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Mindfulness, and Workplace Outcomes for Secondary Teachers

by

Jonathan Erickson

Claremont Graduate University

2020

Approval of Dissertation Committee

This dissertation has been duly read, reviewed, and critiqued by the Committee listed below, which hereby approves the manuscript of Jonathan Erickson as fulfilling the scope and quality requirements for meriting the degree of Doctor of Philosophy in Education.

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ABSTRACT

Mindfulness and Workplace Outcomes for Secondary Teachers

by

Jonathan Erickson

Claremont Graduate University: 2020

For teachers to most effectively teach and support students in their classrooms, we want them to feel good about the work they do and burnout from emotional exhaustion. This study investigates how mindfulness, as measured by a comprehensive questionnaire, may play an important role in supporting teachers' well-being, and specifically asks how mindfulness and other demographic factors may affect the key workplace outcomes of job satisfaction, efficacy, burnout, and resilience. Analyses were performed on data collected from 86 participants, of 330 who were contacted, and who were all secondary teachers in the Los Angeles area at total of five urban and suburban schools. Using Pearson correlation calculations, it was found that mindfulness levels significantly correlated to each of the four workplace outcomes. Investigating further with multiple regression models, it was found that four of the five facets of mindfulness, measured as subscores in the Five Facet Mindfulness Questionnaire (FFMQ) instrument, in different combinations were strong, positive predictors for workplace outcomes, as were years of experience, and whether or not the participants practice mindfulness. A MANOVA test quantified this relationship further, giving another predictive model for each workplace outcome based on whether or not participants reported regularly practicing mindfulness. Implications of these strong connections between mindfulness—both as exhibited qualities, and as a regular practice—and the workplace outcomes of job satisfaction, efficacy,

burnout, and resilience, are discussed with recommendations for policy, practice, and further research.

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CHAPTER I: STATEMENT OF THE PROBLEM

Introduction and Purpose of the Study

Teachers throughout the United States face many challenges in their work to meet the academic, social, and emotional needs of their students (Darling-Hammond & Sykes, 2003). The challenges teachers face often lead to stress (Blase, J. J., 1986), and burnout (McCormick & Barnett, 2011; Zellars, Hochwater, & Perrewew, 2004), among other effects. Teaching is considered one of the most psychologically demanding professions (Roeser, Skinner, Beers, & Jennings, 2012), which contributes to high levels of attrition (Darling-Hammond, 2001). Thus, we must address the psychological needs of teachers if we wish them to continue in the profession and to effectively address the needs of their students.

A popular proverb among educators is that “students don’t care how much you know until they know how much you care¹.” It is often seen on posters in classrooms and proudly printed below email signatures. It is not just a clever antimetabole; there is strong research that backs up the phrase’s claim. Specifically, when teachers are ill-equipped to effectively manage the social and emotional challenges in their classroom, students show decreased levels of being on-task (Marzano et al., 2003). This can lead to a vicious cycle of teacher burnout where the teacher becomes more frustrated and reactive. This, in turn, leads to even more behavior issues, then increased frustration and reactivity from the teacher, and so on (Osher et al., 2007). Furthermore, when teachers leave schools or the profession altogether, it is often because of issues with student behavior in the classroom (Ladd, 2011, Allensworth et al., 2009).

¹ The origin of this quote is difficult to establish, as it is credited Theodore Roosevelt, John Maxwell, and Earl Nightingale by different sources.

When new teachers in challenging assignments have challenges with classroom management or other issues, they typically either try to transfer to a different school, or quit altogether (Ladd, 2011). This creates a vacancy that will likely be filled by another new teacher, and the pattern continues. The research on the damage that high teacher turnover does to both school climate and classroom climate is well-established (Jennings & Greenberg, 2009). For instance, schools and districts have trouble getting momentum with initiatives to improve teaching and learning, especially in the high-poverty urban schools that need it most (Allensworth et al., 2009). Whatever other factors we may consider in improving results for students, stopping this revolving door of teacher turnover is an essential priority.

Teacher burnout is associated with worse student behavior, student attendance, and student achievement (Mirsky, 2007). This makes intuitive sense—how could we expect great results from someone who is burned-out? In the short term, these frustrated teachers will probably not do their job as well, especially in regard to managing the class and creating a positive learning environment (Osher et al., 2007). There are also long-term consequences, particularly in urban schools, which have (on average) less experienced teachers, and less positive school climates (Mirsky, 2007).

Thus, if we would like to do something that will improve student behavior and achievement in urban schools, we should examine what affects teachers' work experience, and in particular, what may reduce burnout and increase efficacy, job satisfaction, and resiliency. The purpose of this study is to identify the connections between teacher's mindfulness and the following variables of work experience: well-being, job satisfaction, burnout, and resilience. Where the most significant correlations have been found, targeted interventions are recommended.

Background and Significance of the Study

So what can break the teacher burnout cycle? The traditional focus of most teacher preparation programs and professional development has been on what to do “to and for” students. For instance, classroom management, behavior management, and response to behaviors, have all traditionally referred to teacher actions to and for students. Yet very little attention has been given to mindfulness and self-care, especially in regard to actively training teachers in how to improve and sustain their well-being (Jennings & Greenberg, 2009). Fortunately, there have been some important strides in recent research that have confirmed the connection between mindfulness and teachers’ efficacy and decreased burnout (Flook et al., 2013, Jennings & Greenberg, 2009).

During the past two decades, mindfulness-based practices have been implemented with adults in the business, military, psychology, and medicine fields (Burke, 2010; Kabat-Zinn, 1990; Meiklejohn et al., 2012). Specifically for teachers, findings from research studies on the implementation of mindfulness-based programs have demonstrated cognitive, social and psychological benefits (Burke, 2010; Flook et al., 2013; Meiklejohn et al., 2012). Additional studies of teachers participating in mindfulness-based programs showed increased levels of mindfulness, lowered levels of stress, decreased levels of burnout, improvements in self-efficacy, increased levels of self-compassion, decreases in levels of emotional exhaustion, and improvements in sleep quality (Jennings et al., 2013; Roeser et al., 2013).

Although there are now many studies of how mindfulness affects workplace outcomes generally, there are only about 20 studies published in peer-reviewed journals to date with findings suggesting mindfulness-based practices to be beneficial for teachers (Burke, 2010; Emerson et al., 2017; Flook et al., 2013; Meiklejohn et al., 2012). And these 20 studies all have

something in common—they test an intervention on relatively small samples (<50 participants), and at only one or two schools. Specifically, there have not been large-scale studies that have been conducted to measure the correlation of teachers’ baseline mindfulness levels and the variables related to workplace outcomes. Yet this is an important consideration, because mindfulness has multiple factors, and identifying which correlate most with positive work experience can inform more-targeted programs to support teachers. This study aimed to have 200 participants, and ended up with 86, which still makes it larger than most of the previous studies. Also this study does not include an intervention, as connections are being investigated between “baseline” levels of mindfulness and correlated workplace outcomes to determine *where* interventions may be planned to be most effective.

Looking at this data for different subgroups of teachers, such as urban or suburban, middle or high school, and number of years of work experience, could help inform whether interventions should be done at the state (credentialing program) level, the local (district) level, or specific schools. In this study, we will consider numerous different variables in building models that help us make targeted recommendations that will be explained in Chapter 5.

Essentially, while other researchers have looked at how a mindfulness intervention may affect some specific, small group of teachers, my study may help these and other researchers better identify which groups of teachers should receive these interventions, and which facets of mindfulness the interventions should focus on to support specific workplace outcomes.

Theoretical Framework

The theoretical framework guiding this proposed study is the *Integrative Framework Relating Mindfulness to Workplace Outcomes* (IFRMWO) developed by Good et al. (2016) as a synthesis of a large body of research on mindfulness and the workplace.

Figure 1
Integrative Framework Relating Mindfulness to Workplace Outcomes

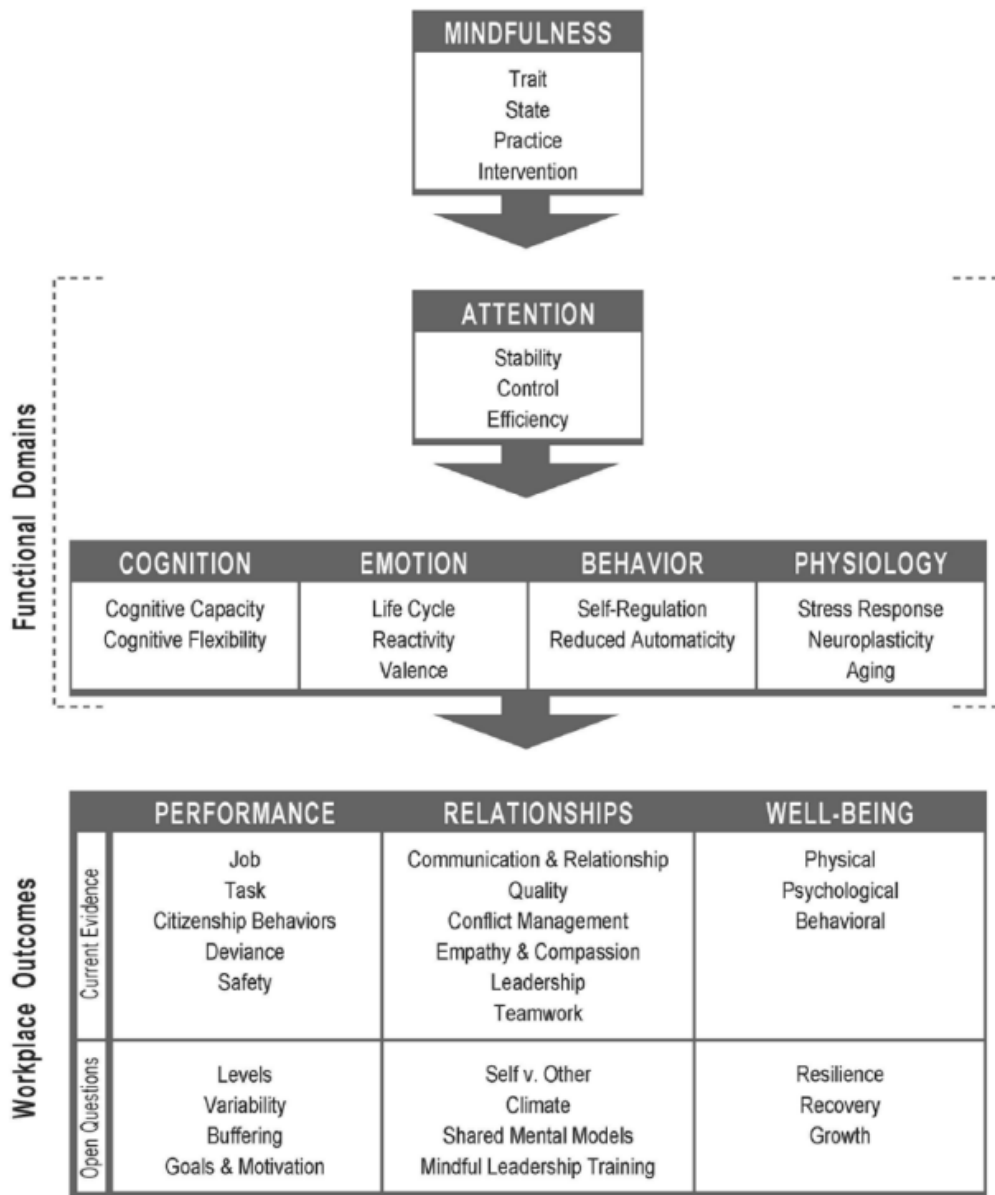


Figure 1. *Integrative Framework Relating Mindfulness to Workplace Outcomes*. Reprinted from *Journal of Management*, January 2016, retrieved from Sage Publishing, DOI: 10.1177/0149206315617003.

The IFRMWO has the advantage of not only showing the influence of mindfulness on work with the *Current Evidence* row but also providing an *Open Questions* row that urges further research. Answering that call, this study addresses several of these open questions by

analyzing data for specific variables that connect facets of mindfulness with this framework. Specifically, the study will address open questions related to *goals & motivation* and *resilience*, and add to the support for *psychological* and *physical* elements of *well-being*.

The elements and flow of the IFRMWO, along with their connection to the research questions and variables, will be explained in greater depth in Part 2 of the literature review below.

Research Questions

This study will first explore states or practices of mindfulness among different types of teachers in different settings, some of whom will have had mindfulness training and some who will not, to begin to get a sense of a general state of mindfulness at this moment in California. California may not be an entirely generalizable setting, however the potential for mindfulness practice to be more prevalent here than in some other areas is advantageous in that it helps ensure practitioners and non-practitioners will form large enough subgroups in our sample. Further, by focusing on a range of geographic contexts, we attempt to find some variation within the California context. Next, we will examine relationships between those various facets and practices of mindfulness with particular workplace outcomes that are relevant to the education context, some of which are aligned with outcomes that have been more thoroughly examined in other industries, especially with health-care workers (Good et al., 2016). Good et al. (2016) list the relationships of mindfulness to certain workplace outcomes as “open questions” in need of further evidence; thus this study helps to contribute and elaborate to that literature base. Finally, given the strong differences in teacher retention in different types of schools, the study investigates if there are any suggestive patterns in the levels of mindfulness facets or workplace outcomes.

There are also basic demographic questions in this study about where (urban/suburban, middle/high) teachers work, their years of experience, race or ethnicity, gender, and whether or not they have had mindfulness training or practice mindfulness. From the question about practicing, we can see, for instance, how “natural” or untrained mindfulness indicators correlate compared to “nurtured” or trained indicators do. This builds on the idea mentioned earlier about how this study can help us choose more targeted interventions based on what people have and have not experienced, and the effects thereof.

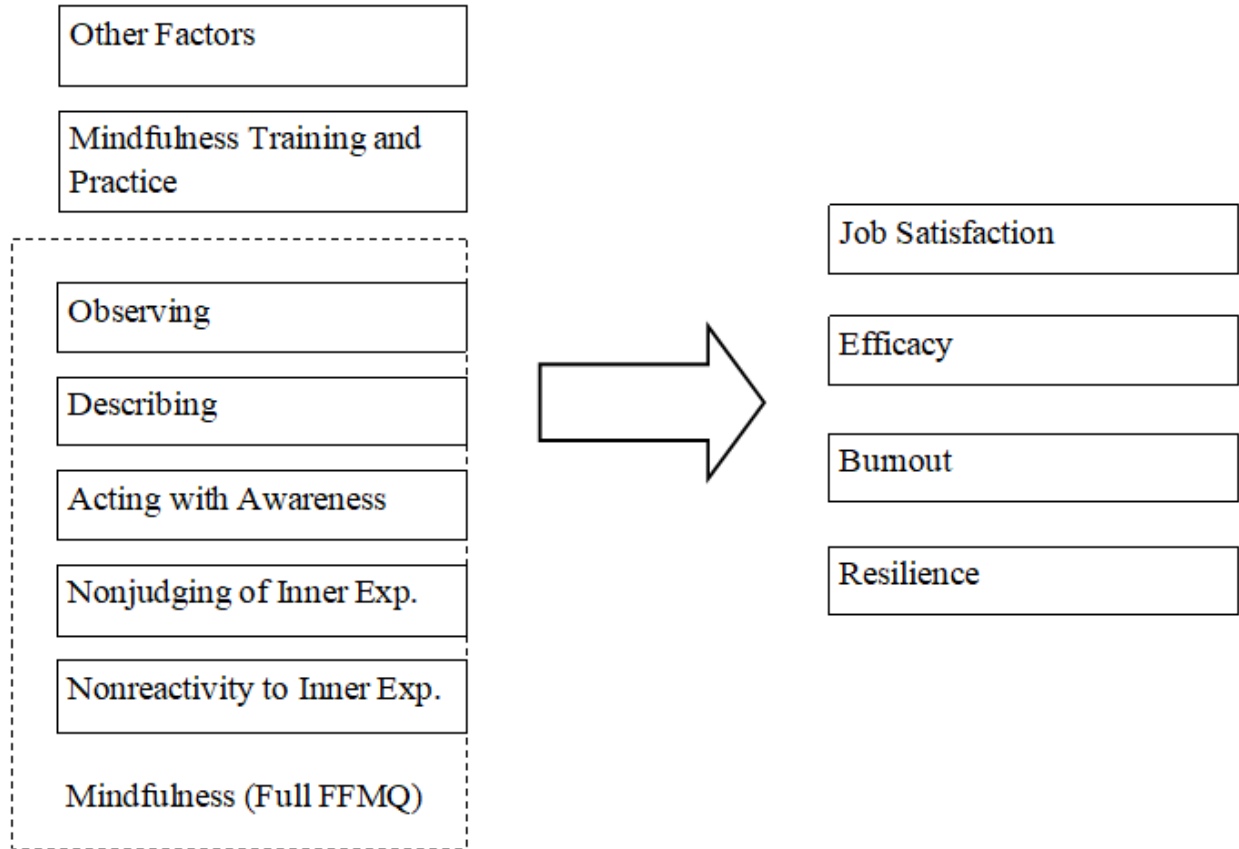
Thus, the overarching research questions of this study are the following:

- 1) *What is the current state of mindfulness among teachers at specific secondary schools in Southern California (in urban and suburban areas), and*
- 2) *How do demographic factors of participants, such as location of school, relate to the workplace outcomes of job satisfaction, efficacy, burnout, and resilience?*
- 3) *How do reported levels for the different facets of mindfulness, being trained in mindfulness, and practicing mindfulness, relate to the workplace outcomes of job satisfaction, efficacy, burnout, and resilience?*

For 2), a series of multiple linear regression analyses are used to model Figure 2 below, where the large arrow can be replaced by multiple smaller arrows showing specific relationships between pairs of variables, holding other factors constant.

Figure 2

Diagram for Relationship Between Mindfulness and Other Factors (independent variables) and the Workplace Outcomes of Efficacy, Job Satisfaction, Burnout, and Resilience (dependent variables)



Why were these questions chosen? As the research noted in the preceding section shows, many significant factors that contribute to teacher turnover are beyond teacher control. Mindfulness, on the other hand, is something that anyone can develop, which, in turn, can have positive effects on these workplace outcomes that can decrease teacher turnover (Good et al., 2016). By uncovering more about the specifics of how mindfulness and specific facets of mindfulness function in education settings, we hope to provide teachers, administrators, and teacher educators with tools that can better workplace outcomes. Specifically, this could inform teacher preparation and training at school, district, or regional levels.

CHAPTER 2: LITERATURE REVIEW

This literature review is structured in three parts. Part 1 will discuss the history and relevance of mindfulness to help orient the reader to this relatively new area of research and its potential. Part 2 will explain the theoretical framework, and how this study answers the call to give more evidence for certain parts of that framework. Part 3 will review some of the recent and promising studies about implementing mindfulness training with teachers, and further explore the connections between mindfulness and workplace outcomes.

Part 1: Relevance and Measurement of Mindfulness

Not long ago, Mindfulness was a word that was not nearly as familiar or popular as it is now. Though the origin of many Mindfulness practices dates back to millennia-old Buddhist practices, the specific term as codified in Mindfulness-Based Stress-Reduction (MBSR) practices is credited to Kabat-Zinn (1990). Once thought to be just “spiritual,” research has now proven that meditation and mindfulness practices can significantly change a person’s sense of well-being, brain chemistry, physical health, and longevity (Grossman, 2004). For instance, Kilpatrick et al. (2011) used Functional Magnetic Resonance Imaging (fMRI) to see the effects of Mindfulness-Based Stress Reduction (MBSR) practices on the brain. The results showed that there was a significant increase in connectivity in regions of the brain, and an increase in cortical thickness in certain areas related to increased abilities for problem-solving and creative thinking. This is from an 8-week MBSR group pre/post compared with a control (no-treatment) group. Studies like this have challenged many skeptics’ concern that mindfulness practices do not have “hard science” backing their efficacy.

Parallel to this burst in research, popularity in mindfulness has also grown; Forbes Magazine (2018) recognized it as the fastest-growing health trend in the United States.

Mindfulness is finding its way into MBA and other graduate school programs; however (and strikingly), mindfulness is less common a component in graduate education programs², which further justifies the proposed study.

Despite the growing popularity of mindfulness, the word has many different connotations, and is not clearly defined in much of the literature. Bishop et al. (2004) conducted a meta-study of research on mindfulness with the specific purpose of creating a consistent, operationalized definition of mindfulness. Their results led them to create the following definition for mindfulness:

- A) Self-regulation of attention such that it is maintained on immediate experience, and
- B) An orientation toward experience in the present moment, characterized by curiosity, openness, and acceptance.

Regarding A), the authors address a common misperception about mindfulness, stating that *mindfulness is not a practice in thought suppression*. This is an important point, as one of the leading issues reported by people in preventing them from attempting mindfulness practices such as meditation is that they are scared that they will not be able to completely clear their mind, or fully stop thinking (Bishop et al., 2004). These are indeed unrealistic expectations that may have been popularized by cinematic portrayals of meditation. Instead, Bishop et al. (2004) clarify that thoughts are considered objects of observation, not distractions. Then, once a thought is observed, focus goes back to the breathing exercise, and further *elaboration* of thoughts is prevented. Practicing this technique has been shown to improve people's ability for cognitive inhibition, which is important in semantic processing, which is, in turn, both measurable and

² For instance, Claremont Graduate University, the researcher's graduate school, has multiple courses with mindfulness content in the school of psychology and school of management, but not in the school of education: <http://bulletin.cgu.edu/content.php?catoid=2&navoid=87>

critical for focused thinking (Deci, 2016). The explanation of the role of different types of attention in Part 2 of this literature review will explain part B) of this definition of mindfulness.

One way to measure mindfulness is through self-reported survey responses, and a validated and popular tool for this is the Five-Facet Mindfulness Questionnaire (FFMQ), developed by Baer et al. (2008). As the name indicates, this tool identifies and measures five different indicators for mindfulness: *observing, describing, acting with awareness, nonjudging of inner experience, and nonreactivity to inner experience*. This aligns with the two-part Bishop (2004) definition already discussed, with observation and describing aligning with part A), nonreactivity and nonjudging of inner experience with part B), and acting with awareness with parts A) and B). Baer et al. also showed that mindfulness measures correlated positively with well-being—defined in this study as “the overall quality of an employee’s experience and functioning at work” (Grant et al., 2007, p. 52)—which is directly related to one of the Workplace Outcomes in the IFRMWO theoretical framework presented in Figure 1.

Christopher et al. (2012) further validated the FFMQ as a tool. The study differentiates itself from other studies in that it goes to the level of individual items in the survey, not just the five sets of items. It also explains the construction of the FFMQ, a 39-item self-report that is built from the following other measures: Mindful Attention Awareness Scale (MAAS; Brown & Ryan, 2003), Freiburg Mindfulness Inventory (FMI; Buchheld et al., 2001), Kentucky Inventory of Mindfulness Skills (KIMS; Baer et al., 2004), Cognitive and Affective Mindfulness Scale; Hayes & Feldman, 2004), and the Southampton Mindfulness Questionnaire (SMQ; Chadwick et al., 2008). Combined, these surveys have 112 items, so the FFMQ is a shortened amalgamation. In the results section of the article by Christopher et al. (2012), it was established that every item of the FFMQ was validated with statistically significant data.

Given the research supporting the potential of mindfulness, and the reliability of the FFMQ in measuring it, we turn to some specific workplace outcomes we may connect it to.

Part 2: Theoretical Framework

Recalling the IFRMWO, which connects aspects of mindfulness to workplace outcomes being investigated in the proposed study, we now explain how the framework works, and how it relates to this research proposal.

Mindfulness and Attention

The top box in Figure 1 shows that mindfulness may be viewed in terms of a *trait*, *state*, *practice*, or *intervention* (Good et al., 2015). The *state* refers to one's immediate, purposeful awareness and attention. This may come from a *practice*, such as meditation, which turn may be part of a larger *intervention*, such as MBSR (Kabat-Zinn, 1990). Finally, recent research has supported the claim that *trait* mindfulness—one's predisposition to be mindful in daily life—is increased with regular mindfulness practice (Kiken et al., 2015). This is important because trait mindfulness has been positively correlated with psychological well-being (Shapiro et al., 2008). Furthermore, this is relevant to the proposed study because there is a question asking participants if they have been trained in mindfulness before, and the resulting data sheds more light on this connection.

The next stage in the diagram describes how mindfulness affects attention, specifically related to the qualities of stability, control, and efficiency (Good et al., 2015). *Attentional stability* is one's disposition toward sustaining attention and focus—the opposite being uncontrolled mind-wandering (Good et al., 2015). The human mind wanders about half of the time that we are awake each day, however, mindfulness practices have been shown to decrease

this amount (Smallwood & Schooler, 2015). This increase in attentional stability may be the result of learning how to consciously notice the mind wandering and returning to present focus, which is a fundamental feature of mindfulness training (Hasencamp et al., 2012).

Attentional control is the appropriate directing of attention while facing competing demands (Ocasio, 2011). In other words, it is the ability to resist distraction. Attentional control also refers to the ability to reduce the habitual allocation of attention to things like checking email and phone over-frequently when sustained focus on a particular task is preferred (Wadlinger & Isaacowitz, 2011). Practitioners of mindfulness or meditation show increases in attentional control, even when faced with emotional distractions. Remarkably, this claim is supported by both behavior observations (Allen et al., 2012) and by analyzing brain-wave activity (Cahn et al., 2013).

The third quality, *attentional efficiency*, is the economical use of cognitive resources (Neubauer & Fink, 2009). This is a natural result of developing stability and control (the first two qualities of attention); however, it has been tested independently and shown to increase with mindfulness practices. Specifically, meditators spend fewer resources processing distractions, and fMRI scans show that they use fewer cognitive resources in the executive function areas of the brain (Cahn & Polich, 2009).

Taken together, we see that mindfulness affects three critical areas of attention: stability, control, and efficiency. We now look at other functional domains—*cognition, emotion, behavior, and physiology*—which in turn will be connected to workplace outcomes.

Mindfulness and Cognition, Emotion, Behavior, and Physiology

Regarding *cognition*, there are links between mindfulness and cognitive capacity and cognitive flexibility (Kane & Engle, 2002; Smallwood & Schooler, 2015). For cognitive capacity, there is particularly strong evidence for how mindfulness increases working memory—even after controlling for general intelligence, which is less malleable (Rusocco & Direkoglu, 2013). For cognitive flexibility, mindfulness has been associated with novel perspectives, creativity, divergent thinking, and insight problem solving (Ostafin & Kassman, 2012). Given the job demands of teachers, these potential cognitive benefits of mindfulness may be significant in promoting positive workplace outcomes.

For *emotions*, we will use the following standard definition: emotions are the result of evaluative reactions to observed stimuli that serve to catalyze behavior (Frijda, 1988). More plainly—emotions are how we respond to feelings. Two important aspects of emotions are *lifecycle* and *reactivity*. Mindfulness has been shown to both shorten emotional reaction lifecycles (Keng et al., 2013) and decrease emotional reactivity (Arch & Craske, 2010). The methodology of this comes from breaking the natural response to evaluate stimuli as positive or negative, which, over time, mindfulness practices support (Wadlinger & Isaacowitz, 2011). Specifically, there is a “decoupling” of sensory processing and narrative self-processing, that creates a positive psychological “distance” from stimuli (Hulsheger et al., 2014). Over time, a person’s general emotional tone, or *valence*, (if they generally experience more positive or negative emotions) is also shifted more in the positive direction for practitioners of mindfulness (Eberth & Sedlmeier, 2012). Given the emotionally challenging aspects of the job for teachers, we see again that mindfulness shows great promise.

This same decoupling is important to the beneficial effects of mindfulness on *behavior*, particularly in the areas of *reduced automaticity*, which, in turn, increases *self-regulation* (Glomb

et al., 2011). Specifically, mindfulness increases one's ability to create a mental gap between stimulus and response, which gives time and space to make more conscious choices before taking action (i.e. "behaving"). Interestingly, for certain work—high repetition, low innovation—automaticity is considered an advantage (Bargh & Chartrand, 1999). However, in jobs like teaching, which require more adaptive behaviors, automaticity can be a barrier, and self-regulation is an asset. A great example of this is how mindfulness can address the *teacher paradox*, which is defined as "Teacher expertise must weave together a large knowledge base of plans, routines, and structures, within improvised classroom practice that responds to the unique needs of the moment" (Sawyer, 2015, p. 21). Thus all the wonderful preparation by teachers is not adequate unless they are also able to adapt and improvise, which mindfulness can support through increasing cognitive flexibility (Glomb et al., 2011).

Research has also shown that mindfulness has a positive effect on *physiology*, at least in the areas of *stress-response*, *neural-plasticity*, and *aging*. Regarding stress, there is significant evidence linking mindfulness to lowering the severity of stress reactions and cortisol levels, and to faster recovery from stressful states (Cresswell & Lindsay, 2014). In the area of neural-plasticity, there have been remarkable results, showing an association between mindfulness and actual changes in the brain, such as shrinking the amygdala, and growing regions connected with attention, memory, and emotional regulation (Fox et al., 2014). Finally, mindfulness also has connections to aging, with evidence showing slower and fewer instances of brain degeneration, especially among experienced meditators (Guard et al., 2014). These benefits are naturally beneficial to people in and beyond their workplace.

Understanding how mindfulness affects various functional domains, we now turn to how these relate to specific workplace outcomes, and to the research questions, variables, and tools for this study.

Connections Between the Theoretical Framework and the Proposed Study

This literature review has already explained how *mindfulness*, through different types of *attention*, affects the four domains of *cognition*, *emotion*, *behavior*, and *physiology* that appear in Figure 1 (the IFRMWO). Those four domains will not be measured directly in this study, however, as they are an intermediary step in the theoretical framework, that is further broken down into categories that are each a set of workplace outcomes. Thus we now turn to these categories of specific workplace outcomes, which will help connect the research questions to the theoretical framework and current research in this area.

Good et al. (2016), in both the IFRMWO and their paper explaining it, sort workplace outcomes into three categories: *performance*, *relationships*, and *well-being*. For the *performance* category, they investigated nine workplace outcomes, citing current evidence supporting a positive effect for mindfulness on *job*, *task*, *citizenship behaviors*, *deviance*, and *safety* outcomes, while noting gaps for *levels*, *variability*, *buffering*, and *goals & motivation*. The proposed study will look closer at *goals & motivation* for teachers, especially as related to efficacy (as explained below after introducing Figure 3). The interesting challenge in current research on mindfulness in regard to goals & motivation, is that, on the one hand, mindfulness is associated with non-striving (Williams, 2008), which at first sounds like it could be counterproductive to goal pursuit, yet on the other hand, mindfulness is associated with increased attention and focus, which supports goal pursuit (Brown & Ryan, 2003). Furthermore, mindfulness is strongly associated with intrinsic motivation and efficacy, which have long-term

influence on goal attainment (Levesque & Brown, 2007; Ryan & Deci, 2000). It is interesting how this tension of non-striving/goal-attainment parallels the structure/improvisation paradox (Sawyer, 2015) discussed earlier. In both cases mindfulness provides a model of having both structure (specific practices) and openness (not getting stuck in routines). Perhaps the best reconciliation of these tensions is Dane's (2011) contingency theory, which posits that mindfulness increases attentional breadth through the practitioner seeing more peripheral stimuli and being less focused on specific targets. This combination of mindfulness increasing focus (Brown and Ryan, 2003), while also not limiting it to a single target (Dane, 2011), shows how it helps straddle the seemingly paradoxical situation described above.

For the *relationships* category, Good et al. (2016) investigated ten workplace outcomes, citing current evidence supporting a positive effect for mindfulness on *communication & relationship, quality, conflict management, empathy & compassion, leadership, and teamwork* outcomes, while noting gaps for *self v. other, climate, shared models, and mindful leadership training*. Making climate a measure in the proposed study was considered, however, it was dropped because the author felt it would not accurately be measured if only surveying teachers, and because this study already utilizes multiple questionnaires, and survey-fatigue should be avoided.

Finally, for the *well-being* category, Good et al. (2016) investigated six workplace outcomes, citing current evidence supporting a positive effect for mindfulness on *physical, psychological, and behavioral* outcomes, while noting gaps for *resilience, recovery, and growth*. This proposed study is investigating three of these outcomes: *psychological, physical, and resilience*. Even though Good et al. (2016) argue that mindfulness supporting physical and psychological well-being is well-supported by current research (Dana & Griffin 1999), the two

factors are so closely related to causes of teachers leaving schools (Cone, 2014), that they will still be examined in this study. Resilience is also a critical factor in teacher attrition (Cone, 2014), and this study may add evidence to justify it as another positive workplace outcome supported by mindfulness. One other promising study worth noting here is by Roche, Haar, & Luthans (2014), who found that level of mindfulness correlated with psychological capital, which is defined as the combination of one’s hope, efficacy, resilience, and optimism (Luthans et al., 2007).

Now that we have gone through all parts of the IFRMWO from defining mindfulness, to explaining how mindfulness affects functional domains, to how it in turn affects workplace outcomes, we will look more closely at connections between the research questions, variables, and IFRMQ, and instruments in the proposed study. We begin by introducing Figure 2, which shows these connections, and the following paragraphs will explain these connections (from left to right) in each row.

Figure 3
Research Connections Summary Table (RCST)

	Proposed Research Study Question Variables	Terms from the IFRMWO	Instruments and Measures
To what extent do teachers report Mindfulness States and Practices?	Mindfulness Facets: Observing, Describing, Acting with awareness, Nonjudging of and nonreactivity to inner experience	Mindfulness (trait) Attention (stability, control, efficiency)	Five-Facet Mindfulness Questionnaire (FFMQ)
What relationship is there between Mindfulness States and Practices and Workplace Outcomes?	Efficacy	Performance: Goals & Motivation	Teacher’s Sense of Efficacy Scale (TSES)
	Job Satisfaction Burnout	Well-being: Psychological & Physical	Single Item Survey each for Job

			Satisfaction and Burnout
	Resilience	Resilience	The Brief Resilience Scale (TBRIS)

Starting with connections in the top row of the table, we note that the facets of mindfulness fit with mindfulness thought of as a “trait,” which can be seen in the format of the FFMQ. The questions in the FFMQ are frequency measures for different types of mindfulness experiences, such as “I perceive my emotions and feelings without having to react to them” (Baer et al., 2006). In regard to *attention*, the facets of *observing*, *describing*, and *acting with awareness* are examples of “directing” attention, while *nonjudging of inner experience* and *nonreactivity to inner experience* are examples of “re-directing” attention (Baer et al., 2008). Both types are important, as both develop the critical areas of attention in the theoretical framework: *stability*, *control*, and *efficiency* (Good et al., 2016), especially *control*, as both directing and re-directing attention is a type of attentional control. It is also worth noting that, for teachers in particular, these five facets have other direct and important connections to aspects of the job. The first two facets (observing and describing) are critical for being able to effectively grade assessments and give feedback to students (Marzano et al., 2003). And the last three facets are important for all of the social/interactive parts of the job, especially in managing behavior in the classroom (Osher et al., 2007).

We turn now to look at the connections between the second and third columns (terms and instruments) in the second row (relationships). Starting with *Performance/Goals and Motivation* and *Efficacy*, Bandura (1977) defined *self-efficacy* as a person’s belief that they are capable of performing a particular task successfully. Since then, nine large-scale meta-analyses consistently

showed that efficacy beliefs of workers contribute significantly to their levels of motivation and performance (Bandura & Locke, 2003). Further, Bandura (1982) found that high self-efficacy correlated to higher goals that employees set for themselves. Since the proposed study is focused on teachers, the Teacher Self-Efficacy Survey (Tschannen-Moran & Woolfolk, 2001) is being used, and will be explained in more depth in the instrumentation section below. It is also worth noting that in a job where individual success is connected to the success of others—especially with some level of dependency, as with teachers/students—efficacy is particularly important (Tschannen-Moran & Woolfolk, 2001). Effective teachers believe in themselves, their students, and their ability to teach their students (Haberman et al., 2018).

Next, we look at *well-being (psychological & physical)* with *job satisfaction* and *burnout*. While psychological and physical well-being are listed in the IFRMWO as already supported by current evidence (Ryan & Deci, 2001), they are still being used because of their direct connection to job satisfaction and burnout, which are central to the proposed study. That is, high job satisfaction and low burnout are indicators for positive psychological and physical well-being (Danna & Griffin, 1999; Pillay et al., 2005). In fact, job satisfaction and burnout may be thought of as different sides of the same coin. Teachers who leave the job earlier than planned, typically experience both low job satisfaction and high burnout (Allensworth et al., 2009). For these two variables, the proposed study will use single-item measures, which are explained in more detail below.

Finally, we look at *resilience* as a measure of *well-being*. The connection here is direct, as some of the studies referenced in building the IFRMWO use the same tool (The Brief Resilience Scale) proposed for this study (Bishop et al., 2004). The added importance here is that resilience, as another component of well-being, is connected to job satisfaction and burnout

(Luthans et al., 2007). And again, for teachers, given the recurring stressors and obstacles inherent in their job, resilience is critical for long-term success (Ladd, 2011).

All of this together, as explained above and shown through Figure 2, demonstrates how the measurements with the FFMQ compared with measurements from the other tools can answer the research questions about how mindfulness affects the workplace outcomes of efficacy, job satisfaction, burnout, and resilience.

Part 3: Mindfulness Training for Teachers

Mindfulness-based practices have been traditionally implemented in fields other than education in the past twenty years, such as business, military, psychology, and medicine (Meiklejohn et al., 2012). Mindfulness research is still in its early stages and even though the body of research for implementing mindfulness-based practices with positive findings is growing, there is not broad or consistent implementation of practice—or research on practice—in public schools (Burke, 2010). Issues with the research that is available include sample size, study design, and methods of measurement, which have limited validity and generalizability (Meiklejohn et al., 2012). Nonetheless, a growing number of promising studies have shown that the creation and implementation of mindfulness-based programs in schools are worthwhile (Emerson et al., 2017).

Findings from recent research studies implementing mindfulness-based programs with teachers have demonstrated psychological benefits (Burke, 2010; Flook et al., 2013). Specifically, studies with teachers participating in a mindfulness-based program have found increased levels of mindfulness (Jennings et al., 2013; Roeser et al., 2013), lowered levels of stress (Roeser et al., 2013), lowered levels of burnout (Abenavoli et al., 2013; Jennings et al., 2013; Roeser et al., 2013), increased levels of self-efficacy (Jennings et al., 2013), increased

levels of self-compassion (Frank et al., 2013; Roeser et al., 2013), decreased levels of emotional exhaustion (Abenavoli et al., 2013), and improvements in sleep quality (Frank et al., 2013).

There are only about 20 studies published in peer-reviewed journals to date with findings suggesting mindfulness-based practices to be beneficial for teachers (Flook et al., 2013; Meiklejohn et al., 2012). We will take a closer look at some of these studies now.

A study conducted by Beshai et al. (2015) implemented a nine-session mindfulness-based program with a sample of 49 teachers, and found decreases in levels of stress, and increases in levels of compassion, mindfulness and well-being when compared with a control group of 40 teachers. The intervention consisted of nine sessions with 75-minute-long modules on topics such as “attention to body,” “attention to thoughts,” and “cultivation of self-compassion” (Beshai et al., 2015, p. 3). Similarly, a randomized controlled study by Taylor et al. (2015) utilizing the Stress Management and Relaxation Techniques (SMART) program for 9 weeks with 26 teachers found decreased levels of stress when compared to the control group of 30 teachers. The intervention consisted of 11 sessions totaling 36 hours of contact. Some of the mindfulness practices utilized were “body scan for somatic awareness and awareness of states of tension and rest,” “mindful walking practice,” “mindfulness of thoughts and emotion practice,” “basic breath awareness practice” (Taylor et al., 2015, p. 118).

A randomized controlled study conducted by Crain, Schonert-Reichl, and Roeser (2016) measured the effects of participation in a mindfulness program on participants’ mindfulness, job satisfaction, and sleep quality and quantity. The study had 113 participants who were public school teachers in Canada and the United States. Teachers participated in an eight-week mindfulness program with 11 sessions lasting from 2 to 2.5 hours once a week at work with two 7-hour Saturday retreats, totaling 36 hours. The results showed that participants had higher

satisfaction at home and work, and improved sleep quality and quantity compared to a control group. Participants in the treatment group also reported a decrease in sleepiness during the day, insomnia, and bad moods at home and work. One of the limitations of this study was the use of a waitlist control group rather than an active control group (Crain, Schonert-Reichl, & Roeser, 2016).

Frank et al. (2013) conducted a randomized controlled trial study examining the effectiveness of an adapted mindfulness-based stress reduction (MBSR) program on levels of stress, sleep quality, burnout, self-compassion, mindfulness, and well-being of teachers with measures implemented pre- and post-intervention. The study used an 8-week modified MBSR program with 2-hour sessions delivered after school. The study's participants, 36 high school teachers, were placed in a treatment or a wait-list control group. Results from the study showed participants in the treatment group reported significant improvements in mindfulness, self-compassion, self-regulation, and multiple dimensions of sleep quality.

A randomized controlled study conducted by Flook et al. (2013) tested an adapted mindfulness-based stress reduction (MBSR) program specifically modified for teachers. The eight-week MBSR program was offered to 18 participants, all teachers from four different elementary schools. Each regular session was 2.5 hours, and the program also included a 6-hour full-day session for a total of 26 hours. This study measured changes in levels of psychological distress, mindfulness, self-compassion, burnout, and cortisol (a hormone associated with stress). Measures were implemented pre- and post-intervention. Participants of the adapted MBSR program demonstrated significant decrease in burnout and psychological symptoms, and an increase in levels of self-compassion compared to participants in the control group. Additionally, the participants in the treatment group demonstrated improved classroom

organization as rated by an observer, and improvement on a task measuring attention. A limitation of the study was the small sample size, however an advantage was the measuring of cortisol levels, which sets it apart from most other studies that rely on self-reporting (in words) through surveys or interviews. Adding this physiological component added another layer of reliability to the results showing the promising effects of mindfulness (Flook et al., 2013).

Gold et al. (2010) conducted a study to investigate the effects of participation in a mindfulness-based stress reduction (MBSR) program on participants' levels of anxiety, depression, stress and mindfulness. The program was an eight-week course with eight 2.5-hour weekly sessions as well as a 5-hour full-day silent retreat. The sample was nine primary school teachers and two teaching assistants who were previously identified as experiencing high levels of stress. Results from the study suggested that most participants demonstrated statistically-significant improvement in levels of anxiety, depression and stress. Participants also showed improvements in levels of mindfulness on at least two out of the four dimensions of the inventory used. Not having a control group is a major limitation of this study. Another limitation for this study was the small sample size of participants (Gold et al., 2010).

Poulin et al. (2008) completed a study using a quasi-experimental research design to assess the effects of participation in a Mindfulness-Based Wellness Education (MBWE) program with 44 teacher-trainees. Of the 44 participants, 28 were part of an intervention group, and the other 16 were assigned to a control group. The MBWE program consisted of an eight-week intervention focused on developing mindfulness, and was administered as part of a course the students were enrolled in. The study measured changes in mindfulness, psychological distress, and self-efficacy. Results from the study showed increased levels of life satisfaction, mindfulness, and self-efficacy when compared to the control group. One of the limitations of

this study was that it was not randomized, so there could be bias in how participants were selected (Poulin et al., 2008).

Jennings, et al. (2013) conducted a randomized controlled experiment to measure the effect of the Cultivating Awareness and Resilience in Education (CARE) program on participants' levels of burnout, efficacy, mindfulness and well-being. The CARE program is specifically designed for teachers. The version of the CARE program used for the study consisted of an initial weekend retreat session totaling 12 hours, followed by a one-day session two weeks later, and an additional day another two weeks later. A one-day extra session was offered four weeks after the last session. The study included 53 participants who were teachers in two different school districts. Participants in the treatment group demonstrated significant improvements in efficacy, mindfulness, well-being, and burnout/time-related stress compared to participants in the control group. One of the limitations of this study was the gathering of data only pre-intervention and post-intervention. Gathering data at a follow-up time could have strengthened the study by providing an opportunity to assess if participants in the treatment group sustained the benefits over time (Jennings et al., 2013).

Finally, Roeser et al. (2013) completed an eight-week randomized controlled trial study with 54 teachers participating in the program, and 59 teachers in a wait-list control group. The intervention consisted of 11 experiential sessions for 36 hours of total contact. Participants engaged in "guided mindfulness and yoga practices, group discussions of mindfulness practice, small-group activities to practice skills in real-life scenarios, lecture and guided home practices, and homework assignments" (Roeser et al., 2013, p. 4). Teachers in the treatment group demonstrated decreased levels of anxiety, burnout, depression, and stress, along with increased levels of mindfulness and self-compassion (Roeser et al., 2013).

The studies we just reviewed demonstrated that participants in treatment groups generally experienced positive outcomes from participating in a mindfulness-based intervention or program. However, these studies used different research measures and approaches, making it difficult to compare or combine their results. Also, while the mindfulness-based programs or interventions varied in structure and content, most lasted 8 weeks and lacked longitudinal data about how participants fared in the months or years after. A recurring difference in the studies was the length of time for each of the sessions for the mindfulness-based program or intervention. And yet, despite these inconsistencies, results from all of the studies demonstrated that participation in a mindfulness-based program had predominantly positive effects among participants, and zero negative results were indicated. Some of the instruments used in the above-described research studies are also used in this research study, such as the Five Facet Mindfulness Questionnaire (FFMQ; Baer et al., 2008) and the Teachers' Sense of Efficacy Scale (TSES; Tschannen-Moran & Hoy, 2001).

In summary, findings from recent clinical and non-clinical studies promote the use of mindfulness-based practices to help address teacher challenges with work (Flook et al., 2013; Lomas et al., 2017; Meiklejohn et al., 2012). Additional research evidence is desired to make more solid generalizations for the effective use of mindfulness-based practices in educational settings, but we are on the right track, especially given how new this area of research is. In that regard, the recent increase in the utilization of mindfulness-based practices in K-12 settings is encouraging (Burke, 2010; Flook et al., 2013; Meiklejohn et al., 2012). Thus, it is important to be aware of the developing nature of this application of mindfulness practices for educators, and this study's potential to add to the important growing body of literature.

CHAPTER 3: METHODS

Research Design

This study examines the relationships between mindfulness indicators among a range of secondary public schoolteachers in the Los Angeles area of California and various workplace outcomes by gathering survey data on those indicators and outcomes directly from teachers. Other common and relevant demographic information was also collected to identify potential factors of influence, as well as whether or not participants had been trained in mindfulness, or actively practice mindfulness. The survey was emailed and administrated digitally through Qualtrics.

A pilot survey was conducted in advance to identify opportunities to refine the process. The Pilot Survey demonstrated that the survey took approximately 15 minutes to complete, as had been hoped for. Also, important feedback about format was given, so the questions were blocked in easier-to-digest pages making the survey flow better. Finally, there was an issue with participants getting stuck on a particular question (and thus not able to proceed in the survey) because it was entered in Qualtrics incorrectly. This was remedied, as was the scoring for several questions once the data from the pilot was observed on the back-end. This made organizing and analyzing the data much easier.

Sample

The goal was for the sample to be at least 200 participants, however, 86 participants completed the process sufficiently to produce usable data. There were 103 participants who started the online survey, however 17 answered three or fewer questions and thus could not be included in the study. It was a purposive and convenience sample: restricted to middle and high schools in Los Angeles county, and chosen by using the professional network of the researcher,

with the goals of engaging one or more urban schools, one or more suburban schools, and one or more rural schools. A connection with a rural school was not successfully established; however, two urban (non-charter) schools were included, as were two suburban schools, and one middle-high urban charter schools. Because the survey was anonymous, the identities of the schools in the study will not be revealed. However, different copies of the same survey were administered to each school, so that the researcher could distinguish them without revealing individual participant identities.

The purpose of getting samples of teachers from different types of schools was to introduce a location variable to relate to the dependent-variable workplace outcomes. The location variable could be particularly important—if there is a significant relationship—for making policy recommendations for training or other actions that could be done at school or regional levels (Cone, 2014).

The original research proposal for this study was approved before the COVID 19 pandemic, so that was not anticipated as a consideration. The pandemic less to school campus closures, and stay-at-home orders for everyone in this region. This did lessen the sample size, as will be explained in the limitations section, and other potential effects of the pandemic are explored in Chapter 5.

Data Collection

In this section we look at the instruments used, recruitment and outreach approach, and survey administration for the study. We will also review the protection of human subjects and IRB approval process.

Instrumentation

The Five Facet Mindfulness Questionnaire (FFMQ; Baer et al., 2006) was used to measure participants' mindfulness. The FFMQ is a 5-point Likert scale instrument composed of 39 items and containing five subscales: observing, describing, acting with awareness, nonjudging of inner experience, and nonreactivity to inner experience. Participants' answers ranged from *1 = never or very rarely true* to *5 = very often or always true*. The following are example items from the survey measure for each of the five facets:

- Observing: "When walking, I deliberately notice the sensations of my body moving."
- Describing: "I can easily put my beliefs, opinions, and expectations into words."
- Acting with Awareness: "I don't pay attention to what I'm doing because I'm daydreaming, worrying, or otherwise distracted." (coded in reverse, because it is a negative statement)
- Nonjudging of Inner Experience: "I criticize myself for having irrational or inappropriate emotions." (coded in reverse, because it is a negative statement)
- Nonreactivity to Inner Experience: "I perceive my feelings without having to react to them."

The FFMQ is a popular tool in mindfulness research, and it has been validated repeatedly in different studies with different populations (Williams et al., 2014). In particular, it is useful both as a whole measure for mindfulness, and each of the five-facets has a sub-score formed from 7 or 8 specific items. This study will examine all six variables (one total score and five subscores) in how they relate to workplace outcomes and other variables in the study. Studies have also shown reliability for the instrument (Christopher et al., 2012; Baer et al., 2006). Specifically, Christopher et al.'s (2012) study, which had 350 participants and looked at the factor loading for each item in the FFMQ, the following Cronbach's alpha's were determined:

Observing ($\alpha=0.84$), Describing ($\alpha=0.91$), Act with Awareness ($\alpha=0.90$), Nonjudgment ($\alpha=0.93$), Nonreactivity ($\alpha=0.86$), Total FFMQ ($\alpha=0.93$).

Efficacy was measured using the short form of The Teachers' Sense of Efficacy Scale (TSES; Tschannen-Moran & Woolfolk Hoy, 2001). The TSES is a 10-point Likert scale survey containing 12 (short form) or 24 (long form) items measuring efficacy on instructional strategies, classroom management and student engagement. An example of an item is "How well can you respond to defiant students?" Participants' answers can range from "0 – nothing" to "9 – a great deal." The short form has been demonstrated to be valid and reliable to a similar degree as the long form with both new and more experienced teachers (Fives & Buehl, 2010). Specifically, Fives & Buehl (2010), for a sample of 372 teachers, determined $\alpha=.94$ and $\alpha=.92$ for the long and short form version, respectively. This study will use the short form with 12 items, and shorten the response options from 1 – 9 to 1 – 5, to match the other scales in the study. The researcher recognizes that this means that we cannot count on the reliability noted above since it was calculated for the 9-level version of the survey.

Job satisfaction will be measured by a single-item measured on a 5-point scale: "Overall, how satisfied are you with your job?" The 5-level Likert Scale answer choices range from 1 = "very dissatisfied" to 5 = "very satisfied." This single-item tool was validated by Scarpello & Campbell (1983) and verified further for reliability by Nagy (2002). Nagy (2002) found that the single item tool had a sufficient $\alpha =.63$. He further compared this with a popular multiple-item job satisfaction survey, the Job Descriptive Index (JDI; Wanous et al., 1997), that looks at the categories of "work itself," "pay," "promotions," "supervision," and "coworkers." The analysis, with a sample size of 207, showed that the single items correlated well (ranging from .52 to .76) with each category (Nagy, 2002). Since job satisfaction is more straightforward to measure than

efficacy, the single-item approach is sufficient, and aids in keeping the full battery of surveys shorter and more manageable for the participant.

The Maslach Burnout Inventory (MBI) is valid, reliable, and the most popular tool for measuring burnout (Schaufeli et al., 2001). Rohland et al., (2004) successfully created and tested a single-item version of the survey that is still reliable, correlating with the results of the full MBI ($\alpha=.82$) at $r=.5$. The single question is “Overall, based on your definition of burnout, how would you rate your level of burnout?” The 5-level Likert Scale the following five answer choices:

- 5 = “I feel completely burned out and often wonder if I can go on. I am at the point where I may need some changes or may need to seek some sort of help,”
- 4 = “The symptoms of burnout that I’m experiencing won’t go away. I think about frustration at work a lot,”
- 3 = “I am definitely burning out and have one or more symptoms of burnout, such as physical and emotional exhaustion,”
- 2 = “Occasionally I am under stress, and I don’t always have as much energy as I once did, but I don’t feel burned out,” and
- 5 = “I enjoy my work. I have no symptoms of burnout.”

The question was presented in this format in the survey but coded in reverse to make higher scores corresponded with more positive outcomes (*less* burnout), just as all the other survey items do. This was done for clearer mathematical modeling, which will be discussed more later. Just as with the single-item job satisfaction measure, this is very useful making participation in the study less cumbersome—and thus potentially more dependable for response rates—for participants. After all, we do not want them to burnout from taking a long burnout survey.

Resilience was measured using The Brief Resilience Scale (TBRS; Tschannen-Moran & Hoy, 2001). The TBRS is a 5-level Likert scale survey with 6 items. An example of an item is “I tend to bounce back³ quickly after hard times.” Participants’ answers could range from “1 – *strongly disagree*” to “5 – *strongly agree*.” This survey has been used and validated in numerous studies, and is even reliable among participants with different health-related problems (Smith et al., 2008). Specifically, in the study by Smith et al. (2008) α ranged from .80 to .91 across different population samples that amounted to a total of 354 participants.

There are demographic questions about gender, grade levels taught, years of experience, exposure to mindfulness training, and regular participation in mindfulness practice as other variables to consider, which can be found in Appendix B. The responses to these questions are be coded with 0 and 1 when binary, and with more consecutive integers when there are several answer choices.

For gender, there were four answer choices, including “Gender Variant/ Non-Conforming” and “Prefer not to answer.” For race/ethnicity, the choices were “Asian / Pacific Islander, Black or African American, Hispanic or Latino, Native American or American Indian, White, Other” or “Prefer not to answer.” The words for these answers options were chosen to match the same language used by the National Center for Education Statistics (NCES).

Because there are some questions of a sensitive nature in this survey, the final page of the survey says this:

If you would like some immediate, high-quality, and free resources to learn more about mindfulness, the UCLA Mindfulness Awareness Research Center (MARC) is a great place to start: <https://www.uclahealth.org/marc/>. Also, sometimes when people are asked to think

³ Interestingly, the root for the English word “resilience” is “resile”, which means to “to bounce back” (Agnes, 2005).

about their feelings, they feel sad or anxious. If you would like to talk to someone about your feelings at any time, you can call the LA County Dept. of Mental Health hotline toll-free, 24 hours a day: 1-800-854-7771.

Finally, there was an invitation to learn more about study the when it is published by emailing the researcher directly at erickson.jonathan@gmail.com.

Recruitment and Outreach

The researcher reached out to his professional network to identify schools to participate in the study. This was done by either reaching out to district/charter-network leadership, or directly to principals for permission to reach out to teachers to participate. Deliberate action (such as the researcher emailing participants directly, or an email from the researcher being directly forwarded to the staff to protect their anonymity) was taken to ensure that each principal did not pressure teachers to participate. The email itself with the link to the survey emphasized the words **OPTIONAL** and **ANONYMOUS** in explaining the process, to further emphasize to participants that they should not feel pressured to participate.

Traditional public suburban and urban schools, and charter urban schools, were engaged in Los Angeles County. A total of 10 suburban schools were contacted, and although several showed early willingness to participate, after the COVID 19 pandemic began only one middle and one high school participated. A rural district in neighboring Kern County was also engaged and showed signs of being willing to participate (which would have brought several middle and high schools into the sample), but again withdrew from participating after the COVID 19 pandemic began. Two CMO's were also contacted, but one said they no longer participate in research studies, and the other said that they had too many already going on. After this, individual school leaders were contacted, and of the 7, one span (6-12) school participated.

Additionally, the author offered to give a free mindfulness and learned-optimism workshop (online) for the teachers of any school participating in the study. One group of schools agreed, and the workshop was delivered (virtually) after participants from the study had already completed the survey. That training may be modified and delivered again as part of a different, future study, after following the process for approval of such research.

Survey Administration

The survey was administered as one 69-question survey—a composite of all the surveys described above—through Qualtrics, which all CGU students have a license to use. The survey was accessed through a hyperlink in the email sent to teachers, and the questions on the survey were only accessible after the participant read and agreed to the terms of consent on the first page of the survey (see Appendix A).

The survey was successfully administered to two urban charter schools, two urban district schools, and two suburban schools—one middle school and one high school each—in the last week of March, and in early April 2020. This means that all data was collected after all local schools closed their campuses (on or before March 13) because of the COVID 19 pandemic. This included stay-at-home orders for most workers, including public school educators. More schools were contacted in April and May to participate, but none were willing, even some that had agreed to participate in the study prior to the pandemic. This included the rural district, so that subgroup was removed from the study.

The idea of waiting to collect more data was considered. However, given that the first data was collected only during the pandemic's campus closure, any data collected after this term would not be comparable, given that the situation was so extreme, and it was not clear when

things would normalize again. The researcher met virtually with his dissertation committee to review the situation in May 2020, and it was agreed that the study should proceed with the acquired data given the unknowns about when the campus closure order would end.

Findings, through the completed dissertation, will be shared with all participants who expressed interest by optionally emailing the researcher at the address given at the end of the survey. Two participants did email the researcher requesting this follow-up.

Protection of Human Subjects

The Claremont Graduate University Institutional Review Board (IRB) application was submitted on February 5, 2020, and it was approved with permission to begin research for the study on February 26, 2020. The application was submitted for expedited review, as there is no experiment being conducted, no minors as participants, and no concerns with a control group not getting treated with an intervention. Thus, with no other concerns, such as the potential mistreatment of participants, the application was accepted for expedited review.

All participants joined the study voluntarily, and digitally acknowledged the consent form on the first page of the online survey. The consent form can be found in Appendix A and the survey can be found in Appendix B. All participant identities are anonymous. Records of surveys will be kept in case they are needed for review, but any data connecting to specific schools or participants will be destroyed—except those who accepted the invite at the end of the survey to directly email the researcher to request a copy of the final published paper—and all other data and other information will be kept on a password protected hard drive.

Analysis Plan

This section begins by building on the instruments described earlier by detailing the measurements for each of the independent and dependent variables. We then look at the statistical tools and methods that will be used to address the research questions in Chapter 4.

Variables

Table 1 below summarizes the independent variables being measured and the instruments used in this study, and Table 2 does the same for the dependent variables.

Table 1*Summary of Independent Variables with Instruments and Measures Used in Study*

Description	Instrument or Measure	Range
Location of school/current workplace	Single item: Urban, Suburban, or Rural ¹	0, 1
Grade levels taught	Single item: Middle, High School	0, 1
Years of exp. in teaching	Single item: 0-2, 3-5, 6-10, 11-19, or 20 more years of experience	1-5
Gender	Single item: Male, Female, Gender Variant/Non-conforming, or Prefer not to answer ²	0, 1
Race/ethnicity	Single item: Asian/Pacific Islander, Black or African American, Hispanic or Latino, Native American or American Indian, White, Other, or Prefer not to answer ³	0, 1
Has been trained in mindfulness	Single item: No, Yes	0, 1
Practices mindfulness	Single item: No, Yes	0, 1
Mindfulness: All five facets	Five Facet Mindfulness Questionnaire (FFMQ)	1-5
Mindfulness: Observing	Observing subset of FFMQ	1-5
Mindfulness: Describing	Describing subset of FFMQ	1-5
Mindfulness: Acting with awareness	Awareness subset of FFMQ	1-5
Mindfulness: Nonjudging of inner exp.	Nonjudging subset of FFMQ	1-5
Mindfulness: Nonreactivity to inner exp.	Nonreactivity subset of FFMQ	1-5

Notes. ¹ Only 0 (suburban) and 1 (urban) were used for the location variable because there were no “rural” responses. ² Only 0 (male) and 1 (female) were used for the gender variable because everyone answered “male” or “female.” ³ Only 0 and 1 were used, where 0 represented white, and 1 represented all other subgroups as one “persons of color” category for statistical analysis sufficiency.

Table 2*Summary of Dependent Variables with Instruments and Measures Used in the Study*

Description	Instrument	Range
Job Satisfaction	Single item: Likert scale	1-5
Efficacy	12 items: Teachers Sense of Efficacy Scale (TSES, short form)	1-5
Burnout	Single item: Likert scale – based on the Maslach Burnout Inventory (MBI)	1-5
Resilience	6 items: The Brief Resilience Scale (TBRS)	1-5

The data that was acquired using these instruments and measures will be summarized and analyzed in the following chapter.

Analyses

Beyond basic statistical calculations, such as means, standard deviations, percentages, and cross-tabulations, this study utilizes Chi-Squared Tests, Pearson correlation tests, multiple linear regression modeling, *t*-Tests, ANOVA, and MANOVA tools through SPSS software. We will now review the purpose of and rationale for using each of these tools.

After organizing descriptive data in Chapter 4 by cross-tabulation (crosstabs), Chi-Squared tests are used to identify any relation between one group, such as gender, and another group, such as those who have participated in mindfulness training. The Chi-Square can identify and quantify the likelihood that there is a significant difference between the two groups, or that a relationship is no more likely than random (Aberson, 2010).

A two-tailed Pearson correlation test was conducted between all scaled independent and dependent variables. The Pearson Product-Moment correlation coefficient (denoted as *r*) gives an indication of the relationship between two variables on a scale from -1 to 1, with -1 indicating perfect negative or inverse correlation, 0 indicating no correlation, and 1 indicating perfect positive correlation. In this study, it is particularly appropriate for looking at the relationship between the independent and dependent variables that have scores and mean-scores ranging on the same 1 to 5 level interval score (Aberson, 2010), such as the FFMQ mean scores, and single-item job satisfaction mean scores. Similarly, when comparing binary (0,1) independent variables with the scaled dependent variables, *t*-Tests are used to identify any significant differences. Recognizing that correlation and *t*-Tests only consider relationships pairwise, other tools are used to dig deeper into any correlation or *t*-Test results with significance at a $p < .05$ or stronger level.

One such tool is multiple linear regression modeling, which can be used to create predictive equations that relate multiple independent variables—by using coefficients proportional to each’s influence—to one dependent variable (Aberson, 2010). For this study, we test models relating the full FFMQ score and, separately, each of its five facet’s subscores, to each of the four dependent variables. The goal is to find out which independent variables (if any), taken together, have significant influence on a particular dependent variable, and what the relative influence or predictive power is for each those independent variables is. We will also explore the inclusion and exclusion of various demographic control variables, and the other independent variables of participating in mindfulness training and practicing mindfulness. Possible causes for error, such as multicollinearity, are also tested and accounted for as necessary to ensure accurate interpretation of the results (Aberson, 2010).

We also investigate the relationship between dependent variable and various demographic variables, such as gender, and experience variables, such as whether a participant has participated in mindfulness training. In this study we first use *t*-Tests (when the independent variable is binary) or ANOVA to identify if there is any significant difference in the dependent variables related to any nominal independent variable. We can then use MANOVA where appropriate to determine the relative strength of the effect of an independent variable on all of the dependent variables simultaneously. These tools work well, as opposed to a correlation test, when relating a nominal independent variable, like gender, with scale independent variables, like job satisfaction (Aberson, 2010).

Limitations

This study has several important limitations. The sample is restricted to Southern California schools to which the researcher was able to gain access through his professional networks, and participation from teachers at each of the schools is voluntary. Voluntary participation can influence the results if there are specific characteristics common to the type of person who willingly participates. Also, a natural limitation arises since all of the data is self-reported.

Since this study was conducted during school campus closures due to the COVID19 pandemic—an unprecedented event in the lifetime of all participants—that also limits the generalizability of the results. The pandemic caused country-wide shutdowns of schools and businesses starting in 2020. In the United States, schools began closing their campuses in March 2020 (with very few exceptions, such as day-care centers for first-responders). Teachers and students were suddenly forced to transition completely to online learning, which added an assortment of new challenges for both educators and the families they serve. Beyond this, there were “stay at home” and “social distancing” orders from the government, along with local laws and policies about wearing masks in public that were instituted. All of this means that the teachers surveyed in this study may have felt entirely different than they did just a month before taking the survey. However, it is also unclear at this time when the effects on school operations from the pandemic will end, so this study may also have timely relevance and use having gathered data about teachers and workplace outcomes during school closure. Also, the pandemic has been a particularly stressful time for teachers, and thus considerations for their health and well-being are even more critical. These points will be explored in Chapter V.

Because of the limited number of participants, some of the racial subgroups were also limited. More on the ramifications of this, and how it was handled statistically, is explained in Chapter 4.

There are other tools that could have been used measure each of the variables being studied, such as the Mindfulness Awareness and Attention Scale (MAAS), which has been validated (Brown & Ryan, 2003). This tool is not as popular as the FFMQ, however, because the FFMQ breaks down mindfulness indicators into five distinguishable facets, or factors. Also, even though including this scale might broaden the results slightly, there is the risk of further limiting participation from survey fatigue, and some of questions would sound redundant.

A qualitative study to follow-up on the results of this study to dig deeper into any discovered correlations may be an appropriate next step to address the limitation of not knowing more than is given by Likert-scale responses. Also, more may be uncovered when exploring the lived experiences and perspectives of teachers that adds new ideas to the study. This will be addressed in greater detail in the future-research section of Chapter 5.

CHAPTER 4: RESULTS

This chapter begins with descriptive statistics for the sample including a table and explanations of certain general results. Subsequently, analyses of data related to each research question are presented in tables accompanied with explanations of significant results and the tools used to identify them.

Analytic Sample

Demographic and Mindfulness Experience Data

The tables below show demographic data gathered from question at the end of the survey. All of this data comes from self-reporting in the administered survey for this study.

Table 3*Demographics, and Mindfulness Training and Participation*

Measure	<i>n</i>	%
Location of school/work		
Urban	35	40.7
Charter	13	15.1
Traditional	22	25.6
Suburban	51	59.3
Rural	0	0
School level taught		
Middle school	32	37.2
High school	54	62.8
Experience in teaching		
1-2 years	11	12.8
3-5 years	15	17.4
6-10 years	15	17.4
11-19 years	19	22.1
20 or more years	26	30.2
Race/Ethnicity		
Asian / Pacific Islander	6	7.0
Black or African American	9	10.5
Hispanic or Latino	16	18.6
Native American or American Indian	0	0
White	52	60.5
Other	0	0
Prefer not to answer	3	3.5
Gender		
Male	30	34.9
Female	56	65.1
Participated in mindfulness training	44	51.2
Practices mindfulness	30	34.9

(Total *n*=86)

For location, 59% of the sample work a suburban middle or high school, and 41% in urban schools, with the latter breaking down further to 15% in an urban span (6-12) charter school, and 26% in an urban traditional public middle or high school. This aligns well with the state's over-all data for charter schools, since 10% of student enrollment in CA is at charter schools as of 2018 (CDE, 2018), and the breakdown by location in CA is 42.7% urban, and

45.8% suburban from the most recent data collection in 2016 (NCES, 2016). The research would have preferred to have a larger data set, both with more teachers in urban schools and with a sample of teachers from rural schools; however, having both charter and traditional public-school teachers in the sample, as well as teachers from urban and suburban schools, increases its breadth. Location, as we will see when addressing research question 3 below, was not identified as a significant factor affecting workplace outcomes as predicted in this study.

The percent of teachers at the middle school level (37%) and high school level (63%) corresponds well with the overall representation of the job, since most middle schools have three grade levels, and most high schools have four. Responses to the years of experience question indicated that 47% of the sample has been teaching for 11 or more years, and of the 53% teaching for 10 or fewer, 13% are in their first 2 years of teaching. Since 45% of teachers in CA are 46 or more years old, this also aligns well. The gender breakdown was 35% male and 65% female, which is well-aligned to 36% male and 64% female national data for secondary teachers (NCES, 2016). This question had other answer choices, such as “Gender Variant/Non-conforming,” yet all respondents answered by indicating male or female. The race question had the standard multiple choices used by NCES (see Table 1, or Appendix B for a copy of the full survey).

Regarding mindfulness experience, 50% of participants have been trained at least once in their career, and 35% practice regularly. In addressing Research Question 1, below, we will dig into this part of the data further. More of this result will be discussed in the cross-tabulation analysis later in this chapter.

Sample-to-School Comparison Data

The number of respondents compared with the total number of teachers at each of the schools is summarized in the table below:

Table 4
Representative Samples from Each School

Measure	<i>n</i> in Study	<i>n</i> in School	%	# Schools Contacted	# Schools Respond.	% Schools Respond.
Suburban				10	2	20.0
Middle School	13	46	28.3	6	1	17.7
High School	38	123	30.9	4	1	25.0
Urban				12	3	25.0
Charter Span School (6-12)	13	23	56.5	7	1	14.3
Traditional Middle School	13	61	21.3	3	1	33.3
Traditional High School	9	75	12.0	2	1	50.0
Rural				6	0	0.0
Total	86	328	26.0	28	5	17.9

We see from the table above, that at 57%, the sample from the charter span (6-12 grade) was the most representative, and the traditional high school, with 12%, was the least.

Demographic data, such as gender and race, is available from California's website Dataquest (<https://dq.cde.ca.gov/dataquest/>). Because some of the subgroups are so small, the data has been combined for all schools in the study to protect the anonymity of participants, as promised on the consent form. The table below summarizes these results for both the participant sample, and for the all schools combined based on data from the CDE.

Table 5
Participant Demographics

Measure	% within Sample	% within All Schools in Study (combined)
Race/Ethnicity		
Asian / Pacific Islander	7.0	10.1
Black or African American	10.5	18.6
Hispanic or Latino	18.6	22.3
Native American or American Indian	0	0.9
White	60.5	46.3
Other	0	0
Prefer not to answer	3.5	1.2
Gender		
Male	34.9	38.7
Female	65.1	61.3

From the data above we observe that the representation for gender was very closely aligned, and Asian/Pacific Islander and Hispanic or Latino is closely aligned (< 4 percentage point difference). However, Black or African American participants in the study were underrepresented by an 8.1 percentage point difference between the sample and the schools' population, and that, combined with other small differences, contributed to a larger overrepresentation of White participants in the amount of a 14.2 percentage point difference. Despite these differences, both the sample and the schools' population had the same sequence of smallest to largest subgroup, which contributes to the representativeness.

We will now look more closely at our data through the format of cross-tabulation, which can show us overlapping results for groups of participants organized by how they answered the various nominal-variable questions.

Patterns in Mindfulness Training and Practice

Below, Table 6 shows the cross-tabulation (crosstabs) for the demographics of participants concerning whether they have participated in or practiced mindfulness.

Table 6

Crosstabs: Participant Demographics and Mindfulness Training and Practice (n=86)

Measure	Participated in Mindfulness Training?			Practices Mindfulness?		
	n	% within % of total		n	% within % of total	
		group	sample		group	sample
Overall						
Location of school/work	44		51.2	30		34.9
Urban	14	40.0	16.3	10	28.6	11.7
Charter	9	69.2	10.5	4	30.8	4.7
Traditional	5	22.7	5.8	6	27.3	7.0
Suburban	30	58.8	34.9	20	39.2	23.3
School level taught						
Middle school	17	53.1	19.8	13	40.6	15.1
High school	27	50.0	31.4	17	31.5	19.8
Experience in teaching						
1-2 years	4	36.4	4.7	4	36.4	4.7
3-5 years	8	53.3	9.3	6	40.0	7.0
6-10 years	9	60.0	10.5	7	46.7	8.1
11-19 years	14	73.7	16.3	7	36.8	8.1
20 or more years	9	34.6	10.5	6	23.1	7.0
Race/Ethnicity						
Asian / Pacific Islander	4	66.7	4.7	3	50	3.5
Black or African American	3	33.3	3.5	2	22.2	2.3
Hispanic or Latino	10	62.5	11.6	6	37.5	7.0
White	27	51.9	31.4	19	36.5	22.1
Prefer not to answer	0	0	0	0	0	0
Gender						
Male	11	36.7	12.8	10	33.3	11.6
Female	33	58.9	38.4	20	35.7	23.3

Note: For Race/Ethnicity both "other" and "Native American or American Indian" were not included because they were not part of the sample (through self-reporting). "Prefer not to say" had 3 participants, however, all 3 said "no" to both questions about mindfulness practice and training.

In analyzing the results from Table 4, we will work down the column of demographic variables to explore the results. Starting with location of school, we note that participants at the suburban schools (58.8%) and the urban charter school (69.2%) were much more likely to have participated in mindfulness training than at the traditional public schools (22.7%). However, looking at the remainder of those rows for practicing mindfulness, the percentages 30.8%, 27.3%, and 39.2% for each type of school, respectively, do not differ as much from each other as for the training. So work location may be more relevant to whether a teacher is exposed to mindfulness, rather than if they actually practice it. However, given the very small number of the non-suburban participants who said yes to either question, this data could be less representative. This result will be revisited again in the context of testing for significance of control variables in the development of our linear regression models.

For school level taught—middle or high school—we see very little difference in training (53.1% and 50.0% respectively), and some difference in practicing (40.6% and 31.5%, respectively). This variable was not anticipated to predict much variance, but will be further analyzed as a potential control nonetheless.

Experience in teaching had a broad range across the five subgroups for training (34.6% to 73.7%), with a somewhat normal distribution curve. Again, however, we see that range decrease significantly when looking at practicing (23.1% to 46.7%). So, like in the case of school location, experience may be more related to exposure to mindfulness training than to ongoing practice. Again, the small number of participants in each of the stratified groups limits our ability to generalize.

For race or ethnicity, we also have issues with generalizing data from the smaller subgroups; however, this sample shows that the Black or African American subgroup was less

(about 50% less) than the other groups in saying yes to either the training or practice question. When all of the non-white participants are grouped in one Persons of Color group, we note that 19.8% said yes to the training question, and 12.8% said yes to the practicing question, compared with 31.4% and 22.1% respectively for the White subgroup, which is still marked less, even when grouped. The standout group was Asian/Pacific Islander, with 50% reporting that they practice mindfulness, which was more than any other group. Granted, this was just 3 of the 6 total participants in that group, so it is hard to generalize, but it is worth noting as in the literature that mindfulness originated from Asia.

Regarding gender, we note that the females (58.9%) were more much likely to have participated in mindfulness training than males (38.4%), but again, when looking at responses to the practicing question, the two groups were very similar at 35.7% and 33.5% respectively. A possible explanation for this result is that, in general, females are more likely to seek-out and participate in self-development trainings like mindfulness (Taylor, 1999). This result and its implications will be revisited and discussed more in Chapter 5.

Unfortunately, there are no large data sets at the state or national level to compare these numbers with to know how accurately representative they are. However, we can still use a Chi-Square test to measure the likelihood that observed distribution is affected by relationships between the variables. The table below shows the results of Chi-Square tests from the crosstabs data in the previous table.

Table 7

Chi-Square Test for Demographic Variables and Participated in Mindfulness Training or Practices Mindfulness (n=86)

	<i>Participated in Mindfulness Training</i>			<i>Practices Mindfulness</i>		
	<i>df</i>	<i>Chi-Squared</i>	<i>Phi</i>	<i>df</i>	<i>Chi-Squared</i>	<i>Phi</i>
Location	2	10.016	.341	2	1.079	
Middle (or High School)	1	.079		1	.740	
Years of Experience	4	8.167		4	2.728	
Person of Color (or White)	4	5.700		4	2.957	
Female (or male)	1	3.875	.212	1	.049	

Note: Phi values are only given for Chi-Squared results with a significance of $p < .05$.

As we may have predicted from our initial crosstab analysis, the two significant results here were that location (suburban, charter urban, or traditional urban) relates to likelihood of having participated in mindfulness training, as does gender. Specifically, teachers in suburban or charter-urban schools, and female teachers, were more likely to have been trained than the others. These were higher chi-square results for years of experience and race, however those also had more variables, and overall did not yield a significant *Phi*. Possible explanations for and implication of these results will be revisited at the beginning of Chapter 5 in the discussion of Research Question 1.

Independent and Dependent Variable Data

Below is descriptive data from participants' responses organized by the various variables measured by the survey. Note that each of these measures ranges from 1.00 to 5.00 in possible score. For the FFMQ, this means ranging from 1 = "never or rarely true" to 5 = "very often or always true." Below, Table 8 describes data for the six independent variables from FFMQ survey.

Table 8*Means and Standard Deviations of FFMQ Independent Variables*

	<i>M</i>	<i>SD</i>	<i>Sample Range</i>	<i>Possible Range</i>
FFMQ Total	3.429	.357	2.2 - 4.2	1-5
Observing Facet	3.436	.705	1.9 - 5.0	1-5
Describing Facet	3.589	.455	2.5 - 4.5	1-5
Awareness Facet	3.396	.677	1.0 - 4.9	1-5
Nonjudging Facet	3.518	.728	1.6 - 5.0	1-5
Nonreactivity Facet	3.181	.418	2.1 - 4.1	1-5

N=86

In Table 8, the means are all similar, except that the nonreactivity facet is somewhat lower. However, the standard deviations of the observing, awareness, and nonjudging facets are larger, and thus these facets vary more greatly among participants. The sample range also aligns with this result as we see for each of those three facets that one of the actual limits of 1.00 or 5.00 are achieved.

Below, Table 9 shows the crosstabs data for which of the participants who participated in mindfulness also practice mindfulness.

Table 9*Crosstabs for Participated in Mindfulness Training and Practice Mindfulness*

		Practice Mindfulness			
		No	Yes		
Participated in Mindfulness Training	No	Count	37 _a	5 _b	42
		% within Participated in Mindfulness Training	88.1%	11.9%	100.0%
		% within Practices Mindfulness	66.1%	16.7%	48.8%
		% of Total	43.0%	5.8%	48.8%
	Yes	Count	19 _a	25 _b	44
		% within Participated in Mindfulness Training	43.2%	56.8%	100.0%
		% within Practices Mindfulness	33.9%	83.3%	51.2%
		% of Total	22.1%	29.1%	51.2%
Total	Count	56	30	86	

Note: Each subscript letter denotes a subset of Practices Mindfulness categories whose column proportions do not differ significantly from each other at the .05 level.

We can see from this table that 25 participants were both trained in mindfulness, and practice mindfulness, which is 83% of the 30 total participants who practice mindfulness. But this also means that 19 of the 44 (43.2%) participants who were trained in mindfulness, do not practice it. So while it is very likely that practitioners have been trained, those who have been trained do not consistently practice.

Below, Table 6 describes data for the four dependent variables from the other surveys, which ranged from 1= “none at all” to 5 = “a great deal” for the Teacher Sense of Efficacy Scale (TSES), and 1 = “strongly disagree” to 5 = “strongly agree” for The Brief Resiliency Scale (TBRS). The descriptions for the levels for the job satisfaction and burnout surveys are in Table 7 with their data.

Table 10
Means and Standard Deviations for Dependent Variables

	<i>n</i>	<i>M</i>	<i>SD</i>	<i>Sample Range</i>	<i>Possible Range</i>
Job Satisfaction	86	4.023	1.062	1.00-5.00	1-5
TSES Efficacy	86	4.126	.488	3.17-5.00	1-5
Burnout (reverse)	86	3.674	.975	1.00-5.00	1-5
TBR5 Resilience	86	3.738	.889	1.50-5.00	1-5

The four measures of our dependent variables, show efficacy (4.13) and job satisfaction (4.02) with averages above 4.00, and resilience (3.74) and burnout (3.67) below 4.00. The high-efficacy trend will be revisited in the discussion section. Also, recall that burnout in this study was measured in reverse to align with the other (positive) workplace outcomes, so a higher score on in its measure indicates *less* burnout, and vice-versa.

Turning to frequency and percentages, the tables below show the results from the two single-item measures of burnout and job satisfaction:

Table 11
Frequency and Percentages for Job Satisfaction and Burnout Scores

	<i>n</i>	<i>%</i>
Job Satisfaction		
5: Very satisfied	16	18.6
4: Moderately satisfied	38	44.2
3: Neither satisfied nor dissatisfied	23	26.7
2: Moderately dissatisfied	6	7.0
1: Very dissatisfied	3	3.5
Burnout		
5: I enjoy my work. I have no symptoms of burnout.	33	38.4
4: Occasionally I am under stress, and I don't always have as much energy as I once did, but I don't feel burned out.	35	40.7
3: I am definitely burning out and have one or more symptoms of burnout, such as physical and emotional exhaustion.	8	9.3
2: The symptoms of burnout that I'm experiencing won't go away. I think about frustration at work a lot.	7	8.1
1: I feel completely burned out and often wonder if I can go on. I am at the point where I may need some changes or may need to seek some sort of help.	3	3.5

For self-reporting on job satisfaction, 10.5% are dissatisfied (scores of 1 or 2), 26.7% are neither satisfied nor dissatisfied (score of 3), and 62.8% are satisfied (scores of 4 or 5). For self-reporting on Burnout, 11.6% experience persistent or severe feelings of burnout (scores of 1 or 2), 9.3% experience one or more symptoms of burnout, such as physical and emotional exhaustion (score of 3), and 79.1% may experience some stress, but no burnout (scores of 4 or 5). There is some parallel here, especially at the low end with scores of 1 or 2. However, there is also a distinct difference in the middle-to-high range of scores, showing that the participants do not feel exactly the same about burnout and job satisfaction.

While there are limitations to what can be gathered by this analysis of averages and percentages, it alludes to some significant results, such as how the workplace outcomes, despite being related to each other, are predicted differently by the various independent variables. These and other connections are explored through more advanced statistical methods, which we will be explained in addressing the second and third research questions below.

Research Question 1

What is the current state of mindfulness among teachers at specific secondary schools in Southern California? Looking at just averages from the descriptive data in Table 5 above, for the FFMQ and its five facets, which were all above 3.00 (the middle score on the survey), it appears that these teachers are generally mindful. In comparison with data from other studies using the FFMQ, teachers generally score higher than general population samples, which had averages scores of 3.00 to 3.30 for observing and describing, and below 3.00 for the other three facets (Pang & Ruch, 2019). For instance, a recent study (Williams et al., 2014), had 940 participants from a general community sample, with the following means for each facet: observing (3.31), describing (3.30), awareness (2.96), nonjudging (2.95), and nonreactivity

(2.91). Their study did not break down racial subgroups beyond white (n=800), and other (n=140), and that ratio of white to other is more extreme than in our study. Also, about 40% of their participants had a college degree, compared with 100% of our teacher-only sample (Williams et al., 2014). However, this second distinction is to be expected when comparing teachers with the general population. Their standard deviations for each facet also tended to be greater, with all but the observing facet being greater by 0.2 or more. This may suggest that teachers are not just generally more mindful in terms of higher scores, but demonstrate less variation in those scores than the population as a whole.

Looking at the FFMQ and each of the five-facet submeasures for our sample, we observe that the average score for the observing (3.43) and the acting with awareness (3.40) facet averages are very close to the full FFMQ average score (3.42), that the describing (3.59) and nonjudging of inner experience (3.51) facet averages are above the full FFMQ, while nonreactivity to inner experience (3.18) facet average is below the full FFMQ. The nonreactivity facet average is actually further from the full FFMQ average score than any other facet is, and that result connects with other results related to this correlation that will be addressed later in this chapter. Also the nonreactivity facet had only 7 questions, compared with 8-each for the facets, which explains why it did not pull down the full FFMQ average further, as it does not carry quite as much weight as the other facets in the total FFMQ score.

The sample had 51.2% of respondents report that they had participated in mindfulness training, and 34.9% report that they regularly practice mindfulness. There is no specific or national study to compare these percentages with, however they do seem to match the current trends through which mindfulness training is becoming more popular in education, and would have probably been much lower ten or more years ago (Jennings et al., 2013). For instance,

Emerson et al. (2017) did a systematic review of studies involving teaching mindfulness to teachers, and fewer than 10% of these studies were more than 12 years old. Also, in our study's sample, about the same number of teachers reported participating in mindfulness training regardless of their years of experience, further supporting that this part of the general growth pattern. Finally, anecdotally, the researcher has noticed throughout his own 17-year career in education in Los Angeles county, that the trend across that time in trainings and popular articles for educators has gone from nearly no mention of mindfulness, to frequent mention. A search in ACSD.org, an organization and website that develops and compiles resources for educators, gets over 2000 hits in articles and books upon searching for "mindfulness."

The difference, however, between teachers who have been trained in mindfulness and those who regularly practice it, at 16.3%, is substantial, especially as discussed previously in consideration of crosstabs comparing participants answers to those two questions. And, in answering the second research question, we will see that practicing mindfulness was consistently correlated with positive workplace outcomes, while participation in training, absent practice, was not. It appears that training alone may not be sufficient.

In summary, we can say that indicators of mindfulness, at least among the teachers in this study's sample, are present. Scores were generally high on the FFMQ, over half of the participants have had exposure to mindfulness training, and over a third practice on a regularly basis. The nonreactivity to inner experience facet of mindfulness had a lower average score than the other facets, suggesting this is could be an area less well-developed for teachers.

Additionally—as we will see in the results section that addresses Research Question 3—nonreactivity was significant in predicting workplace outcomes.

We now turn to Research Questions 2 and 3, and the use of t -Tests, ANOVA, MANOVA, and multiple linear regression tools to analyze the results.

Research Questions 2 and 3

We will begin this section by addressing Research Question 2. This is because Research Question 2 looks at demographic and experience variables that, depending on their effect, may need to be controlled-for in the modeling used to address Research Question 3. The goal is to identify the variables beyond the five facets of mindfulness and mindfulness training or mindfulness practice that may relate to workplace outcomes, so that we can build accurate models for each workplace outcome.

Recall Research Questions 2 and 3:

- 2) *How do demographic factors of participants, such as location of school, relate to the workplace outcomes of job satisfaction, efficacy, burnout, and resilience?*
- 3) *How do reported levels for the different facets of mindfulness, being trained in mindfulness, and practicing mindfulness, relate to the workplace outcomes of job satisfaction, efficacy, burnout, and resilience?*

To answer these question, we will begin by performing t -Tests and correlational tests to identify any relationships that may exist among the demographic variables. Because the variables for participating in mindfulness and practicing mindfulness are also binary, we will include them in these tables and analyses. And even though the FFMQ total score is one of our independent variables, we include it with the workplace outcomes here to note any connections it may have with the other control and independent variables.

***t*-Tests and Correlations for Demographics and Other Factors**

Below, the Table 12 summarizes the means and standard deviations for each of the workplace outcomes and FFMQ total score when broken down by binary independent variables. This includes all of our demographic variable data (except for range of years of experience, which is not binary), and the data for the participating in mindfulness training and practicing mindfulness variables. Note that as indicated before, burnout is measured in reverse, such that a higher score indicates lower burnout, and vice versa.

Table 12
Binary Variable Breakdown of Means and Standard Deviations for Workplace Outcomes and FFMQ Total Score

Binary Ind. Variable	Grouping	<i>M, SD</i>				
		Job Satisfaction	Efficacy (TSES)	Burnout (reverse)	Resilience (TBRS)	FFMQ Total
Gender	Male (0)	4.13, 1.17	4.03, 0.53	3.77, 1.07	3.83, 0.95	3.40, 0.37
	Female (1)	3.96, 1.01	4.18, 0.46	3.63, 0.93	3.69, 0.86	3.44, 0.35
Middle or High School	Middle (0)	4.06, 1.08	4.19, 0.53	3.72, 1.02	3.79, 0.99	3.42, 0.32
	High (1)	4.00, 1.06	4.09, 0.46	3.65, 0.95	3.71, 0.83	3.43, 0.38
Race or Ethnicity	White (0)	3.98, 1.15	4.10, 0.47	3.71, 0.98	3.80, 0.88	3.46, 0.31
	Pers. of Color (1)	4.23, 0.80	4.15, 0.53	3.68, 1.01	3.68, 0.94	3.40, 0.43
School Location	Suburban (0)	3.98, 1.16	4.06, .43	3.71, 1.06	3.79, .91	3.42, .35
	Urban (1)	4.09, 0.92	4.22, .55	3.63, .84	3.66, .86	3.45, .37
Part. in Mind. Training Practices	No (0)	3.90, 1.14	4.02, 0.51	3.48, 1.06	3.5, 0.94	3.37, 0.4
	Yes (1)	4.14, 0.98	4.23, 0.45	3.86, 0.85	3.96, 0.78	3.49, 0.3
Mindfulness	No (0)	3.75, 1.13	4.03, 0.48	3.38, 0.96	3.45, 0.87	3.32, 0.33
	Yes (1)	4.53, 0.68	4.31, 0.45	4.23, 0.73	4.28, 0.64	3.64, 0.31

Using the data from the table above, we can create a new table below that shows how each of the binary-measure variables relate to the workplace outcomes using *t*-tests (it again excludes the variable for range of years of experience, which is nonbinary, and will be analyzed

later using a correlation test). There is also a larger correlation table showing the relationships between all non-binary variables in Appendix C.

Table 13
t-Test Results for Binary Independent Variables Related to Workplace Outcomes and FFMQ Total Score

Binary Ind. Variable	Grouping	<i>t, Difference in Means</i>				
		Job Satisfaction	Efficacy (TSES)	Burnout (reverse)	Resilience (TBRS)	FFMQ Total
Gender	Male (0)	.701, .17	-1.370, .15	.640, .14	.725, .14	-.531, .04
	Female (1)					
Middle or High School	Middle (0)	.262, .06	.902, .10	.323, .07	.420, .08	-.093, .01
	High (1)					
Race or Ethnicity	White (0)	-1.046, .25	.368, .05	.152, .03	.618, .12	.770, .06
	Pers. of Color (1)					
School Location	Suburban (0)	-449, .11	-1.558, .16	.359, .08	.695, .13	-.411, .03
	Urban (1)					
Part. in Mind. Training	No (0)	-1.011, .24	-1.968, .21	-1.868, .38	-2.487, .46	-1.575, .12
	Yes (1)					
Practices Mindfulness	No (0)	-3.463, .78	-2.583, .28	-4.264, .85	-4.564, .83	-4.400, .32
	Yes (1)					

Note: Significant results (with sig. $t < .05$) are highlighted in grey.

For Table 13, above, note that a positive t value indicates that variable coded as 0 has the greater mean, and a negative t value indicates that the variable coded as 1 have the greater mean. For instance, persons of color reported higher job satisfaction on average, given that $t = -1.046$, and (*Difference in Means*) = .25.

Moving from top to bottom in the rows to analyze this data, we begin by noting that gender was not a significant factor for any of the workplace outcomes. This fits well with the general research that shows that even though female teachers may experience slightly more

work-related stress than male teachers, their job satisfaction and other related workplace outcomes do not differ consistently in either direction (Klassend & Chiu, 2010).

Research comparing middle versus high school teacher workplace outcomes was not found, so that the result of no significant difference being found in these *t*-Tests is not easy to put in context. However, it was a potential control variable worth testing for.

Race was also found to not indicate a significant difference in the workplace outcome. This calculation was done grouping “Persons of Color” to compare with White since the subgroups were not large enough to perform a reliable ANOVA test. However, the ANOVA test was still run, and shows the same results of no significant difference based on individual races. These tables can be found in Appendix D. NCES has not released a comprehensive report on job satisfaction for teachers among US teachers since 1997, and in that report the difference was not more than 6% among any of the subgroups (NCES, 2012).

Contrary to the predicted outcome—that was based on the evidence discussed in the lit review about turnover being higher in urban schools—there was not any significant difference in workplace outcomes for urban versus suburban teachers. Although with a much wider significance window (such as $p < .2$), one could consider teaching in an urban school to be slightly positively related to efficacy: *t*, sig. *t* being -1.558, .123 respectively, and the mean efficacy score for urban was .16 higher than it was for suburban. The test was run again with ANOVA looking at the three different groups—separating urban charter schools from traditional urban schools—and there was still no observed significant difference (see Appendix D). It is possible that the small sample size affected the results for the ANOVA test as with the subgroups for race, and several other possible explanations for this result (including considerations in context of the COVID 19 pandemic) will be discussed in Chapter 5.

The table below shows the correlation test for Years of Experience, which has the following five answer choices in the survey for the question “For how many years have you been teaching?”: 1 = 1-2 years, 2 = 3-5 years, 3 = 6-10 years, 4 = 11-19 years, and 5 = 20 or more years.

Table 14
FFMQ Mindfulness Measures and Workplace Outcome Correlation (r)

	Job Satisfaction	Efficacy (TSES)	Burnout (reverse)	Resilience (TBRS)
Years of Experience	.206	.343	.120	.156
Sig.	.057	.001	.269	.152

In this analysis of the sample, we see that years of experience is correlated with efficacy, and may be correlated with job satisfaction as well given a more lenient significance level (such as $p < .06$). This is not deeply relevant to the study, but does make sense as research shows that efficacy, especially in the teaching profession, increases over time (Allensworth et al., 2009). It is also important now to consider this is as a control variable when building the linear regression model for the efficacy, and possibly the job satisfaction, workplace outcome.

Mindfulness Training and Practice, and Workplace Outcomes

Strikingly, the variable of practices mindfulness related at a significant level with all four workplace outcomes, suggesting that the more likely a teacher is to practice mindfulness, the more likely that teacher is to have positive workplace outcomes. Specifically, the mean scores for each workplace outcomes were .28 to .85 greater for those who reported practicing mindfulness. Participation in mindfulness training was also related to resilience, but not as strongly as practicing mindfulness was. This result fits with the primary research that was fundamental to this study’s inception—the promising potential for mindfulness to be related to

positive workplace outcomes—that is best summarized in Good et al. (2016) and the theoretical framework discussed in Chapter 2.

Looking deeper into the result of practicing mindfulness correlating with all workplace outcomes, the table below shows the results of a MANOVA test, which is a multivariate analysis tool that examines the predictive value of one independent variable on *multiple* dependent variables. This is not as common as ANOVA, but it is an appropriate fit for a study with multiple dependent variables that appear to all be related to a single independent variable, such as practices mindfulness, for this study (Tabachnick & Fidell, 1996). The table below summarizes the results.

Table 15
MANOVA Test Results for Practices-Mindfulness Related to Workplace Outcomes

Dependent Variable	<i>Type III Sum</i>				
	<i>of Squares</i>	<i>df</i>	<i>Mean Square</i>	<i>F</i>	<i>Sig.</i>
Job Satisfaction	11.987 ^a	1	11.987	11.992	.001
Efficacy	1.486 ^b	1	1.486	6.670	.012
Burnout	14.392 ^c	1	14.392	18.182	.000
Resilience	13.364 ^d	1	13.364	20.834	.000

- a. R Squared = .125 (Adjusted R Squared = .115)
- b. R Squared = .074 (Adjusted R Squared = .063)
- c. R Squared = .178 (Adjusted R Squared = .168)
- d. R Squared = .199 (Adjusted R Squared = .189)

While none of the R Squared or adjusted R Squared values are particularly large, they do show that the single answer of yes or no to “Do you regularly practice mindfulness?” could predict variance in all four workplace outcomes with a range of 6% to 20%. In particular, practicing mindfulness may predict 17% of burnout variance, with people practicing mindfulness being more likely to be less burned-out. Because burnout is an identified critical issue with teachers (Cone, 2014), this is quite meaningful. Recognizing that MANOVA is a less familiar

modelling tool than ANOVA is, the Adjusted R Squared is also given for all four outcomes, and is no more than .01 different from the standard R Squared, which corresponds to just 1% less predictive power. This suggests that the model is very stable.

In summary, while most demographic factors were not significant, the experience variables of participation in mindfulness training, and especially the regular practice of mindfulness, were. This begins the process of addressing Research Question 3, and we now turn to the use of Pearson correlation tests analyze the relationships between the five facets of mindfulness and the workplace outcomes.

Correlation for Mindfulness and Workplace Outcomes

The table below shows the correlation measures for the independent variables for the full FFMQ scores and each of the five facets of mindfulness in the FFMQ, with the four dependent variable scores for workplace outcomes. Correlations above .500 have been made **bold** to highlight their strength.

Table 16

FFMQ Mindfulness Measures and Workplace Outcome Correlation (r)

Mindfulness (FFMQ)	Job Satisfaction	Efficacy (TSES)	Burnout (reverse)	Resilience (TBRS)
Total Score	.433 ^{***}	.538^{***}	.515^{***}	.568^{***}
Observing	.237 [*]	.377 ^{***}	.129	.138
Describing	.430 ^{***}	.519^{***}	.389 ^{***}	.424 ^{***}
Acting with Awareness	.284 ^{**}	.282 ^{***}	.378 ^{***}	.307 ^{**}
Nonjudging of Inner Exp.	.062	.186	.301 ^{**}	.412 ^{***}
Nonreactivity to Inner Exp.	.411 ^{***}	.293 ^{**}	.419 ^{***}	.518^{***}

*** *Correlation is significant at the 0.001 level (2-tailed)*

** *Correlation is significant at the 0.01 level (2-tailed)*

* *Correlation is significant at the 0.05 level (2-tailed)*

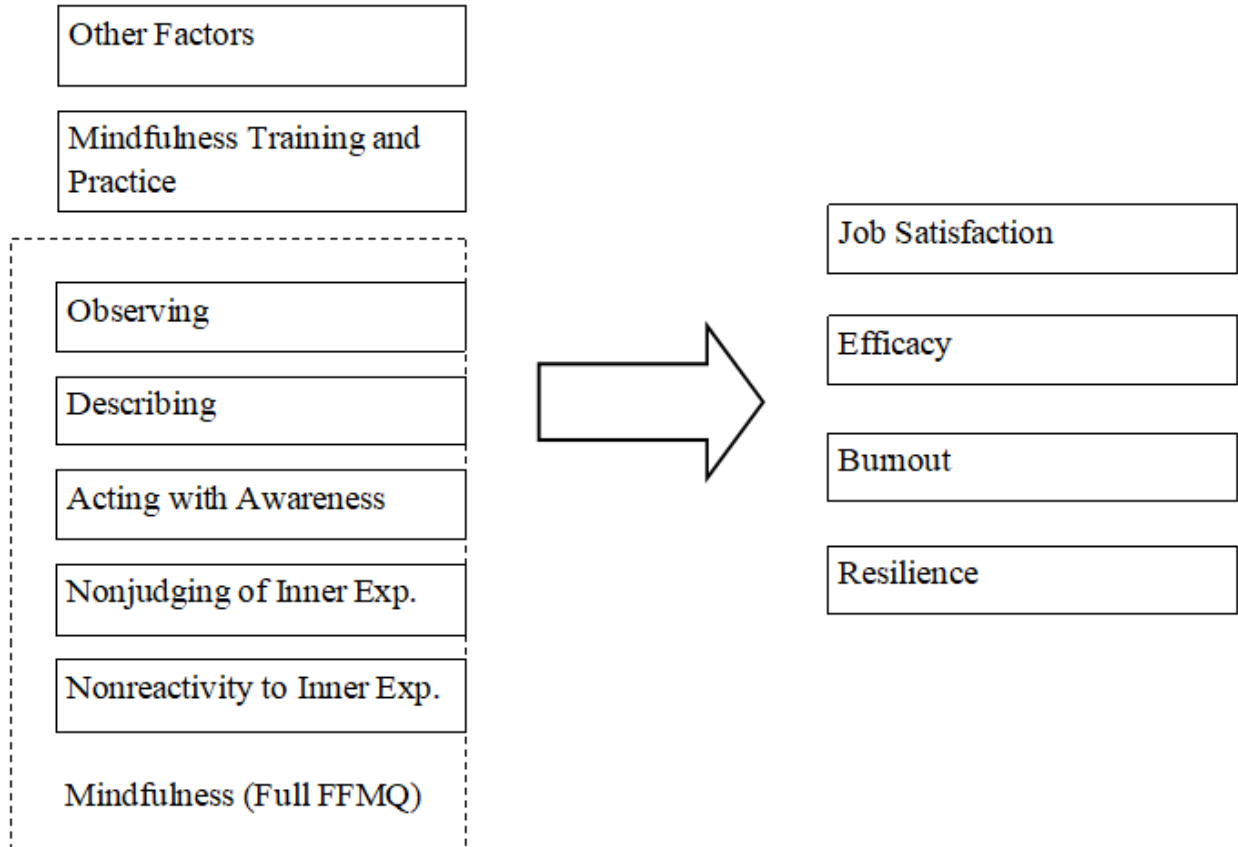
The total score for the FFMQ correlates moderately to strongly with each of the four workplace outcomes, as does the FFMQ facet of describing. Nonreactivity to inner experience correlates moderately with all but efficacy but still had a significant albeit weak correlation with efficacy. The facet of nonjudging of inner experience has a moderate correlation with resilience, and otherwise weak or not significant correlation. And the facet of observing had a significant but weak correlation with efficacy, weaker still with job satisfaction, and otherwise had no observed effect. Because correlation only considers relationships pairwise, we turn to linear modeling to get a better sense of how the variables predict outcomes in combinations with each other.

Multiple Linear Regression for Mindfulness and Workplace Outcomes.

Going beyond correlation between pairs of variables, we will now look at multiple linear regressions for how the FFMQ and its five facets may predict the variance in the workplace outcomes. Recall Figure 2 from Chapter 2 that shows the relationships that will be explored:

Figure 2

Diagram for relationship between mindfulness facets, training, practice, and other factors (independent variables) and the workplace outcomes of efficacy, job satisfaction, burnout, and resilience (dependent variables)



The intention here is to test various linear models that quantify and rank the predictive effect of each independent variable in comparison with each other. For each of the four models considered, we consider ones with the total FFMQ score, and ones with the five facet scores, separately. This is because of multicollinearity, which the FFMQ has with all of the facet subscores, since it is composed of exactly those subscores⁴. Also, analysis of the individual facets may offer a more nuanced picture of each facet’s relationship to each workplace outcome.

⁴ Specifically, as shown in the full correlation table in Appendix C, the full FFMQ score had Pearson *r* correlations of .518, .750, .648, .551, and .528 with the facets of observing, describing, awareness, nonjudging, and nonreactivity, respectively.

Multicollinearity tests were also performed for potential over-alignment between the five facet independent variables, and the results of those tests can be found in a table in Appendix E. Multicollinearity was determined to not be an issue between any of the facets, however, it is a concern with the total FFMQ score in relation to each facet's score, as explain above and in footnote 4, because those facet scores actually construct the total FFMQ score. Thus in the various models we explore, the total FFMQ is always considered separately from its five facets.

The independent variable for participated in mindfulness training, practices mindfulness, and the demographic control variables are also included in the models below. For the control variable of race or ethnicity, the groups were simplified to one Persons of Color subgroup, and one White subgroup. This is because the non-white subgroups were too small to produce accurate linear regression results⁵. However, in the analysis above that addressed Research Question 2, there were no noted differences in *t*-Tests or ANOVA tests for how race or ethnicity relates to the workplace outcomes.

The sequence of models for each workplace outcome that are found in the tables below is as follows: Model 1 = Demographics, Model 2 = Demographics + Training + Practice, Model 3 = Demographics + FFMQ Total, Model 4 = Demographics + Five Facets, Model 5 = Demographics + Training + Practice, and FFMQ Total, and Model 6 = Demographics + Training and/or Practice + Five Facets.

Finally, the research context and implications for findings from the results of this modeling process will be addressed in Chapter 5.

⁵ Typically a group must have $n > 25$ to be considered for linear regression modeling (Jenkins, 2020)

Job Satisfaction

The table below shows the results of linear regression modeling to test the predictability of job satisfaction based on the various independent variables.

Table 17
Predictors of Job Satisfaction Linear Regression Models

Model Summary	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Total FFMQ Score			.446***		.339**	
Observing Facet				-.046		-.125
Describing Facet				.380**		.353**
Awareness Facet				.156		.133
Nonjudging Facet				-.068		-.102
Nonreactivity Facet				.223*		.197*
Part. Mindfulness Train		.246			-.081	-.038
Practice Mindfulness		.422***			.257*	.250*
Location (urban)	.027	.050	.020	-.025	-.001	.000
Grade Level (HS)	-.023	.025	-.039	-.048	-.006	-.015
Years of Experience	.245*	.285**	.184	.192	.224*	.234*
Gender (female)	-.117	-.103	-.144	-.162	-.124	-.149
Race (person of color)	.073	.076	.138	.107	.127	.101
<i>n</i>	83	83	83	83	83	83
<i>R</i> ²	.087	.232	.277	.356	.318	.396

*** Correlation is significant at the 0.001 level (2-tailed)

** Correlation is significant at the 0.01 level (2-tailed)

* Correlation is significant at the 0.05 level (2-tailed)

We note that Model 6 has the highest R Square (.396), which suggests that it may predict up to 40% of the variance in the job satisfaction outcome. We also see that the total FFMQ score and the facets of describing and nonreactivity are specific significant predictors for job satisfaction for this sample, as are practicing mindfulness and years of experience. Even though other independent variables may not have been significant at the $p < .05$ level, including them

still sheds some light on the potential direction of their influence. For instance, the coefficient of (-.149) for gender reinforce the results discussed earlier that women in this sample reported lower job satisfaction on average compared with men.

Efficacy

The table below shows the results of linear regression modeling to test the predictability of efficacy based on the various independent variables.

Table 18
Predictors of Efficacy Linear Regression Models

Model Summary	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Total FFMQ Score			.517***		.472***	
Observing Facet				.136		.091
Describing Facet				.337**		.323**
Awareness Facet				.151		.144
Nonjudging Facet				.081		.058
Nonreactivity Facet				.088		.111
Part. Mindfulness Train		.108			.133	.139
Practice Mindfulness		.276*			.046	.033
Location (urban)	.071	.129	.016	.024	.059	.064
Grade Level (HS)	-.081	-.043	.100	-.107	-.087	-.095
Years of Experience	.315**	.336**	.244**	.246*	.250**	.251**
Gender (female)	.100	.068	.068	.040	.038	.014
Race (person of color)	-.053	-.072	.023	.009	-.001	-.016
<i>n</i>	83	83	83	83	83	83
<i>R</i> ²	.137	.248	.392	.423	.414	.442

*** Correlation is significant at the 0.001 level (2-tailed)

** Correlation is significant at the 0.01 level (2-tailed)

* Correlation is significant at the 0.05 level (2-tailed)

We note that Model 6 has the highest R Square (.442), which suggests that it may predict up to 44% of the variance in the efficacy outcome. We also see that the total FFMQ score, the

describing facet, and years of experience are specific significant predictors for efficacy for this sample. Interestingly, practicing mindfulness was not a significant predictor, and we will explore that result more in the next chapter.

We also note that, in Model 6, the coefficients variables of the awareness facet and participated in mindfulness training are positive and stronger than all of the other variables that did not have a significant *t* value.

Burnout

The table below shows the results of linear regression modeling to test the predictability of burnout based on the various independent variables.

Table 19
Predictors of Burnout Linear Regression Models

Model Summary	<i>Model 1</i>	<i>Model 2</i>	<i>Model 3</i>	<i>Model 4</i>	<i>Model 5</i>	<i>Model 6</i>
Total FFMQ Score			.520***		.405***	
Observing Facet				-.051		-.166
Describing Facet				.228		.190
Awareness Facet				.246*		.218*
Nonjudging Facet				.127		.075
Nonreactivity Facet				.263*		.257*
Part. Mindfulness Train		.003			.024	.084
Practice Mindfulness		.431***			.234*	.266*
Location (urban)	-.042	.006	-.098	-.118	-.054	-.060
Grade Level (HS)	-.052	-.004	-.076	-.077	-.042	-.035
Years of Experience	.154	.191	.083	.101	.118	.146
Gender (female)	-.080	-.091	-.112	-.093	-.116	-.102
Race (person of color)	-.025	-.035	.050	.055	.026	.029
<i>n</i>	83	83	83	83	83	83
<i>R</i> ²	.030	.212	.232	.347	.334	.418

*** *Correlation is significant at the 0.001 level (2-tailed)*

** *Correlation is significant at the 0.01 level (2-tailed)*

* *Correlation is significant at the 0.05 level (2-tailed)*

We note that Model 6 has the highest R Square (.418), which suggests that it may predict up to 42% of the variance in the burnout outcome. We also see that the total FFMQ score, the facets of awareness and nonreactivity, and practicing mindfulness are specific significant predictors for efficacy for this sample. The describing facet was also almost a significant predictor.

Resilience

The table below shows the results of a linear regression analysis to test the predictability of resilience based on the FFMQ and its five facet subscores.

Table 20*Predictors of Resilience Linear Regression Models*

Model Summary	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Total FFMQ Score			.567***		.405***	
Observing Facet				.009		-.132
Describing Facet				.207		.167
Awareness Facet				.084		.058
Nonjudging Facet				.257*		.199*
Nonreactivity Facet				.384***		.398***
Part. Mindfulness Train		.075			.024	.182
Practice Mindfulness		.427***			.234*	.222*
Location (urban)	-.083	-.017	-.143	-.126		-.049
Grade Level (HS)	-.075	-.019	-.095	-.066		-.025
Years of Experience	.203	.238*	.125	.152		.190*
Gender (female)	-.075	-.103	-.110	-.063		-.093
Race (person of color)	-.068	-.087	.014	-.022		-.063
<i>n</i>	83	83	83	83	83	83
<i>R</i> ²	.052	.262	.359	.461		.550

*** Correlation is significant at the 0.001 level (2-tailed)

** Correlation is significant at the 0.01 level (2-tailed)

* Correlation is significant at the 0.05 level (2-tailed)

We note that Model 6 has the highest R Square (.550), which suggests that it may predict up to 55% of the variance in the resilience outcome. We also see that the total FFMQ score, the facets of nonjudging and nonreactivity, practicing mindfulness, and years of experience are specific significant predictors for efficacy for this sample.

Job Satisfaction, Efficacy, Resilience and Burnout Linear Regression Model Summary

Now that we have built a final linear model for each workplace outcome, which was Model 5 in each of the tables above, we summarize these four models in the table below to see the strength and distribution of each standardized coefficient (Beta) side by side.

Table 21
Complete Linear Regression Model Summary

Dependent Variable	Standardized Coefficients: <i>Beta</i>						R²	
	<i>Years of Exper.</i>	<i>Practice Mindful.</i>	<i>Observing</i>	<i>Describing</i>	<i>Awareness</i>	<i>Non-judging</i>		<i>Nonre-activity</i>
Job Satisfaction	.234	.250		.353			.197	.396
Efficacy	.251			.323				.442
Burnout		.266			.218		.257	.418
Resilience	.190	.222				.199	.398	.550

Note: Each Beta has $t < .05$ or stronger significance.

When all taken into account, the only significant demographic variable was years of experience, which partly predicted job satisfaction, resilience, and especially efficacy (which had the largest Beta). Even though the factor of practicing mindfulness positively predicted all of the workplace outcomes in our earlier analysis, it was not a part of the final model for efficacy, though it was substantial for each of the other three workplace outcomes.

Looking at the five facets of mindfulness, all but the observing facet made it to at least one of the final models. Nonreactivity was the most influential, being strong predictor for job satisfaction, burnout, and resilience. Describing was the second-most influential, predicting both job satisfaction and efficacy. Finally, awareness predicted only burnout, and nonjudging predicted only resilience. We also recall that the total FFMQ score was predictive for each of the workplace outcomes, however, looking at the component facets gave us a more detailed (indicating which facets are most predictive) and more accurate (higher R Squared) model.

In summary, we see that years of experience, reports of practicing mindfulness, and nonreactivity are our strongest independent variable predictors for the dependent variable workplace outcomes. Describing was also strong for two outcomes, and awareness and nonjudging for one outcome each. However, none of the linear models used all of the independent variables with significance, so we saw consistent relationships in clusters. Still, the complete linear model using all facets of mindfulness and other factors to explain variance for each of the four dependent variables representing workplace outcomes is very informative. These results, taken into consideration with the other results from earlier in the chapter, provide interesting implications for policy, practice, and further research that we will discuss in the next chapter.

CHAPTER V: DISCUSSION

In this chapter, we will discuss potential explanations for, and implications of, the findings revealed in the previous chapter. A confounding factor is the COVID 19 pandemic, which began just before data was collected for this study and caused all schools in the study to close their campuses and move entirely to online instruction for the remainder of the term. Since nothing like this has occurred with this population in the last 100 years, it is very difficult to know what its effect is. However, some of the unusual patterns in the data, such as lack of a distinct difference in levels of burnout recorded by suburban versus urban teachers, may be explained or influenced by the pandemic, which forced all teachers to work from home, instead of at their school's actual location. We will explore this and other explanations of the results in the pages ahead, starting with a summary and proposed explanation of results related to the research questions, including a diagram that summarizes the significant relationships between the independent and dependent variables. After that, implications for policy and practice will be introduced, followed by limitations of the study, recommendations for future research, and concluding remarks.

Summary and Explanation of Findings

Research Question 1

What is the current state of mindfulness among teachers at specific secondary schools in Southern California? In the previous chapter, we saw that over half of the teachers surveyed had been trained in mindfulness, but only a third said that they practice mindfulness, and 83% reported that they were both trained and practice. Although this was a relatively small sample, the data supports the claim that a substantial number of teachers are being exposed to and embracing mindfulness at urban and suburban schools in the Los Angeles area. Unfortunately,

there is no clear regional or national data on teachers' exposure to mindfulness to compare this with, but it does compare well with other studies of the general population as explained in Chapter 4. Given the findings of other research that practicing mindfulness and exhibiting mindfulness (through the five facets) have a significant predictive effect for positive workplace outcomes, this is very promising information. After looking deeper at the specific relationships between these variables, we will discuss their implications in regard to policies and practices that can further boost the role of mindfulness in making teachers feel better about the work they do and the job they have.

Research Questions 2 and 3

How do demographic factors of participants, such as location of school, relate to the workplace outcomes of job satisfaction, efficacy, burnout, and resilience, and how do reported levels for the different facets of mindfulness, being trained in mindfulness, and practicing mindfulness, relate to the workplace outcomes of job satisfaction, efficacy, burnout, and resilience?

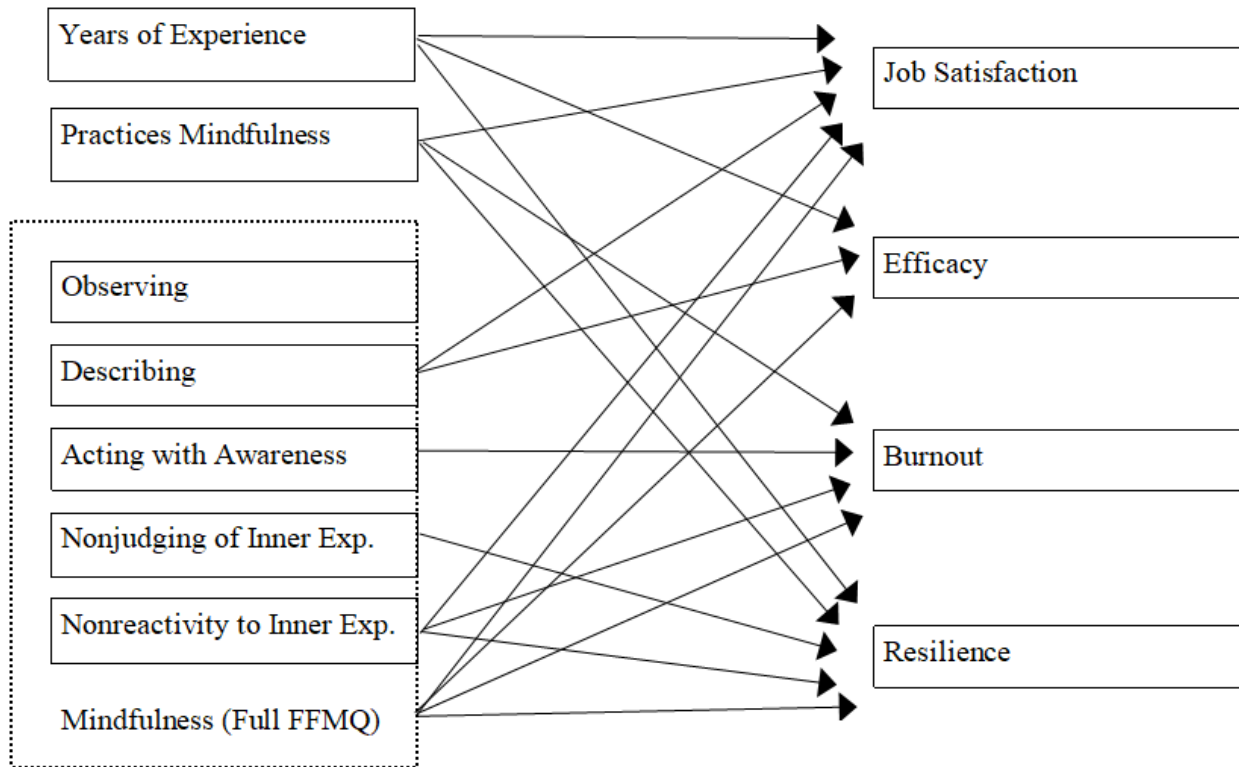
We begin our discussion of these two questions with a diagram that shows the significant relationship between variables with vectors.

Vector Relationship Diagram

Taking the results associated with Research Questions 2 and 3 together, we can create a diagram showing all of the significant relationships simultaneously:

Figure 4

Significant Relationships Between Independent and Dependent Variables



Note: The arrows represent significant relationship at $p < .05$ or stronger. The box with a dotted border around the five facets indicates that they are components of the full FFMQ measure.

This diagram helps us see that the total FFMQ score is the most influential independent variable, as it significantly relates to all four dependent variables in the data set. When looking more closely at the five facets within the FFMQ, we see that nonreactivity to inner experience is the most influential (relating to three outcomes), followed by describing (relating to two outcomes), and finally, acting with awareness and nonjudging of inner experience (relating to one outcome each).

Beyond the FFMQ, the variables of practices mindfulness and years of experience each related to three outcomes. We will now discuss these variables and their relationships with proposed explanations based on the context of the study and broader research.

The Strong Influence of Years of Experience

Even though years of experience was only significantly correlated to efficacy in the initial analysis, when incorporated as a control in the various linear regression models it emerged as an important predictor for the outcomes of job satisfaction and resilience as well. This result can be explained in several ways. First, since many new teachers resign because of negative workplace outcomes, it makes sense that years of experience naturally screens many of those teachers out. Research has demonstrated a strong connection between teachers' experience, and the outcomes of efficacy and job satisfaction (Klassen et al., 2010), so this study may add to that general finding.

Unfortunately, year of experience is not something that we can train for, as we can for mindfulness, or one of the specific five facets. Thus we acknowledge the importance of experience as a control variable, and keep it in mind as we focus more energy and resources on supporting new teachers. However, it is interesting to note that burnout was *not* related to years of experience in this study. Whether this is because of new stressors from the pandemic or something else, such as teachers who quit early in their career because of burnout not being eligible participants in this study, is not clear. But there is a cautionary message here that a teacher can burnout at any time in their career.

The Strong Influence of Practicing Mindfulness

As revealed in the MANOVA analysis in Chapter 4, and as shown in Figure 4 above, practicing mindfulness was a predictor for positive results in all four workplace outcomes, and in three of the four after completing the linear regression modeling. This aligns well with the research about mindfulness and workplace outcomes in general (Good et al., 2016), and for teachers specifically (Flook et al., 2013). And again, since whether or not a participant had

training in mindfulness was not a significant predictor for any of the workplace outcomes, we note an important gap between exposure and ongoing practice.

The Chi Square tests from Chapter 4 also showed us that there was no significant variance in participation in mindfulness or practicing mindfulness-based across demographic factors, except for gender and location of schools. Specifically, females were more likely to have participated in mindfulness training, as were suburban and charter school teachers. Why was this the case? Regarding the school type or location, it may have to do with the priorities of the school and district leadership. There is no clear data on which schools by location are implementing mindfulness training for teachers, however, one could make the argument that incorporation of new, nonstandard trainings like mindfulness are more popular and easier to get going in smaller districts or schools, which is an attribute (smallness) that distinguishes suburban schools/districts and charter schools from most urban schools/districts. Despite studies like Preston et al. (2012) supporting this claim, it is definitely a generalization with many exceptions, as some urban schools have implemented impressive innovations, including mindfulness training for staff and students. Meiklejohn et al. (2012) reviews the results of several of these studies.

Regarding gender, there is plenty of research that shows that women are much more likely than men to seek training and other experiences for self-help and wellbeing (Katz, 1993; Taylor, 1999). Thus is not surprising that women in the sample were much more likely to report having been trained in mindfulness than men were, especially since the question in this study did not distinguish between school/work-based training, versus training that participants may have sought out personally. However, why there was not significance difference how women and men reported whether or not they consistently practice mindfulness, is not clear. This could suggest that seeking training in mindfulness independently is not as impactful as it being

delivered consistently through work. There is not strong enough data to definitively assert this, but it helps us build the case for recommendations for policy and practice that will be discussed later in this chapter.

There was also significant variation by race in reporting experience with mindfulness training and practice, with Black or African American being much lower than all other groups, and Asian being higher than all others. The sample sizes for each subgroup were quite small, so it is difficult to make general statements about this result, but it at least raises some interesting questions, such as whether religion is a factor to consider here. Even though mindfulness practices are not necessarily religious in nature, they are fundamental to the Buddhist religion. Since there are patterns among race and religion, that could also affect the pattern of race and mindfulness training or practice. Also, mindfulness training was much more prevalent across the sample in charter and suburban schools, so why was it less common at traditional urban schools? Since the charter school was in an urban area, it may be more about school innovation trends, rather than specific school location trends. There is certainly a lot more to look into here in a potential larger-scale study.

The Strong Effect of the Nonreactivity Facet

The nonreactivity to inner experience facet was a significant and positive predictor of job satisfaction, (low) burnout, and resilience. In Chapter 1, we explained the emotional challenges of the teaching profession that can lead to burnout and high turnover (Cone, 2014). A corollary to nonreactivity to inner experience is the ability to separate emotions from feelings. Feelings—positive and negative—are inevitable, however, emotions, or how we “react” to those feelings, are controllable, and better control leads to better feeling about work or whatever context has triggered the initial feelings (Rose, 2010). The ability to manage reactions to feelings, especially

if we broaden this from inner-experience to outer (or other people's) experience, falls in the area of emotional intelligence (EQ), which is defined as the ability to perceive emotions, to access and generate emotions so as to assist thought, to understand emotions and emotional knowledge, and to reflectively regulate emotions so as to promote emotional and intellectual growth (Goleman, 2006). Fortunately, unlike IQ, which remains relatively constant throughout a person's life EQ can increase with proper training and practice (Goleman, 2006). Also, EQ is more strongly correlated with well-being than IQ, making it a worthwhile pursuit (Goleman, 2006). Given their shared positive effect on well-being, there may be a deeper connection between mindfulness and emotional intelligence that is worth investigating further. Also, despite the growing popularity and familiarity with mindfulness, emotional intelligence may be a more "approachable" concept, especially for educators. If professional development on increasing one's emotional intelligence also develops nonreactivity, which may in turn lead to better workplace outcomes, it is pathway worth considering for future research, which we will discuss more later in this chapter.

It worth noting here, however, that nonreactivity could be seen as controversial expectation. For one, many may perceive severe nonreactivity as being stoic, or uncaring. In a professional where kids are the main population served, this may be considered unusual or even unprofessional. Also, in regard to issues with racism or other social injustice in the workplace, where is the place for nonreactivity? The author can deeply remember a conversation with mentor school leader who said "While the general expectation of educators, and especially school leaders, is to be calm and level-headed, when it comes to matters of social injustice, it is not only appropriate to shown emotion, it is necessary for credibility." So there is a difference between issues with (over) reactivity, such as the teacher who repeated yells at students in their

class out of general frustration, and the teacher who witnesses or recognizes a deep injustice and calls it out with the appropriate intensity it deserves.

The Strong Influence of the Describing Facet

The describing facet was a significant predictor of job satisfaction and efficacy. What makes this facet so important? Recent positive psychology research suggests that practice in describing how you feel, especially with journaling, can lead to increased feelings of well-being (Seligman, et al., 2005). So it is possible that this explains the result of positively predicting job satisfaction. The same argument could be made for the influence of describing on efficacy, but there is at least one other promising explanation involving an interesting connection to teacher evaluation. We start by looking at language of some of the items in the Teachers Sense of Efficacy Scale (TSES; Tschannen-Moran & Woolfolk (2001):

To what extent can you craft good questions for your students?

How well can you establish a classroom management system with each group of students?

To what extent can you use a variety of assessment strategies?

To what extent can you provide an alternative explanation or example when students are confused?

How well can you implement alternative teaching strategies in your classroom?

Now consider the list of the five California Standards for the Teaching Profession (CSTPs), which are the basis for all induction programs and most teacher evaluation systems in California; CCTC, 2009):

Standard 1: Engaging and Supporting All Students in Learning

Standard 2: Creating and Maintaining Effective Environments for Student Learning

Standard 3: Understanding and Organizing Subject Matter for Student Learning

Standard 4: Planning Instruction and Designing Learning Experiences for All Students

Standard 5: Assessing Students for Learning

Standard 6: Developing as a Professional Educator

There is clear alignment between the language of efficacy in the TSES and the CSTPs, which could have contributed to the strong connection between describing and efficacy. For instance, teachers with high efficacy probably practiced describing their work in language that matches their evaluation.

This claim is also supported by the language in the actual FFMQ questions for the describing facet, which goes beyond just describing feelings. In particular, the following three items could relate to work experiences (the full FFMQ survey can be found in Appendix B for reference):

7. I can easily put my beliefs, opinions, and expectations into words.

12. It's hard for me to find the words to describe what I'm thinking. (measure in reverse)

32. My natural tendency is to put my experiences into words.

Perhaps teachers who feel more confident describing their thoughts, feelings, and experiences, also feel more confident and efficacious in their actual work.

The Weaker Effects of the Observing, Awareness, and Nonjudging Facets

Why were these facets not as significant in predicting workplace outcomes? One possibility, of course, is that it was just the nature of this sample, and a different pattern may have emerged with a larger group of participants in the study. However, there is also evidence in research that these three facets, especially observing, are less strongly associated with outcomes like the workplaces ones analyzed in this study (Pang and Ruch, 2018). I would also like to offer

the idea, though there is no specific research that I could find to support it, that being observant is a natural quality of those who would be interested in teaching in the first place. For instance, consider the following two items from the FFMQ that are scored for the observing facet:

20. I pay attention to sounds, such as clocks ticking, birds chirping, or cars passing.

31. I notice visual elements in art or nature, such as colors, shapes, textures, or patterns of light and shadow.

Though these items may not seem to immediately relate to teaching, the first could be connected to the awareness relating to paying attention to all the things that could be going on in a classroom (heard but not always immediately seen), and the second sounds like the type of observation that could be for any number of things taught in classes (not just art). This proposed idea may be a stretch with the limited data and evidence presented here, however, the specific question of “are teachers generally more observant than other workers?” could be worth considering for future research.

Acting with awareness was still a significant predictor for lower-burnout, which fits with the literature discussing in Chapter 2 about the opposite of acting of awareness—that is, automaticity and *mindless* engagement with work—being associated with higher burnout (Good et al., 2016).

Nonjudging of inner experience was a significant predictor for resilience, which makes sense conceptually, as people who judge themselves less severely may also be able to bounce-back from adversity more easily. Some research also supports this connection between nonjudging and resilience, such as an Emerson et al. (2017) meta-study; however, as discussed in Chapter 2 and indicated in the research of Good et al. (2016), this is a less explored area of research. Hopefully, this study contributes to the growing body of evidence to support the

connection. Resilience is an especially important outcome, because it benefits general wellbeing throughout all of life and experience, not just as a workplace outcome (Good, et al., 2016). So even if nonjudging was the only facet made it into the final model at a significant level for the resilience outcome, it is still a very important factor to consider.

FFMQ: The Whole and the Parts

Given all of the results discussed above, this study greatly benefited from using a rich tool like the FFMQ, that can measure mindfulness attributes with five distinct facets. Also, given the explosive growth in popularity of mindfulness, it is helpful to have clear ways to describe it, and to help people understand it. Many people have reported that they are interested in learning more about mindfulness, but that the term itself (especially used *by itself*), can be intimidating and confusing (Jennings et al., 2013). “You should try to be more mindful” is not very specific, and thus not necessarily a very useful direction. But when we talk about developing the skill to be less reactive to inner experience (i.e. control our emotional reactions to feelings), that is more specific, and can be quite useful if also given corresponding strategies and techniques such as those covered in Rose (2010).

Of course, as much as mindfulness is now being studied scientifically and broken into discernible and measurable pieces—making it more credible, and less mystical—there may still be some appropriate semi-scientific value in commenting that oftentimes the whole is greater than the sum of its parts, and that these facets may add up to something more than just a composite score for mindfulness. A more-comprehensive mixed-methods study with interviews could provide evidence to this point.

The High Efficacy Trend

As mentioned in Chapter 4, there was a trend of high efficacy among most of the sample, even while some participants reported low job satisfaction and/or high burnout. One explanation for this is that a large portion of the sample had 10 or more years of experience, and there was also a significant positive correlation ($r = .343$) between experience and efficacy identified (see Appendix C), which is in alignment with other research (Jennings & Greenberg, 2009). Another potential explanation is that this may stem from a sense that they feel like they are good at *their* part of the job but still frustrated with factors of the job that they feel are beyond their control, which could be a more prevalent feeling during the pandemic than ever before.

The other workplace outcomes, and the significance of the factors that relate to them, will be discussed further in the implications section below.

What About the COVID 19 Pandemic?

It is perhaps equally frustrating and fascinating to think about how the COVID 19 Pandemic impacted this study. For one, it limited the sample size, as schools and districts that originally were open to participating cited this a reason not to proceed. Also, those who did actually participate probably experienced the most severe change in their job experience since becoming a teacher—having not only to teach entirely online for at least a quarter of the school year but also to do so from home, and maybe without childcare.

Yet the result of burnout and other workplace outcomes not varying based on location, as prior research suggested it would—with urban schools tending to have higher rates of burnout (Cone, 2014)—also suggests an interesting potential “leveling of the playing field” that may have come with the shift to distance teaching and learning. That is, given the additional challenges that teachers faced throughout pandemic’s school closings, such as lack of childcare

while working from home, and general fear about health and safety, the suburban teachers may have felt more burned-out than before. With the urban group it is harder to tell, since while they also probably had additional burnout from factors related to the pandemic, this may have been balanced by a decrease in burnout if their in-person teaching experience (pre-COVID 19) was unbearable. It is difficult to make any solid conclusions based on the results in this study, but it raises interesting questions that could be addressed by another study.

It is also possible that the pandemic strengthened the positive influence of mindfulness on workplace outcomes that was observed in this study. Prior research shows that while mindfulness promotes an assortment of positive workplace and life outcomes, it is especially powerful in helping people deal with change, and even trauma (Kabat-Zinn, 1990; Good et al., 2016). Thus it is possible, and maybe even probable, that the results of this study are even more definitive about the importance of mindfulness *because* of the pandemic. And this could come from two directions: that mindfulness is a more useful tool during the pandemic, and that mindfulness and related practices were promoted so much more through the pandemic⁶.

Especially in consideration of the nonreactivity to inner experience facet...I think it is safe to say that it was tested quite a bit in almost every household during the stay-at-home orders! Maybe mindfulness is more important during this pandemic than ever before.

Implications for Policy and Practice

In consideration of all the results of the study that we have analyzed and discussed, we will start this section with a discussion of two broad recommendations for policy. The first is about how it is important to increase mindfulness among educators by offering training that

⁶Marketed to him as both a school principal and parent, the researcher received many emails throughout the pandemic quarantine promoting mindfulness workshops, webinars, and practices, specifically in regard to coping with the challenges from the pandemic in schools and at home.

actually leads to consistent mindfulness practice. The second recommendation focuses on developing specific areas of mindfulness for teachers, and doing so in a way that makes sense for the profession. In the following sections, we will look at the details of what these recommendations could look like.

After the discussion of recommendations, we will discuss an overview of the predictors for workplace outcomes, so that educators are pointed in clear directions if they would like to improve a specific workplace outcome, or combination of workplace outcomes, for teachers.

Recommendation 1: Mindfulness, From Training to Practice

Too often, in all jobs, but especially (and ironically) in education, workers are trained in something new and exciting, and then it is never revisited. We have all experienced it—the “one and done” training that perhaps a few people will follow-up with on their own, but most just see and experience as a fleeting idea or fad that is not worth their energy. “We’ll never hear about this again,” they may murmur in the back of the room. And that is a fair critique, because all too often leaders in education (the researcher not excluded) do exactly that. More evidence for this concern came from the data in this study showing that a little more than half of the people who reported being trained in mindfulness, actually practice it regularly. Yet, since there is so much evidence supporting the ongoing practice of mindfulness for workplace outcomes within and beyond this study, we must try to find a way to make it a more standard practice for teachers who could benefit from it. For this study, we did not see major variations among demographic variables for teachers, except for years of experiences being a positive predictor for workplace outcomes. Thus we can argue that at least new teachers should be supported in practicing mindfulness, as should any teacher who we are concerned may be burning out or experiencing other negative workplace outcomes.

Not all training and professional development in schools follow this pattern. For instance, fire drills and other safety exercises happen multiple times every year (this is required by law). And one sees how well the repeated practice works when all staff and hundreds or thousands of kids do what they are supposed to exactly when they are supposed to. When groups of teachers regularly meet in Professional Learning Communities with consistent, learning-focused agendas, they make great progress in instructional planning and results for students (DuFour & Reeves, 2015). So how can mindfulness, which may help decrease burnout and support other positive workplace outcomes for teachers, be practiced more consistently? We will look at several approaches, across the domains of new teacher preparation, district support, and school support.

Self-Care in Teacher Preparation Programs

As discussed in the literature review in Chapter 2, teacher preparation programs mostly focus on what to do “to and for students”. What they often do not include, unfortunately, is focus on self-care, and how to prepare oneself mentally and emotionally to do all of the other things expected of teachers. We saw how important nonreactivity to inner experience is in relation to job satisfaction, burnout, and resilience, so why do we not make it standard in training for new teachers? Perhaps it is because self-care is typically considered a “personal” matter, and not a professional one. Yet we know teachers are leaving the profession due to issues with self-care, so it is worth considering. Also, social-emotional learning (SEL) has become more commonplace in schools, especially since the creation and promotion of clear standards by the Collaborative for Academic, Social, and Emotional Learning (CASEL). Again, we see the all-to-common pattern in education that what we identify as important for the education and development of kids, is overlooked in the preparation of the adults to teach them. Teachers

deserve to be taught these skills too, both for their own personal benefit, and to make them more effective in teaching the skills and related content to their students.

There are many different ways that this can be done, however, the CARE program developed by Jennings et al. (2009), discussed earlier in Part 3 of the literature review, is one of the most promising mindfulness-based stress reduction (MBSR) programs, and it was designed specifically for teachers. Programs like this have been shown to not only benefit teachers in their workplace outcomes, but, naturally, to relate positively to student outcomes, such as attendance and academic performance as well (Jennings et al., 2009; Kanold, 2017). Also, a book that the researcher recommends because it functions as a guided mindfulness workbook is *Shifting Gears* (Rose, 2010). This book focusses on developing skills to improve nonreactivity to inner experience—or *feel your feelings, control your emotions* in the author’s words—more than most books like this do, making it especially well-aligned to what could benefit teachers most (Rose, 2020, p 24). Also, a book like this can be used by teachers individually if their preparation program does not offer this sort of training directly.

District Level Wellness Programs

Many organizations are implementing wellness programs now, though interestingly, not many school districts. The researcher was fortunate to experience one organized by Beach Cities Health District for Redondo Beach Unified School District (RBUSD). You can learn more about the program here: <https://www.bchd.org/blue-zones-worksites>. For RBUSD, the program included four “wellness challenges” that each lasted about 6 weeks. They were *healthy eating, fitness, financial literacy, and mindfulness*. What was nice about each challenge, is that it was *not* one and done. Each had several learning opportunities, online sharing of experiences,

partnering with a wellness-buddy, and other aspects to keep participants engaged. There was also a point system for participation that led to prizes. The virtual workshop on mindfulness and learned optimism led by the researcher was also incorporated into this program, and is available as a recording for anyone interested in viewing. Now that the pilot of the program has been completed, a team from UCLA is managing a project to research the program's effectiveness, and if the results are positive, this could be a very promising approach to making mindfulness (and other wellness practices) more consistent among teachers and other school employees.

An added benefit of programs like this, is that even though they have a nominal cost for prizes, training, and other resources, they can save organizations significant amounts of money in two major areas: lowering insurance premiums, and better physical and mental health among employees. Insurance companies have actually agreed to lower insurance premiums for organizations if they meet certain participation thresholds for these programs (Mattke et al., 2013). And school districts spend huge amounts of money on substitute teachers each year because of health issues that could potentially be reduced with programs like this.

School Level

At the school level, multiple things can be done to both teach mindfulness and support the ongoing practice of it. These include direct professional development, incorporation into all staff meetings, and creating spaces for staff to practice mindfulness individually at work. For professional development, the same resources and programs that could be used in teacher preparation programs (such as CARE [Jennings et al., 2013]) could also be used at the school-level. An important difference, is that while most, if not all, teachers in a preparation program are new, at a school site there will typically be a wider range of experience, just as was seen in the population sample for this study. However, teacher experience did not correlate with

mindfulness experience or practice, so this type of program can still be beneficial to all teachers and staff. Schools might consider utilizing teachers and staff who are comfortable and confident in practicing and teaching mindfulness to present professional development sessions. This can be especially useful during a time of crisis or trauma, such as the loss of life in the community (Goodman & Calderon, 2012).

For a school with a leader who may not be fully bought-in on the benefits of mindfulness, there is a very simple activity that can be done at *every* staff meeting that will increase mindfulness, focus, and productivity with consistency, and without even mentioning the word “mindfulness” (Kleinman, 2007). The activity is easy to implement, and can take less than a minute. It is to start the meeting by saying “Welcome, Everyone. We are starting the meeting now, so please close your computers, put away your cell phones, and look up at me.” This action alone will increase the likelihood that participants are present, and aware (Kleinman, 2007). What is so interesting is that teachers often start a class with students in exactly this way—why not do it with adults too? This may not sound like a mindfulness practice at first—but it is because it is guiding people to the present moment and experience. As leaders gain more confidence in developing mindfulness, other actions can be added to the beginning of a staff meeting, such as asking participants to sit up straight, close their eyes, and breathe deeply for a minute while the presenter talks about the intention for that day’s meeting. Again, the whole process may be effectively completed in under two minutes, yet it can generate many more minutes of added focus and productivity for the participants by guiding their attention.

Finally, schools can create safe and quiet spaces for staff members to practice mindfulness. Typically, this cannot be the staff lounge, as that is a bustling place with lots of foot traffic and chatting. However, if there is another room, with comfortable furniture, and no

television or computer/phone use allowed, then staff members have another place to go where they can practice without disruption (Gelles, 2015). Interestingly, but probably not surprisingly, rooms like this have become more popular in schools as a place for *students* to go as needed—but not for staff, except those who work to supervise the area. In a profession like teaching, where many people have very little time alone or in a quiet space, this can be an especially valuable asset. If teachers have an empty classroom to themselves during their conference period, that can suffice, but if they do not, creating this space for them can be a great service.

Recommendation 2: Developing Mindfulness Through Coaching and Journaling

For the second recommendation based on the results of this study, we will look at how mindfulness can be further developed for teachers through structured coaching and journaling protocols. Both offer the opportunity for reflection: one with input, and one as pure output. Each approach has important advantages that will be discussed in the next two sections.

Coaching

As explained in the exposition of Recommendation 1, there are effective ways to train for and reinforce mindfulness in a group setting. Still, as is often the case, one-on-one coaching can increase the effectiveness of the learning and practice (Kraft et al., 2018). In the case of coaching for teachers, there are usually one or more of the following opportunities:

- Coaching through induction or other certification programs
- Coaching by teachers on special assignment, department chairs, or other teacher-leaders
- Coaching by district or central office staff
- Coaching by school-site administrators

Of the options listed above, the last is the only one that is guaranteed to be available, however, it should also be the last-resort for coaching, since the administrator is also the evaluator, and

conflating those two roles can cause issues (Garmston, 1987). However, whether it is an administrator or anyone else in a coaching role, there are important coaching techniques that go beyond just focusing on curriculum and instruction. One is asking teachers to “describe” how they feel about elements of their practice, and in response to challenges that arise as they teach. The typical reflection questions of “what did you want students to learn, and how well did they learn it?” are still important for instructional leadership, but we also want to help teachers get good at describing how they *feel*, since the research within and beyond this study suggest that this can improve their workplace outcomes (Lomas et al., 2016).

Another element of coaching that is less-common among educators, is focusing on awareness of, and improvement in, self-talk. This directly addresses the facets of nonjudging of inner experience and nonreactivity to inner experience. Again, the book *Shifting Gears* (Rose, 2010) is a great resource with specific tools to help guide the coach and teacher through this process. A sample dialogue could look something like this:

Coach: How did you feel when the student rolled their eyes when you said that the class was going to learn about something new and exciting today?

Teacher: I felt hurt, and I got mad at the student for making me feel unimportant.

Coach: What did you say to yourself?

Teacher: I said to myself “What a jerk. That kid has no idea how hard I work.”

Coach: How did you outwardly react to this feeling?

Teacher: I said to the student “Do you have a problem with what we are going to learn today? Why don’t you read the first slide of this presentation on your own then?”

Coach: How was your tone of voice, and how was the student’s?

Teacher: Mine probably sounded angry, and the student's sounded bored and mocking when he read the slide.

Coach: If you could relive the situation and change the way you reacted, what would you do differently.

Teacher: I would have told myself not to take it personally. I would have tried to remember that I was young and bored a lot at that age, and that persistent enthusiasm from certain teachers made all the difference.

If the teacher could not come to the conclusion on their own for less-reactive inner and outer responses in this manner, the coach could do more guiding to that outcome by validating the feeling (hurt), but challenging the reaction (negative self-talk and lashing out), and offering alternatives (don't take it personally, and focus on communicating your passions).

Much more can be written about the theory and practice of coaching, but we will stop here and just note that the intimacy and intensity associated with one-to-one coaching aligns well with the present-focus of mindfulness, and can boost each of the five facets that we have discussed throughout.

Journaling

Acknowledging that coaching is resource-intensive, and relies on trust and personal investment from both the teacher and the coach to be effective, journaling is also part of this recommendation as an important practice for developing mindfulness. Research shows that in addition to developing people's ability to describe how they feel, journaling also increases optimism and well-being (Seligman, 2005). For improving workplace outcomes, this tool has shown to be effective for many people, especially in the teaching profession (Jennings et al., 2013). Just as the Rose (2010) workbook was recommended for new teachers to use

independently if MBSR training is not part of their preparation program, for schools with limited resources for coaching, or for any school to use in conjunction with coaching, journaling is an inexpensive, individualized, and potentially highly-valuable practice worth implementing.

Recommendations Organized by Each Workplace Outcome

At the beginning of this Chapter we introduced Figure 4, which showed how each of our independent variables related to the four workplace outcomes of job satisfaction, efficacy, burnout, and resilience. In this section, we now consider these relationships in reverse, as we ask the question of *what to do* to get to better workplace outcomes. We know from our analysis how to answer this in terms of the predictor variables, and now we also incorporate the recommendations we have just discussed that could potentially develop those variables, and, in turn, the workplace outcomes. The table below summarizes these relationships and recommendations.

Figure 5

Workplace Outcomes and Recommended Practices

Workplace outcome to improve	Predictor variables for each outcome	Approaches that may improve each outcome
Job Satisfaction	Practices Mindfulness	<i>Ongoing</i> mindfulness training and practice support, such as district or school wellness programs
	Describing Facet	Coaching; Journaling
	Nonreactivity Facet	Mindfulness practice, especially in regard to separating feelings and emotions; Coaching
Efficacy	Describing Facet	Coaching; Journaling
Burnout	Practices Mindfulness	<i>Ongoing</i> mindfulness training and practice support, such as district or school wellness programs
	Awareness Facet	More purposeful start to staff meetings; Coaching; Journaling
	Nonreactivity Facet	Mindfulness practice, especially in regard to separating feelings and emotions; Coaching

Resilience	Practices Mindfulness	<i>Ongoing</i> mindfulness training and practice support, such as district or school wellness programs
	Nonjudging Facet	Mindfulness practice, especially in regard to more positive self-talk; Coaching
	Nonreactivity Facet	Mindfulness practice, especially in regard to separating feelings and emotions; Coaching

In looking at the repetition of specific approaches in the last column, there is an argument that most of these recommendations are potentially high yield—that is, multiple workplace outcomes might be boosted by a single approach. However, given the interconnectedness of both the outcomes and approaches, the general recommendation is to implement as many of the approaches as is feasible and appropriate for a given group of teachers.

Limitations and Future Research

This study has limitations, and, naturally, those point in the direction for important future research. We will dig deeper into both below.

Limitations

One notable limitation of this study is the sample. It was 86 teachers, and only from the Los Angeles area. The response rate for each school in the study ranged from 12.0% to 56.5%, and was 26% over-all. It would be great to see data from a broader set, with a greater quantity of participants overall, and greater representation for each school. Along those lines, it would have been a richer data set if participants from rural schools had been included as well.

In regard to the instruments used, in retrospect, it would have been stronger with more questions about mindfulness practice. We learned that the single question “Do you regularly practice mindfulness?” was an important predictor for three workplace outcomes, but we did not ask about how frequently teachers practice mindfulness, or for how long they have been

practicing mindfulness. Similarly, for training we could have asked how recently teachers had been trained in mindfulness, how many times, and in what context (work, individually, or through some other connection). In both cases we may have been able to make more insightful conclusions and recommendations for practice with the added data.

Another limitation of this study is that it was conducted during the COVID 19 pandemic, which limited participation, and greatly changed the context of work (from in-person to online teaching) for all of the participants. However, since many research projects ended or were postponed because of the pandemic, it is good that this study sheds some light on how teachers are feeling during this time, and what we may be able to do to improve their workplace outcomes.

Because participation in the study was purely voluntary, and no school had 100% or near 100% participation, selection bias is also a concern. Specifically, participants may have been generally more interested in or experienced in mindfulness, and chosen to participate for that reason. This limits the cause-and-effect conclusions we can make, as well as generalizability.

This was a purely quantitative study and could have been richer utilizing mixed-methods. That may not have been as feasible with the pandemic, yet it is an important limitation to consider. The quantitative results show us a lot, but with teacher interviews, we would know even more.

Future Research

Given the limitations mentioned above, a follow-up study recommended by the researcher is to reuse the battery of surveys in this study as pre-and-post for a mindfulness stress reduction program conducted with a group of teachers as discussed in Part 3 of the literature review in Chapter 2. This could also include a qualitative component and give us the chance to

test for the effects of an experiment with a control group. It would be worthwhile to do the same with interventions such as coaching or journaling, so that all different approaches could be investigated.

Because of the similarities between the elements of emotional intelligence and the five facets of mindfulness, and the fact that both show a positive effect on workplace outcomes, it could be worthwhile to look into this connection further. Does developing one automatically develop the other? If so, which is more powerful, and which is easier to teach and learn? These questions could be the focus of a future study.

Finally, with an ambitious longitudinal study, we could incorporate mindfulness training into a teacher preparation programs, and look at participants' workplace outcomes and aspects of wellbeing throughout their first years of teaching. The goal, in all of these, is to figure out the right time and method teach mindfulness to teachers so that they practice it and get better workplace outcomes.

Conclusion

Teachers do a lot for kids. We expect them to, and we try to prepare them with great theories and practice for curriculum, instruction, and classroom management. But in the end, teachers, like anyone in any profession, may always be limited by how good they *feel*. We owe it to them, and to our children whom they teach, to prepare them to *feel* good, so that they can *teach* and *work* well. This study adds to the mounting evidence that mindfulness is a pathway that can help teachers feel better and do better in their crucially important work.

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APPENDIX

Appendix A: IRB Consent Form



AGREEMENT TO PARTICIPATE IN MINDFULNESS AND WORKPLACE OUTCOMES STUDY (IRB #3438)

You are invited to take a survey for a research project. While volunteering will probably not benefit you directly, you will be helping the investigator to learn more about mindfulness indicators in school settings, which may ultimately provide some lessons learned for preparing future teachers for their classroom experiences. If you decide to volunteer, you will complete this online survey, which would require about 10-15 minutes of your time. Volunteering for this study does not involve risk beyond what a typical person would experience on an ordinary day. Since your involvement is entirely voluntary, you may withdraw at any time for any reason. Please continue reading for more information about the study.

STUDY LEADERSHIP: This research project is led by Jonathan Erickson, a PhD student at Claremont Graduate University, who is being supervised by Dr. Thomas Luschei, a professor of education Claremont Graduate University.

PURPOSE: The purpose of this study is to identify connections between mindfulness indicators and workplace outcomes, which may have implications for teacher preparation programs and policies. If positive connections are identified, recommendations for policies and programs to benefit teachers will be proposed.

ELIGIBILITY: To participate in this study you must be employed full time as a secondary teacher in a public (district or charter) school.

PARTICIPATION: During the study, you will be asked to complete a 10-15 minute online survey that will ask questions about work experience, job satisfaction, and efficacy as a teacher.

RISKS OF PARTICIPATION: The risks that you run by taking part in this anonymous study are minimal. Some individual data (such the grade levels you teach) will be collected, however information about your identity will not be collected. Sometimes when people are asked to think about their feelings, they feel sad or anxious. If you would like to talk to someone about your feelings at any time, you can call the LA County Dept. of Mental Health hotline toll-free, 24 hours a day: 1-800-854-7771.

BENEFITS OF PARTICIPATION: We do not expect the study to directly or immediately benefit you personally, however it may indirectly benefit you by increasing your awareness of factors related to workplace outcomes, and it could benefit you in the future if the research leads to innovations that benefit you and other teachers. Depending on the results of this research, there may be concrete implications for how training and development of teachers can address some of the relationships examined in this study.

COMPENSATION: There is no set compensation for participating in this study.

VOLUNTARY PARTICIPATION: Your participation in this study is completely voluntary. You may stop or withdraw from the study or refuse to answer any particular question for any reason at any time without it being held against you. Your decision whether or not to participate will have no effect on your current or future connection with anyone at CGU, your place of work, or any other person or entity.

CONFIDENTIALITY: Your individual privacy will be protected in all papers, books, talks, posts, or stories resulting from this study. We may use the data we collect for future research or share it with other

researchers, but we will not have identifying information. In order to ensure anonymity, we will not collect your name, email address, or other personal identifying information. Some demographic information will be collected, but to further protect privacy, we will secure all data on a password-protected computer and in password-protected files.

FURTHER INFORMATION: If you have any questions or would like additional information about this study, please contact Jonathan Erickson at erickson.jonathan@gmail.com and 310-350-7514. You may also contact the faculty supervisor at thomas.luschei@cgu.edu and 909-621-8000. The CGU Institutional Review Board has approved this project. If you have any ethical concerns about this project or about your rights as a human subject in research, you may contact the CGU IRB at (909) 607-9406 or at irb@cgu.edu. If you would like a copy of this form for your records, you may print it from this screen before beginning the survey.

CONSENT: Clicking the box below to proceed signals your consent to participate, and to begin completing the survey.

Appendix B: Administered Survey

Please select the most accurate and honest descriptions for each statement.

Q1 When I am walking, I deliberately notice the sensations of my body moving.

- 5: very often or always true
 - 4: often true
 - 3: sometimes true
 - 2: rarely true
 - 1 never or very rarely true
-

Q2 I'm good at finding words to describe my feelings.

- 5: very often or always true
- 4: often true
- 3: sometimes true
- 2: rarely true
- 1 never or very rarely true

Q3 I criticize myself for having irrational or inappropriate emotions.

5: very often or always true

4: often true

3: sometimes true

2: rarely true

1 never or very rarely true

Q4 I perceive my feelings and emotions without having to react to them.

5: very often or always true

4: often true

3: sometimes true

2: rarely true

1 never or very rarely true

Q5 When I do things, my mind wanders off and I'm easily distracted.

5: very often or always true

4: often true

3: sometimes true

2: rarely true

1 never or very rarely true

Q6 When I take a shower or bath, I stay alert to the sensations of water on my body.

5: very often or always true

4: often true

3: sometimes true

2: rarely true

1 never or very rarely true

Q7 I can easily put my beliefs, opinions, and expectations into words.

5: very often or always true

4: often true

3: sometimes true

2: rarely true

1 never or very rarely true

Q8 I don't pay attention to what I'm doing because I'm daydreaming, worrying, or otherwise distracted.

5: very often or always true

4: often true

3: sometimes true

2: rarely true

1 never or very rarely true

Q9 I watch my feelings without getting lost in them.

5: very often or always true

4: often true

3: sometimes true

2: rarely true

1 never or very rarely true

Q10 I tell myself I shouldn't be feeling the way I'm feeling.

5: very often or always true

4: often true

3: sometimes true

2: rarely true

1 never or very rarely true

Page Break

Q11 I notice how foods and drinks affect my thoughts, bodily sensations, and emotions.

5: very often or always true

4: often true

3: sometimes true

2: rarely true

1 never or very rarely true

Q12 It's hard for me to find the words to describe what I'm thinking.

5: very often or always true

4: often true

3: sometimes true

2: rarely true

1 never or very rarely true

Q13 I am easily distracted.

5: very often or always true

4: often true

3: sometimes true

2: rarely true

1 never or very rarely true

Q14 I believe some of my thoughts are abnormal or bad and I shouldn't think that way.

5: very often or always true

4: often true

3: sometimes true

2: rarely true

1 never or very rarely true

Q15 I pay attention to sensations, such as the wind in my hair or sun on my face.

5: very often or always true

4: often true

3: sometimes true

2: rarely true

1 never or very rarely true

Q16 I have trouble thinking of the right words to express how I feel about things.

5: very often or always true

4: often true

3: sometimes true

2: rarely true

1 never or very rarely true

Q17 I make judgments about whether my thoughts are good or bad.

5: very often or always true

4: often true

3: sometimes true

2: rarely true

1 never or very rarely true

Q18 I find it difficult to stay focused on what's happening in the present.

5: very often or always true

4: often true

3: sometimes true

2: rarely true

1 never or very rarely true

Q19 When I have distressing thoughts or images, I “step back” and am aware of the thought or image without getting taken over by it.

5: very often or always true

4: often true

3: sometimes true

2: rarely true

1 never or very rarely true

Q20 I pay attention to sounds, such as clocks ticking, birds chirping, or cars passing.

5: very often or always true

4: often true

3: sometimes true

2: rarely true

1 never or very rarely true

Page Break

Q21 In difficult situations, I can pause without immediately reacting.

- 5: very often or always true
 - 4: often true
 - 3: sometimes true
 - 2: rarely true
 - 1 never or very rarely true
-

Q22 When I have a sensation in my body, it's difficult for me to describe it because I can't find the right words.

- 5: very often or always true
 - 4: often true
 - 3: sometimes true
 - 2: rarely true
 - 1 never or very rarely true
-

Q23 It seems I am “running on automatic” without much awareness of what I’m doing.

5: very often or always true

4: often true

3: sometimes true

2: rarely true

1 never or very rarely true

Q24 When I have distressing thoughts or images, I feel calm soon after.

5: very often or always true

4: often true

3: sometimes true

2: rarely true

1 never or very rarely true

Q25 I tell myself that I shouldn't be thinking the way I'm thinking.

5: very often or always true

4: often true

3: sometimes true

2: rarely true

1 never or very rarely true

Q26 I notice the smells and aromas of things.

5: very often or always true

4: often true

3: sometimes true

2: rarely true

1 never or very rarely true

Q27 Even when I'm feeling terribly upset, I can find a way to put it into words.

5: very often or always true

4: often true

3: sometimes true

2: rarely true

1 never or very rarely true

Q28 I rush through activities without being really attentive to them.

5: very often or always true

4: often true

3: sometimes true

2: rarely true

1 never or very rarely true

Q29 When I have distressing thoughts or images, I am able just to notice them without reacting.

5: very often or always true

4: often true

3: sometimes true

2: rarely true

1 never or very rarely true

Q30 I think some of my emotions are bad or inappropriate and I shouldn't feel them.

5: very often or always true

4: often true

3: sometimes true

2: rarely true

1 never or very rarely true

Page Break

Q31 I notice visual elements in art or nature, such as colors, shapes, textures, or patterns of light and shadow.

5: very often or always true

4: often true

3: sometimes true

2: rarely true

1 never or very rarely true

Q32 My natural tendency is to put my experiences into words.

5: very often or always true

4: often true

3: sometimes true

2: rarely true

1 never or very rarely true

Q33 When I have distressing thoughts or images, I just notice them and let them go.

5: very often or always true

4: often true

3: sometimes true

2: rarely true

1 never or very rarely true

Q34 I do jobs or tasks automatically without being aware of what I'm doing.

5: very often or always true

4: often true

3: sometimes true

2: rarely true

1 never or very rarely true

Q35 When I have distressing thoughts or images, I judge myself as good or bad depending what the thought or image is about.

5: very often or always true

4: often true

3: sometimes true

2: rarely true

1 never or very rarely true

Q36 I pay attention to how my emotions affect my thoughts and behavior.

5: very often or always true

4: often true

3: sometimes true

2: rarely true

1 never or very rarely true

Q37 I can usually describe how I feel at the moment in considerable detail.

5: very often or always true

4: often true

3: sometimes true

2: rarely true

1 never or very rarely true

Q38 I find myself doing things without paying attention.

5: very often or always true

4: often true

3: sometimes true

2: rarely true

1 never or very rarely true

Q39 I disapprove of myself when I have irrational ideas.

- 5: very often or always true
- 4: often true
- 3: sometimes true
- 2: rarely true
- 1 never or very rarely true

End of Block: FFMQ

Start of Block: TSES

Q51 How much can you do to control disruptive behavior in the classroom?

- A great deal
 - Quite a bit
 - Some degree
 - Very little
 - None at all
-

Q52 How much can you do to motivate students who show low interest in school work?

- A great deal
 - Quite a bit
 - Some degree
 - Very little
 - None at all
-

Q53 How much can you do to calm a student who is disruptive or noisy?

- A great deal
 - Quite a bit
 - Some degree
 - Very little
 - None at all
-

Q54 How much can you do to help your students value learning?

- A great deal
 - Quite a bit
 - Some degree
 - Very little
 - None at all
-

Q55 To what extent can you craft good questions for your students?

- A great deal
 - Quite a bit
 - Some degree
 - Very little
 - None at all
-

Q56 How much can you do to get children to follow classroom rules?

- A great deal
 - Quite a bit
 - Some degree
 - Very little
 - None at all
-

Q57 How much can you do to get students to believe they can do well in school work?

- A great deal
 - Quite a bit
 - Some degree
 - Very little
 - None at all
-

Q58 How well can you establish a classroom management system with each group of students?

- A great deal
 - Quite a bit
 - Some degree
 - Very little
 - None at all
-

Q59 To what extent can you use a variety of assessment strategies?

- A great deal
 - Quite a bit
 - Some degree
 - Very little
 - None at all
-

Page Break

Q60 To what extent can you provide an alternative explanation or example when students are confused?

- A great deal
 - Quite a bit
 - Some degree
 - Very little
 - None at all
-

Q61 How much can you assist families in helping their children do well in school?

- A great deal
 - Quite a bit
 - Some degree
 - Very little
 - None at all
-

Q62 How well can you implement alternative teaching strategies in your classroom?

- A great deal
- Quite a bit
- Some degree
- Very little
- None at all

Page Break

End of Block: TSES

Start of Block: TBRS

Q42 I tend to bounce back quickly after hard times.

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly disagree

Q48 I have a hard time making it through stressful events.

- Strongly Agree
 - Agree
 - Neutral
 - Disagree
 - Strongly disagree
-

Q46 It does not take me long to recover from a stressful event.

- Strongly Agree
 - Agree
 - Neutral
 - Disagree
 - Strongly disagree
-

Q49 It is hard for me to snap back when something bad happens.

- Strongly Agree
 - Agree
 - Neutral
 - Disagree
 - Strongly disagree
-

Q47 I usually come through difficult times with little trouble.

- Strongly Agree
 - Agree
 - Neutral
 - Disagree
 - Strongly disagree
-

Q50 I tend to take a long time to get over set-backs in my life.

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly disagree

Page Break

End of Block: TBRs

Start of Block: JS and Burnout

Q64 Overall, how satisfied are you with your job?

- Very satisfied
- Moderately satisfied
- Neither satisfied nor dissatisfied
- Moderately dissatisfied
- Very dissatisfied

Q63 Overall, based on your definition of burnout, how would you rate your level of burnout?

- I enjoy my work. I have no symptoms of burnout.
- Occasionally I am under stress, and I don't always have as much energy as I once did, but I don't feel burned out.
- I am definitely burning out and have one or more symptoms of burnout, such as physical and emotional exhaustion.
- The symptoms of burnout that I'm experiencing won't go away. I think about frustration at work a lot.
- I feel completely burned out and often wonder if I can go on. I am at the point where I may need some changes or may need to seek some sort of help.

Page Break

End of Block: JS and Burnout

Start of Block: Demographics

Q66 What grade level(s) do you teach? (Please check all that apply)

6

7

8

9

10

11

12

Q67 Where do you teach? (click here if more clarification is needed: <https://nces.ed.gov/surveys/ruraled/definitions.asp>)

- Urban/Inner City (territory inside a principal city)
 - Suburban (territory adjacent to a principal city)
 - Rural (territory further from a principal city)
-

Q68 Have you participated in mindfulness training or learning before?

Yes

No

Q68 Do you regularly practice mindfulness?

Yes

No

Q65 What is your gender?

Male

Female

Gender Variant/ Non-Conforming

Prefer not to answer

Q67 Which race/ethnicity do you identify with?

- Asian / Pacific Islander
 - Black or African American
 - Hispanic or Latino
 - Native American or American Indian
 - White
 - Other
 - Prefer not to answer
-

Q69 For how many years have you been teaching?

- 1 - 2 years
 - 3 - 5 years
 - 6 - 10 years
 - 11 - 19 years
 - 20 or more years
-

Page Break

End of Block: Demographics

Start of Block: Block 6

Q71

This concludes the survey! Thank you for participating!

If you would like some immediate, high-quality and free resources learn more about mindfulness, the UCLA Mindfulness Awareness Research Center (MARC) is a great place to start: <https://www.uclahealth.org/marc/>

Also, sometimes when people are asked to think about their feelings, they feel sad or anxious. If you would like to talk to someone about your feelings at any time, you can call the LA County Dept. of Mental Health hotline toll-free, 24 hours a day: 1-800-854-7771.

Thank you again for participating, and if you have questions about or would like to be notified about the results of the study, please send a separate email to the researcher at erickson.jonathan@gmail.com.

End of Block: Block 6

Appendix C: Pearson Correlation Table for All Variables

Table 22
Correlation Matrix for All Scale Variables (n=86)

Variable	1	2	3	4	5	6	7	8	9	10	11
1. FFMQ Total	-	.518**	.750**	.648**	.551**	.528**	.433**	.538**	.515**	.568**	.134
2. Observing		-	.500**	.051	-.210	.236*	.237*	.377**	.129	.138	.167
3. Describing			-	.277**	.255*	.336**	.430**	.519**	.389**	.424**	.074
4. Awareness				-	.308**	.181	.284**	.282**	.378**	.307**	.089
5. Nonjudging					-	.153	.062	.186	.301**	.412**	-.008
6. Nonreactivity						-	.411**	.293**	.419**	.518**	.076
7. Job Satisfaction							-	.316**	.700**	.488**	.206
8. TSES Efficacy								-	.376**	.481**	.343**
9. Burnout									-	.610**	.120
10. Resilience										-	.156
11. Years of Exp.											-
<i>M</i>	3.43	3.44	3.59	3.40	3.52	3.18	4.02	4.13	3.67	3.74	3.40
<i>SD</i>	.36	.70	.46	.68	.73	.42	1.06	.49	.98	.89	1.41

** Correlation is significant at the 0.01 level (2-tailed)

* Correlation is significant at the 0.05 level (2-tailed)

Appendix D: ANOVA Tables for All Subgroups for Race or Ethnicity and Location Items as Related to Workplace Outcomes

As explained in Chapter 4, the table below shows that no significant difference in workplace outcomes was observed for the full set of racial subgroups in the sample.

Table 23

ANOVA Test Results for Race or Ethnicity and Workplace Outcomes

		<i>n</i>	<i>M</i>	<i>SD</i>	<i>f</i>	<i>sig.</i>
Job Satisfaction	Asian/Pacific Islander	6	4.50	.54772	1.990	.104
	Black or African American	9	4.44	.72648		
	Latino or Hispanic	16	4.00	.89443		
	White	52	3.98	1.14601		
	Prefer not to answer	3	2.67	1.15470		
	Total	86	4.02	1.06248		
TSES Efficacy	Asian/Pacific Islander	6	4.33	.61464	.594	.668
	Black or African American	9	4.21	.57375		
	Latino or Hispanic	16	4.04	.47120		
	White	52	4.10	.47331		
	Prefer not to answer	3	4.31	.41944		
	Total	86	4.13	.48756		
Burnout	Asian/Pacific Islander	6	3.67	1.21106	.401	.807
	Black or African American	9	3.78	.83333		
	Latino or Hispanic	16	3.63	1.08781		
	White	52	3.71	.97692		
	Prefer not to answer	3	3.00	.00000		
	Total	86	3.67	.97549		
TBRS Resilience	Asian/Pacific Islander	6	3.69	1.11264	.349	.844
	Black or African American	9	3.67	1.18439		
	Latino or Hispanic	16	3.68	.77596		
	White	52	3.80	.87856		
	Prefer not to answer	3	3.22	.38490		
	Total	86	3.74	.88945		

As explained in Chapter 4, the table below shows that no significant difference in workplace outcomes was observed for the full set of school locations observed in the sample.

Table 24

ANOVA Test Results for School Location and Workplace Outcomes

		<i>n</i>	<i>M</i>	<i>SD</i>	<i>f</i>	<i>sig.</i>
Job Satisfaction	Suburban	51	3.98	1.16	.101	.904
	Urban – Charter	13	4.07	.64		
	Urban - Traditional	22	4.09	1.06		
	Total	86	4.02	1.06		
TSES Efficacy	Suburban	51	4.06	.43	1.217	.301
	Urban – Charter	13	4.24	.55		
	Urban - Traditional	22	4.21	.56		
	Total	86	4.13	.49		
Burnout	Suburban	51	3.71	1.06	.363	.697
	Urban – Charter	13	3.46	.66		
	Urban - Traditional	22	3.73	.94		
	Total	86	3.67	.98		
TBR5 Resilience	Suburban	51	3.79	.91	.277	.759
	Urban – Charter	13	3.6	.94		
	Urban - Traditional	22	3.69	.83		
	Total	86	3.74	.89		

Appendix E: Multicollinearity Test Tables for Linear Regression Modeling

The tables below are provided to show the justification for organizing the models as we did in Chapter 4. The method used in this study is to examine the BLANK (VIF) statistic generated by SPSS for this data set, which, if less than 3.0, indicates that collinearity is not a concern (Aberson, 2010). The closer the VIF statistic gets to 10.0 or greater, the more certain we can be that there are issues with multicollinearity (Aberson, 2010).

Because the total FFMQ score is a composite of each of five facets of mindfulness scores, multicollinearity is automatically a concern, which is why the total FFMQ was considered separately (in Models 1 and 3) from the five facets (in Models 2 and 4) in Chapter 4. However, what still needs to be tested for is if any of the five facets have multicollinearity with each other, which would affect our ability to model with them simultaneously.

The tables below were generated in SPSS by testing each facet once as a dependent variable with the other four facets as independent variables. Repeating this method five times, we generated the following tables with VIF statistics:

Table 25
VIF Statistics for Independent Variable Multicollinearity Tests

Independent Variables	<i>VIF Statistic</i> ¹				
	Observing	Describing	Awareness	Nonjudging	Nonreactivity
Observing	-	1.142	1.617	1.361	1.592
Describing	1.224	-	1.689	1.532	1.681
Awareness	1.166	1.136	-	1.108	1.159
Nonjudging	1.147	1.204	1.294	-	1.350
Nonreactivity	1.141	1.123	1.151	1.148	-

*Note*¹: The VIF statistic is calculated when treating each variable in the columns below as the dependent variable, with all the variables in the first column as the independent variables.

The data from the table above confirms that we are able to enter all five facet variables into one linear regression model simultaneously without issues associated with multicollinearity.