

ABSTRACT OF CAPSTONE

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Morehead State University

April 18, 2018



THE 'BE' PROJECT: A PROFESSIONAL DEVELOPMENT SERIES FOR  
SUPPORTING MINDFULNESS IN THE CLASSROOM

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Abstract of Capstone

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A capstone submitted in partial fulfillment of the  
Requirements for the degree of Doctor of Education in the  
College of Education  
At Morehead State University

By

Kara N. Davies

Winchester, Kentucky

Committee Chair: Michael W. Kessinger, Assistant Professor

Morehead, Kentucky

April 18, 2018

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ABSTRACT OF CAPSTONE

THE ‘BE’ PROJECT: A PROFESSIONAL DEVELOPMENT SERIES FOR  
SUPPORTING MINDFULNESS IN THE CLASSROOM

The ‘Be’ Project was designed to combat teacher stress, and turnover, in addition to managing classroom challenges resulting from high rates of poverty, absenteeism, and mental health issues in Clark County. The ‘Be’ Project was created within the context of Clark County; however, it was designed to be scalable to any organization, private or public. Upon completion of curriculum development, it was determined that a series of training modules would need to be developed in order to support teachers delivering mindfulness curriculum in the classroom. The training modules educate teachers on the benefits of mindfulness, support the development of their own personal mindfulness practice, and provide strategies to embed mindfulness exercises for students into their current classroom practices.

There are five modules in total covering five topics including: the breath, the brain, focus, awareness, and resilience. Each module includes a full agenda for the training, complete with activities, resources, and references. The modules may also be utilized by teachers with established mindfulness practice in order to share with colleagues within their current school setting.

KEYWORDS: Mindfulness, Education, Change, Stress, Resilience, Grit

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Candidate Signature

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## DEDICATION

I dedicate this book to my children who keep me young, inspiring me to practice mindfulness, and to my fellow mindfulness practitioners who show the way by their life examples.

## ACKNOWLEDGEMENTS

I would like to acknowledge Dr. Michael Kessinger, without whom this capstone would not have been possible. I am grateful for his support, feedback, countless reads and for taking the time to really dig in with me to accomplish this. His steadfastness, motivational speeches, and really interesting analogies kept me going even when I contemplated giving up.

I am immeasurably grateful for the support and encouragement of my parents who spurred me on with their support and frequent offers of assistance. They took my children to the park, to sporting events, to play practice, to church, to school, always offering to give me time to work. Without them this capstone would not exist.

The help and companionship of my fellow ‘Be’ project creators, Allison Nelson, Cindy Reed, Katie Scherrer, and Erin Smith was invaluable. They taught me about mindfulness, practiced mindfulness along side me, and modeled mindfulness for me. Those ladies have made this whole experience worthwhile. They have helped me create the most positive team where women support each other to achieve a common goal.

I am forever grateful for the support of Jen Algire and the funding of our ‘What’s your ambition?’ grant provided by The Greater Clark Foundation. I am so fortunate to live in a community with a foundation dedicated to making our community one of the best places to live work and play. What an amazing opportunity to receive a grant for local lay people wanting to change the landscape of their community!

Finally, I am grateful for the laughter and joy my children bring to my life. I am grateful they eagerly come to the carpet to practice yoga with me, practice paying attention to the breath with me. They are conduits of God's love in my life and this project has been one of the many gifts God has given me through my life.

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## **Executive Summary**

### **What is the core of the capstone?**

Education is the very heart of transformation, change, and community development. In this rapidly changing world, where people are bombarded with information and experience, individuals must be provided with the tools to navigate their reactions and inform their decision making. The climate and culture of our schools reflect the climate and culture of our community. Educational institutions that are infused with mindfulness can produce community members equipped with the necessary tools to react thoughtfully to the variety of situations they will encounter.

Mindfulness is paying attention in a particular way on purpose to the present moment without judgment (Kabat-Zinn, 1994, 2017). Mindfulness can include almost any activity where one applies those conditions of intentional attention and focus often through the breath. Some practices include mindful walking, mindful listening, yoga, and sensory meditation; however, mindfulness can be applied to daily activities such as brushing teeth, washing hands, doing dishes, and vacuuming.

The 'Be' Project was a mindfulness project within the Clark County Public Schools. The project was designed to infuse the community with mindfulness practices. Based on a wealth of research supporting the benefits of a mindfulness practice (Beauchemin et al. 2008, Jennings, 2015; Kabat-Zinn, 1994, 2005, 2017; Meiklejohn et al., 2012), a team of highly qualified educators and mindfulness experts gathered to work toward increasing the personal mindfulness practices of teachers. They developed a curriculum to support the use of mindfulness practices in

the classroom. Their goal was to establish model classrooms in each school building in the district and providing support to the counseling cadre. The team worked with administrators and other district staff to support the use of mindfulness practices in classrooms, on school busses, in hallways, in cafeterias along with supporting the use of mindfulness practices with families through connections with family and youth resource workers.

Phase I of the 'Be' Project vision was to pilot the development and implementation of a mindfulness curriculum at one school in Clark County while collecting data to determine its value and impact on student and teacher performance. Data from the pilot of the project were analyzed in order to assess the level of impact and determine if a second phase of the program may be implemented district wide. Phase II of the project further considered the curriculum needed to train staff, a peer review of the process, institution of model classrooms, support for counselors and administrators, and an ongoing feedback process. Ultimately, the project plans to be self-sustaining, creating a model district of mindfulness. What is missing at this stage of the project development is a sequence of training modules that would be used to help develop the skills needed for staff to implement mindfulness within the classroom.

**Problem statement.** According to Child Mind Institute's 2016 Children's Mental Health Report (2016), one in five children suffer from a mental health or learning disorder and 80% of mental health conditions begin in childhood. The rate of suspensions has increased from 1.7 million in 1974 to 3.1 million in 2001 (Child

Mind Institute 2016). One study reported that 95% of out of school suspensions were for nonviolent and minor disruptions (Child Mind 2016). These high rates of suspensions lead to problem with graduation rates. Identifying and providing mental health interventions early in life can be integral to children persisting to graduation and developing coping skills for life.

Graphiq (2017) noted some alarming statistics related to absenteeism as well as teacher retention/experience from Clark County. According to these data 19.2% of teachers at the high school and 29.4% of teachers at the elementary level were within their first two years of teaching within the district whereas the state average was 10% and 9% respectively (Graphiq, 2017). This made the rate of new high school teachers in Clark County greater than both the state and national average. Constantly having a new teacher can compound stress within the school as students struggle under the tutelage of new teachers and teachers struggle to either thrive in a new environment or meet the demands of mentoring new teachers within the building.

Chronic absenteeism in Clark County was defined as students being absent 15 or more days. Clark County, in the 2015-16 school year, had 23.9% of students classified as chronically absent which was above both the state and national average (Graphiq, 2017). In addition to these data, the local Director of Pupil Personnel related an internal statistic revealing an increase of students participating in homebound services due to mental health concerns (Hollon, 2017). The 2016-2017 percentage of all students participating in homebound services due to mental health concerns was 75%.

In 2016 the Greater Clark Foundation commissioned the Harwood Institute for Public Innovation to assess and compile a report that would reflect the current community identity and strengths in order to make appropriate plans for moving Clark County forward. "The Institute for Public Innovation is a nonpartisan, independent nonprofit that teaches, coaches, and inspires people and organizations to solve pressing problems and to change how communities work together" (Harwood, 2107, p. 1).

The Greater Clark Foundation, a funding agent of the 'Be' Project, commissioned the assistance of The Harwood Institute for Public Innovation to partner with the community to develop an innovators lab with the goal of "help(ing) our community grow stronger by building from within" in the 2016-2017 school year (Harwood, 2107, p. 1). As part of its work with the Greater Clark Foundation, The Harwood Institute began a series of conversations across Clark County with local residents, students, leaders, business owners, and average citizens to determine how the community might make Clark County one of the best places in the country to live, work, and play. Meetings were held in 10 different neighborhoods across town with small groups of individuals participating in the conversations. In addition, the Institute held 36 in-depth interviews with community leaders as well as a group conversation with high school students. These meetings, interviews, and group conversations helped The Harwood Institute develop a picture of the current climate and identify current issues facing the community.

The findings revealed that “too many people feel unseen and unheard”, “real divides hold the community back”, and “people are hungry to get things done” (The Harwood Institute, 2017, p. 6). One theme that emerged from the work can be summed up by a quote from one participant “Everybody’s got hope; you just have to bring it out” (Harwood, 2017, p. 7). The report revealed some serious issues facing the community of Clark County including a lack of activities for youth, children being raised by children, a crumbling downtown and community divides along race and culture (Harwood, 2017). The institute noted that there is a divide between established and new residents, a breakdown of family, and a serious drug issue in the community (Harwood, 2017). The issues noted above result in students losing hope in their future, and feeling as though they cannot thrive in their broken families (Harwood, 2017).

In order for our community to come together, work together, and renew together, we may benefit from the coping strategies gained through mindfulness practices which allow us to navigate the tough conversations, identify solutions, and build a shared vision for our community. The Clark County Public School System (CCPS) is the heart of the community. As a microcosm of the larger community, the CCPS touches the community through providing work opportunities for residents, education opportunities for residents, community facilities for residents, and touching the lives of our children and our children’s parents, grandparents, aunts, uncles, cousins, and friends. In order to provide the community with mindfulness tools, the ‘Be’ Project was developed. The Clark County Public School System represents a

microcosm of the community at large and stands as a potential vehicle to reach the largest percentage of the total population of the community.

Stress is a growing concern at the school level. Stress impacts teacher turnover, student learning, and attendance. With the amount of pressure on teachers to perform, daily life stressors, constant change within the educational setting, a rapidly changing external world, and growing issues with poverty, addiction, and abuse in the community mental health plays a role in school success. Currently, Clark County Public School System experiences a high rate of teacher turnover. Based on conversations in teacher's lounges and in the community, teachers are often stressed and some even express dissatisfaction with their jobs. In the special education department alone, in the summer of 2017 over 50% of special education facilitators left the district. According to Principal David Bolen, the high school alone has had an average turnover of 20% each year over the past three years (Bolen, 2017).

In addition to teacher well-being, Holzel et al. (2011) tells us that students learn best when their brain is calm (not in a state of fight, flight, or freeze) and happy (loaded with dopamine) (Jennings, 2015). When students are not calm and happy, their brains release chemicals and hormones that prevent them from taking in new information; a stressed brain only retrieves memories from its hippocampus reinforcing whatever their current perception already is (The Hawn Foundation, 2011). When students experience stress, their brains cannot take in new information as their amygdala prevents them from accessing their prefrontal cortex; instead, they retrieve information from the hippocampus where memory is stored (The Hawn

Foundation, 2011). In order to process new information and engage higher order thinking skills, students should remain out of the fight, flight, or freeze mode. In order to reach more students and increase learning, mindfulness can be used as a tool to maximize potential.

**Purpose.** The 'Be' Project was designed to infuse Public School Systems and their greater communities with increased mindfulness. Initially, a team of qualified professionals developed a mindfulness curriculum to be utilized in a system of ongoing professional development in Clark County. By attacking the system at its heart through professional development for staff the project will not only potentially train 933 employees in personal mindfulness practices, but also in mindfulness strategies that can be embedded throughout the school environment. To be able to train the district employees in mindfulness, training modules were needed to provide a structured model for consistent delivery of the mindfulness curriculum. The purpose of this capstone was to design the training modules that would be used as a basis for the professional development delivered to teachers in the Clark County Public School System.

The project established model classrooms in each school building where the teacher received ongoing coaching in order to effectively utilize mindfulness strategies with students throughout the course of instruction. The model classrooms provided a platform for other teachers to improve their own practice and use of mindfulness tools in the classroom. Each model classroom teacher was required to

have an open door policy with other teachers in their school and committed to mentoring three other teachers.

The training modules provided teachers with mindfulness resources designed to be used either in circle time, at the start of class for focus, or at the end of class for reflection. These training modules can also be used to train mental health workers within the district through the counseling cadre.

Although the scope of this project is centered in Clark County, it is designed for the potential to replicate in any public school system. The capstone considered the following two questions as a focus of the discussions: What is the overall purpose of The 'Be' Project? How can the premise of The 'Be' Project be effectively delivered to various stakeholders through a series of training modules?

**Literature review.** Principals face challenges every day to meet the diverse needs of their staff, students, and community. One of the most time consuming and costly challenges that principals face is staffing their buildings (Gloria, Faulk, & Steinhardt, 2012). Principals know that while they could be holding strategic planning meetings and developing long-range plans, instead summers are spent interviewing, re-interviewing, hiring, and re-hiring. The never-ending cycle continues as principals work to stop the loss of talent at their schools.

In addition to staffing and managing teachers, administrators must work to elicit the highest level of performance from each individual student in order to meet accountability demands. Administrators and teachers need students who are focused, curious, and excited to learn. Students who are engaged in the classroom working



hard to improve themselves and their content knowledge are too busy learning to misbehave or present discipline issues.

Administrators, teachers, parents, and the community want to support teachers and build students who are aware, focused, resilient, strong enough to face constant change, and willing to risk failure in order to achieve. Teachers face the challenge of vying for student attention, increasing engagement, and meeting student benchmarks.

The literature review examines the reasons for teacher turnover and discusses the role of mentoring and induction programs as a vehicle for providing teachers with the tools they need to meet the demands of their profession. In addition, the literature review explores the role of the personal qualities of resilience and grit in having the strength to remain in the profession and push through difficult times. Finally, the power of mindfulness practices is discussed as the platform for increasing awareness, generating calm focus, and building resilience in individuals so they have the skill set required to manage their stress and perform at higher levels.

***Turnover.*** More than 30% of all newly trained teachers entering the profession will leave the profession within five years in less affluent schools, reaching turnover rates as high as 50% in some areas (Darling-Hammond & Sykes, 2003). Patterson, Collins, and Abbott (2004) point out that there are even higher rates of attrition in complex urban high schools. Teachers with less preparation through briefer alternate certification programs leave the profession at even higher rates with 49% of uncertified teachers leaving the profession within five years (Henke et al., 2000). Special programs that offer a route to teaching without a student teaching

component contribute even higher rates of attrition, with some programs having between 50% and 80% of beginning teachers leaving the profession within the first three years (Darling Hammond & Sykes, 2003). A pool of highly qualified staff is directly related to student achievement with statistics showing that with every dollar spent on increasing teacher education and experience pupil test scores rise (Darling-Hammond, 2000).

*Change.* Schools work to keep employees motivated and committed to the values and mission of the organization by building a strong and reflexive culture (Bear, 1994; Deal, 1987; Deal & Peterson 2009; Gaziel, 1997). Educational institutions often examine best practices employed in other sectors and adapt these methodologies to suit their needs. As an example, effective leaders spend time working with staff to develop a set of shared values including a vision and mission (Deal & Peterson, 2009; Mells, 1994; Murgatroyd, 1991). Examining best practices for managing change, research shows that mindfulness practices can reduce the negative affect, initiate calmness, and improve social skills needed to conduct the professional conversations and work required in order to build a healthy work culture.

In order to meet the demands of accountability, school administrators work with teachers and teacher leaders to develop effective professional learning communities to help support the shared vision and mission and to work toward the vision/mission through continuous data analysis and improvement based on data (Zepeda, 2012). All of this work, which involves constant reflection and change, can lead to teacher stress and burnout.

Education reform brings with it a constant flow of change in schools. School leaders and teachers must navigate this constant change in order to remain competitive. Constant change brings stressors for individuals, requiring them to develop coping skills to manage and institute change. Teachers need tools to productively embrace and navigate the constant flow of change in education.

***Stress.*** Research indicates teachers leave the profession with working conditions and dissatisfaction ranking high on the list of complaints (Gloria, Faulk, & Steinhardt, 2012; Ingersoll & Smith, 2003; Ingersoll & Strong, 2011). In fact, in a 1994-1995 teacher follow-up survey the National Center for Education Statistics reports that around 29% of teachers cited dissatisfaction as their reason for leaving and 39% leave to pursue another position or career outside of teaching (Ingersoll & Smith, 2003).

More recent data from the 2013 Met Life Survey of American Teachers indicated that over half of all teachers reported feeling under stress and overall teacher satisfaction has declined from 62% to 39% of teachers being very satisfied with their jobs (Strauss, 2013). Research and experience showed that teachers generally work independently and are left alone in the classroom to either succeed or fail (Ingersoll & Strong, 2011).

New teachers are often placed in the most difficult classes with students that are more challenging and have higher workloads, which leads to high rates of dissatisfaction and disillusionment (Ingersoll & Smith, 2003; Ingersoll & Strong, 2011). Stress is a major contributing factor to teachers both considering leaving the

profession and teachers who actually do leave the profession (McCarthy, Lambert, Crowe, & McCarthy, 2010).

Researchers point out that teachers face a host of stressors including excessive workload, frequent and regular curriculum changes, lack of administrative support, increasing strict accountability standards, new initiatives, and internal conflicts (Gloria, Faulk, & Steinhardt, 2012). Teachers report significant rates of stress, and schools experience the high rates of turnover due to teacher stress and burnout (Darling-Hammond & Sykes, 2003; Gloria, Faulk, & Steinhardt, 2012). This high rate of turnover leads to an increased allocation of both human and financial resources spent on recruiting, hiring, training, and retention. In addition, teachers experience stress resulting from student apathy and struggle to manage student discipline (Hidi & Harackiewicz, 2000; Wiesman, 2012).

Navigating the constantly changing and reforming world of education requires individuals to demonstrate resilience to overcome the daily pressure and succeed in building a highly effective school (Duckworth & Quinn, 2009; Perkins-Gough, 2013). In order to meet the demands of growth and change in education teachers must maintain a reflective and receptive attitude to growth, feedback, and coaching through both group settings, such as professional learning communities, as well as individual settings such as one on one coaching sessions (Crane, 2009; Zepeda, 2012).

High levels of stress and burnout in teachers lead to high rates of turnover for administrators (Johnson & Down, 2013; Howard & Johnson, 2004). Some studies

indicate that up to 50% of all new teachers leave the profession in the first five years (Darling-Hammond & Sykes, 2003; Henke et al., 2000; Howard & Johnson, 2004).

Teachers report high rates of stress with 42% reporting high rates of stress resulting from work (Piscitella 2016). Of those teachers experiencing high rates of stress, 36% report experiencing stress either all or most of the time (Piscitella 2016). Research demonstrates that 95% of teachers experience increasing levels of stress over time (Piscitella 2016). These numbers are alarming and demonstrate a need for intervention in order to reduce teacher stress and provide tools to manage the daily stress involved in the workplace. Research indicates that the source of teacher stress results from changes in the curriculum, excessive workload, disruptive students, lack of support, and increasingly stringent accountability standards (Ingersoll & Smith, 2003; Kyriacou, 2001; Manthei et al., 1996; Montgomery & Rupp, 2005).

Ingersoll & Smith (2003) relate that policy makers have responded to the teacher supply problem by trying to increase the supply rather than focus on retaining teachers. Extensive research has been done to examine the effectiveness of mentoring and induction programs to improve teacher support and retention (Darling-Hammond, 2000; Darling-Hammond & Sykes, 2003; Ingersoll & Strong, 2011).

***Mentoring and induction.*** There is a great body of literature supporting induction and mentoring programs for beginning teachers (Ingersoll & Strong, 2011; Ingersoll & Smith, 2003; Rogers, 2014; Wills, 2014). This has led to a trend in education policy and reform to support teacher induction and mentoring programs. As of 2012 more than half of all states require new teachers to participate in an induction

or a mentoring program (Goldrick et al., 2012). In a 2012 review of state policies on teacher induction, the New Teacher Center (NTC) presented an analysis of the induction and mentoring programs required across the country. They found evidence that supports the use of induction and mentoring programs to reduce new teacher attrition rates, improve student learning, and increase the professional growth rate of new teachers (Goldrick et al., 2012).

Inmann and Marlow (2004) have gone beyond the questions of why teachers choose to leave the profession and have posed the question of why beginning teachers choose to stay in the profession. Beginning teachers surveyed who plan to stay with the profession cite mentors, colleagues, encouraging administration, and a sense of community as reasons for remaining (Inman & Marlow, 2004). Administrators can ensure that beginning teachers have access to induction and mentoring programs that provide the support necessary for beginning teachers to experience success. This project recommends a mentoring component to support new and experienced teachers in the implementation of mindfulness offering a mentoring program to accompany the initial training. By utilizing the vehicle of mentoring the training modules would have ongoing support thereby having a greater impact and reach.

***Resilience.*** When examining why some teachers stay in the profession and some teachers choose to leave the profession, Beltman, Mansfield, and Price (2011) have attempted to define the qualities of resilience. Their research is beneficial in identifying those qualities necessary to overcome stress and challenges associated with job requirements and to remain in the profession. Resilience is a broadly used

term in academic disciplines regarding climate change, people groups, and an individual's ability to face change and/or adverse situations (Beltman, Mansfield, & Price, 2011). Resilience is a relatively new term as applied to education and teachers in particular. In a review of research on teacher resilience, Beltman, Mansfield, and Price (2011) attempt to define resilience in terms of teachers and education. In this paper, the authors quote Christopher Day:

Research on teacher retention tends to focus on factors affecting teachers' decision to leave the teaching profession. Instead, what is required is a better understanding of the factors that have enabled the majority of teachers to sustain their motivation, commitment and, therefore, effectiveness in the profession. (Day, 2008, p. 256)

Beltman et al. (2011) summarized resilience as "a dynamic process or outcome that is the result of interaction over time between a person and the environment" (p. 8). This suggests that schools and administrators can impact the resilience of teachers in their building by managing the environment. From his extensive literature review, Beltman et al. (2011) presented five definitions of resilience which emerged from the body of literature:

- 1.) A quality that enables teachers to maintain their commitment to teaching and their teaching practices despite challenging conditions and recurring setbacks (Brunetti, 2006, p. 813 as cited in Beltman et al., 2011).

- 2.) Capacity to overcome personal vulnerabilities and environmental stressors, to be able to 'bounce back' in the face of potential risks, and to maintain well-being (Oswald, Johnson, & Howard, 2003, p. 50 as cited in Beltman et al., 2011).
- 3.) Using energy productively to achieve school goals in the face of adverse conditions (Patterson, Collins, & Abbott, 2004, p. 3 as cited in Beltman et al., 2011).
- 4.) Capacity to continue to 'bounce back', to recover strengths or spirit quickly and efficiently in face of adversity", "a dynamic construct subject to influence by environmental, work-specific and personal contexts (Sammons et al., 2007, p. 694 as cited in Beltman et al., 2011).
- 5.) A mode of interacting with events in the environment that is activated and nurtured in times of stress (Tait, 2008, p. 58 as cited in Beltman et al., 2011).

Patterson et al. (2004) identified nine common strategies used by teachers to maintain their resilience and remain in high stress positions within complex urban schools. One major finding that Patterson et al. relates is the notion that resilient teachers take responsibility for building a better work environment by getting involved to influence decisions and educate others.

In addition to building resilience, administrators can help to reduce the factors that provide risk to teacher resilience. In the review of literature on teacher resilience



produced by Beltman, Mansfield, and Price (2011), the authors were able to identify key risk factors to teacher resilience in two domains of classroom/school context challenges and professional work challenges. A few of these were classroom management, meeting the needs of disadvantaged students, unsupportive or disorganized leadership staff, lack of resources, relationships with parents, geographical or social isolation, relationships with colleagues, heavy workload, time demands, difficult schools, poor hiring practices, unsupportive or lack of mentor, poor funding and low salary (Beltman et al. 2011). Many of these factors can be mitigated thorough competent leadership. McCarthy et al. (2010) determined that it is in the interest of administration to measure teacher stress and intervene to provide the resources necessary to reduce teacher stress by providing emotional and informational support to build teacher resilience.

**Grit.** In addition to the idea of resilience is the concept of grit (Perkins-Gough, 2013). Duckworth (2013, 2009, 2007) has conducted extensive research into the concept of grit. Duckworth (2013) points out in an interview with Perkins-Gough (2013) that grit is different from resilience in that it involves both being resilient in the face of failure but also practicing perseverance over the course of time toward ones' deep commitments. Duckworth (2013) points out in her interview with Perkins-Gough the issues with the variety of definitions of resilience where one definition is more about optimism, and at the other end of the spectrum resilience is defined as having the ability to bounce back from adversity. The idea of grit seems to encompass that quality of pushing through and remaining committed to a purpose and passion

over a long period of time. Grit encompasses resilience and takes it a step further.

Duckworth's grit scale has been researched and tested to demonstrate its ability to reliably and accurately measure grit in individuals (Duckworth & Quinn, 2009; Perkins-Gough, 2013). In a study with West Point candidates, research correlated grit with student retention (Perkins-Gough, 2013). Duckworth (2013) points out her partnership with Carol Dweck in an attempt to demonstrate the ability of individuals to change their mindsets and discusses the reality of developing grit and the role of teachers in helping students to develop grit. If we can develop grit in staff then they can pass those mindsets and practices on to students.

***Mindfulness.*** An emerging area of research (Barnes et al., 2003; Beauchemin et al., 2008; Broderick & Metz, 2009; Flook et al., 2011; Napoli et al., 2005) that has been shown to support healing, resilience, and grit in individuals is mindfulness training. By incorporating mindfulness training into teacher professional development, and induction and/or mentoring programs, education institutions can help reinforce and build feelings of well-being and self-efficacy. Professional Development in mindfulness also increases teachers' ability to manage classroom behavior and build positive relationships with students (Meiklejohn et al., 2012). These practices are hallmarks of resilience and remove many of the potential risk factors to resilience. By directly providing teachers a tool to manage the vast array of stressors in their daily lives, administrators and institutions can reduce the amount of stress experienced by educators and support their resilience and determination (grit)

to stay in the field and contribute to the students in their schools and in their communities.

Mindfulness is a concept steeped in the religious traditions of the east and secularized in the west by Jon Kabat-Zinn (Jennings, 2015). Kabat-Zinn (1994) used his background in medical science to study the effects of mindfulness practices he learned through eastern practitioners of Buddhism such as Thich Nhat Hanh. Kabat-Zinn (1994, 2005, 2013, 2016) has conducted a wealth of research into the effects of mindfulness practices on human health, as well as developed an eight-week mindfulness based stress reduction certification program. Through his work, Kabat-Zinn has legitimized and secularized mindfulness in the west founding the Center for Mindfulness at the University of Massachusetts Medical School (Kabat-Zinn 1994, 2005, 2013, 2016).

Following in Kabat-Zinn's footsteps, mindfulness practitioners have seen exponential growth in the past few decades. A quick search of Google will bring up a host of organizations, foundations, and studies associated with promoting the usefulness of mindfulness. Agencies and organizations vary in purpose and scope, but all are dedicated to the proliferation of mindfulness techniques. The interdependence project is a work place meditation program that encourages and supports mindfulness practices through meditation in the workplace (IDP, 2017). The Association for Mindfulness in Education (AME) supports mindfulness training in the classroom through research and public events (AME, 2017).

Greater Good the Science of a Meaningful Life at Berkeley presents scholarly research on mindfulness and wellbeing in an accessible format through a variety of platforms in order to make the research relevant for parents, educators, business leaders, and health care professionals (Berkeley, 2017). The Mindfulness in Education Network (MiEN, 2018) is a group dedicated to supporting the use of mindfulness strategies in education; they see mindfulness as “an antidote to the growing stress, conflict, and confusion in educational settings, as well as an invaluable gift to give students” (Our Network section para. 2).

There is an increasing focus on the usefulness of mindfulness in education. The AME cites many benefits of mindfulness training including increased attention, executive functioning, emotional regulation, self-calming, social skills, and care for others (Meiklejohn et al., 2012). In addition, research shows mindfulness produces decreased negative affect or emotions, decreased anxiety, decreased depression, increased sense of calmness, relaxation, and self-acceptance, increased self-esteem, and increased quality of sleep (Meiklejohn et al., 2012). Many schools are using mindfulness programs with students, and conducting studies into the benefits of mindfulness for students in K-12 education, including the Compassionate Schools Project in Louisville, Kentucky (Barnes, Davis, Murzynowski, & Treiber, 2004; Beauchemin, Hutchins, & Peterson, 2008; Flook, Golberg, Pinger, & Davidson, 2015; Napoli, Krech, & Holley, 2005; Schonert-Reichl et al., 2015; Semple, Reid, & Miller, 2005; Sibinga, Webb, Ghazarian, & Ellen, 2016).

**Summary.** In order to effectively provide mindfulness instruction for students, teachers must also incorporate a practice into their own lives. This project seeks to provide teachers training in mindfulness techniques in order to not only begin and/or deepen their own practice, but to also use mindfulness practices in the classroom in order to develop less stressed, more resilient students.

Principals can look toward research based strategies to help them reframe their school culture and build teacher resilience through the use of mindfulness based stress reduction strategies (Darling-Hammond & Sykes, 2003; Ingersoll & Smith, 2003). The bodies of research in induction, mentoring, resilience, grit, and mindfulness converge to provide leaders and administrators with tools needed to support their workforce and reduce the *brain drain* in education. By supporting the development of resilience and grit through induction and mentoring programs that offer training in mindfulness practices, leaders will begin to see a reduction in the 30-50% of new teachers that leave the profession within the first five years.

When administrators are developing induction and mentoring programs for their schools and districts, they would be wise to consider how they are incorporating values of resilience and mindsets of grit into the curriculum for new teachers. In addition, teacher preparation programs may want to consider the importance of fostering these characteristics amongst their students in the schools of education at the university level. Embedding strategies and practices that reinforce and foster resilience and grit in individuals will reap rewards for generations of students and administrators by developing quality teachers committed to the profession.

**Who is the capstone meant to impact?**

With 5,739 students in the district and 933 employees, 654 of which both live and work in Clark County, this project poses the potential direct impact on nearly 20% of the total population of the community not including the potential extended reach through parent and community involvement projects. The positive impact mindfulness can have on an individual's ability to manage stress would particularly benefit the 62% of students living in low socio-economic conditions in this community.

Initially the curriculum was piloted on a cross section of the population at George Rogers Clark High School with approximately 120 students (nearly 10% of the population). The team members developing the curriculum taught mini-lessons twice a week in four science classrooms to test the lessons being utilized in the curriculum. The piloting of the curriculum lasted four weeks with an opportunity for eight interactions with the classrooms. In addition, the team members pulled groups of students from various classes including math and art for mindful movement work in a separate location.

As the team developed more of the curriculum they noted the need for additional piloting with different age ranges as the proposal written and funded was intended to serve the entire student population from pre-K through high school. The team had access to one elementary school in the district and began piloting the lessons within classrooms at Shearer Elementary School. In this setting the team worked with 14 classrooms piloting one lesson in each classroom.

What was missing were structured training modules that would be used to provide professional development to CCPS employees. It was expected that once the training modules were developed, additional field testing would occur to help solidify the structure of those training modules.

Once CCPS employees have gone through the training modules, potentially all students in the district would then be exposed to mindfulness techniques, lessons, strategies, and experiences. These students could then in turn take their mindfulness practice into their homes. There is a potential to also work with family resource center workers and school based mental health professionals to include mindfulness exercises for students, parents and families through individual counseling, family counseling, parent nights and parent newsletters.

The 'Be' Project was designed and committed to harness the power of this initiative with the aim of transforming the climate and culture of the classrooms, hallways, cafeterias, and homes. The Project is designed in a way that has the power to transform the climate and culture of the entire community. This project could facilitate the change desired by groups such as The Greater Clark Foundation, The Harwood Institute, Clark County Public Schools, Churches, and Leaders in the community. This project provided tools for individuals to respond, rather than react, to the stimuli around them. However, the development of the various training modules related to the 'Be' Project was the primary focus of this capstone. Much of the future impact after the development of the training modules would be outside the scope of this capstone.

**Context of the capstone.** According to data from EPI, Office of Civil Rights, Forecast Package, NCES, ACS, US Census Bureau, and D&B presented by Graphiq (2017), in 2016 Clark County had a total of 5,739 students 84.5% of whom are Caucasian, 6.2% are African-American, and 5.5% are Hispanic/Latino. Clark County was a Title 1 district with over 59.6% free and reduced lunch and has a graduation rate of 95%.

The capstone project provides five training modules for school employees to use in their classrooms. These modules are appropriate for delivery in a variety of settings ranging from district wide trainings, school settings, or small groups. In addition to teachers, modules could be delivered to other school staff including central office personnel, bus drivers and monitors, and cafeteria workers; however, they may need to be altered to suit an audience other than teachers. Modules are helpful for all individuals but geared toward individuals who have contact with students.

The modules should be delivered by trainers with experience in mindfulness. Without a regular mindfulness practice or experience with mindfulness, trainers would not possess the skills, knowledge, expertise, and personal experience required to impart these skills on others. The trainer should be speaking and delivering content from a place of personal experience and knowledge of the benefits of mindfulness.

The space in which the modules are delivered should be comfortable for participants with space for writing and note-taking, as well as space to spread out and



practice some of the recommended exercises. The space should have access to sound and video through a white board with projector and speakers.

It is recommended that the training modules be delivered and followed up through regular mentoring and retraining in the techniques. Teachers will benefit from ongoing support such as one-on-one mentoring, small group mentoring, PLCs with a focus on mindfulness in the classroom as a means of facilitating quality instruction.

In order to build mindful classrooms, teachers must first be trained on mindfulness, develop their own personal practice, and understand the core principals of mindfulness. The training modules will ensure that teachers understand the foundation of mindfulness – mindful breathing but will also teach the four pillars.

The training modules can be broken down into smaller lessons or grouped together for longer more in-depth training sessions. This flexibility in design ensures that lessons stack together well to support the use of the mindfulness in classrooms. It is recommended that each training module be approximately one to two hours in length making the full course of training a five to ten hour training session.

### **How was the capstone project developed?**

The 'Be' Project began from the author's personal mindfulness practice and the observations of culture and teacher turnover in her school. She noticed the climate in the teacher's lounge and the number of staff leaving the school as well as the profession. Knowing how mindfulness had provided her with coping strategies in her

own personal life, she began to question how she might bring mindfulness to education.

Out of her research, came the recognition of a need for mindfulness in the Clark County school district. The research led the author to be interested in bringing mindfulness to as many educators as possible in her school district. The research also showed a growth in interest from the education sector for ways to use mindfulness to improve the quality of life and learning for students, teachers, parents, and the school. The author began to seek out a team of professional mindfulness practitioners and education experts to discuss ways to bring mindfulness to the Clark County School District.

The final team consisted of Kara Davies, author of this capstone; Allison Nelson, a school psychologist; Erin Smith, former librarian, yoga teacher, mindfulness teacher, and owner of The Om Place; Cindy Reed, a licensed clinical social worker, trauma informed care expert, yoga teacher, and mindfulness teacher; and Katie Scherrer, former librarian, author, yoga teacher, mindfulness teacher, and literacy consultant. This team brought a unique set of skills together with experience in education, mental health, project management, special education, grant writing and business.

Once the team was developed, discussions centered on a method of bringing mindfulness to the district. The team extensively reviewed existing curricula and determined that for this particular project, it would be more appropriate to develop its own curriculum rather than purchasing an existing curriculum. The team determined

that the curriculum would need to be simple and easy to use. The writing style would need to be brief, to the point, and easy to read. The team felt that teachers are often frustrated by new initiatives and new curriculum to learn. The team desired to build a curriculum that provided sample lesson plans that any teacher could pick up and use on the spot with minimal training.

Funding was provided in two stages by The Greater Clark Foundation for the curriculum development, training of district staff in a one-time large scale professional development and follow-up mentoring through model classrooms. Two \$10,000 What's Your Ambition?! grants were awarded to the team.

In designing the curriculum, the team determined that every teacher would be able to provide a small amount of time in class to breathe. They determined that if the teachers employed one mindfulness tool, it should be the foundation of the breath. Beyond the breath, the team determined that the four pillars would be knowledge of the brain, mindfulness for focus, mindfulness for awareness, and mindfulness for resilience. These pillars resulted from research into many mindfulness practices as well as other curricula available. Through the practice and focus on these five areas the team believed that community values of kindness, equity, compassion, and empathy would be found in the being of participants.

After developing the curriculum, the team provided two district wide trainings to all district staff interested at the start of the school year and provided follow-up mentoring through one-on-one direct support in the classroom and outside of the classroom for two months. After this initial training it was determined that more in-

depth training modules should be developed in order to provide a delivery system for professional development to support mindfulness in the classroom and to support the use of the curriculum.

The team had completed The 'Be' Project, but the training modules remained to be developed. At this stage the author developed the training modules to support the utilization of the curriculum by teachers. The modules were developed solely by the author without input from the curriculum development team.

### **Why were this capstone and related strategies selected?**

Mindfulness, as demonstrated in the literature review, can be a powerful tool for personal transformation. Schools can be a place of great tension and stress and mindfulness can provide practitioners with space between their thoughts and reactions. This space between thought and reaction can help individuals to deescalate before reacting to situations. Learning is a form of personal transformation and mindfulness is a tool that can facilitate learning.

The team developed a completely secular curriculum for teachers to use in the classroom and in their personal practice. The tools provided in the curriculum and professional development series can teach students coping skills to improve focus, awareness, and resilience. Through understanding their brains and practicing intentional breathing, students can become more mindful, focused, and resilient. The 'Be' Project was born out of a desire to improve the climate and culture of a school district by teaching individuals how to 'Be' through mindfulness practices that encourage kindness, compassion, and empathy.

Once the curriculum had been developed and well received by the school district, it was determined that a set of training modules needed to be created to accompany the curriculum in order to allow others to fully utilize the curriculum. This would help to ensure that The 'Be' Project did not finish with the completion of the single training and mentoring. It was determined that a professional development series would instruct teachers on how to fully implement the curriculum and develop their own personal practice. Training modules would be designed around the structure of the curriculum in order to ensure that individuals would be able to fully utilize the curriculum upon completion of the professional development series. This professional development series will make it possible for The 'Be' Project to extend beyond the scope of this project so it can be used by any school or district interested in mindfulness.

### **Limitation of the Capstone**

This capstone was developed by a mindfulness practitioner and educator in one school district and is limited to the experiences of individuals in a relatively small sampling of educators. This capstone speaks only to the use of mindfulness for average participants and is not a tool for managing serious mental health issues that can arise in a school setting. Mindfulness is a coping strategy and not a treatment for mental illness.

Although the modules have been developed to accompany the curriculum, the full series of modules has not been fully delivered and tested. The training has been offered in an abbreviated form covering an overview of the content included in the

full professional development series in Clark County. Feedback from the training was positive from participants; however, each module has not been individually tested through delivery.

The project was completed in one district in Kentucky and has not been vetted by other districts and educators outside of this school district. In addition, the project is a local project with an emphasis on reaching the needs of students in this particular place, in this particular time.

This capstone provides the professional development series to accompany the curriculum; however, it does not provide instructions for ongoing follow-up training through mentoring and individual teaching. The capstone recognizes the importance of mentoring as noted in the literature review; however, the scope of this project did not allow for a formal plan for mentoring to be developed even though the project recommends ongoing support and mentoring to be part of the delivery model.

### **Reflections**

I have learned a great deal personally through this project. Focusing intensely on mindfulness and increasing my own personal mindfulness practice through this project has greatly improved my own coping skills. I have found personally how to put space between my thoughts and my reactions which has led to much greater productivity, improved relationships, and an ability to bounce back faster from adversity (resilience).

I have found a great deal of support and a hunger from fellow educators for mindfulness and its benefits. Teachers, professors, districts, and conferences have

expressed interest in this project by reaching out to access the curriculum, request training, and requests for support. This material has been presented at the Kentucky Council for Exceptional Children's Conference and the Kentucky Association for Psychology in Schools with a very positive reception.

Further research on the professional development series through a feedback mechanism and structured study of the impact of the training and curriculum on a classroom setting would be beneficial in determining the effectiveness of the professional development series as well as the curriculum. In order to determine the effectiveness of the professional development series, a study would need to be conducted with data collection from participants as well as data collection from their classroom after the delivery of the full series of training modules to determine their effectiveness.

### **Capstone Project**

#### **Overview of Modules**

Modules will cover mindfulness basics, the foundational practice of mindful breathing, the brain, awareness, focus, and resilience (Figure 1). Each of the five lessons will provide teachers will an experience of the technique, provide a rationale, and expose teachers to instruction using the "I do, we do, you do" approach. Each module provides the teachers the opportunity to practice with the material before teaching the curriculum in their own classrooms. All modules support the paradigm developed in the curriculum (Figure 1).



*Figure 1:* The 'Be' Project Paradigm. This graphic presents the various components of The 'Be' Project. These components are further explored through the various modules of the professional development series.

The five components of The 'Be' Project are discussed on the following pages. In addition, there is a summary of the training modules that have been developed for the professional development series. The reader can find the full components of the professional development series in the Appendix section.

**Foundation – Mindful Breathing.** The foundation of The 'Be' Project paradigm is mindful breathing. All pillars and modules are built on the foundation of mindful breathing. If teachers start and end with this foundation they can improve the culture of their classroom. This foundation allows students and staff to explore their



emotions and work toward a culture that values diversity, empathy, compassion, engagement, kindness and opportunity.

Module 1 provides an outline of the training that would take place in the classroom for students, or in a training setting to help teachers to become comfortable in knowing the foundation of mindfulness. This module will provide the opportunity for teachers to experience the breath through directed mindful breathing. In addition, this module provides teachers with an introduction to the science behind mindfulness. This module is the foundation for all other modules. The complete detail of module 1 can be found in Appendix A.

## **Module 1**

### *Introduction to Mindfulness and Mindful Breathing*

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#### **Title**

Introduction to Mindfulness and Mindful Breathing

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#### **Time**

Approximately two hours to deliver

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#### **Event Description**

This event will introduce teachers to what mindfulness is and is not, and will reveal how mindfulness relates to learning in the classroom. Participants can expect to practice the foundational practice of mindful breathing and will practice walking others through a mindful breathing exercise.

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#### **Learning Objectives**

- Gain an understanding of what mindfulness is.
- Learn about current research supporting the benefits of mindfulness.
- Experience a mindfulness practice.
- Develop a plan for a personal mindfulness practice.
- Develop a personal plan for implementing mindfulness in the classroom.

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#### **Key Points to Emphasize**

- Mindfulness is not a cure-all, not all sunshine and rainbows;
- Mindfulness is intentionally staying present with whatever arises without judgment and choosing to return our awareness to the breath;
- Mindfulness is a tool that can be utilized at any time;
- Mindfulness is very much like riding a bike, even if participants develop a practice and then do not use it for an extended time period, it is always there waiting for them to begin utilizing this coping tool once again;
- Mindfulness is research based and has lasting, profound effects on the brain.

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**Agenda**

- Review the class objectives with teachers.
- Provide teachers with an opportunity to set an intention at the beginning of the lesson.
- Show the teachers the “Just Breathe” short Wavecrest film by Julie Bayer Salzman and Josh Salzman (2015).
- Direct teachers through a breathing practice utilizing the script provided in the resources section.
- Allow a small group discussion to occur where participants identify how they felt after the breathing exercise.
- Explain to the teachers what mindfulness is: paying attention, in a particular way, on purpose, to the present moment, without judgment.
- Introduce research supporting mindfulness practices.
- Ask teachers to break down in small groups and jigsaw the article.
- After a designated time, have teachers share out what they found in their research summary.
- Discuss the benefits of mindfulness.
- Ask teachers to list the attributes of the ideal students and document responses on a white board or large post-it
- Discuss the guidelines for presenting mindfulness to students
- Practice guiding each other through a short mindful breathing practice
- At the conclusion of the training, challenge teachers to practice 2 minutes of mindful breathing each day until the next lesson

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**Materials**

- Script for the presenter and for teachers to utilize while practicing
- Comfortable seat that allows the feet to rest flat and evenly on the floor
- Jigsaw puzzle
- Whiteboard or large post-it notes
- A chime or bell

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**Activities**

- intention setting
- small group discussions
- guided mindful breathing exercise
- brainstorming
- jigsaw articles

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**Resources**

- A summary of research articles on mindfulness studies in education (list provided in References below) can be found at [https://greatergood.berkeley.edu/article/item/mindfulness\\_in\\_education\\_research\\_highlights](https://greatergood.berkeley.edu/article/item/mindfulness_in_education_research_highlights)
- The Just Breath video: <https://youtu.be/RVA2N6tX2cg>

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**Pillar 1 – The Brain.** By learning how our brain responds to stress, we can use mindful breathing to influence our bodies, quieting the amygdala and activating the hippocampus and prefrontal cortex. We know that brains take in new information best when our brains are calm, focused, and feel safe. In order to activate higher order thinking we cannot be in a state of fight, flight, or freeze from an activated amygdala.

Module 2 offers an introduction to the neuroscience supporting mindfulness. In this module participants will learn about what happens in the brain when we are mindful. Gaining the knowledge in this module of how our brains work will equip teachers and participants with the ability to transform the learning environment. This module will begin to help teachers understand the brain function behind student behavior and will equip them with the tools to practice empathy and lead students toward a greater understanding of themselves. The complete detail of module 2 can be found in Appendix B.

## **Module 2**

### *Mindfulness and the Brain*

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#### **Title**

Mindfulness and the brain

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#### **Time**

Approximately two hours to deliver

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#### **Event Description**

Understanding how our brains work can be a powerful transformative tool in our box of coping skills. By understanding the root causes of our behavior, we can begin to uproot undesirable or ineffective behaviors and replace them with a more neutral default setting. Teachers who equip students with this information offer them power over their reactions to stimuli. When we begin

to see things more clearly and have control over our being through mindfulness practices, we can feel a greater sense of control over ourselves and our environment.

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**Learning Objectives**

- Understand brain basics and how they relate to mindfulness.
- Identify what happens to the brain and body when stressed.
- Understand how brain functions impact learning.
- Practice foundational breathing techniques.
- Learn how to calm and focus the body and mind with the breath.
- Learn about the impact of a regular mindful practice on the brain.

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**Key Points to Emphasize**

- Regular mindfulness practice demonstrates increased activity in the control center of the brain and increase ability to self-regulate and improves self-concept;
- Mindfulness helps us learn from our past mistakes, supports optimal decision making and helps maintain clear perception;
- Mindfulness facilitates the conversion of information from working memory into long-term storage, and facilitates access to parts of our brain that manage complex thinking;
- Mindfulness has been shown to reduce stress hormones in the brain and shrink our 'fight, flight, or freeze' mechanism;
- Mindfulness can change the way the brain works and replace tendencies toward worry, stress, fear, anger, depression and anxiety with flexibility, calm, self-regulation, informed decision making, peace, and happiness.

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**Agenda**

- Review the class objectives with teachers.
- Provide teachers with an opportunity to set an intention at the beginning of the lesson.
- Direct teachers through a guided mindful breathing exercise utilizing the script provided in the first module or utilizing the script provided in the resources section for the square breathing technique.
- Allow a small group discussion to occur where participants identify how they felt after the breathing exercise
- Show teachers the Mind the Bump video utilizing the link provided in the resources section.
- Allow teachers to write a reflection on the emotions they currently practice and how they might improve their quality of life through intentional practice.



- Using the brain diagram provided in the resources section ask teachers to label the parts of the brain explaining what each part does and how it impacts learning.
- Provide teachers with copies of the research articles included in the resources section of this module.
- After a designated time, have teachers share out what they found in their research.
- Discuss the changes in the brain as a result of regular mindful practices.
- Ask teachers to define stress, root causes of stress, and what happens to their body when stressed and document answers on the white board.
- Provide fully labeled brain diagram to teachers and allow small group discussions regarding how the information covered will impact how they manage their classroom.
- Have teachers identify three things they will do differently in the classroom based on the information learned.
- Ask teachers to do 25 jumping jacks to raise heart rate and then lie down or find a comfortable seat and guide teachers through the mindful breathing exercise utilizing the script provided in the first module.
- Facilitate a class discussion regarding the observations of the previous exercise.
- At the conclusion of the training, discuss how the amygdala impacts the classroom and identify ways to better design learning experiences for students based on lessons learned.

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**Materials**

- Script for the presenter and for teachers to utilize while practicing
- Comfortable seat that allows the feet to rest flat and evenly on the floor
- Handouts of labeled and unlabeled brains
- Whiteboard or large post-it notes
- A chime or bell

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**Activities**

- intention setting
- small group and whole group discussions
- guided mindful breathing exercise
- brainstorming
- research articles jig saw
- journaling

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**Resources**

- A copy of research articles on mindfulness (list provided in References below and hardcopies provided in the Appendix) can be found at:  
[https://www.mindful.org/how-the-brain-changes-when-you-meditate/;](https://www.mindful.org/how-the-brain-changes-when-you-meditate/)  
<https://www.forbes.com/sites/alicegwalton/2015/02/09/7-ways-meditation-can-actually-change-the-brain/#717282d51465>
- Mind the Bump video: <https://youtu.be/aNCB1MZDgQA>

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**Pillar 2 – Awareness.** Awareness of ourselves and others leads to emotional self-regulation and empathy. Awareness through mindful breathing fosters emotional and social competence and brings healing within ourselves and allows us to build positive relationships with others. Awareness in the classroom helps teachers and students be more responsive to their own needs as well as the needs of others in order to bring about a more optimal learning environment in the classroom and within the students themselves.

Module 3 provides the participants the opportunity to experience intentional awareness and will offer exercises to engage with the students in their classroom in order to improve awareness of themselves and others. This module will discuss how

social emotional awareness impacts students, teachers, the classroom, and learning with an aim to help teachers improve social emotional awareness and the culture of their classroom. The complete detail of module 3 can be found in Appendix C.

### **Module 3**

#### *Mindfulness and Awareness*

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#### **Title**

Mindfulness and Awareness

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#### **Time**

Approximately two hours to deliver

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#### **Event Description**

There is often more going on in our brains and our bodies than we are aware of at any given moment. We cannot accept or change what we are experiencing without first becoming aware of our thoughts and feelings and how they impact our actions. Mindfulness can help us develop this awareness. We begin by purposefully noticing our own experiences and that awareness can then extend to the experiences of others. We can learn to see any situation from a variety of perspectives and to act with more compassion and less aggression in our interactions with others. Learning to recognize and name one’s own feelings and experiences is the first step toward developing empathy. The practice of mindfulness allows us to put space between what is going on inside us and how we react to our experience. This additional space between thought and response can certainly save us from natural negative consequences that can come from our reactions. This module will provide teachers with the tools to build their own awareness and empathy as well as the awareness and empathy of the students in their classroom.

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#### **Learning Objectives**

- Understand the role awareness plays in self-regulation, empathy and social-emotional competence
- Learn ways to exercise and direct our awareness in meaningful ways through mindfulness.
- Understand how trauma, awareness, and non-judgment can impact the classroom and learning.

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**Key Points to Emphasize**

- Experiencing traumatic events can interrupt how our mind and body communicate;
- Trauma can make connecting with our bodies and emotions difficult;
- Mindfulness should be offered in a way that is sensitive to the needs of participants and not be forced;

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**Agenda**

- Review the class objectives with teachers
- Provide teachers with an opportunity to set an intention at the beginning of the lesson.
- Allow teachers to practice guiding others through a breathing exercise of their choice from the scripts provided in the first two modules on groups of two or three.
- Lead a whole group discussion about social emotional competence in the classroom documenting through whiteboard or post-it notes.
- Discuss the role of mindfulness in social emotional competence.
- Utilize a snow globe or glitter jar to direct teachers through a directed awareness mindfulness activity.
- Brainstorm how body awareness impacts students in the school house.
- Introduce the body scan mindfulness practice utilizing the script provided.
- Journal about the body scan experience.
- Explain the role of self-talk and awareness utilizing the pay-attention method.
- Discuss the role of empathy in awareness.
- Practice a kindness mindful exercise.
- Teachers should close the session by journaling about the practices learned and their potential impact on the classroom climate, culture, and productivity.

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**Materials**

- Script for the presenter and for teachers to utilize while practicing
- Comfortable seat that allows the feet to rest flat and evenly on the floor
- Several snow globes or glitter jars
- Whiteboard or large post-it notes
- A chime or bell

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**Activities**

- intention setting
- small and large group discussions
- guided mindful breathing exercise
- brainstorming

- body scan
- kindness mindful exercise
- journaling
- snow globe activity

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### Resources

- Scripts for body scan, kindness meditation, and snow globe activity.
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**Pillar 3 – Focus.** Teachers desire students to be able to focus on the present moment in the classroom in order to take in the content being delivered. When students are fragmented and concerned about the past or the future they are prevented from reaching their potential in the classroom. This pillar provides instruction and techniques to elicit more directed focus in the classroom by teaching teachers and students to prime their brain for calm, clear decision making through mindful breathing. In order for the brain to move information from short term to long term storage the brain must be in a state of calm focus.

Module 4 will provide teachers with the tools to achieve a greater focus for the students in their classroom. This module will demonstrate practices that teachers can engage in to work toward improved attention and focus together with their students. By learning how to focus themselves and their student's teachers will gain a tool box for improving the learning climate in their classrooms. The complete detail of module 4 can be found in Appendix D.

**Module 4***Mindfulness and Focus*

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**Title**

Mindfulness and focus

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**Time**

Approximately two hours to deliver

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**Event Description**

This event will explain how movement can be used to prime our brains for calm, focused, learning. Participants will learn how to manipulate their bodies into a relaxed and aware state. This event will introduce teachers to mindful movement and teachers will practice walking others through a mindful movement sequence or pose.

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**Learning Objectives**

- Learn how focus is a skill that can be developed.
- Understand how mindfulness and movement can improve focus.
- Learn how to calm down and respond to stress reflectively.
- Build on our understanding of how the brain works, specifically the interplay between the prefrontal cortex, the amygdala, and the hippocampus.
- Introduce experiential activities to help students and teachers prime their brains for calm, focused, mindful decision making.

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**Key Points to Emphasize**

- Focus is a skill that can be cultivated with practice;
- Our thoughts are generally about the past or the future, but through a practice of awareness of the present moment we can improve our ability to direct and sustain focus;
- Learning to direct, control, and sustain our focus can lead to better more efficient planning and reduced stress for both teachers and students;
- Teachers can exercise student’s RAS and teach them to filter out unnecessary stimuli in order to achieve optimal performance;

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**Agenda**

- Review the class objectives with teachers
- Provide teachers with an opportunity to set an intention at the beginning of the lesson.

- Allow teachers to lead each other through a mindfulness exercise of their choice learned thus far in the modules in groups of two.
- Discuss the science related to calm focus, the amygdala, and how to prime the brain for calm focus.
- Discuss the role of the five senses in directing focus and achieving calm.
- Pass out food items and engage in a mindful eating exercise using the script provided.
- Facilitate a small group discussion about the previous activity and note what teachers noticed.
- Discuss the role of movement for achieving focus through the mind body connection.
- Handout the movement sequence provided in this module.
- Have teachers practice the poses provided in the movement sequence
- Guide teachers through the movement sequence.
- Discuss specific poses for relaxing and specific poses for energy.
- Discuss how mindful movement can be applied to daily activities.
- Engage teachers in the mindful walking exercise using the script provided.
- Practice guiding each other through a short mindful breathing practice
- At the conclusion of the training, challenge teachers to incorporate movement into their daily routine with students and ask teachers to write down how they plan to incorporate movement into their classroom.

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### **Materials**

- Scripts for the presenter and for teachers to utilize
- Comfortable seat that allows the feet to rest flat and evenly on the floor
- Journals
- Food items
- Snow globes
- Whiteboard or large post-it notes
- A chime or bell

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### **Activities**

- intention setting
- small group discussions
- guided mindful movement
- guided mindful eating
- guided mindful walking

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### **Resources**

- Scripts included in appendix



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**Pillar 4 – Resilience.** Mindfulness provides individuals with tools to navigate reactions, make informed decisions, and foster a sense of Resilience, which is the capacity to recover from adverse experiences. The key concepts involved in creating resiliency include motivation, hope, gratitude, and responsibility. According to Shame Resilience Theory (SRT), developed by Brené Brown (2006), individuals who are resilient exhibit specific behavioral and cognitive patterns which include the cultivation of hope, practice of critical awareness, and engagement in structured gratitude practices. People who are resilient are resourceful, good problem solvers, seek help when needed, are capable of managing their feelings, develop strong social support networks, and feel a true sense of connectedness with others in their communities. These patterns of behavior and thought can be developed and sustained with mindfulness practices.

In this module, through mindfulness practices, individuals will be able to cultivate hope as they are able to create space between their perceptions and reactions, understand persistence to be a necessary piece of life, and view hope as, not just an emotion, but a way of thinking. Additionally, mindfulness practices enhance

our critical awareness skills by increasing our ability to accept responsibility, sustain motivation, and let go of negative behaviors that take the edge off discomfort and pain. Mindfulness allows us persevere through difficult situations without denying responsibility for our actions and feelings. Finally, a regular gratitude practice is an integral component to developing and sustaining a mindfulness practice. Through structured practices, we begin to understand gratitude as an orientation, or way of thinking, that allows us to acknowledge connections with others that are grounded in compassion. The complete detail of module 5 can be found in Appendix E.

## **Module 5**

### *Mindfulness and Resilience*

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#### **Title**

Mindfulness and resilience

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#### **Time**

Approximately two hours to deliver

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#### **Event Description**

This training module will demonstrate to teachers the value of resilience for students in their classrooms and provide tools for teachers to influence mindsets and build resilience. Failure is a necessary and useful part of life and building resilience in students will help them to bounce back from failure and cultivate persistence.

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#### **Learning Objectives**

- Gain an understanding of resilience.
- Be able to articulate the qualities of a resilient person.
- Understand how mindfulness can help individuals be more resilient.
- Learn to bounce back quicker from adversity.
- Learn to practice gratitude and hope with students as a strategy for building long-term resilience in students.

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**Key Points to Emphasize**

- Cultivating hope is an essential ingredient of resilience;
- Mindfulness puts space between perception and reaction;
- Persistence is a necessary part of life and a key trait of resilient people;
- Critical awareness helps us lean into discomfort in order to accept responsibility sustain motivation through difficulties;
- Mindfulness is a tool that can help us manage anxiety;
- Gratitude is a way of thinking that build connection and compassion and leads to resilience.

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**Agenda**

- Review the class objectives with teachers
- Provide teachers with an opportunity to set an intention at the beginning of the lesson.
- Discuss the key components of Resilience and how neuroscience supports a mindfulness practice to build resilience through hope, gratitude, and acceptance
- Allow teachers to work in pairs to practice one of the breathing exercises provided in previous modules including guided breathing, square breathing, body scan, directed awareness, movement sequence
- Facilitate a whole group discussion about the participants experience to date through previous modules and mindfulness homework.
- Ask teachers how motivation, hope, gratitude, and responsibility impact students and teachers in the classroom
- Chart responses on the white board or post-it notes
- Show the resilience video from [havethattalk.ca](http://havethattalk.ca) Ottawa Public Health link included in the resources section.
- Facilitate a discussion on the challenges facing students.
- Discuss how mindfulness puts space between perceptions and reactions and how often students reactions without that space create issues in the classroom.
- Discuss the impact of a gratitude practice
- Explain how hope is more than an emotion but is also a way of thinking that leads to resilience.
- Have teachers brainstorm ways that students taking responsibility over their actions can build resilience.
- Review how tactical (square) breathing allows us to bear with difficult situations.
- Demonstrate to teachers a visual method to square breathing as described in the appendix using the finger to trace a square along with the script provided in previous modules.

- Discuss the role of dopamine in the brain and its relation to motivation and gratitude.
- Place large post-it notes numbered from 1-107 around the room for a gallery walk and ask teacher to go around the room and write things they are grateful for until the numbers are full. Afterward allow teachers to walk the gallery and notice what everyone wrote.
- Allow teacher to journal about the previous gratitude practice.
- Discuss teacher burnout, teacher stress and the importance of self-care
- Direct teachers to revisit their intention and write a three to five sentence plan for how they will incorporate elements from the module into their own classrooms.
- Place teachers in a restorative pose (legs up the wall, reclining butterfly pose, or corpse pose) and guide them through a 5-10 minute mindful breathing exercise in the restorative pose using the script provided in module one.

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**Materials**

- Scripts for the presenter and for teachers to utilize while practicing
- Comfortable seat that allows the feet to rest flat and evenly on the floor
- Projector for video
- Markers
- Journals – materials from previous modules
- Whiteboard or large post-it notes
- A chime or bell

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**Activities**

- intention setting
- small group discussions
- guided mindful breathing exercise
- brainstorming
- gratitude practice

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**Resources**

- Scripts found in appendix
- Havethattalk resilience video by Ottawa Public Health found at: <https://youtu.be/GLAdRgft7pU>

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**Appendix A**

**The 'BE' PROJECT: A PROFESSIONAL DEVELOPMENT SERIES**

LIST OF APPENDIX MODULES

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## **Module 1**

### **Foundation – Mindful Breathing.**

The foundation of The 'Be' Project paradigm is mindful breathing. All pillars and modules are built on the foundation of mindful breathing. If teachers start and end with this foundation they can improve the culture of their classroom. This foundation allows students and staff to explore their emotions and work toward a culture that values diversity, empathy, compassion, engagement, kindness and opportunity.

Module 1 provides an outline of the training that would take place in the classroom for students, or in a training setting to help teachers to become comfortable in knowing the foundation of mindfulness. This module will provide the opportunity for teachers to experience the breath through directed mindful breathing. In addition, this module provides teachers with an introduction to the science behind mindfulness. This module is the foundation for all other modules.

**Title.** Introduction to Mindfulness and Mindful Breathing.

**Time.** This module will take approximately two hours to deliver.

#### **Event Description.**

This event will introduce teachers to what mindfulness is and is not, and will reveal how mindfulness relates to learning in the classroom. Participants can expect to practice the foundational practice of mindful breathing and will practice walking others through a mindful breathing exercise.

#### **Learning Objectives.**

Gain an understanding of what mindfulness is. Learn about current research supporting the benefits of mindfulness. Experience a mindfulness practice.

Develop a plan for a personal mindfulness practice. Participants will develop a personal plan for implementing mindfulness in the classroom.

### **Key Points to Emphasize.**

Mindfulness is not a cure-all, not all sunshine and rainbows; mindfulness is intentionally staying present with whatever arises without judgment and choosing to return our awareness to the breath. Mindfulness is a tool that can be utilized at any time. Mindfulness is very much like riding a bike, even if participants develop a practice and then do not use it for an extended time period, it is always there waiting for them to begin utilizing this coping tool once again. Mindfulness is research based and has lasting, profound affects on the brain.

When guiding students through mindful exercises, it is important to be mindful as well. As a teacher introducing mindfulness in the classroom, you may notice students responding with skepticism, nervousness, apprehension, passive observation or rejection of the practices. If given the freedom to choose, eventually most students will become curious and try. All of these responses are ok. As teachers, you may notice that these responses evoke in your feelings of judgement, frustration, fear, anger and desire for control. When presenting mindful experiences to our students, we should practice: non-judgment, acceptance, curiosity, and consistency.

### **Agenda.**

Review the class objectives with teachers. Provide teachers with an opportunity to set an intention at the beginning of the lesson. It is advisable to have students write down their intention, what they intend for themselves today. As an example, students may intend to learn about mindfulness and apply it to their lives they may intend to find a way to reduce stress in their lives. Their intention is unique to them and may represent what they plan to learn in the forthcoming professional development.

Show the teachers the “Just Breathe” short Wavecrest film by Julie Bayer Salzman and Josh Salzman (2015). Explain that this film was inspired by the filmmakers kindergarten student’s experience with mindfulness in schools through the social emotional learning curriculum centered on mindfulness.

Direct teachers thorough a breathing practice utilizing the script provided in the resources section. Allow a small group discussion to occur where participants identify how they felt after the breathing exercise. Be sure to validate all participants, there is no right or wrong answer. Participants will

say things ranging from I feel more relaxed, more focused, and clearer. Some participants may report feeling anxious, overwhelmed by their thoughts, concerned that people are looking at them. Acknowledge all responses as valid and explain that mindfulness is not about making everyone feel happy, it is not all sunshine and rainbows. In fact, mindfulness can lead us to awareness of some strong feelings or emotions within ourselves. What mindfulness can do for us is put some space between our thoughts and emotions and our response to those emotions.

Explain to the teachers what mindfulness is: paying attention, in a particular way, on purpose, to the present moment, without judgment. Ask teachers to break down into small groups and discuss each part of the definition identifying why it no longer is mindfulness if one part is removed.

Introduce research supporting mindfulness practices. Provide teachers a copy of the summary of research on mindfulness in education provided by Greater Good Science Center at UC Berkeley found at the link included in the resources section. Ask teachers to break down in small groups and jigsaw the article. After a designated time, have teachers share out what they found in their research summary.

Discuss the benefits of mindfulness including increased self-efficacy, increased focus, increased resilience, and increased self-regulation. Discuss the physical benefits such as reduced blood pressure, lower heart rate, and reduced anxiety with the use of a regular mindfulness practice. Discuss how research has demonstrated less than two minutes of mindful breathing a day can actually change the brain chemistry and function through increased gray matter, increased activity in the ACC, and a reduction in the size of the amygdala.

Ask teachers to list the attributes of the ideal students and document responses on a white board or large post-it. This can be a good opportunity for staff to talk amongst themselves to identify the attributes of an ideal student and offers an opportunity to move around the room if given post-it notes to capture attributes to post on the board. Once teachers do this, relate this list for attributes to the research, pointing out that mindfulness supports those attributes in students.

Once the participants return to whole group, discuss the guidelines for presenting mindfulness to students. The foundational practice of mindful breathing and intentional stillness is intended to be used on a daily basis, ideally on a few different occasions throughout the day. The length of duration for daily breath work and intentional stillness should be determined

based on the age and developmental level of your group of students. A general recommendation is that you practice mindful breathing and intentional stillness for one minute per grade level (i.e. two minutes for second grade, five minutes for fifth grade). Durations for middle and high school students may range anywhere between five to ten minutes or longer if appropriate.

Once this material has been covered it will be important to give teachers an opportunity to practice guiding each other through a short mindful breathing practice. Break the teachers into small groups and allow them the opportunity to practice using sound such as chimes. As teachers practice circulate around the room providing tips for verbal cues in guiding a mindfulness practices.

Return teachers to whole group and conduct a classroom discussion regarding what worked and what did not work for them guiding others through a mindful breathing exercise. Note those areas on the board and discuss providing teachers with tips to navigate the challenges. Remind teachers that it is helpful to just be silent and just remind students to return their awareness to their breath. Remind teachers that verbal cues that help students identify a physical sensation with breathing can be helpful such as the sensation of air coming in through the tip of the nostril, the sensation of their chest rising and falling, or the sensation of their belly expanding and contracting.

At the end challenge teachers to practice 2 minutes of mindful breathing each day until the next lesson. Ask students to revisit the intention that they set at the beginning of class. Ask students to complete a plus delta and make note of something they are willing to commit to and how they plan to make that happen.

### **Materials.**

Script for the presenter and for teachers to utilize while practicing:

*Find a comfortable seat that allows your feet to rest flat and evenly on the floor. Find a tall spine. Feel the weight of your bottom in the seat, allow your hands to rest comfortably either on your legs or in your lap.*

*If you are willing, close your eyes and begin to turn your gaze inward. If you are not comfortable closing your eyes, just allow your gaze to soften and look down your nose toward the floor.*

*Let your lips gently touch, relax your jaw and tongue inside your mouth. Begin to focus on the sensation of breathing. Feel your breath entering your nostrils, traveling down into your body filling up your belly like a balloon. Feel the sensation of your chest rising and falling with each inhale and exhale. Allow the individuals a few moments of silent breathing.*

*Remind the participants that it is normal for thoughts to come and go and it is normal for us to be carried away by our thoughts, remind them to simply notice when they have become lost in thought and gently bring their awareness back to their breath. Offer the analogy of standing on a train platform and watching the trains go by. The trains are our thoughts and we can acknowledge and notice the thoughts but just allow ourselves to remain on the platform rather than being carried away by our thoughts.*

*Allow a few more moments of silent breathing. Then ask participants to extend their inhale and notice the pause in between the inhale and the exhale and then direct them to extend their exhale and notice the pause in-between the exhale and the inhale.*

*Allow a few more moments of silent breathing. Direct participants to allow their breath to return to its normal rhythm.*

*Explain that you will ring a chime and when they no longer hear the sound of the chime they may gently open their eyes and notice the way they feel.*

**Activities.**

Activities include: intention setting, small group discussions, guided mindful breathing exercise, brainstorming, jigsaw articles.



**Resources.**

A summary of research articles on mindfulness studies in education can be found using the link:

[https://greatergood.berkeley.edu/article/item/mindfulness\\_in\\_education\\_research\\_highlights](https://greatergood.berkeley.edu/article/item/mindfulness_in_education_research_highlights).

The Just Breath video can be found using the link:

<https://www.youtube.com/watch?v=RVA2N6tX2cg&list=PL8EKmNvCC1cGmzCaC35iMY4h8gV1vBqt5>

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## **Module 2**

### **Pillar 1 – The Brain**

By learning how our brain responds to stress, we can use mindful breathing to influence our bodies, quieting the amygdala and activating the hippocampus and prefrontal cortex. We know that brains take in new information best when our brains are calm, focused, and feel safe. In order to activate higher order thinking we cannot be in a state of fight, flight, or freeze from an activated amygdala.

Module 2 offers an introduction to the neuroscience supporting mindfulness. In this module participants will learn about what happens in the brain when we are mindful. Gaining the knowledge in this module of how our brains work will equip teachers and participants with the ability to transform the learning environment. This module will begin to help teachers understand the brain function behind student behavior and will equip them with the tools to practice empathy and lead students toward a greater understanding of themselves.

#### **Title.**

Mindfulness and the brain

#### **Time.**

This module should take approximately two hours to deliver.

#### **Event Description.**

Understanding how our brains work can be a powerful transformative tool in our box of coping skills. By understanding the root causes of our behavior, we can begin to uproot undesirable or ineffective behaviors and replace them with a more neutral default setting. Teachers who equip students with this information offer them power over their reactions to stimuli. When we begin

to see things more clearly and have control over our being through mindfulness practices, we can feel a greater sense of control over ourselves and our environment.

**Target Audience.**

Teachers

**Learning Objectives.**

Understand brain basics and how they relate to mindfulness. Identify what happens to the body when stressed. Understand brain basics and how some brain functions impact learning. Practice the foundational deep breathing technique. Recognize how deep breathing can be used to calm and focus the body and mind. Learn about the potential impact of a regular mindful practice on the makeup of the brain.

**Key Points to Emphasize.**

Research on mindfulness practices indicates that individuals with a mindfulness practice show increased activity in parts of the brain that control our ability to self-regulate, learn from past mistakes, support optimal decision making, maintain clear perception, improve self-concept, convert information from working memory into long-term storage, and access parts of our brain that manage complex thinking. We can actually change the way our brain works, reduce stress hormones in the brain and shrink our ‘fight, flight, or freeze’ mechanism. By redirecting our awareness, we can replace our tendency toward worry, stress, fear, anger, depression and anxiety with flexibility, calm, self-regulation, informed decision making, peace, and happiness.

**Agenda.**

Ask students to set an intention for the class. Have students document their intention, as it will be revisited again at the end of the class.

Guide students through a mindful breathing exercise. Utilize either the script provided in the first module or introduce a new breathing technique called square breathing. Square breathing is often used by athletes and soldiers to manage their stress and performance anxiety.

Show the Mind the Bump video from the link included in the resources section. After the video have participants write a reflection about what

emotions they are currently practicing and how they might practice things that could improve their lives and their teaching for example practicing patience and joy rather than worry and anger.

Provide students with an unlabeled diagram of the brain. Have students label the prefrontal cortex of the brain and explain that this is the part of the brain responsible for higher-order mental functions, such as learning and forming memories. Explain that when students are in a relative state of calm and are experiencing a happy brain full of dopamine and chemicals associated with satisfaction students learn better as they are more easily to transmit information throughout the brain.

Have students then label the amygdala and explain that this is the emotion center of the brain. The amygdala is our brain's alarm system that controls the "fight, flight or freeze" mechanism. When the amygdala is triggered, it causes the hippocampus (have students label the hippocampus) to stop storing memories in our long-term storage and begins pumping the stress hormone, cortisol, into our brain. The result is that we stop taking in new information and cannot access the higher-order thinking skills in our prefrontal cortex of the brain.

Explain that when the amygdala is triggered, memories become stored in the limbic region rather than in the cortex, and everyday triggers of those memories can set off our alarm system. In extreme cases, recurring trauma can become PTSD and can cause our amygdala (or alarm system) to become jammed, causing us to live in a constant state of alarm.

When students feel stressed, the stress hormone, cortisol, is released in the brain. Cortisol prevents us from retrieving information from the prefrontal cortex, with all of our information coming from the hippocampus instead. As a result of this, the only memories retrieved are those associated with the particular emotion or situation causing the stress. This reaction reinforces our negative perception of events and prevents us from taking in and processing new information using reason and logic.

Provide teachers with copies of the research articles included in the resources section of this module. Ask teachers to break down into small groups to jigsaw the articles. Give teachers 15-20 minutes to read an article and explain the highlights to the others in their small group. Once back in whole group ask teachers to note what was most notable in the articles they read.

Discuss the research demonstrating that mindfulness practice can reduce the size of the amygdala and reduce the amount of cortisol in the brain. Practicing mindfulness by engaging positive memories helps us to reduce cortisol levels while increasing dopamine, a hormone which improves feelings of hopefulness and motivation.

Have students label the RAS, or Reticular Activating System, at the very top of the brain. Explain that this is a bundle of nerve fibers within the Central Nervous System (CNS). The RAS plays a role in wakefulness, sleep, attention, behavioral modification and filtering information and is a portal through which almost all information passes to get to the brain. Mindfulness practices engage the RAS, allowing us to filter out unnecessary information (in order to make the best decisions), react more appropriately and perform tasks with higher precision. Explain that many of our students with sensory challenges can learn to filter out sensory information by training the RAS.

In order to help teachers understand the role stress plays in triggering the amygdala and reducing the amount of learning taking place in the classroom ask teachers to think about what stress is. Document answers on the white board or have students think, pair, share. Then have them brainstorm what sorts of things cause stress. Then ask them what happens to our body when we're stressed? Identify the physical and emotional signs of stress.

Provide teachers with the list of definitions and fully labeled brain. Allow teachers to break down in small groups to discuss how the information in the handouts and the information discussed in the previous exercises might inform how they respond in the classroom. Have teachers write down three things they will do with this new information in the classroom.

As an illustration of how mindfulness can impact bodily response to stress, have teachers do 25 jumping jacks or run in place for one minute. Now direct them to notice their breath. List on the board adjectives to describe it (shallow, fast, etc.). Teachers should now lie down or (if at desks) sit tall and relax their shoulders. Instruct them to close their eyes if they are willing and make their top lip touch their bottom lip. Now start to take deep breaths in and out of your nose. When you breathe in, imagine you are filling up your belly like a balloon. When you breathe out, feel the belly drop down (or, if they are sitting up, the belly button/navel will move back towards their spine). Let your breath be soft and relaxed. If you start thinking about other things, it doesn't matter. Just come back to watching your breath come and go. Have them continue in this way for at least one minute and up to five minutes. Before opening their eyes, they should be instructed to notice how their breath feels.

As teachers come back to the group, list on the board adjectives to describe the breath and body after the exercise (calm, soft, relaxed, etc.). Ask why they think deep breaths help us feel calm and focused (slows blood flow, slows heart rate, slows neural firing in brain, allows us to focus on one thing, etc.) Refer back to what we learned about the amygdala in the previous lesson plan.

Discuss how the amygdala impacts us in the classroom as each and every experience in a classroom can be new and novel. Ask teachers to identify ways that this information can help us better design out classrooms, lessons, and guide our interactions with students. Ask them to identify what this information may be telling us about some of our most challenging students?

### **Materials.**

Unlabeled human brain – print for handout:  
<https://goo.gl/images/J1iU5L>

Labeled human brain – print for handout:  
<https://goo.gl/images/e6ZUZi>

Square breathing – print for handout:  
<https://goo.gl/images/y5RoCz>

### **Activities.**

Intention setting, guided mindful breathing, video, brain labeling and analysis of terms, heart rate activity, research article analysis, brainstorming, whole group discussion, small group discussion, journaling.

### **Resources.**

Mind the bump by Smiling Mind video link  
<https://www.youtube.com/watch?v=aNCB1MZDgQA>

Mindfulness can literally change your brain by Christina Congleton, Britta K. Holzel, and Sara W. Lazar 1/8/2015. <https://hbr.org/2015/01/mindfulness-can-literally-change-your-brain>

What are the benefits of mindfulness by Daphne M. Davis and Jeffrey A. Hayes 2011. <http://www.apa.org/pubs/journals/features/pst-48-2-198.pdf>

How the brain changes when you meditate by Jennifer Wolkin 9/20/2015.  
<https://www.mindful.org/how-the-brain-changes-when-you-meditate/>

7 ways meditation can actually change the brain Alice G. Walton 2/9/15.  
<https://www.forbes.com/sites/alicegwalton/2015/02/09/7-ways-meditation-can-actually-change-the-brain/#717282d51465>

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### **Module 3**

#### **Pillar 2 – Awareness**

Awareness of ourselves and others leads to emotional self-regulation and empathy. Awareness through mindful breathing fosters emotional and social competence and brings healing within ourselves and allows us to build positive relationships with others. Awareness in the classroom helps teachers and students be more responsive to their own needs as well as the needs of others in order to bring about a more optimal learning environment in the classroom and within the students themselves.

Module 3 provides the participants the opportunity to experience intentional awareness and will offer exercises to engage with the students in their classroom in order to improve awareness of themselves and others. This module will discuss how social emotional awareness impacts students, teachers, the classroom, and learning with an aim to help teachers improve social emotional awareness and the culture of their classroom.

**Title.**

Mindfulness and awareness

**Time.**

This module should be delivered in two hours.

**Event Description.**

There is often more going on in our brains and our bodies than we are aware of at any given moment. We cannot accept or change what we are experiencing without first becoming aware of our thoughts and feelings and



how they impact our actions. Mindfulness can help us develop this awareness. We begin by purposefully noticing our own experiences and that awareness can then extend to the experiences of others. We can learn to see any situation from a variety of perspectives and to act with more compassion and less aggression in our interactions with others.

Learning to recognize and name one's own feelings and experiences is the first step toward developing empathy. The practice of mindfulness allows us to put space between what is going on inside us and how we react to our experience. This additional space between thought and response can certainly save us from natural negative consequences that can come from our reactions. This module will provide teachers with the tools to build their own awareness and empathy as well as the awareness and empathy of the students in their classroom.

**Target Audience.**

Teachers

**Learning Objectives.**

Understand the role awareness plays in self-regulation, empathy, and social emotional competence. Learn ways to exercise and direct our awareness in meaningful ways through mindfulness.

**Key Points to Emphasize.**

Many teachers and students have experienced trauma in their lives. Experiencing traumatic events (such as abuse, loss, a natural disaster, etc.) can interrupt how our mind and body communicate. Because of this, connecting with our bodies and emotions can be difficult, even overwhelming, for those who have experienced trauma. Mindfulness activities are best and most effective when offered in a way that is sensitive to the needs of those who have experienced trauma, without singling anyone out. This can be done by offering options that allow participants to choose their own comfort level whenever possible. For example, offering an instruction of closing the eyes or keeping the eyes softly open in a downward gaze, rather than just stating that everyone must close their eyes.

**Agenda.**

Ask the teachers to start by setting an intention for themselves and the class. Since students have been practicing mindful breathing, have them break down

into small groups of three and take turns talking each other through a mindful breathing exercise. The exercise should consist of 2 minutes of mindful breathing each person. Back in a whole group setting ask teachers what issues face them and their students in the classroom with regards to social and emotional competence. Brainstorm how this affects classroom performance. After this discussion, explain that mindful breathing fosters emotional and social competence, bolstering both our relationship with others as well as our relationship to ourselves leading to emotional self-regulation and empathy.

With mindful breathing, we learned to watch thoughts come and go through the mind without judgment. In this class we apply that practice to the body and mind by watching physical sensations come and go in the same way and by holding ourselves and others in non-judgmental awareness. Mindful awareness will allow us to identify what we are experiencing in the mind and body in various contexts, how those thoughts and feelings are expressed and the effects such expressions may have on others.

Take out a snow globe or a glitter jar and direct teachers attention to the globe. Explain that this is a visual representation of their mind and a visual focal point to watch as they experience the benefits of a visual mindfulness practice. Taking time to watch the glitter settle in a snow globe or jar provides a metaphor for the “dust” settling in their own mind. This can be a calming tool for teachers to use for students when their anxiety is escalated. Allowing a student to take a “time out” to sit quietly and watch their globe can provide a moment of calm before talking through the issue with a teacher or other adult.

As a demonstration of the method shake up the globe. Ask teachers to practice mindful breathing while watching the particles resettle at the bottom of the globe or jar. Ask teachers to try to pick out a single particle and watch it make its way to the bottom of the jar. After the exercise is over ask teachers to journal about this experience.

Ask teachers to think of a student that they currently have or have had in the past that seemed to be unaware of their own body in space. Ask them to think about that student’s ability direct their awareness. Discuss how awareness can be exercised and can help students become more aware of their bodies in space as well as more aware of thoughts, feelings, and emotions that reside in our bodies.

Explain that the body scan is a mindfulness practice in which we non-judgmentally notice, in turn, the physical sensations occurring in each of our body parts. We aren’t trying to change our bodies in any way; we are simply paying attention to how they feel in this particular moment. Some places may feel relaxed, others may feel tense and some places may give us no feeling at

all. Simply pay attention to what your experience is right now. The mind may wander off into stories or memories; this is fine. Each time that you notice that it has happened, simply bring your mind gently back to body and to the practice.

Guide teachers through a body scan practice either sitting up in a chair or if the room allows have teachers lie down on the floor for the body scan. Utilize the body scan script in the resources section below. After the body scan, ask teachers to take five minutes to journal about their experience noting how they felt both in the mind and the body throughout the exercise. Ask them to note how they may be able to use this in the classroom with students.

Explain to teachers that everyone engages in self-talk, which is what we say to ourselves (out loud or silently) as we go about our day. The way we talk to ourselves when we experience a challenge influences what we believe we can do. For example, we may try to draw a picture and find that it doesn't come out right. If we experience negative self-talk, we may express that there is something flawed about ourselves ("I am terrible at drawing") or blame someone or something else ("these crayons don't work"). Whereas positive self-talk is more confident and optimistic ("I'm still learning how to draw, but this looks pretty good. Next time it will be even better"). The first step to controlling our self-talk is to become aware of it. How do we talk to ourselves and about ourselves when we are successful? How about when we make mistakes?

Explain that teaching students to notice their thoughts can impact their awareness of those thoughts and can reduce unwanted hijacking of thoughts. Explain that having students practice noting can be a beneficial mindful exercise. Noting is a variation of mindful breathing in which the practitioner pays attention to the thoughts as they come and go through the mind. When a thought arises (i.e. "I'm bored"), simply note it by either making a tally mark or by silently saying thought in your mind and then return to resting the awareness gently on the breath. Have teachers practice this by breathing mindfully in this way for a short period of time. When the practice is over, have them reflect on what kinds of thoughts they noticed about themselves. Remember, there is no need to judge the thoughts as good or bad. This practice is simply about noticing the thoughts as they are, as these thoughts are continually going through the mind without our awareness, influencing what we believe about ourselves, others and our world.

Explain that empathy is understanding how another person feels. The first step in developing empathy is learning to recognize our own feelings and how we express them with our bodies and our behaviors. We can then learn to recognize how others are expressing their feelings. When we are able to

recognize how others express their feelings, we can then identify with times where we have felt similarly or imagine what it might be like to feel what they are feeling. This is empathy.

Ask teachers to close their eyes if they are willing and find a tall seat where their feet can rest fully on the floor. Explain that we are going to practice directing our awareness and empathy, journaling individually about their experience with their mindfulness practice.

Finally, have teachers revisit their intention and make a plan as to how they will incorporate these ideas and practices in their own classrooms. Have them think about how these practices may alter the climate and culture of their classrooms and their schools.

### **Materials.**

Several snow globes or glitter jars, journals, post-it notes, white board or large easel pad, scripts for mindful exercises.

### **Activities.**

Intention setting, practice guided mindful breathing, small group discussion, large group discussion, snow globe activity, journaling, body scan, kindness mindful exercise.

### **Resources.**

Script for the presenters to use to guide participants through a mindful body scan:

*Begin by lying down comfortably on your back or sitting with your back tall and your feet flat on the floor. Allow your eyes to close (if they are willing) so that you can more deeply connect with your body. This is a safe place where you can feel comfortable resting with your eyes closed for the duration of this practice. Feel your breath coming into and out of the body. Where do you feel your breath in your body? There is no right or wrong answer; just notice where you feel your breath right now.*

*Now, notice your feet. What sensations do you feel in your feet? Notice all the parts of your feet: the toes, the bottom of the foot, the heel, the top of the foot, the ankles. Remember, you aren't trying to make anything special happen. Just notice what you feel, notice if it changes and notice if there are any blank spots. Just notice.*

*Now, let go of your feet and notice your legs. Notice all the parts of your legs: the shins, the calves, the knees, the thighs and even up into the hips. Just notice what you feel and where you feel it.*

*Now, let go of the hips and legs and notice the middle of your body. What do you feel in your stomach? What do you feel in your back? What do you feel in your shoulders? What do you feel in your throat? Try not to use words to label what you feel; rather, just be with the feeling itself. Remember, there is no need to judge your experience. These sensations are not good or bad...they just are.*

*Now, let go of the midsection and notice your arms and hands. Notice how each part of your arms and hands feels right now. Notice the sensation of your clothing on your arms. Notice the sensation of anything the arms and hands may be resting on. Notice the sensations in all parts of the arms. Feel your elbows. Feel your wrists. Feel each fingernail.*

*Let go of noticing the arms and hands and begin to notice your face and head. Notice the front and back of the neck. Notice your mouth and jaw. Notice your eyes and the space between the eyes. Notice the top of the head.*

*And the back of the head. Has your mind wandered away? If so, that’s fine.*

*Gently come back to noticing your face and head.*

*Now, feel your entire body, together and whole. Notice the breath coming into and out of the body. Just rest here for a few more moments, breathing and noticing any feelings that arise and fall away in your whole body.*

*Thank you for practicing the body scan. Take a few moments to end this practice by gently wiggling your fingers and toes and then blinking your eyes open.*

Script for practicing kindness and empathy mindfulness exercise.

*Ask teachers to place their right hand over their heart and their left hand over their belly. As they begin to focus on their breath have them say silently to themselves ‘may I feel safe, may I feel happy, may I live with ease’.*

*After a full breath cycle, ask them to bring someone into their mind who they love very much someone like a spouse, a parent, a child and once they have that person in their mind ask them to direct that thought towards that person and say silently to themselves ‘may you feel safe, may you feel happy, may you live with ease’.*

*After another breath cycle ask them now to bring someone into their mind who they know and care about but do not know intimately such as their friend, their hair dresser, their neighbor and once they have that person in*

*their mind to say silently to themselves 'may you feel safe, may you feel happy, may you live with ease'.*

*After another complete breath cycle have them bring someone that they may casually see but do not know into their mind such as the person checking them out in the grocery lane, the person taking their money at the gas station, the waitress at the local restaurant and once they have that person in their mind to say silently to themselves 'may you feel safe, may you feel happy, may you live with ease'.*

*After another complete breath cycle have them bring someone to mind that they struggle with, someone that they may not like to work with as a colleague, a boss that is difficult to work with and once they have that person in their mind to say silently to themselves 'may you feel safe, may you feel happy, may you live with ease'.*

*Finally, after another complete breath cycle have them send that message out to everyone they love, they like, and don't like saying 'may you feel safe, may you feel happy, may you live with ease'.*

*After another complete breath cycle have teachers gently open their eyes.*

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## **Module 4**

### **Pillar 3 – Focus**

Teachers desire students to be able to focus on the present moment in the classroom in order to take in the content being delivered. When students are fragmented and concerned about the past or the future they are prevented from reaching their potential in the classroom. This pillar provides instruction and techniques to elicit more directed focus in the classroom by teaching teachers and students to prime their brain for calm, clear decision making through mindful breathing. In order for the brain to move information from short term to long term storage the brain must be in a state of calm focus.

Module 4 will provide teachers with the tools to achieve a greater focus for the students in their classroom. This module will demonstrate practices that teachers can engage in to work toward improved attention and focus together with their students. By learning how to focus themselves and their student's teachers will gain a tool box for improving the learning climate in their classrooms.

#### **Title.**

Mindfulness and focus

#### **Time.**

This module will require two hours to deliver.

#### **Event Description.**

This event will explain how movement can be used to prime our brains for calm, focused, learning. Participants will learn how to manipulate their bodies into a relaxed and aware state. This event will introduce teachers to mindful



movement and teachers will practice walking others through a mindful movement sequence or pose.

**Target Audience.**

Teachers

**Learning Objectives.**

Understand how mindfulness and movement can improve focus. Utilize movement and mindfulness practices to direct focus. Teachers will learn how to calm down and respond to stress reflectively. We will build on our understating of how the brain works, specifically the interplay between the prefrontal cortex, the amygdala and the hippocampus. We'll introduce experiential activities to help students and teachers prime their brains for calm, focused mindful decision-making.

**Key Points to Emphasize.**

Focus is a skill that can be cultivated with practice. Our thoughts throughout the day are generally of the past or the future, but through a practice of awareness of the present moment, we can improve our ability to direct and sustain focus. Learning to direct, control and sustain our focus can lead to better, more efficient planning and reduced stress. What great news for us and for our students that we can cultivate focus within ourselves and within our students through intentional practice of mindful exercises. We can exercise student's RAS and teach them to filter out unnecessary stimuli in order to achieve optimal performance.

**Agenda.**

Have students set an intention for themselves and the class. Since students have been practicing personal mindfulness practices and leading students in mindfulness practices. Have them break down in pairs to lead each other through a mindfulness exercise of their choice such as breathing, walking, body scan, or snow globe. Have students reflect on this experience in their journals.

Explain to teachers that we can prime our brain for calm, clear decision-making using mindful breathing setting the stage for long-term memory learning. Ask teachers to discuss how focus both positively and negatively impacts performance. Remind teachers that the human brain responds to any sort of stress as if we are in immediate danger. This results in

involuntary physical changes, setting off the “fight, flight or freeze” stress response. But mindful breathing can lower stress and sharpen focus.

The experiences of mindful breathing, intentional stillness and using the five senses to engage and explore our world form the bedrock of mindful awareness and focused attention. The more we understand what calm focus feels like, the easier it becomes to access.

Hand out a tray of food items such as raisins, grapes, or a small piece of chocolate. Explain that we are going to practice directing our focus through a mindful eating exercise. This mindful eating exercise allows us to harness our ability to focus by intentionally exploring every sensory aspect of consuming a bite of food. When students experience this heightened sense of focus, they will then have the ability to generalize that directed focus across various settings through repeated practice.

Instruct teachers to refrain from consuming the food until instructed to do so. Explain that this will be a different type of eating. They are going to eat the food as slowly as possible, while really taking time to notice all the sensations the food has to offer. Direct teachers to sit up tall in their seat and invite them to place the bottoms of their feet on the floor. Ask them to close their eyes and begin practicing mindful breathing by taking three deep, full breaths. Follow script provided below in the resources section.

After completion of the exercise ask teachers to share with a partner about their experience. Talk about what they notice about the food and the experience in general. Remind them that this is a new experience for most people to eat in this way and just like all mindfulness exercises requires practice. This technique allows us to practice focused concentration, mindful movement and intentional awareness of our surroundings. This experience provides us with a sense of focus, awareness and concentration that can be applied across various settings and circumstances.

Explain that mindful movement provides individuals with an opportunity to learn about the mind-body connection through the practice of mindful movement. Instructors can move participants through a series of postures that allow them to experience physical sensations as well as the mental effects of physical movement. Movements can easily be incorporated into brain breaks throughout the school day. Utilizing the script and movement sequence set out in the resources section below guide the teachers through the sequence.

Remind teachers that perfectly correct alignment is not necessary when practicing with students but verbal cues can be used with students to improve alignment as time passes. Remind them to check alignment to ensure that students will not harm themselves. After the movement exercise have teachers share out how they felt after the sequence. Discuss how this may be useful in a classroom setting for regaining focus, activating attention and focus prior to mentally taxing tasks such as quizzes, tests, and acquisition of new content.

Talk about how different types of movement can achieve different objectives. As an example, if students are revved up and need help transitioning after recess, gym, or lunch they can use a restorative pose such as legs up the wall in order to calm the central nervous system and regain focus. Poses that require cross lateral movement such as bird dog can be used activate both sides of the brain in order to improve brain function prior to tests and quizzes. Movement sequences that require balance are good for energizing students and regaining focus. Any movement sequence can be used to revive sluggish students and get their body and mind ready for learning.

Explain that mindful movement and directed focus can be incorporated into daily activities such as brushing our teeth, doing dishes, and walking. Utilizing the mindful walking script in the resources section below guide teachers through a mindful walking exercise.

Have teachers spend five minutes of the module journaling about how they might be able to utilize the strategies included in this training to help students improve their focus. After journaling ask teachers to share our strategies.

**Materials.**

Journals, snow globes, food such as raisins, grapes, small tomatoes, or chocolates for each participant, scripts included in the resources section.

**Activities.**

Intention setting, practice guided mindful breathing, mindful eating exercise, mindful walking activity, mindful movement, small group discussion, large group discussion, journaling.

**Resources.**

Script for practicing mindful eating exercise:

*I will be placing a small piece of food (chocolate, raisin, orange) on your desk. Please do not touch the food or place it in your mouth until you are instructed to do so. We will be engaging in a mindful eating activity where we will focus our attention on the many sensations the food has to offer us.*

*To begin, I would ask that you find a tall seat at your desk and place your feet firmly on the floor. If you are willing, you may close your eyes or turn your gaze downward, looking past the tip of your nose.*

*Take a moment to turn your focus inward and begin your mindful breathing practice. Notice the air coming in through the tip of your nose, and your belly and chest filling up with the air. Exhale deeply and fully, releasing all the air from your belly and chest. Take three more deep breaths just like this.*

*Once you have taken three more deep, mindful breaths, open your eyes. Before we pick up the food from our desks, we will take a moment to imagine where the food came from. Picture the farmer that planted the orange trees. Visualize the orange growing, being nourished with sun and water. Picture the orange being harvested from the tree and being placed on a truck with all the other oranges. You can visualize the orange making the trip to the marketplace on the truck and being placed in the produce section at the store. (The script may be altered to reflect the type of food you have chosen.)*

*Now you may pick up your food and hold it in your hand. Take a few moments to study your food. What do you see? How does it smell? How does it feel in your hands?*

*Before it even enters your mouth, you may imagine what it will taste like on your tongue. Now place the food into your mouth and without chewing, notice what it feels like on your tongue; the weight, the taste, the texture, etc. After you have felt the food in your mouth, you may begin chewing the food while noticing the taste and texture.*

*As you swallow the food, imagine the food traveling down your esophagus and into your stomach giving nourishment to your body.*

Mindful movement activity and sequence:

Prolonged sitting can lead to poor posture, physical pain, and a myriad of health problems. We can combat this by moving a bit throughout our day. Practice mindful movement by noticing the physical sensations that you experience as you move. No need to judge the experience or try to change it; just notice what you feel.

Remember, as in all mindfulness practices, thoughts will come and go. This is fine! The goal is not to get rid of thoughts. Just notice them when they arrive and gently return your attention to the body.

Gentle Mindful Movement Sequence

Standing

Standing with Raised Arms

Lateral Bend (Crescent Moon)

Spinal Extension and Flexion (Standing Cat and Cow)

Gentle Twist

\*Note: Moving the spine through its full range of motion daily, as in the above sequence, helps maintain and improve mobility and flexibility.\*

Standing Balance (Tree)

Neck Rolls

Shoulder Rolls

Shoulder Stretch (Cow Face Arms)  
Seated Hip Stretch (Seated Pigeon)  
Seated Twist

End your movement session with a few minutes of mindful breathing. What do you notice now? Does your body and/or mood feel different in any way from when you began?

Mindful walking exercise:

Start by standing up. Can you simultaneously be tall and strong but also comfortable and relaxed? Lead the teachers through a minute of foundational breathing to get present. Just stand on the spot, being aware of your weight being transferred through the soles of your feet into the earth. Become aware of all of the subtle movements that happen in order to keep you from falling down.

Line up and walk slowly around the room, down the hall or outside if possible. Teachers may take off their shoes. Make sure that all cell phones are off. Tell teachers that they may smile at others but not speak to them until the walk is finished. Walk naturally and at a normal pace but be aware of what is happening.

Questions to ask teachers as they are walking.

1. Which part of your foot leaves the floor last?
  2. Do you notice any sensations in your ankles?
  3. Are there things that feel unpleasant in the body?
  4. Are you bored? Are you content? Are you irritated? Are you feeling happy? Just notice whatever emotions are present. Remember that no emotion or thought is wrong.
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## **Module 5**

### **Pillar 4 – Resilience**

Mindfulness provides individuals with tools to navigate reactions, make informed decisions, and foster a sense of Resilience, which is the capacity to recover from adverse experiences. The key concepts involved in creating resiliency include motivation, hope, gratitude, and responsibility. According to Shame Resilience Theory (SRT), developed by Brené Brown (2006), individuals who are resilient exhibit specific behavioral and cognitive patterns which include the cultivation of hope, practice of critical awareness, and engagement in structured gratitude practices. People who are resilient are resourceful, good problem solvers, seek help when needed, are capable of managing their feelings, develop strong social support networks, and feel a true sense of connectedness with others in their communities. These patterns of behavior and thought can be developed and sustained with mindfulness practices.

In this module, through mindfulness practices, individuals will be able to cultivate hope as they are able to create space between their perceptions and reactions, understand persistence to be a necessary piece of life, and view hope as, not just an emotion, but a way of thinking. Additionally, mindfulness practices enhance our critical awareness skills by increasing our ability to accept responsibility, sustain motivation, and let go of negative behaviors that take the edge off discomfort and pain. Mindfulness allows us persevere through difficult situations without denying responsibility for our actions and feelings. Finally, a regular gratitude practice is an

integral component to developing and sustaining a mindfulness practice. Through structured practices, we begin to understand gratitude as an orientation, or way of thinking, that allows us to acknowledge connections with others that are grounded in compassion.

**Title.**

Mindfulness and resilience

**Time.**

This module will require two hours to present.

**Event Description.**

This training module will demonstrate to teachers the value of resilience for students in their classrooms and provide tools for teachers to influence mindsets and build resilience. Failure is a necessary and useful part of life and building resilience in students will help them to bounce back from failure and cultivate persistence.

**Target Audience.**

Teachers

**Learning Objectives.**

Understand how mindfulness practices can help us bounce back quicker from adversity. Learn to practice gratitude and hope with students as a strategy for building long-term resilience in students.

**Key Points to Emphasize.**

*cultivating hope.* Using mindfulness skills to see hope not just as an emotion but as a way of thinking. This comes about when we are able to use mindfulness practice to put space between perception and reaction and see persistence as a necessary part of life.

*practicing critical awareness.* The ability to accept responsibility, sustain motivation and let go of numbing behaviors towards pain (the



avoidance of which is part of natural brain operation) are the skills and emotional practice we need to lean into discomfort. These mindfulness practices create space between perception and reaction, allowing for an awareness of the dangers of numbing or not taking responsibility for difficult emotions as we develop the ability to move through challenging experiences. It is imperative to have the capacity to stay mindful in times of great stress and anxiety.

*the concept of gratitude as a structured practice.* Practicing gratitude as an orientation or a way of thinking that includes acknowledgement of connection with others, grounded in compassion.

### **Agenda.**

Ask teachers to set an intention for themselves and for the class and document their intention on the designated form. Explain to teachers that when we connect to the breath, we connect to the present moment. Neuroscience tells us that feelings of hope, gratitude and acceptance can only be experienced in the present moment. In this way, a mindful breathing practice leads to more resilient students and teachers. Ask students to break down into pairs and practice walking each other through a guided breathing exercise.

Explain to teachers that mindfulness provides individuals with tools to navigate reactions, make informed decisions and foster a sense of resilience, which is the capacity to recover from adverse experiences. The key concepts involved in creating resilience include motivation, hope, gratitude and responsibility.

Show the resilience video found at the link below in the resources section. Ask teachers to discuss in small groups adversity that they have experienced and what practices they use to move through difficult situations. Ask teachers to discuss some of the challenges that students face.

Explain that with the mindfulness practices learned today individuals will be able to: cultivate hope as they create space between their perceptions and reactions; understand persistence to be a necessary piece of life; and view hope not just as an emotion, but as a way of thinking. Explain that mindfulness practices enhance our critical awareness skills by increasing our ability to accept responsibility, sustain motivation and let go of negative behaviors that take the edge off discomfort and pain. Mindfulness allows us to persevere through difficult situations without denying responsibility for our actions and feelings. Finally, a regular gratitude practice is an integral component to developing and sustaining a mindfulness practice. Through

structured practices, we begin to understand gratitude as an orientation (or way of thinking) that allows us to acknowledge connections with others that are grounded in compassion.

Ask teachers to discuss how hope can be seen not just as an emotion but as a way of thinking. When we are able to use mindfulness practices to put space between perception and reaction and see persistence as a necessary part of life we begin to have hope in our ability to respond rather than react we understand that we are in control therefore we have hope that our circumstances can improve as we exert force over them and our reactions to them.

Ask teachers to discuss how students taking responsibility over their actions and responses can build resilience. Discuss how the ability to accept responsibility, sustain motivation and let go of numbing behaviors towards pain (the avoidance of which is part of natural brain operation) are the skills and emotional practice we need in order to lean into discomfort. These mindfulness practices create space between perception and reaction, allowing for an awareness of the dangers of numbing or not taking responsibility for difficult emotions as we develop the ability to move through challenging experiences. It is imperative to have the capacity to stay mindful in times of great stress and anxiety.

Discuss the role of gratitude in resilience helps us to focus on growth rather than circumstances. Gratitude allows us to use compassion and connect with others. When difficult situations arise a gratitude practice can help us orient ourselves to the victories. Remind teachers of the mind the bump video where we learned what we practice is what we get. If we practice more worry and stress, we become really good at worry and stress, whereas if we practice gratitude we become very good at being grateful and recognizing the gifts we have to capitalize on. We often talk about wanting students to use their resources and by practicing gratitude students can identify the resources they have at their disposal both within themselves and outside of themselves.

Talk about using mindfulness practices to bear with and through difficult situations. Discuss tactical breathing as practiced in an earlier module. Explain that the military uses square breathing (also called tactical breathing) with the philosophy, "if you don't know your emotions, you can't get done what you need to get done." When emotion washes over us, our body naturally reacts. Breathing gets us to a place where we can pay attention. Tactical breathing helps us tune into our emotions and calms out nervous system so we can bear through tough situations and come out on the other side. This practice teaches us to trust in our own resilience.

Ask teachers to find a tall seat and find their feet flat on the floor. Ask teachers to even out their breaths so that they are inhaling for the same count as their exhale. Ask teachers to take their index finger and draw a square in the air as they breathe. Ask students to breathe in to a count of four, hold their breath for a count of four, breathe out for a count of four, and hold for a count of four. Ask them to coordinate the movement of their finger with the inhale, pause, exhale, pause. After three breath cycles ask them to notice what they notice. If they need to increase the number of seconds from 4 to 5 or 4 to 6 tell them to do so as long as they keep each section in symmetry. After 2-5 minutes of tactical breathing ask students to journal their experience. Ask teachers to share their experiences and discuss.

Explain that gratitude as a practice has demonstrated positive effects for the brain and body. When we practice gratitude, the parasympathetic part of our brain engages, calming our nervous system. When we practice gratitude, the brain releases dopamine to the prefrontal cortex, the part of our brain that controls logic and reasoning. Dopamine is a critical factor in engaging a student's reward and motivation system. By having your students practice gratitude, you encourage the development of a brain ready to learn.

We have learned that mindfulness is a way we can practice paying attention. Gratitude is also a practice. Gratitude can be mindfulness when we practice it as an orientation or a way of thinking that includes acknowledgement of connection with others, grounded in compassion. Like all things that are a practice, we must set up structured ways to do it. Remind teachers that we get more of what we practice. When we practice more gratitude, hope and faith, we get more thankful, hopeful, and trust in our future. As a whole group exercise identify 107 things that the group is grateful for. Take four to six large poster size post-it notes and ask teachers to fill the sheets with a total of 107 things they are grateful for. Ask teachers to reflect on this exercise and discuss in small groups how they could incorporate this into their classroom and content areas.

Finally discuss the importance of self-care in building our own resilience. Discuss the issues with teacher turnover and retention and talk about the importance of mindfully practicing things that are good for them so that they have energy left over for their students. Ask teachers to journal about how they can practice self-care in their work, lives, and relationships. Direct teachers to revisit their intentions and write a 3-5 sentence plan for how they plan to incorporate elements from today's lesson into their own classrooms. Ask teachers to lie on the floor with their legs up a wall or propped up on a

chair. Guide teachers through a 5-10 minute breathing exercise in this restorative pose.

**Materials.**

Large post-it notes and markers, projector and white board with sound, journals, and materials from previous modules.

**Activities.**

Intention setting, practice guided mindful breathing, make a gratitude list, brainstorming, whole group discussion, small group discussion.

**Resources.**

Resilience video link

<https://www.youtube.com/watch?v=GLAdRgft7pU>

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Articles for Use in Training

# How the Brain Changes When You Meditate

By charting new pathways in the brain, mindfulness can change the banter inside our heads from chaotic to calm.

By [Jennifer Wolkin](#) | September 20, 2015



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Not too long ago, most of us thought that the brain we’re born with is static—that after a certain age, the neural circuitry cards we’re dealt are the only ones we can play long-term.

Fast-forward a decade or two, and we’re beginning to see the opposite: the brain is designed to adapt constantly. World-renowned neuroscientist Richie Davidson at the [Center for Healthy Minds](#) at the University of Wisconsin-Madison, along with this colleagues, want us to know three things: 1) you can train your brain to change, 2) that the change is measurable, and 3) new ways of thinking can change it for the better.

It's hard to comprehend how this is possible. Practicing mindfulness is nothing like taking a pill, or another fix that acts quickly, entering our blood stream, crossing the Blood Brain Barrier if needed in order to produce an immediate sensation, or to dull one.

But just as we learn to play the piano through practice, the same goes for cultivating well-being and happiness. Davidson told *Mindful* that the brain keeps changing over its entire lifespan. And he thinks that's very good news:

We can intentionally shape the direction of plasticity changes in our brain. By focusing on wholesome thoughts, for example, and directing our intentions in those ways, we can potentially influence the plasticity of our brains and shape them in ways that can be beneficial. That leads us to the inevitable conclusion that qualities like warm-heartedness and well-being should best be regarded as skills.

Davidson adds that research on neuroplasticity gives neuroscientists a framework for tracking meditation research. And CIHM is beginning to see that "even short amounts of practice," like 30 minutes of meditation per day, "can induce measurable changes in the brain" that can be tracked on a brain scanner.

Based on recent research, I've chosen to share four ways your brain may change when you practice mindfulness:

### **Increased Grey Matter/Cortical Thickness in the following key areas:**

- **Anterior Cingulate Cortex:** Increased grey matter changes were noted in the anterior cingulate cortex (ACC), which is a structure located behind the brain's frontal lobe. It has been associated with such functions as self-regulatory processes, including the ability to monitor attention conflicts, and allow for more cognitive flexibility.
- **Prefrontal Cortex:** Increased grey matter density was also found in areas of the prefrontal lobe, which are primarily responsible for executive functioning such as planning, problem solving, and emotion regulation.
- **Hippocampus:** Increased cortical thickness in the hippocampus has also been noted. The hippocampus is the part of the limbic system that governs learning and

memory, and is extraordinarily susceptible to stress and stress-related disorders like depression or PTSD.

## **Decreased Amygdala Size:**

Studies have shown that the amygdala, known as our brain's "fight or flight" center and the seat of our fearful and anxious emotions, decreases in brain cell volume after mindfulness practice.

## **Diminished or enhanced functionality in certain networks/connections:**

Not only does the amygdala shrink post mindfulness practice, but the functional connections between the amygdala and the pre-frontal cortex are weakened. This allows for less reactivity, and also paves the way for connections between areas associated with higher order brain functions to be strengthened (i.e. attention, concentration, etc.).

## **Reduced activity in the Brain's "Me" Center:**

Mindfulness practice has been implicated in the decreased activation and the stilling of our Default Mode Network (DMN), which is also sometimes referred to as our wandering "Monkey Minds." The DMN is active when our minds are directionless as it goes from thought to thought, a response that is sometimes likened to rumination and not always adaptive with regards to overall happiness.

The impact that mindfulness exerts on our brain is borne from routine: a slow, steady, and consistent reckoning of our realities, and the ability to take a step back, become more aware, more accepting, less judgmental, and less reactive. Just as playing the piano over and over again over time strengthens and supports brain networks involved with playing music, mindfulness over time can make the brain, and thus, us, more efficient regulators, with a penchant for pausing to respond to our worlds instead of mindlessly reacting.

*This post was originally published on [mindful.org](http://mindful.org) in August 2015.*

2/26/2018

7 Ways Meditation Can Actually Change The Brain

Forbes / Pharma &amp; Healthcare

FEB 9, 2015 @ 10:03 AM 636,916

## 7 Ways Meditation Can Actually Change The Brain

**Alice G. Walton**, CONTRIBUTOR*I cover health, medicine, psychology and neuroscience.* [FULL BIO](#) ▾

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The meditation-and-the-brain research has been rolling in steadily for a number of years now, with new studies coming out just about every week to illustrate some new benefit of meditation. Or, rather, some ancient benefit that is just now being confirmed with fMRI or EEG. The practice appears to have an amazing variety of neurological benefits – from changes in grey matter volume to reduced activity in the “me” centers of the brain to enhanced connectivity between brain regions. Below are some of the most exciting studies to come out in the last few years and show that meditation really does produce measurable changes in our most important organ. Skeptics, of course, may ask what good are a few brain changes if the psychological effects aren’t simultaneously being illustrated? Luckily, there’s good evidence for those as well, with studies reporting that meditation helps relieve our subjective levels of anxiety and depression, and improve attention, concentration, and overall psychological well-being.



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### **Meditation Helps Preserve the Aging Brain**

Last week, a [study](#) from UCLA found that long-term meditators had better-preserved brains than non-meditators as they aged. Participants who'd been meditating for an average of 20 years had more grey matter volume throughout the brain — although older meditators still had some volume loss compared to younger meditators, it wasn't as pronounced as the non-meditators. "We expected rather small and distinct effects located in some of the regions that had previously been associated with meditating," said study author Florian Kurth. "Instead, what we actually observed was a widespread effect of meditation that encompassed regions throughout the entire brain."

### **Meditation Reduces Activity in the Brain's "Me Center"**

One of the most interesting [studies](#) in the last few years, carried out at [Yale University](#), found that mindfulness meditation decreases activity in the default mode network (DMN), the brain network responsible for mind-wandering and self-referential thoughts — a.k.a., "monkey mind." The DMN is "on" or active when we're not thinking about anything in particular, when our minds are just wandering from thought to thought. Since mind-wandering is typically [associated with being less happy](#), ruminating, and worrying about the past and future, it's the goal for many

<https://www.forbes.com/sites/alicegwalton/2015/02/09/7-ways-meditation-can-actually-change-the-brain/#60a314cf1465>

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people to dial it down. Several studies have shown that meditation, through its quieting effect on the DMN, appears to do just this. And even when the mind does start to wander, because of the new connections that form, meditators are better at snapping back out of it.

### **Its Effects Rival Antidepressants for Depression, Anxiety**

A review [study](#) last year at Johns Hopkins looked at the relationship between mindfulness meditation and its ability to reduce symptoms of depression, anxiety, and pain. Researcher Madhav Goyal and his team found that the effect size of meditation was moderate, at 0.3. If this sounds low, keep in mind that the effect size for antidepressants is also 0.3, which makes the effect of meditation sound pretty good. Meditation is, after all an active form of brain training. “A lot of people have this idea that meditation means sitting down and doing nothing,” says Goyal. “But that’s not true. Meditation is an active training of the mind to increase awareness, and different meditation programs approach this in different ways.” Meditation isn’t a magic bullet for depression, as no treatment is, but it’s one of the tools that may help manage symptoms.

### **Meditation May Lead to Volume Changes in Key Areas of the Brain**

In 2011, Sara Lazar and her team at Harvard [found](#) that mindfulness meditation can actually change the structure of the brain: Eight weeks of Mindfulness-Based Stress Reduction (MBSR) was found to increase cortical thickness in the hippocampus, which governs learning and memory, and in certain areas of the brain that play roles in emotion regulation and self-referential processing. There were also *decreases* in brain cell volume in the amygdala, which is responsible for fear, anxiety, and stress – and these changes matched the participants’ self-reports of their stress levels, indicating that meditation not only changes the brain, but it changes our subjective perception and feelings as well. In fact, a follow-up [study](#) by Lazar’s team found that after meditation training, changes in brain areas linked to mood and arousal were also linked to improvements in how participants said they felt – i.e., their psychological well-being. So for anyone who says that activated blobs in the brain don’t necessarily mean anything, our subjective experience – improved mood and well-being – does indeed seem to be shifted through meditation as well.

### **Just a Few Days of Training Improves Concentration and Attention**

<https://www.forbes.com/sites/alicegalton/2015/02/09/7-ways-meditation-can-actually-change-the-brain/#60a314cf1465>

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Having problems concentrating isn't just a kid thing – it affects millions of grown-ups as well, with an ADD diagnosis or not. Interestingly but not surprisingly, one of the central benefits of meditation is that it improves attention and concentration: One recent [study](#) found that just a *couple* of weeks of meditation training helped people's focus and memory during the verbal reasoning section of the GRE. In fact, the increase in score was equivalent to 16 percentile points, which is nothing to sneeze at. Since the strong focus of attention (on an object, idea, or activity) is one of the central aims of meditation, it's not so surprising that meditation should help people's cognitive skills on the job, too – but it's nice to have science confirm it. And everyone can use a little extra assistance on standardized tests.

### **Meditation Reduces Anxiety – and Social Anxiety**

A lot of people start meditating for its benefits in stress reduction, and there's lots of good evidence to support this rationale. There's a whole newer sub-genre of meditation, mentioned earlier, called Mindfulness-Based Stress Reduction (MBSR), developed by Jon Kabat-Zinn at the University of Massachusetts' Center for Mindfulness (now available all over the country), that aims to reduce a person's stress level, physically and mentally. Studies have shown its benefits in reducing anxiety, [even years after](#) the initial 8-week course. [Research](#) has also shown that mindfulness meditation, in contrast to attending to the breath only, can reduce anxiety – and that these changes seem to be mediated through the brain regions associated with those self-referential (“me-centered”) thoughts. Mindfulness meditation has also [been shown](#) to help people with social anxiety disorder: a Stanford University team found that MBSR brought about changes in brain regions involved in attention, as well as relief from symptoms of social anxiety.

### **Meditation Can Help with Addiction**

A growing number of [studies](#) has shown that, given its effects on the self-control regions of the brain, meditation can be very effective in helping people recover from various types of addiction. One [study](#), for example, pitted mindfulness training against the American Lung Association's freedom from smoking (FFS) program, and found that people who learned mindfulness were many times more likely to have quit smoking by the end of the training, and at 17 weeks follow-up, than those in the conventional treatment. This may be because meditation helps people “decouple” the state of craving from the act of smoking, so the one doesn't always have to lead to the other, but rather you fully experience and ride out the “wave” of craving, until it passes. Other research has found that mindfulness training, mindfulness-based

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cognitive therapy (MBCT), and [mindfulness-based relapse prevention \(MBRP\)](#) can be helpful in treating other forms of addiction.

### Short Meditation Breaks Can Help Kids in School

For developing brains, meditation has as much as or perhaps even more promise than it has for adults. There’s been increasing [interest](#) from educators and [researchers](#) in bringing meditation and yoga to school kids, who are dealing with the usual stressors inside school, and oftentimes additional stress and trauma outside school. Some [schools](#) have starting implementing meditation into their daily schedules, and with good effect: One district in San Francisco started a twice daily meditation program in some of its high-risk schools – and saw suspensions decrease, and GPAs and attendance increase. [Studies](#) have confirmed the cognitive and emotional benefits of meditation for schoolchildren, but more work will probably need to be done before it gains more widespread acceptance.

### Worth a Try?

Meditation is not a panacea, but there’s certainly a lot of evidence that it may do some good for those who practice it regularly. Everyone from [Anderson Cooper](#) and congressman Tim Ryan to companies like [Google](#) GOOGL +1.23% and [Apple](#) AAPL +1.82% and [Target](#) TGT +1.86% are integrating meditation into their schedules. And its benefits seem to be felt after a relatively short amount of practice. Some [researchers](#) have cautioned that meditation can lead to ill effects under certain circumstances (known as the “dark night” phenomenon), but for most people – especially if you have a good teacher – meditation is beneficial, rather than harmful. It’s certainly worth a shot: If you have a few minutes in the morning or evening (or both), rather than turning on your phone or going online, see what happens if you try quieting down your mind, or at least paying attention to your thoughts and letting them go without reacting to them. If the research is right, [just a few minutes of meditation](#) may make a big difference.

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**Harvard  
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# Mindfulness Can Literally Change Your Brain

by Christina Congleton, Britta K. Hölzel, and Sara W. Lazar

JANUARY 08, 2015

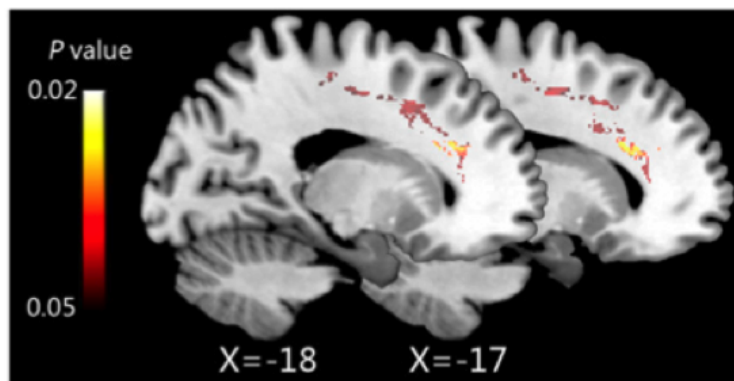


The business world is abuzz with mindfulness. But perhaps you haven't heard that the hype is backed by hard science. Recent research provides strong evidence that practicing non-judgmental, present-moment awareness (a.k.a. mindfulness) changes the brain, and it does so in ways that anyone working in today's complex business environment, and certainly every leader, should know about.

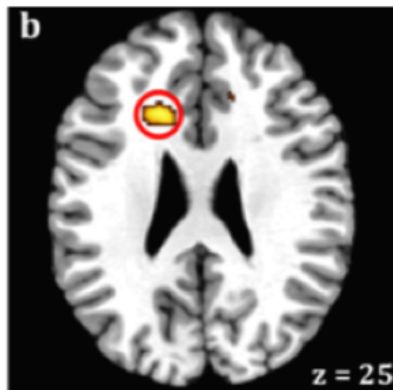
We contributed to this research in 2011 with a study on participants who completed an eight-week mindfulness program. We observed significant increases in the density of their gray matter. In the years since, other neuroscience laboratories from around the world have also investigated ways in which meditation, one key way to practice mindfulness, changes the brain. This year, a team of scientists from the University of British Columbia and the Chemnitz University

of Technology were able to pool data from more than 20 studies to determine which areas of the brain are consistently affected. They identified at least eight different regions. Here we will focus on two that we believe to be of particular interest to business professionals.

The first is the anterior cingulate cortex (ACC), a structure located deep inside the forehead, behind the brain’s frontal lobe. The ACC is associated with self-regulation, meaning the ability to purposefully direct attention and behavior, suppress inappropriate knee-jerk responses, and switch strategies flexibly. People with damage to the ACC show impulsivity and unchecked aggression, and those with impaired connections between this and other brain regions perform poorly on tests of mental flexibility: they hold onto ineffective problem-solving strategies rather than adapting their behavior. Meditators, on the other hand, demonstrate superior performance on tests of self-regulation, resisting distractions and making correct answers more often than non-meditators. They also show more activity in the ACC than non-meditators. In addition to self-regulation, the ACC is associated with learning from past experience to support optimal decision-making. Scientists point out that the ACC may be particularly important in the face of uncertain and fast-changing conditions.

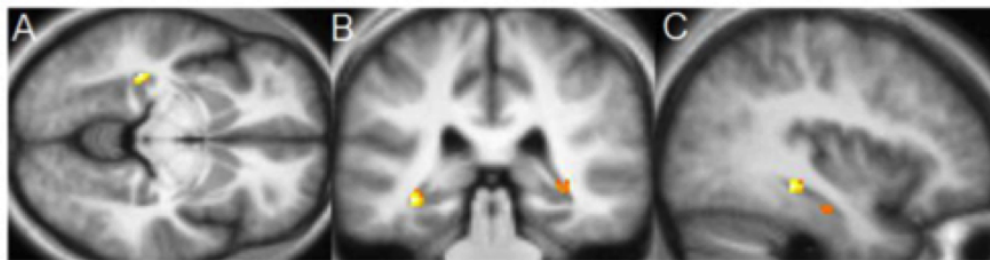


(Source: Tang et al.)



(Source: Fox et al.)

The second brain region we want to highlight is the hippocampus, a region that showed increased amounts of gray matter in the brains of our 2011 mindfulness program participants. This seahorse-shaped area is buried inside the temple on each side of the brain and is part of the limbic system, a set of inner structures associated with emotion and memory. It is covered in receptors for the stress hormone cortisol, and studies have shown that it can be damaged by chronic stress, contributing to a harmful spiral in the body. Indeed, people with stress-related disorders like depression and PTSD tend to have a smaller hippocampus. All of this points to the importance of this brain area in resilience—another key skill in the current high-demand business world.



(Source: Hölzel et al.)

These findings are just the beginning of the story. Neuroscientists have also shown that practicing mindfulness affects brain areas related to perception, body awareness, pain tolerance, emotion regulation, introspection, complex thinking, and sense of self. While more research is needed to document these changes over time and to understand underlying mechanisms, the converging evidence is compelling.

Mindfulness should no longer be considered a “nice-to-have” for executives. It’s a “must-have”: a way to keep our brains healthy, to support self-regulation and effective decision-making capabilities, and to protect ourselves from toxic stress. It can be integrated into one’s religious or spiritual life, or practiced as a form of secular mental training. When we take a seat, take a breath, and commit to being mindful, particularly when we gather with others who are doing the same, we have the potential to be changed.



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**Arthur Marr** a month ago

an alternative to Lazar’s interpretation of mindfulness, also based on neuroscience.

Here is a brief and simple argument that ‘meditative states’ actually represent the overlap of two distinct neuro-physiological states: somatic and neurologic rest. A more expansive explanation of my position, written for a lay audience, is linked below, and is based in large measure on the work of the distinguished affective neuroscientist Kent Berridge of the University of Michigan, who was kind to review and endorse the extended argument.

**A Note on Resting States, Resting Brains, and Meditative States**

A resting state, or ‘somatic rest’, would seem to correspond with a brain at rest or ‘neurologic’ rest, but by definition, somatic and neurologic rest are entirely different things. A resting ‘state’ or somatic rest represents the inactivity of the striatal musculature that results from the application of resting protocols (continual avoidance of perseverative thought represented by rumination, worry, and distraction.). Resting states also are affective states, as they elicit opioid activity in the brain. Resting states in turn may occur in tandem with all levels of non-perseverative thought that are passive or active, from just passively ‘being in the moment’ or being mindful, to actively engaging in complex and meaningful cognitive behavior. The latter cognitive behavior is also additionally affective in nature due to its elicitation of dopaminergic activity, and resulting opioid-dopamine interaction results in a perceived state of ‘bliss’ or ‘flow’. On the other hand, a resting ‘brain’, neurologic rest, or the so-called ‘default mode network’ is a specific type of neural processing that occurs when the mind is in a ‘passive’ state, or in other words, is presented with no or very limited cognitive demands. This results in ‘mind wandering’ that can entail non-perseverative (creative thought) or perseverative thought (rumination, worry). As such a resting brain may or may not correlate with somatic rest, and is correlated with a level of demand, not a kind of demand, as in somatic rest.

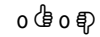
Like the broad color palate that emerges from the intermix of three primary colors, it may be argued that meditative states are simply emergent properties of two very distinctive neuro-physiological resting states that have separate and easily definable causes. It is remarkable that in the literature of meditation, the neuro-physiology of rest both in body and mind is not defined, with a similar neglect to how neuro-muscular activity is actively shaped by experience


or learning. The importance of meditation is very real, and the meditative community is understandably averse to equating it with rest since it makes meditation less ‘special’ or less marketable. But that is my argument nonetheless, which in the end provides a better advocacy of meditation by denying that meditation elicits a unique physiological process or state, which like the concept of ‘phlogiston’, or the imaginary element that enabled fire, impedes rather than furthers scientific inquiry

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## PRACTICE REVIEW

# What Are the Benefits of Mindfulness? A Practice Review of Psychotherapy-Related Research

Daphne M. Davis and Jeffrey A. Hayes  
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Research suggests that mindfulness practices offer psychotherapists a way to positively affect aspects of therapy that account for successful treatment. This paper provides psychotherapists with a synthesis of the empirically supported advantages of mindfulness. Definitions of mindfulness and evidence-based interpersonal, affective, and intrapersonal benefits of mindfulness are presented. Research on therapists who meditate and client outcomes of therapists who meditate are reviewed. Implications for practice, research, and training are discussed.

*Keywords:* mindfulness, psychotherapy, meditation, literature review

Mindfulness has enjoyed a tremendous surge in popularity in the past decade, both in the popular press and in the psychotherapy literature (Didonna, 2009a; Shapiro & Carlson, 2009). Owing largely to the success of mindfulness-based stress reduction (MBSR) programs and the central role of mindfulness in dialectical behavior therapy, as well as acceptance and commitment therapy, mindfulness has moved from a largely obscure Buddhist concept to a mainstream psychotherapy construct. Advocates of mindfulness would have us believe that virtually every client, and their therapists, would benefit from being mindful. In fact, mindfulness has been proposed as a common factor in psychotherapy (Martin, 1997). Among its theorized benefits are self-control (Bishop et al., 2004; Masicampo & Baumeister, 2007), objectivity (Adele & Feldman, 2004; Brown, Ryan, & Creswell, 2007; Leary & Tate, 2007; Shapiro, Carlson, Astin, & Freedman, 2006), affect tolerance (Fulton, 2005), enhanced flexibility (Adele & Feldman, 2004), equanimity (Morgan & Morgan, 2005), improved concentration and mental clarity (Young, 1997), emotional intelligence (Walsh & Shapiro, 2006), and the ability to relate to others and one's self with kindness, acceptance, and compassion (Fulton, 2005; Wallace, 2001). Is mindfulness as good as advertised, however? What does the research literature have to say about the benefits of mindfulness? The purpose of this paper is to provide psychotherapists with information about the empirically supported advantages of mindfulness, contextualized by effect sizes of these advantages. In addition, we review research on practices that have been found to promote mindfulness, as well as the effects on therapists and trainees exposed to mindfulness meditation. The paper concludes with implications for practice, research, and train-

ing. We begin by exploring the meaning of the term "mindfulness."

### Definitions: Ancient and Modern

The term "mindfulness" has been used to refer to a psychological state of awareness, a practice that promotes this awareness, a mode of processing information, and a characterological trait (Brown et al., 2007; Germer, Siegel, & Fulton, 2005; Kostanski & Hased, 2008; Siegel, 2007b). The word *mindfulness* originally comes from the Pali word *sati*, which means having awareness, attention, and remembering (Bodhi, 2000). Mindfulness can simply be defined as "moment-by-moment awareness" (Germer et al., 2005, p. 6) or as "a state of *psychological freedom* that occurs when attention remains quiet and limber, *without attachment* to any particular point of view" (Martin, 1997, p. 291, italics included in original text). For the purposes of the present paper, and for the sake of consistency with most of the research that is reviewed subsequently, mindfulness is defined as a moment-to-moment awareness of one's experience without judgment. In this sense, mindfulness is viewed as a state and not a trait, and while it might be promoted by certain practices or activities (e.g., meditation), it is not equivalent to or synonymous with them. When slightly different definitions of mindfulness are used in the literature that is reviewed, these shall be noted.

Mindfulness has similarities to other psychotherapy-related constructs. For example, mindfulness is similar to mentalization (Bateman & Fonagy, 2004, 2006; Fonagy & Bateman, 2008), the developmental process of understanding one's own and others' behavior in terms of individuals' thoughts, feelings, and desires. Both constructs emphasize the temporary, subjective, and fluid nature of mental states and both are thought to enhance affect regulation and cognitive flexibility (Wallin, 2007). Mindfulness differs from mentalizing in that mindfulness is both being aware of the "reflective self" engaged in mentalizing, and the practice of fully experiencing the rising and falling of mental states with acceptance and without attachment and judgment. Wallin proposes

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that the receptivity that mindfulness fosters enables the process of mentalization to occur.

A second construct, intersubjectivity (Benjamin, 1990), has been theorized to relate to Buddhist psychology (Epstein, 2007; Surrey, 2005; Thompson, 2001; Wallace, 2001) and to being in the present moment in psychotherapy (Stern, 2004). Mindfulness and intersubjectivity are similar in that they both enable a sense of connection with others (Thompson, 2001), or what Thich Nhat Hanh (1987) calls interbeing. Interbeing is a Buddhist notion that by living in the present moment, the interdependent nature of all phenomena and people is experienced (Hanh, 1987). To date, there is no research relating mindfulness with either mentalization or intersubjectivity.

Finally, insight, the conscious process of making novel connections (Hill & Castonguay, 2007), can be construed as a beneficial outcome of mindfulness practice. Siegel (2007b, 2009) has proposed a neurological basis for the connection between mindfulness and insight, and research discussed later in this article has begun to support this proposition.

**How Can Mindfulness Be Enhanced?**

Although there are several disciplines and practices that can cultivate mindfulness (e.g., yoga, tai chi, qigong; Siegel, 2007b), the majority of theoretical writing and empirical research on the subject has focused on mindfulness developed by mindfulness meditation. Meditation refers to:

A family of self-regulation practices that focus on training attention and awareness in order to bring mental processes under greater voluntary control and thereby foster general mental well-being and development and/or specific capacities such as calm, clarity, and concentration (Walsh & Shapiro, 2006, p. 228).

While a myriad of meditation practices including Tibetan and Zen Buddhist meditation styles also cultivate mindfulness, the term *mindfulness meditation* is typically used synonymously with Vipassana, a form of meditation that derives from Theravada Buddhism (Gunaratana, 2002; Young, 1997). Vipassana is a Pali word for insight or clear awareness and is a practice designed to gradually develop mindfulness or awareness (Gunaratana, 2002).

Mindfulness is systematically cultivated in Vipassana practice by applying one’s attention to one’s bodily sensations, emotions, thoughts, and surrounding environment (Bodhi, 2000; Germer, 2005; Germer et al., 2005; Gunaratana, 2002; Wallace, 2001; Young, 1997).

While it may be assumed that all meditation practices equally benefit the practitioner, research rather intriguingly suggests that different styles of meditation practice elicit different brain activity patterns (Cahn & Polich, 2006; Lutz, Dunne, & Davidson, 2007; Valentine & Sweet, 1999). For example, mindfulness meditation more than concentrative forms of meditation (e.g., focusing on a mantra) has been shown to stimulate the middle prefrontal brain associated with both self-observation and metacognition (Cahn & Polich, 2006; Siegel, 2007b) and foster specific attentional mechanisms (Valentine & Sweet, 1999). With the advancement of neurological technology, mindfulness researchers are examining distinct components of mindfulness meditation such as focused attention, open monitoring (nonjudgmental moment-to-moment observation of one’s experience), and loving-kindness compassion practice and their specific physiological outcomes (Lutz, Slagter, Dunne & Davidson, 2008; Lutz et al., 2009).

**Empirically Supported Benefits of Mindfulness**

As research evidence begins to accumulate concerning the positive outcomes of mindfulness, it is possible to categorize these benefits along several dimensions. Three dimensions that are particularly relevant to psychotherapy pertain to the affective, interpersonal, and other intrapersonal benefits of mindfulness. Another empirically supported benefit of mindfulness, empathy, will be discussed later in the paper when research is reviewed on therapists who practice mindfulness meditation. Practical examples of mindfulness-based interventions that could be used with clients are provided in Table 1.

**Affective Benefits**

**Emotion regulation.** There is evidence that mindfulness helps develop effective emotion regulation in the brain (Corcoran, Farb, Anderson, & Segal, 2010; Farb et al., 2010; Siegel, 2007b).

Table 1  
*Examples of Mindfulness-Based Interventions for Clients*

Benefits	Practical mindfulness-based interventions to use with clients	
Emotion regulation	“Can you stay with what is happening right now? . . . Can you breathe with what is happening right now?” <sup>1</sup>	“What can you tell me about your experience right now? Notice any changes in your feeling, however subtle.” <sup>2</sup>
Decreased reactivity & increased response flexibility	Slowly scan your entire body starting at your toes. Notice any sensations in your body without trying to change them. <sup>3</sup>	Can you allow and accept this feeling and stay in touch with it without reacting to it? If not, what is happening in your experience that’s reacting to this feeling? <sup>4</sup>
Interpersonal benefits	For couples: Face each other, look into each other’s eyes and notice what reactions, feelings, and thoughts arise. <sup>5</sup>	For couples: Face each other, look into each other’s eyes, and practice sending loving-kindness to one another. <sup>5</sup>
Intrapersonal benefits	Therapist and client can practice mindfulness meditation together during the therapy session. <sup>6</sup>	Informal daily practice can include: walking and eating meditations, such as mentally saying “lifting . . . stepping forward . . . heel touching . . . toe touching . . . lifting . . .” when walking. <sup>7</sup>

<sup>1</sup> (Morgan, 2005, p. 135). <sup>2</sup> (Morgan, 2005, p. 138). <sup>3</sup> (Body Scan, Kabat-Zinn, 1990). <sup>4</sup> (Adapted from Didonna, 2009b). <sup>5</sup> (MBRE, Carson et al., 2006). <sup>6</sup> (Lysack, 2005). <sup>7</sup> (Germer, 2005, p.14).

In terms of proposed mechanisms of change, Corcoran et al. theorize that mindfulness meditation promotes metacognitive awareness, decreases rumination via disengagement from perseverative cognitive activities, and enhances attentional capacities through gains in working memory; these cognitive gains, in turn, contribute to effective emotion regulation strategies.

In support of Corcoran et al.’s model, research indicates that mindfulness meditation is negatively associated with rumination and is directly related to effective emotion regulation (Chambers, Lo, & Allen, 2008; McKim, 2008; Ramel, Goldin, Carmona, & McQuaid, 2004). In particular, 20 nonclinical novice meditators who participated in a 10-day intensive mindfulness meditation retreat were compared to a waitlisted control group on mindfulness, rumination, affect, and performance tasks for attention switching, sustained attention and working memory (Chambers et al., 2008). Following the meditation retreat, the meditation group had significantly higher self-reported mindfulness, decreased negative affect, fewer depressive symptoms, and less rumination compared to the control group. In addition, the meditation group had significantly better working memory capacity and greater ability to sustain attention during a performance task compared to the control group. Differences were not detected between the groups on self-reported anxiety or positive affect.

Chambers et al.’s (2008) finding that mindfulness training decreased rumination is consistent with research with participants having chronic mood disorders. Ramel et al. (2004) found that participants in an 8-week MBSR training had significantly less reflective rumination compared to: a) participants’ initial rumination scores, and b) a control group matched on age, gender, and initial depressive symptoms. In addition, decreases in rumination scores were significantly predicted by participants’ amount of meditation practice. In another study, prepost scores after an 8-week MBSR intervention were compared among a community sample that experienced ongoing anxiety, depression, and/or chronic pain (McKim, 2008). Following MBSR, participants had significantly higher scores on self-reported mindfulness and significantly lower scores on self-reported rumination, psychological distress, depression, anxiety, and physical illness. Mindfulness scores significantly predicted anxiety, rumination, medical symptoms, and psychological distress. Furthermore, the relationship between mindfulness and depression was significantly mediated by decreased rumination.

A recent meta-analysis of 39 studies supports the efficacy of mindfulness-based therapy for reducing anxiety and depression symptoms (Hoffman, Sawyer, Witt, & Oh, 2010). MBSR and mindfulness-based cognitive therapy constituted the majority of mindfulness-based therapies in these 39 studies. For clinical populations, the average prepost effect size was large, and a moderate effect size was found among nonclinical populations. For 19 studies that assessed depressive and anxiety symptoms in long-term follow-ups, moderate effect sizes supporting the effectiveness of mindfulness interventions were detected. Hoffman et al. concluded that mindfulness-based therapy has utility for potentially altering affective and cognitive processes that underlie multiple clinical issues.

Hoffman et al. (2010)’s findings are consistent with evidence that mindfulness meditation leads to increased positive affect and decreased anxiety and negative affect (Davidson et al., 2003; Erisman & Roemer, 2010; Farb et al., 2010; Jha, Stanley, Kiyonaga, Wong, & Gelfand, 2010; Way, Creswell, Eisenberger, &

Lieberman, 2010). In one study, participants randomly assigned to an 8-week MBSR training group were compared to waitlisted controls on self-report measures of depression, anxiety, and psychopathology and on neural reactivity as measured by functional magnetic resonance imaging (fMRI) after watching sad films (Farb et al., 2010). Participants exposed to MBSR displayed significantly less anxiety, depression, and somatic distress relative to the control group (Farb et al., 2010). Still further, fMRI data indicated that the MBSR group had less neural reactivity while exposed to the films than the control group, and they displayed distinctively different neural responses while watching the films than they did prior to the MBSR training. These findings suggest that mindfulness meditation shifts individuals’ ability to employ emotion regulation strategies that enable them to experience emotion selectively, and that the emotions they experience may be processed differently in the brain (Farb et al., 2010; Williams, 2010).

In a study of trait mindfulness, Way et al. (2010) investigated the relationships among mindfulness, depressive symptoms, and neural activity in a nonclinical sample of adults. Trait mindfulness was found to be inversely related to amygdala activity when participants were in a resting state; amygdala activity was further associated with depressive symptoms. This study provides support that trait mindfulness may alter baseline amygdala activity so that serves a preventive or buffering role in depressive mood.

Erisman and Roemer (2010) conducted a study in which participants in an experimental group were exposed to a brief mindfulness intervention and then watched film clips that contained either positive affect or mixed affect. Compared to a control group, participants in the experimental group reported more positive emotions after watching the film clips containing positive affect and reported less negative emotions after watching affectively mixed film clips.

Jha et al. (2010) examined working memory capacity and emotional experience among a military group who participated in an 8-week mindfulness training, a nonmeditating military group, and civilians; both military groups were in a highly stressful predeployment period. The nonmeditating military group displayed decreased working memory capacity over time whereas working memory capacity among nonmeditating civilians was stable across time. Within the meditation military group, working memory capacity increased in proportion to actual amount of meditation practice. In addition, meditation practice was directly related to self-reported positive affect and inversely related to self-reported negative affect. Working memory capacity mediated the relationship between meditation practice time and negative affect. These findings suggest that adequate mindfulness meditation practice may enhance working memory capacity, similar to results obtained by Chambers et al. (2008), thereby promoting effective emotion regulation during periods of stress when working memory may otherwise diminish.

Thus, research indicates that meditation may elicit positive emotions, minimize negative affect and rumination, and enable effective emotion regulation. Even eight weeks of mindfulness meditation practice may alter the ways in which emotions are regulated and processed in the brain (Williams, 2010). Emotion regulation has such strong empirical support as a benefit of mindfulness meditation that recently the term “mindful emotion regulation” was coined to refer to “the capacity to remain mindfully aware at all times, irrespective of the apparent valence or magni-

tude of any emotion that is experienced” (Chambers, Gullone, & Allen, 2009, p. 569).

**Decreased reactivity and increased response flexibility.** Research has demonstrated that mindfulness meditation enables people to become less reactive (Cahn & Polich, 2009; Goldin & Gross, 2010; Ortner, Kiner, & Zelazo, 2007; Siegel, 2007a, 2007b) and have greater cognitive flexibility (Moore & Malinowski, 2009; Siegel, 2007a, 2007b). Evidence indicates that mindfulness meditators develop the skill of self-observation that neurologically disengages automatic pathways created from prior learning and enables present moment input to be integrated in a new way (Siegel, 2007a). Meditation activates regions of the brain associated with more adaptive responding to stressful or negative situations (Cahn & Polich, 2006; Davidson et al., 2003). Activation of this region of the brain corresponds with faster recovery to baseline after being negatively provoked (Davidson, 2000; Davidson, Jackson, & Kalin, 2000).

Moore and Malinowski (2009) compared a group of experienced mindfulness meditators with a control group who had no meditation experience on measures assessing their ability to focus attention and suppress distracting information. The meditation group had significantly better performance on all measures of attention and had higher self-reported mindfulness. Mindfulness meditation practice and self-reported mindfulness were correlated directly with cognitive flexibility and attentional functioning.

In another study, individuals with one month to 29 years of mindfulness meditation practice experience viewed pleasant, unpleasant, and neutral pictures and then had their reaction times measured to categorizing tones as either short or long (Ortner et al., 2007). Reaction time was thought to represent emotional interference with the categorization task. Meditation experience was inversely related to emotional interference when viewing unpleasant pictures. Ortner et al. suggest that mindfulness meditation practice may help individuals disengage from emotionally upsetting stimuli, enabling attention to be focused on the cognitive task at hand. In a follow-up study, participants were assigned to either a 7-week training in mindfulness meditation, relaxation meditation, or a waiting list control group. The mindfulness meditation group exhibited less emotional interference in response to the unpleasant pictures than the other groups. Ortner et al.’s findings support the notion that mindfulness meditation decreases emotional reactivity.

In addition, Cahn and Polich (2009) assessed the reactions of very experienced mindfulness meditators to distracting stimuli. Findings revealed that while in a meditative state, practitioners displayed minimal emotional and cognitive reactivity to distracting stimuli. These findings support the notion that mindfulness meditation contributes to decreased reactivity.

A recent study investigated the effects of MBSR training on emotional reactivity and regulation of negative self-beliefs among adults with social anxiety disorder (Goldin & Gross, 2010). Participants completed two attention tasks before and after participating in an 8-week MBSR training. In pretest tests, participants displayed lower levels of negative emotion, decreased amygdala activity, and increased levels of activity in areas of the brain associated with attentional deployment.

### Interpersonal Benefits

The question of how mindfulness affects interpersonal behavior has been pursued recently by scholars who have addressed concepts such as mindful relating (Wachs & Cordova, 2007), mindful responding in couples (Block-Lerner, Adair, Plumb, Rhatigan, & Orsillo, 2007), and mindfulness-based relationship enhancement (MBRE) (Carson, Carson, Gil, & Baucom, 2006). Evidence indicates that trait mindfulness predicts relationship satisfaction, ability to respond constructively to relationship stress, skill in identifying and communicating emotions to one’s partner, amount of relationship conflict, negativity, and empathy (Barnes, Brown, Krusemark, Campbell, & Rogge, 2007; Wachs & Cordova, 2007). Barnes et al. found that people with higher trait mindfulness reported less emotional stress in response to relationship conflict and entered conflict discussion with less anger and anxiety. Evidence shows that mindfulness is inversely correlated with distress contagion and directly correlated with the ability to act with awareness in social situations (Dekeyser, Raes, Leijssen, Leyson, & Dewulf, 2008). Thus, empirical evidence suggests that mindfulness protects against the emotionally stressful effects of relationship conflict (Barnes et al., 2007), is positively associated with the ability to express oneself in various social situations (Dekeyser et al., 2008), and predicts relationship satisfaction (Barnes et al., 2007; Wachs & Cordova, 2007). Given that the therapeutic relationship is emotionally intimate, potentially conflictual, and inherently interpersonal, therapists’ trait mindfulness may aid their ability to cultivate and sustain successful relationships with clients.

### Other Intrapersonal Benefits

In addition to the affective and interpersonal benefits identified above, mindfulness has been shown to enhance functions associated with the middle prefrontal lobe area of the brain, such as self-insight, morality, intuition, and fear modulation (Siegel, 2007b, 2009). There is also evidence that mindfulness meditation has numerous health benefits including increased immune functioning (Davidson et al., 2003; see Grossman, Niemann, Schmidt, & Walach, 2004 for a review of physical health benefits). Mindfulness meditation has been shown to improve well-being (Carmody & Baer, 2008) and reduce psychological distress (Coffey & Hartman, 2008; Ostafin et al., 2006).

Neuroplasticity—the rewiring that occurs in the brain as a result of experience—now explains how regular mindfulness meditation practice alters the brain’s physical structure and functioning (Davidson et al., 2003; Lazar et al., 2005; Siegel, 2007a; Vestergaard-Poulsen et al., 2009). Changes in the structure of the brain include thicker brain regions associated with attention, sensory processing and sensitivity to internal stimuli (Lazar et al., 2005), distinct gray matter concentrations (Hölzel et al., 2008), and thicker brain stems, which may account for positive cognitive, emotional and immunoreactive benefits (Vestergaard-Poulsen et al., 2009). Research suggests that states experienced during mindfulness meditation eventually can become effortless traits over time (Farb et al., 2007; Siegel, 2007a). Thus, the longer therapists practice mindfulness meditation, the more they may benefit from its effects.

Other benefits of mindfulness meditation practice include increased information processing speed (Moore & Malinowski,

2009), decreased task effort (Lutz et al., 2009), and having fewer thoughts that are unrelated to the task at hand (Lutz et al., 2009). In particular, Lutz et al.’s research implies that due to increased attentional skills and increased ability to manage distractions, therapists who practice mindfulness meditation may have an increased ability to be present to their clients.

**Effects of Meditation on Therapists and Therapist Trainees**

Whereas the literature on the benefits of applying mindfulness approaches to psychotherapy clients is vast (see Didonna, 2009 and Baer, 2006 for reviews), research on the effects of mindfulness on psychotherapists is gradually emerging. This body of literature will be reviewed and synthesized below. Practical examples of mindfulness-based interventions for therapists and therapist trainees in practice are shown in Table 2.

**Empathy**

Mindfulness meditation consistently has been theorized to promote empathy (Anderson, 2005; Fulton, 2005; Martin, 1997; Morgan & Morgan, 2005; Shapiro & Izett, 2008; Walsh & Shapiro, 2006), and research utilizing a variety of methods is now accumulating in support of this premise. In a within-subjects study on meditation and empathy, counselors in training demonstrated increased empathy after participating in a 4-week Zen meditation training (Lesh, 1970). In a between-groups experiment, premedical and medical students who participated in an 8-week MBSR training had significantly higher self-reported empathy than a control group (Shapiro, Schwartz, & Bonner, 1998). A qualitative study (Aiken, 2006) of therapists who were experienced meditators

found that they believed that mindfulness meditation helped develop empathy toward clients. In particular, interviews were conducted with six psychotherapists who each had more than 10 years of experience practicing both therapy and mindfulness meditation. Consistent themes from the data indicated that mindfulness helps therapists: develop their ability to experience and communicate a felt sense of clients’ inner experiences; be more present to clients’ suffering; and help clients express their body sensations and feelings. Finally, along similar lines, Wang (2007) used a passive design and found that therapists who were experienced mindfulness meditators scored higher on measures of self-reported empathy than therapists who did not meditate.

**Compassion**

In addition to empathy, a second therapist characteristic that seems to derive from meditation is compassion. For example, MBSR training has been found to enhance self-compassion in health care professionals (Shapiro, Astin, Bishop, & Cordova, 2005) and therapist trainees (Shapiro, Brown, & Biegel, 2007). Kingsbury (2009) investigated the role of self-compassion in relation to mindfulness. Two components of mindfulness, nonjudging and nonreacting, were strongly correlated with self-compassion, and two dimensions of empathy, taking on others’ perspectives (i.e., perspective taking) and reacting to others’ affective experiences with discomfort. Self-compassion fully mediated the relationship between perspective taking and mindfulness.

**Counseling Skills**

Empirical literature now demonstrates that including mindfulness interventions in psychotherapy training may contribute to the

Table 2  
*Examples of Mindfulness-Based Interventions for Trainees and Therapists*

Benefits	Practical mindfulness-based interventions for trainees’ and therapists’ mindfulness	
Empathy	In trainee dyads in “therapist” & “client” roles: Have therapists track their internal responses to client, and what makes them feel more and less empathetic towards client. <sup>7</sup>	In dyads, pause after each person speaks and consciously relax. While pausing, with acceptance and curiosity ask yourself: What is happening now? What am I feeling now? What might this person be experiencing? <sup>8</sup>
Compassion	Visualize an image, color, or memory that elicits feeling friendly towards yourself. Visualize sending this feeling towards an image of yourself, or a challenging client. <sup>9</sup>	Practice sending loving-kindness towards oneself, towards a loved one, towards a ‘neutral’ client, towards a challenging client, and towards all beings. <sup>9</sup>
Counseling skills	In dyads, sit in silence with eyes open. Pay attention to your internal experience in the presence of another person, practicing to bring your attention back to their breath when it wanders. <sup>10</sup>	In trainee dyads in “therapist” & “client” roles: Have therapists let go of judgments and the desire to say ‘something’ and practice fully listening to clients. Have therapists track when their attention wanders off and practice returning attention to back to present moment. <sup>7</sup>
Decreased stress & anxiety	Bring your attention to your experience of breathing. Imagine seeing a client. Pay attention to any feelings of anxiety and fear. Notice how they shift from moment to moment, allowing what is to be there. <sup>11</sup>	In dyads, have each person track their own internal feelings, thoughts, & sensations as they stand at varying distances from each other. Practice with an accepting attitude towards internal reactions with eyes open, with eyes closed, facing each other, & with their backs facing each other. <sup>10</sup>
Other benefits for therapists	Therapists can practice formal sitting mindfulness meditation individually or in groups.	In between sessions, take one minute each to: 1) Ask ‘what is my experience right now?’ 2) Notice the sensation of each in and out breath 3) Expand your awareness to your whole body with an attitude of acceptance. <sup>12</sup>

<sup>7</sup> (Adapted from Shapiro & Izett, 2008). <sup>8</sup> (Adapted from Deep Listening & Authentically Speaking, Surrey, 2005). <sup>9</sup> (Adapted from Morgan & Morgan, 2005). <sup>10</sup> (From author’s (Davis) mindfulness training at Naropa University). <sup>11</sup> (Adapted from Brach, 2003). <sup>12</sup> (Adapted from 3-minute Breathing Space from MBCT, Segal, Williams, & Teasdale, 2002).

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development of skills that impact trainees’ effectiveness as therapists. In a 4-year qualitative study, counseling students reported considerable positive effects on their counseling skills and therapeutic relationships, including being more attentive to the therapy process, more comfortable with silence, and more attuned with oneself and clients, after taking a 15-week course that included mindfulness meditation (Newsome, Christopher, Dahlen, & Christopher, 2006; Schure, Christopher, & Christopher, 2008). Counselors in training who have participated in similar mindfulness-based interventions have reported significant increases in self-awareness, insights about their professional identity (Birnbbaum, 2008), and overall wellness (Rybak & Russell-Chapin, 1998).

#### Decreased Stress and Anxiety

Research has found that premedical and medical students report less anxiety and depression symptoms after an 8-week MBSR training compared to a waiting list control group (Shapiro et al., 1998). The control group evidenced similar gains after exposure to MBSR training. Similarly, following MBSR training, therapist trainees have reported decreased stress, rumination, and negative affect (Shapiro et al., 2007). In addition, when compared with a control group, MBSR has been shown to decrease total mood disturbance, including stress, anxiety and fatigue in medical students (Rosenzweig, Reibel, Greeson, Brainard, & Hojat, 2003). Using qualitative and quantitative measures, nursing students reported better quality of life and a significant decrease in negative psychological symptoms following exposure to MBSR (Bruce, Young, Turner, Vander Wal, & Linden, 2002). Recent evidence from a study of counselor trainees exposed to interpersonal mindfulness training suggests that such interventions can foster emotional intelligence and social connectedness, and reduce stress and anxiety (Cohen & Miller, 2009). Similarly, in a study of Chinese college students, those students who were randomly assigned to participate in a mindfulness meditation intervention had lower depression and anxiety, as well as less fatigue, anger, and stress-related cortisol compared to a control group (Tang et al., 2007). These same students evidenced greater attention, self-regulation, and immunoreactivity. Waelde et al. (2008) assessed changes in symptoms of depression, anxiety, and posttraumatic stress disorder among New Orleans mental health workers following an 8-week meditation intervention that began 10 weeks after Hurricane Katrina. Although changes in depression symptoms were not found, PTSD and anxiety symptoms significantly decreased after the 8-week intervention. Findings suggest that meditation may serve a buffering role for mental health workers in the wake of a disaster.

#### Other Benefits of Mindfulness for Therapists

To date, one study has investigated the relationship between mindfulness and counseling self-efficacy. Greason and Cashwell (2009) found that counseling self-efficacy was significantly predicted by self-reported mindfulness among masters-level interns and doctoral counseling students. In that study, attention mediated the relationship between mindfulness and self-efficacy, suggesting that mindfulness may contribute to the development of beneficial attentional processes that aid psychotherapists in training (Greason & Cashwell, 2009). Drefuss (1990) interviewed six therapists who practiced one of three mindfulness meditation styles (Vipassana,

Zen, and Vajrayana) for more than five years to examine the influence of their meditation practice on their work as therapists. Findings suggested that long-term mindfulness meditation practice can positively impact therapists’ ability to distinguish their own experience from their clients’ experience, can enrich therapists’ clarity in their work with clients, and may help develop therapists’ self-insight. Other potential benefits of mindfulness include increased patience, intentionality, gratitude, and body awareness (Rothaupt & Morgan, 2007).

#### Client Outcomes of Therapists Who Meditate

While the research reviewed above points rather clearly to the conclusion that mindfulness meditation offers numerous benefits to therapists and trainees, do these benefits translate to psychotherapy treatment outcomes? To date, only one study provides evidence. In a study conducted in Germany, randomly assigned counselor trainees who practiced Zen meditation for nine weeks reported higher self-awareness compared to nonmeditating counselor trainees (Grepmaier et al., 2007). What is more important is that after 9 weeks of treatment, clients of trainees who meditated displayed greater reductions in overall symptoms, faster rates of change, scored higher on measures of well-being, and perceived their treatment to be more effective than clients of nonmeditating trainees.

Despite these promising results, three other studies suggest that the relationship between counselor trainees’ mindfulness and client outcomes is not so encouraging. Stanley et al. (2006) studied the relationship between trait mindfulness among 23 doctoral-level clinical psychology trainees in relation to treatment outcomes of 144 adult clients in a university community clinic that used manualized, empirically supported treatments. Contrary to expectation, therapist mindfulness was inversely correlated with client outcome. This is consistent with other findings that suggest an inverse relationship exists between therapists’ mindfulness and client outcomes (Bruce, 2006; Vinca & Hayes, 2007). Still other research suggests that no relationship exists between therapist mindfulness and therapy outcome (Stratton, 2006).

One of the difficulties with this small body of research pertains to the accuracy of therapist self-reported mindfulness. It could be that more mindful people are likely to score lower on a self-report measure of mindfulness because they are aware of the degree to which they are mindless. Conversely, people who are less mindful may not realize it and therefore may be inclined to rate themselves higher on such measures. Also, it is noteworthy that in the one study with positive findings regarding outcome (Grepmaier et al., 2007), participants engaged in the practice of meditation rather than simply reporting their mindfulness. In the studies with negative or null findings, there was no indication if participants had ever engaged in actual meditation. Thus, it may be that meditation is a better predictor of outcome than self-reported mindfulness (see Grossman, 2008 for a comprehensive summary of limitations to mindfulness research).

#### Further Implications

##### Empirically Supported Relationships

Many scholars have proposed that the development of skills and qualities in therapists who practice mindfulness meditation will

strengthen the therapeutic relationship (Germer et al., 2005; Hick & Bien, 2008; Shapiro & Carlson, 2009). Future research could profitably address how therapists’ mindfulness contributes to critical relationship factors such as the formation and sustenance of the working alliance, countertransference management, and the provision of unconditional regard with difficult clients (Norcross, 2002). For example, one study (Wexler, 2006) found that both client and therapist perceptions of the working alliance were positively related to therapist self-reported mindfulness. In another study, however, the relationship between mindfulness and working alliance was not significant (Bruce, 2006). Again, it could be that meditation practice is a better predictor of the working alliance than self-reported mindfulness, although this awaits further study.

With regard to countertransference management, it is plausible that the nonreactivity and cognitive flexibility fostered by mindfulness should help therapists respond more freely and less defensively to their clients (Gelso & Hayes, 2007). To date, one study has investigated mindfulness and countertransference. Kholooci (2008) examined the relationship between self-reported mindfulness and therapists’ awareness of countertransference. Kholooci found a significant inverse relationship between mindfulness and countertransference awareness such that the more mindful therapists perceived themselves to be, the less aware they were of their countertransference.

In conclusion, while the psychological and physical health benefits of mindfulness meditation are strongly supported by research, the ways in which therapists’ mindfulness meditation practice and therapists’ mindfulness translate to measureable outcomes in psychotherapy remain unclear. Future research is needed to examine the relations between therapists’ mindfulness, therapists’ regular mindfulness meditation practice, and common factors known to contribute to successful treatment outcome. Doing so will foster understanding of how mindfulness meditation may enhance communication and relationship building skills within the context of psychotherapy.

**Practice and Clinical Supervision**

Germer et al. (2005) proposed that mindfulness can be integrated into psychotherapy through three means: therapist mindfulness (therapists’ own practice of meditation to be more “mindful” and present with clients), mindfulness-informed psychotherapy (i.e., applying Buddhist psychology and mindfulness theory to clinical work), and mindfulness-based psychotherapy (teaching clients skills through the application of mindfulness practices). Davis (2010) has proposed that mindfulness meditation also would benefit clinical supervision by enhancing supervisors’ presence to their supervisees and enabling them to be less reactive to supervisees’ anxiety. Table 3 expands on Germer et al. (2005) and Davis (2010) and provides practical examples and means of integrating mindfulness into psychotherapy.

The old adage that people can guide another on a path only as far as they themselves have ventured also applies to therapists integrating mindfulness into psychotherapy and into clinical supervision (Davis, 2010). Introducing mindfulness approaches into psychotherapy necessitates engaging in a mindful practice ourselves as psychotherapists (Hick, 2008). It has been recently proposed that therapists who introduce mindfulness interventions with clients may find it helpful to explain mindfulness in terms of attention, avoiding jargon that may have unintended negative effects on clients (Carmody, 2009).

**Training Implications**

Mindfulness as a metacognitive skill has been proposed as a necessary component of psychotherapy training (Bruce, Manber, Shapiro, & Constantino, 2010; Fauth, Gates, Vinca, Boles, & Hayes, 2007; Vinca, 2009). As research on therapists’ mindfulness continues to emerge, should therapists’ mindfulness demonstrate a meaningful relationship with measurable outcomes in the therapeutic relationship and treatment outcomes, psychotherapy train-

Table 3  
*Examples of Ways to Integrate Mindfulness in the Field of Psychotherapy*

Ways mindfulness can be integrated into psychotherapy	Professional avenues for integration	Practical examples
Therapist mindfulness	<ul style="list-style-type: none"> <li>● Therapists’ personal meditation practice</li> <li>● Therapists’ clinical work</li> <li>● Training programs</li> <li>● Clinical supervision</li> <li>● Continuing education</li> </ul>	“While others are speaking, practice letting go of your own thoughts, judgments, and analyzing, and return to listening receptively. Let your listening be wholehearted and attentive . . . speak slowly enough to stay connected to your body and heart.” <sup>13</sup>
Mindfulness-informed psychotherapy	<ul style="list-style-type: none"> <li>● Therapists’ clinical work</li> <li>● Training programs</li> <li>● Clinical supervision</li> <li>● Continuing education</li> </ul>	Apply the Buddhist principal of equanimity to a client issue, such as: “What happens when you let that need be there?” <sup>14</sup>
Mindfulness-based psychotherapy	<ul style="list-style-type: none"> <li>● Therapists’ clinical work</li> <li>● Training Programs</li> <li>● Clinical supervision</li> <li>● Continuing education</li> <li>● Mindfulness-based group therapy</li> </ul>	Guide clients to: Close your eyes and with curiosity and non-judgment, allow whatever emerges in your awareness to be there, letting it come and go. Mentally label your experience, such as feeling, smelling, thinking, etc. as you sit for few minutes. <sup>15</sup>

<sup>13</sup> (Deep Listening & Authentically Speaking, Surrey, 2005, p. 110). <sup>14</sup> (Adapted from Welwood, 2002, p. 190). <sup>15</sup> (Adapted from Mindfulness, Morgan & Morgan, 2005).

ing could include mindfulness training. Given the push toward outcome-based education, training and credentialing as measured by training benchmarks and the acquisition of competencies (Kaslow et al., 2002), perhaps mindfulness could be measured in training programs as a necessary specific competency. Research support is needed to influence policy changes and changes in psychotherapy training program requirements. Given that mindfulness meditation is a means to develop mindfulness, both counselor education and continuing education programs could beneficially offer mindfulness meditation training.

### Important Next Steps in Research

Future research holds tremendous potential for uncovering more about the neurophysiological processes of meditation and the benefits of long-term practice on the brain. Research on neuroplasticity may help explain the relationship among length and quality of meditation practice, developmental stages of meditators, and psychotherapy outcomes. More research is needed to better understand how the benefits of meditation practice accumulate over time.

In addition, other means of increasing mindfulness, in addition to meditation, need to be explored. Given that current research does not indicate that therapists' self-reported mindfulness enhances client outcomes, better measures of mindfulness may need to be developed or different research designs that do not rely on self-report measures need to be used. Garland and Gaylord (2009) have proposed that the next generation of mindfulness research encompass four domains: 1) performance-based measures of mindfulness as opposed to self-reports of mindfulness, 2) scientific evaluation of notions espoused by Buddhist traditions, 3) neuroimaging technology to verify self-report data, and 4) changes in gene expression as a result of mindfulness. Research along any one or a combination of these lines is likely to enhance our understanding of mindfulness and its potential benefits to psychotherapy.

Given the empirical support for the benefits of mindfulness reviewed in this paper, research is needed on effective and practical means of teaching therapists mindfulness practices. While formal training is required to teach MBSR, theoretical literature focused on using a mindfulness-based curriculum and teaching mindfulness practices is beginning to emerge (e.g., McCown, Reibel, & Micozzi, 2010). Future research could include investigating realistic ways mindfulness practices and/or formal mindfulness meditation could be integrated into trainees' practicum and clinical supervision. Given that MBSR is a structured format that has been successfully used with therapist trainees (e.g., Shapiro et al., 2007), MBSR may be a simple way for therapists, regardless of theoretical orientation, to integrate mindfulness practices into trainees' practicum class or group supervision. Future research questions could include: Does therapists' practice of mindfulness meditation in clinical supervision with their supervisees affect the supervisory alliance, or relational skills of supervisees? Does practicing formal mindfulness meditation as a group in practicum or internship aid in group cohesion, self-care, relational skills, or measurable common factors that contribute to successful psychotherapy? Given the limited research thus far on empathy, compassion, decreased stress and reactivity, more research is needed on how mindfulness meditation practice affects these constructs and

measurable counseling skills in both trainees and therapists. For example, how does mindfulness meditation practice effect empathy and compassion for midcareer or late-career therapists who are already seasoned veterans?

Shapiro and Carlson (2009) have suggested that mindfulness meditation can also serve as a means of self-care to help combat burnout rates. Future research on not only how therapists' practice of mindfulness meditation helps facilitate trainee development and affects psychotherapy is needed, but the ways in which therapists' own practice of mindfulness meditation can help with burnout rates and other detrimental outcomes of work-related stress.

In addition, despite abundant theoretical work on ways to conceptually merge Buddhist and Western psychology to psychotherapy (e.g., Epstein, 2007, 1995), there is a lack of literature on what it looks like in session when a therapist employs Buddhist-oriented approaches (i.e., mindfulness-informed psychotherapy as termed by Germer, 2005) to specific clinical issues and diagnoses. Given the numerous and rich clinical applications of mindfulness-based approaches to specific clinical issues, more literature is needed on the ways mindfulness-informed psychotherapy differs from mindfulness-based psychotherapy in session with clients.

In conclusion, the momentum within research on mindfulness holds promise for a potential transformation in ways to facilitate trainee and therapists' development, and means to affect change mechanisms known to contribute to successful psychotherapy. The field of psychotherapy could benefit from future research examining cause and effect relationships and/or mediational models to better understand the seemingly fruitful benefits of mindfulness and mindfulness meditation practice.

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### Module 1

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