

Approximately 50 teachers elected to take part in a study, overseen by WestEd, investigating the impact of TM on teacher burnout and resilience. We established a Quiet Time room at Lowell for staff to meditate before and after school and during breaks to support their wellness and readiness-to-teach.

“The outcomes reported by teachers are remarkable. In a recent survey, teachers who are regularly using the meditation reported the following results: less stress and more productive; better sleep; lower stress and lower blood pressure; better focus, resilience, and everyday joy; clearer mind, calmer demeanor, better organization, and laugh more easily; an opportunity to clear the mind and slow down; reduced mind chatter and allows me to focus more on

the here and now; feeling grounded, present, and improved ability to handle stress; calmer, more focused, less stressed; decreased anxiety; bliss!

I participated in the training, so I can attest to the validity of these phenomena. During my physical this year, my doctor questioned me about what changes I had made because my blood pressure had gone down substantially. In fact, the only change I had made in my lifestyle was the meditation practice.

As a result, we recommend that this program be made available to all teachers and administrators in SFUSD as a standard PD option and ultimately to our students. It directly supports creating a more successful educational experience by reducing stress, increasing clarity of mind, and improving health.

- Andrew W. Ishibashi, Principal at Lowell High School

Isn't it ironic that we teach students about everything except about themselves? ... (meditation) makes you feel more happy, more successful, like you can do just about anything ... Quite simply, Quiet Time should be in every school.

- Carlos Garcia, SFUSD Superintendent 2007 – 2012

Over the last seven years we have piloted an innovative educational program called Quiet Time. It is a meditation-based readiness-to-learn program that has significantly improved student health, created a more positive learning environment, and helped our students realize their full potential. Changes we have observed include: dramatic reduction of school violence and suspensions; increased self-esteem, creativity and happiness; and improved attendance and academic performance.

Quiet Time represents a groundbreaking model for school transformation that we hope becomes a feature of modern education. It is providing a strong foundation for student and educator development and success in life.

- Richard Carranza, SFUSD Superintendent 2012 – present

D. PARENTS

My daughter Sasha is in the 6th grade, and started Quiet Time meditation this past fall of 2013 at Visitacion Valley Middle School. Within a short period of time, Sasha has displayed:

- *more clarity of mind and focus with studying, efficiently completing homework every day, with a 4.0 grade point average all year long (she's literally one of the top students in all of San Francisco);*
- *more energy to do an abundance of sports including golf, softball and basketball;*
- *an increased amount of happiness as displayed by her enjoyment of conversations and time spent with friends, ability to get along with her older brothers more harmoniously, and the way that she expresses and shares things with her parents (me and my wife);*
- *much greater self confidence in learning challenging music on guitar and piano all on her own;*
- *highly increased patience when told she will need to wait for something that she has asked for.*

... I wish I had been introduced to Quiet Time when I was 12. The benefits are invaluable.

- Steven Cravis, Parent, Visitacion Valley Middle School

I am writing to express my appreciation for the Quiet Time program at Visitacion Valley Middle School and Burton High School. I have two children who have gone through this program, one is a graduate of VVMS and currently a senior at Burton High School and the other is currently attending VVMS. I have seen the meditation practice improve my children's behavior in school and also improve their academic achievement. I have also been trained to meditate through the Quiet Time program and have experienced wonderful benefits from my practice. Thank you for bringing this valuable program to the district!

- John Matau, Parent, Visitacion Valley Middle School and Burton High School

My son, Rabia, is a student at John O'Connell High School, in the 10th grade. He joined Quiet Time in his freshmen year. After learning to meditate, he went from being a B student to being an A student. He also meditates at home and has become centered, focused and clear, never angry. I have been very impressed in the way he speaks with such confidence now. He exhibits the most confidence of all my sons.

In Spring 2013, I also learned to meditate. Now I don't experience so many highs and lows, but rather a steady and stable happiness. I feel peaceful and centered. I am so happy my son has this program at school.

- Buthenia Taha, Parent, John O'Connell High School

E. EDUCATION, PUBLIC HEALTH, AND POLICY EXPERTS

There is a strong rationale for the Quiet Time program. I have reviewed the research on various forms of meditation and the SFUSD Quiet Time program. I have also performed accreditation of a university that utilizes meditation as a tool for student development. In my professional opinion, the SFUSD Quiet Time program is providing students an extremely valuable resource that will help them succeed not only in secondary education, but also in college and throughout their lives.

- Dr. Ralph Wolff, President
Senior College Commission of the Western Association of Schools and Colleges (WASC) 1996 – 2013

Over the last 30 years, in my position as a clinical neuropsychologist specializing in learning, I have witnessed a startling increase in stress-related physical and psychological problems in young people. They appear to be related to the fact that contemporary students tend to be chronically tired, stressed, and overloaded. Research has documented that chronic stress and trauma compromises brain development, cognition, and emotional functioning of children across the socio-economic spectrum.

Because of these profoundly negative outcomes, I have long thought that we need a systemic, high impact school-based intervention that can reverse the damaging effects of chronic stress and overstimulation. Of all the programs I have seen across the country for addressing these issues, the Quiet Time program in SFUSD appears to be the most effective. I have reviewed the research on Quiet Time, and while it is always difficult to assess program efficacy in a school setting, the research to date is strong and compelling.

We need more programs like this for the healthy development of our students, enabling them to flourish in stressful environments. In turn, we will have a more socially and emotionally balanced and competent society.

- William Stixrud PhD, Stixrud Group

Stress has a negative, pan-systemic effect. It compromises all physiological and psychological systems. Stress is the root cause of violence and substance abuse. The research indicates that the Quiet Time program and its meditation practice reduce stress and in turn have a positive pan-systemic effect. That's why it is so valuable to integrate into the schools. It provides a foundational tool for healthy youth development. It should be broadly supported and widely deployed.

- Frank Staggars, Jr., M.D., President, Alameda-Contra Costa Medical Association

While Quiet Time is no panacea, it's a game-changer for many students who otherwise might have become dropouts. That's reason enough to make meditation a school staple, and not just in San Francisco.

- Professor David L. Kirp PhD, Goldman School of Public Policy, U.C. Berkeley

I went to these schools as part of my research for a book on what works in education. I have been watching countless classrooms in countless schools trying countless programs (including programs of my own design) for improving the learning of disadvantaged children. There are wonderful things happening in America's classrooms—enough to make me deeply optimistic in a time of great pessimism about what schools can do. But by far the best thing I have seen is also the simplest to do and loveliest to witness—children meditating. They close their eyes, they calm down, and they rest in silence. The effect of doing this regularly on all the things we care about in schools—attendance, behavior, engagement, performance, creativity, and self-control—dwarf the effects of anything I have done or seen done in schools.

- Professor Joshua Aronson PhD, Steinhardt School of Education, New York University

VII. DISCUSSION, CONCLUSIONS, & RECOMMENDATIONS

Research in the fields of psychology, education, public health and neuroscience indicates that stress is a growing problem that compromises cognitive function, emotional well-being, physical health, and behavior of youth and adults. Public health agencies such as the California Endowment identify trauma and toxic stress as the number one health epidemic of our time. The issue fundamentally impacts education as stress impairs student self esteem, self-efficacy, self-control, motivation, creativity, focus, and intelligence --- all dimensions that impair learning. As a result, interventions and support systems are needed to reduce stress and enhance the underlying social, emotional, and cognitive capacity of students, teachers and administrators in order for our education process to be optimally successful.

Although the research is by no means definitive or comprehensive, in aggregate, the data collected over the last seven years suggests that the Quiet Time program is addressing the need described above and has a significant effect on multiple dimensions including: reduced stress, anxiety, anger, violence, depression and suspensions; and increased self-esteem, resilience, happiness, emotional intelligence, focus, attendance and academic achievement. The data indicates that the Quiet Time program as whole has a positive effect on reducing fatigue and enhancing school climate and that the practice of TM in Quiet Time has the most impact, supporting significant increase in academic achievement and social-emotional development. The data also shows that the meditation practice has the most effect on lower performing students, suggesting an impact on closing the achievement gap.

When these quantitative results are considered in conjunction with numerous qualitative reports describing profound transformations, a compelling picture emerges. The picture suggests the program is addressing stress related problems very effectively and supporting the healthy development of students and educators. It appears to be providing deep, systemic impact.

As a result, the evidence supports expansion of the Quiet Time program in more schools, when the conditions are appropriate. The main conditions are that the school administrators, teachers and community are interested, ready to take on an additional initiative, and committed to integrate the program with fidelity as a team. The Quiet Time program is a school-wide initiative and requires the collaboration of all of the school staff to make it successful. The priority selection of schools should include a consideration of the level of stress evident in students, staff and community as well as readiness for adoption.

The data also suggests that the TM-based wellness and leadership development training provided to teachers and administrators is a particularly valuable professional development program. The research in this area is very strong, with two randomized controlled trials indicating significant impact on psychological health and cognitive capacity. The data supports the utilization of the meditation training for teachers and administrators in SFUSD as a tool to reduce stress and burnout, increase resilience, enhance emotional intelligence, improve focus, increase creativity, increase teaching effectiveness, and enhance leadership capacity.

Further research is recommended on the Quiet Time program to determine more clearly the scope and magnitude of impact. It would be useful for the research to include: (i) larger scale randomized controlled trials continuing to investigate impact on all educational domains; (ii) qualitative research that investigates the depth and nature of impact on student, teacher, and administrator development; (iii) longitudinal research investigating program impact on development, college, and life success after secondary education.

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