The Journey from Teaching Mindfulness to Being a Mindful Teacher: A Quantitative Analysis of Factors that Impact Teacher Mindfulness Practices and Teacher Well-Being in Alberta

LeAnna Rose Murtha-Toles

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The Journey from Teaching Mindfulness to Being a Mindful Teacher:
A Quantitative Analysis of Factors that Impact
Teacher Mindfulness Practices and Teacher Well-Being in Alberta

By
LeAnna Rose Murtha-Toles

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of the requirements for the degree of
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The Journey from Teacher of Mindfulness to Being a Mindful Teacher: A Quantitative Analysis of Factors that Impact Teacher Mindfulness Practices and Teacher Well-Being in Alberta

by

LeAnna Rose Murtha-Toles

This dissertation is completed as a partial requirement for the Doctor of Education (EdD) degree at the University of Portland in Portland, Oregon.

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Schools and teachers have a tremendous task set before them as they address challenges that are not only academic but are related to the education of soft-skills and dispositions not generally associated with a particular subject or content area. Incorporating mindfulness into education supports the goal of educating the whole child. The purpose of this quantitative study was to investigate whether and to what extent a relationship existed between teaching mindfulness and the self-reported mindfulness practices and well-being of teachers in Alberta, Canada. This study utilized a correlational quantitative approach to explore four research questions: (a) what mindfulness techniques do teachers in Alberta implement in their own lives? (b) is there a relationship between the extent to which teachers in Alberta report implementing mindfulness in their classrooms and their self-reported mindfulness scores? (c) is there a relationship between the extent to which teachers in Alberta report implementing mindfulness in their classrooms and their self-reported well-being scores? (d) what is the relationship between self-reported mindfulness and well-being scores of teachers in Alberta?

One anonymous school division in the province of Alberta was chosen as the sample to represent the population. The sample bore demographic characteristics similar to the larger group from which the sample was drawn. The eligible participants (N = 606) included certified teachers from pre-kindergarten through Grade 12 who are
currently employed by the selected school division; those in division office or exclusively administrative positions were not included in this study. This research utilized two pre-existing, validated, 14-question instruments: the Freiburg Mindfulness Inventory (Walach, Buchheld, Buttenmüller, Kleinknecht, & Schmidt, 2006) and The Warwick-Edinburgh Mental Well-Being Scale (Tennant et al., 2007). The instruments were combined into one three-section online survey, which took approximately six minutes to complete. The survey was distributed via email to principals, who then presented it to their staff during a staff meeting, and time was provided during the staff meeting should the teachers wish to participate. A total of 426 survey responses were received and 371 of those were deemed eligible for this study; 22% identified as male \((n = 80)\), 76% identified as female \((n = 283)\), 1% identified as other \((n = 2)\), and the remaining 2% preferred not to respond \((n = 6)\).

Results from the Freiburg Mindfulness Inventory indicated participants’ overall personal mindfulness were slightly above the middle possible score of 35 \((M = 38.09, SD = 6.67)\). Also, the Warwick-Edinburgh Mental Well-Being Scale indicated the participants in this study scored in the average range for well-being \((M = 48.66, SD = 8.48)\). Correlations between all measures were conducted using Spearman’s Rho and linear regressions. There were statistically significant \((p < .001)\) relationships among the mindfulness score, teaching mindfulness integration, personal life mindfulness integration, and well-being score. To more thoroughly explore the relationships between the measures, data were disaggregated by gender and grade level taught to determine if either of those factors were associated with those relationships.
From the results, statistically significant positive correlations were identified between personal mindfulness, teaching mindfulness, and well-being. The evidence also indicated that a discrepancy exists surrounding mindfulness-based instruction in elementary and secondary classrooms, with less integration taking place in secondary classrooms than in elementary classrooms. The results suggest that personal mindfulness in conjunction with teaching mindfulness are potential factors to address when considering teacher well-being deficiencies. When taken together, teaching mindfulness and engaging in mindfulness practices yield promising outcomes as methods of improving teacher well-being. This study makes a contribution to the field, looking at the relationships of mindfulness and well-being.
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It is with the sincerest gratitude that I acknowledge those who have supported me throughout this journey.

To Dr. Anctil: you were my greatest blessing. The calm way that you identify the positives, provide feedback, and encourage reflection set an example that I will carry through the rest of my life. I now understand that song lyrics can make things better and that it is ok to set boundaries to support my own well-being.

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There are no words to express my gratitude and affection fully.
Dedication

To my daughter, Myah: the world is before you. You have the ability to do anything and be anyone you desire. Pursue your passions, follow your dreams, and live your life to the fullest. Throughout your journey, be sure to stop, breathe, and take it all in; it is in those minuscule moments that you will find the ultimate gifts that life has to offer. I love you more.
Table of Contents

Abstract .................................................................................................................... iii

Acknowledgements ................................................................................................ vi

Dedication ............................................................................................................... vii

List of Figures ...................................................................................................... xi

List of Tables ......................................................................................................... xii

Chapter 1: Introduction .......................................................................................... 14

Mental Health ........................................................................................................ 15

Stress, Burnout, and Compassion Fatigue in Helping Professions ...................... 18

Self-Care ............................................................................................................... 22

Mindfulness ......................................................................................................... 24

Research Gap ....................................................................................................... 26

Purpose Statement ............................................................................................... 28

Hypothesis ........................................................................................................... 28

Significance of the Study .................................................................................... 29

Definitions .......................................................................................................... 31

Summary ............................................................................................................. 33

Chapter 2: Review of Literature .......................................................................... 35

Mindfulness ......................................................................................................... 35

Mindfulness-Based Training and Mindful Meditation in Neuroscience ............. 41

Teacher-Facilitated Mindfulness Programs ........................................................... 44
The Impact of Mindfulness Practices for Students ................................................... 53
The Impact of Mindfulness Practices for Teachers .................................................. 57
Critiques of Mindfulness .......................................................................................... 61
Well-Being ............................................................................................................... 63
Teacher Stress, Burnout, and Compassion Fatigue .................................................. 65
Self-Care and Recovery ............................................................................................ 72
Theoretical Framework ............................................................................................ 76
Summary ................................................................................................................... 82
Chapter 3: Methods ...................................................................................................... 83
Research Questions and Hypothesis ....................................................................... 83
Rationale for Methodology ....................................................................................... 84
Setting and Participants ............................................................................................ 85
Instruments ............................................................................................................... 87
Design and Procedures ............................................................................................. 95
Data Analysis ............................................................................................................ 97
Ethical Considerations ............................................................................................ 100
Role of the Researcher ............................................................................................. 101
Summary ................................................................................................................... 103
Chapter 4: Results ....................................................................................................... 105
Sample Demographics ............................................................................................ 106
Personal Mindfulness of Teachers .......................................................................... 112
Teachers Implemented Mindfulness in Classrooms ............................................... 121
Well-Being of Teachers .......................................................................................... 129
| Relationship Among Mindfulness, Teaching Mindfulness, and Well-Being | 134 |
| Summary | 147 |
| Chapter 5: Discussion | 151 |
| Interpretation of Findings | 154 |
| Teacher Mindfulness Techniques | 155 |
| Relationship Between Teaching Mindfulness and Personal Mindfulness | 159 |
| Relationship Between Teaching Mindfulness and Well-Being | 162 |
| Relationship Between Mindfulness and Well-Being | 165 |
| Limitations of the Study | 166 |
| Recommendations for Future Research | 168 |
| Implications for Professional Practice | 169 |
| Conclusion | 170 |
| References | 172 |
| Appendix A | 205 |
| Appendix B | 213 |
| Appendix C | 214 |
| Appendix D | 217 |
| Appendix E | 218 |
| Appendix F | 219 |
| Appendix G | 221 |
| Appendix H | 222 |
List of Figures

Figure 1: Suicide rates in Canada between 2007 and 2018...............................16

Figure 2: Number of Canadians 12 years or older who perceive their mental health as fair or poor from 2003 to 2018 .................17

Figure 3: Percentage of employed Canadians with depression who missed a select number of days of work per year due to depression, as of 2016.............................................................18

Figure 4: Hypothesized relationships between the variables in the study...........................................................................29

Figure 5: Two-factorial construct confirmatory factor analysis for The Freiburg Mindfulness Inventory........................................89

Figure 6: One-dimensional construct confirmatory factor analysis for The Freiburg Mindfulness Inventory..................................90

Figure 7: The percentage of integration of mindfulness into teachers’ personal lives, disaggregated by grade level taught.........................113

Figure 8: The percentage of integration of mindfulness into teaching practice, disaggregated by grade level taught...........................122
**List of Tables**

Table 1: Number of Academic Publications in Google Scholar by Search Term(s) ........................................................................................................... 36

Table 2: Definitions of Mindfulness .................................................................. 39

Table 3: Mindfulness Focused Programs ............................................................. 45

Table 4: Population and Sample Comparison Using Publicly Available Data from 2016-2017 ............................................................................. 86

Table 5: Data Analysis Plan .................................................................................. 100

Table 6: Teacher Demographic Comparison with 2016/2017 Alberta and Canada ...................................................................................................... 107

Table 7: Teacher Sample Distribution, by Grade and Gender ......................... 109

Table 8: Teacher Sample Distribution, by Grade and Years of Experience .......... 111

Table 9: Responses to the Freiburg Mindfulness Inventory .............................. 115

Table 10: Mean and Standard Deviation for Freiburg Mindfulness Inventory ........................................................................................................ 117

Table 11: Number of Personal Mindfulness Techniques ($N = 1,158$) Used by Teachers .............................................................................. 119

Table 12: Number of Techniques Used by Teachers ($N = 371$) .................... 120

Table 13: Comparison of Number of Personal Techniques, by Grade Level .... 121

Table 14: Number of Classroom Techniques ($N = 371$) used by Teachers ....... 124

Table 15: Comparison of Number of Teaching Techniques, by Grade Level ...... 125

Table 16: Number of Each Mindfulness Technique ($N = 1,185$) Used in the Classroom .................................................................................. 126
Table 17: Number of Mindfulness Programs (N = 520) Used in the Classroom…………………………………………………………………..…128

Table 18: Responses to the Warwick-Edinburgh Mental Well-Being Scale………131

Table 19: Mean and Standard Deviation for Warwick-Edinburgh Mental Well-Being Scale……………………………………………………………………………133

Table 20: Mean and Standard Deviation of the Four Domain Scores……………135

Table 21: Spearman’s Rho Correlations Among the Four Domain Scores………136

Table 22: Mean and Standard Deviation of the Four Domain Scores, by Grade…………………………………………………………………………137

Table 23: Spearman’s Rho Correlations Among the Four Domain Scores - Elementary……………………………………………………………………138

Table 24: Spearman’s Rho Correlations Among the Four Domain Scores - Secondary…………………………………………………………………..139

Table 25: t-test Results Comparing Survey Results, by Grade Level Taught………140

Table 26: Mean and Standard Deviation of the Four Domain Scores, by Gender…………………………………………………………………………142

Table 27: Spearman Rho Correlations Among the Four Domain Scores - Male Gender. ……………………………………………………………………….144

Table 28: Spearman Rho Correlations Among the Four Domain Scores - Female Gender……………………………………………………………………145

Table 29: t-test Results Comparing Survey Results, by Gender…………………146

Table 30: Linear Regression for Well-Being Scores………………………………..147
Chapter 1: Introduction

Education today is becoming increasingly multifaceted. There is a vision for teachers to teach the whole child by addressing both the academic skills and the life skills necessary for students to develop into positive, contributing members of society (Zenner, Herrnleben-Kurz, & Walach, 2014). Teachers must embrace current expectations to facilitate students in becoming global citizens (O’Meara, Huber, & Sanmiguel, 2018; UNESCO, 2019) and to be happy individuals (Noddings, 2003). The expectations placed on both the teacher and the students are immense. These expectations can: be emotionally and physically demanding; negatively impact teachers’ overall sense of well-being; lead to job dissatisfaction and decreased productivity; and, ultimately, lead to burnout (Leyba, 2009). According to the Canadian Teacher’s Federation (2004), teacher attrition rates in 2004 were approximately 30% in the first five years of service.

Teacher stress is not a new phenomenon. Studies conducted over the past two decades reported that teachers experience greater feelings of professional stress than do individuals in the general public (Finlay-Jones, 1986; Hodge, Jupp, & Taylor, 1994; McGuire, 1979; Mykletun, 1984; Wilhelm, Dewhurst-Savellis, & Parker, 2000). A 2012 Metlife survey of American teachers reported teachers as second only to physicians in reporting work stress. In this survey, 51% of teachers reported experiencing significant stress multiple days per week. More recently, Larrivee (2012) identified the demands and challenges of the profession, and how its daily unpredictability negatively impacted teachers’ motivation, performance, and zeal for teaching.
Mental Health

The terms positive mental health and well-being are commonly used interchangeably in both policy and academic literature (Tennant, 2007). The increasing complexities facing those in the education profession can adversely affect the mental health of the teacher. Mental health and well-being have both a tremendous personal and financial impact. Mental health issues faced by teachers can be linked to events they experience well before they become teachers. According to the Canadian Mental Health Organization (2017), the suicide rate for youth in Canada is the third highest in the industrialized world, and 10% to 20% of Canadian youth are impacted by mental illness. By age 40, approximately 50% of Canadians will have experienced mental health problems. An alarming 8% of all Canadian adults will experience depression during their lives, and suicide accounts for 16% of all deaths of adults 25 to 44 years of age. Suicide rates in Canada rose steadily from 2011 to 2015; in 2016, the suicide rate in Canada dropped for the first time in six years, returning to the 2007 rate (Figure 1).
Canadians are increasingly reporting their mental health as fair to poor (Figure 2), with depression and anxiety disorders being the most frequent diagnosis for Canadians with mental illness (Mood Disorders Society of Canada, n.d.). These statistics are for the entire Canadian population and not specifically for teachers; however, they provide a baseline for Canadian mental health and well-being for the population as a whole.
In 2010, the Mental Health Commission of Canada (2016) estimated the total cost of mental illness in 2010 to be in excess of $50 billion annually. The financial impact of mental illness on individuals and society is extraordinarily costly, and the emotional burden on families impacted by those facing mental illness or suicide can be devastating. Over 60% of depressed employees have missed work due to their diagnosed mental illness (Ipsos, 2018; Weber & Jaekel-Reinhard, 2000). Figure 3 illustrates that 8% of these individuals have missed four or more weeks of work due to depression (Ipsos, 2018). It can be inferred that missed days on the job results in a financial cost incurred by employers due to employee’s absenteeism from work. Therefore, it should be a top priority for leaders to identify approaches and practices that can positively impact the mental health and general well-being of Canadians.
Figure 3. Percentage of employed Canadians with depression who missed a select number of days of work per year due to depression, as of 2016 (Ipsos, 2018).

Stress, Burnout, and Compassion Fatigue in Helping Professions

Struggles with mental health and well-being can lead to an abundance of adverse professional effects. Developing a strong understanding of stress, burnout, and compassion fatigue is instrumental in creating a complete picture of well-being. When seeking to understand the pressures placed on teachers and the resulting psychological and physiological ramifications, parallels can be drawn to other helping professionals, including nurses, doctors, counsellors, and social workers. Terms commonly used to describe significant stress in helping professions include *vicarious traumatization*, *secondary traumatic stress*, *compassion fatigue*, and *burnout* (Bush, 2009; Figley, 1995, 2002a; Huggard, 2003; Joinson, 1992; Lloyd, King, & Chenoweth, 2002; Newell & MacNeil, 2010; Pearlman, 1995; Pines & Aronson, 1988). Professional burnout can occur in most professions related to helping others (Pines & Aronson, 1988); however, vicarious trauma, secondary traumatic stress, and compassion fatigue
are only experienced by those who have had direct contact with those in traumatic or crisis situations (Newell & MacNeil, 2010). Burnout results in emotional exhaustion, depersonalization, and low personal accomplishment (Lloyd, King, & Chenoweth, 2002). A study of 362 social workers conducted in Malaga, Spain by Hombrados-Mendieta and Cosano-Rivas (2013) examined burnout as a multidimensional response to chronic stress, which resulted in negative impacts at both the individual and organizational levels. The authors concluded that social workers are at an increased risk of burnout and that providing workplace supports was a valuable resource for addressing and preventing burnout. Parallels can be drawn between this study and other helping professions, including teaching.

A careful distinction must be made between burnout and compassion fatigue. Burnout is described as feelings of failure or exhaustion (Bush, 2009). In contrast, compassion fatigue describes distinctive effects experienced by caregivers (Joinson, 1992), and is the phenomena defined as an “emotional state with negative psychological and physical consequences that emanate from caregiving of people stricken with trauma” (Bush, 2009, p. 28). Those in helping professions such as physicians, nurses, social workers, and teachers, cannot provide quality care without compassion and empathy. Compassion requires individuals to bear the feelings of others and, alarmingly, compassion fatigue may actually reduce the capacity of individuals to perform this very act (Figley, 2002a). Huggard (2003) further outlined how vicarious traumatization in the medical profession can be described using various terms, one of which is compassion fatigue. Both vicarious traumatization and compassion fatigue are secondary traumatic stress caused by empathetic engagement.
Both vicarious traumatization, in which the outcomes of dealing with others in traumatic situations alter the caregiver’s thoughts and beliefs about the world (Pearlman, 1995), and secondary traumatic stress, which places a greater emphasis on observable behavioural symptoms, often mirror symptoms of those who have post-traumatic stress disorder (Figley, 1995).

Trauma is prevalent in North American society. In a 1998 Kaiser Permanente study of 45,000 American adults, Felitti et al. (1998) conducted groundbreaking research that identified eight adverse childhood experiences (ACEs) and compared the number of ACEs to measures of risk behaviour, health status, and disease in adults. The authors concluded that 52% of adult subjects had experienced at least one ACE, 25% had multiple ACEs, and 6% had experienced more than four ACEs. The study concluded that disease conditions, including ischemic heart disease, cancer, chronic lung disease, skeletal fractures, and liver disease, were related to an individual’s exposure to ACEs. Since the original study was conducted, two additional ACEs have been added and there are now 10 ACEs that are divided into three categories: abuse (physical, emotional, sexual); neglect (physical, emotional); and household dysfunction (mental illness, mother treated violently, divorce, incarcerated relative, substance abuse).

The Alberta Centre for Child, Family and Community Research conducted The Alberta Adverse Childhood Experiences Survey (McDonald & Tough, 2013) with a randomized telephone survey of 1,207 individuals (612 females and 595 males). The results of the survey indicated that before the age of 18, 27.7% of individuals who completed the survey had experienced abuse, and 49.19% had experiences of
household dysfunction. The study concluded that ACEs rarely occur in isolation; having one ACE increases the probability of having another by 84%. North American research demonstrates that not only are students at risk of exposure to ACEs, but some teachers also may have had ACEs in their past. Thus, attention should be paid to ensure the well-being of teachers who are providing care and education to vulnerable youth.

Compassion is a fundamental component of helping others, and as such, those in helping professions are particularly vulnerable to compassion fatigue (Figley, 2002b). Compassion fatigue can be defined as a reduction in capacity or interest to bear the suffering of others. According to the work of Figley (2002b), the clinical presentation of compassion fatigue can range from acute to chronic. The symptoms manifest in many ways: cognitively (decreased concentration, low self-esteem); emotionally (anxiety, guilt, anger); behaviourally (irritability, moodiness, sleep disturbances); in personal relationships (withdrawal, mistrust, isolation); somatically (aches pains, impaired immunity); in work performance (exhaustion, low motivation, absenteeism); and spiritually (questioning of purpose). Occupational stress and burnout also clearly impact well-being negatively (Byron et al., 2015).

Studies in education have addressed these same issues. In their 2007 study, Hoffman, Palladino, and Barnett identified the extensive rates at which teachers are exiting the field and sought to determine how compassion fatigue theory can be used to understand the causes for teachers exiting the profession, and specifically teacher-fatigue in the special education profession. The researchers posed questions related to what they identified as the five fundamental components of compassion fatigue:
specific situations, workload assignments, past histories, symptoms, and professional
development. Their study found there were three factors consistently influencing
teachers leaving the profession: responsibility, empathy, and loss of control. Other
studies indicate that individuals who are in close contact with trauma survivors are at
risk (Bride, 2007; Figley, 1995). Exposure to a child’s stories, narratives, art, or play,
can cause vicarious traumatization in teachers (Whitfield & Kanter, 2014). It is clear,
then, that teachers whose students have high ACE scores may be at greater risk of
vicarious traumatization.

Self-Care

Promoting mental wellness and avoiding fatigue and burnout can be fostered
through a focus on self-care for teachers. Self-care is a restorative method of caring for
teachers’ mental health. Gluschkoff et al. (2016) suggested self-care as a form of
recovery that restores energy and mental resources, allowing individuals to feel
prepared to engage in the demands of their profession. Self-care is positive,
intentional, integrated, and sustainable; it can be drawn from spiritual and religious
traditions, secular mindfulness-based approaches, therapeutic lifestyle changes, and
the wisdom of psychologists (Wise, Hersh, & Gibson, 2012).

Whitfield and Kanter (2014) reported that individuals in helping roles know the
importance of self-care (exercise, spirituality, and social support) but may not put
those techniques into practice. Instead, some may turn to toxic coping mechanisms,
such as alcohol, drugs, or social withdrawal, which will likely intensify the state of
secondary trauma. Pearlman and Saakvitne’s (1995) work in the areas of managing
and treating compassion fatigue identified notable strategies, including making sense
of disrupted schemas, striking a work-life balance, psychotherapy, and attending to spiritual needs. These closely align with the five recommendations made by Whitfield and Kanter (2014) to aid those in helping professions mitigate the effects of secondary trauma:

1. Do no harm to yourself
2. Invest in training and education
3. Practice self-care
4. Ensure workplace and workload promote optimal mental health
5. Continue research in the area of secondary trauma (p. 61)

Pearlman and Saakvitne (1995) identified notable strategies for managing and treating compassion fatigue, including making sense of disrupted schemas, striking a work-life balance, psychotherapy, and attending to spiritual needs, which closely align with the recommendations of Whitfield and Kantor.

It is paramount that those in the helping professions recognize their coping mechanisms in order to seek a positive mental and physical health balance (Hill, 1991), and prepare their minds, bodies, and souls to become resilient (Stebnicki, 2008). Since all caregivers are at risk of experiencing compassion fatigue, an individual’s response to the stresses of their profession is instrumental in developing adaptive coping mechanisms (Bush, 2009). Newel and MacNeil (2010) state that education is the best method to guard against compassion fatigue and vicarious traumatization. Byron et al. (2015) identified mindfulness training as an effective strategy for reducing staff stress in the medical field.
Mindfulness

Mindfulness is one particular method of self-care. Research has demonstrated the positive effects of using mindfulness techniques with adults suffering from physical and mental conditions, such as pain, stress, anxiety, mood disorders, and depression (Baer, 2003; Cullen, 2011; Jain et al., 2007; Kabat-Zinn, 2003; Robins, Keng, Ekblad, & Brantley, 2012). However, most mindfulness research has taken place in the clinical setting regarding the effects of mindfulness-based programs on adults and youth (Ludwig & Kabat-Zinn, 2008; Kabat-Zinn, 1993; Kabat-Zinn & Chapman-Waldrop, 1988; Kabat-Zinn, Lipworth, & Burney, 1985; Kabat-Zinn, Lipworth, Burney, & Sellers, 1986; Kabat-Zinn et al., 1998; Kabat-Zinn & Hanh, 2009; Peterson & Pbert, 1992; Werdani, 2017). According to Rechtschaffen and Rechtschaffen (2015), individuals who are present and focused are able to learn better; the concept of mindfulness teaches individuals to be literate with their bodies, their minds, their hearts, their community, and the world around them. The authors also suggested that there are five literacies of mindfulness. The first is somatic literacy, which means being present in one’s body. The second is cognitive literacy, which involves focusing attention through one’s breathing. The third mindfulness literacy is emotional literacy, during which individuals focus on feeling the correlation of their emotions with their body’s physical sensations. The fourth literacy is social literacy, which is when one brings mindfulness into social interactions. Lastly, the fifth literacy is ecological literacy, which involves connecting with nature (Rechtschaffen & Rechtschaffen, 2015).
Mindfulness activities have been identified as effective methods of reducing stress, anxiety, and even depression in adults (Baer, 2003). It stands to reason that studies testing similar, yet age-appropriate, mindfulness techniques on children would begin to emerge, and research has begun to explore the effects of mindfulness programs in the school environment. According to Viola (2009), the practice of mindfulness fits cohesively within the education system; by focusing the mind, it facilitates teachers in the areas of emotion management and stress reduction. As more research and data suggested that mindfulness techniques and programming can be useful in supporting children’s social and emotional health, publishers of mindfulness curricula concentrated their efforts on this market by creating lessons and programs that could be implemented by teachers in classrooms and schools. It is currently believed that implementing a mindfulness education program can assist in fostering positive metacognitive skills and well-being in students (Hawn Foundation, 2011; Mindful Schools, n.d.; Rechtschaffen & Rechtschaffen, 2015). Mindfulness-based interventions have demonstrated many positive results for students, which include: increased attention (Jha, Krompinger, & Baime, 2007); reduced harsh self-judgments (Semple, Lee, Rosa, & Miller, 2010); reduced perceived stress levels (Costello & Lawler, 2014); increased social skills; reduced test anxiety (Napoli, Krech, & Holley, 2005); improved behaviour; improved executive functioning; and increased metacognition (Flook et al., 2010). The results of a study by Sheinman, Hadar, Gafni, and Milman (2018) concluded that “participation in the mindfulness program significantly contributed to students’ disposition to use mindfulness-based coping
strategies, with the number of years of engagement having a significant effect on students’ disposition to apply these strategies” (p. 3325).

Part of a successful teaching practice includes the modification or implementation of programs and strategies that will foster a positive, thriving learning environment. Recent research in the area of mindfulness has brought this concept to the forefront in education, and North American school divisions are beginning to test the effectiveness of programs such as *Inner Kids Program, Inner Resilience Program, Learning to BREATHE, Mindful Schools, MindUP,* and *Wellness Works in Schools* (Meiklejohn et al., 2012). These programs encourage teachers to focus on topics such as deep breathing, mindful reflection, and guided movement as a means of fostering metacognitive processes. Mindfulness programs are becoming popular (Zenner et al., 2014); however, it is believed that mindfulness is most effectively taught to others if the teacher is practising it in his or her own life (Kabat-Zin, 2003). Additionally, effects are most significant when students implement techniques both at school and at home (Zenner et al., 2014).

**Research Gap**

Although this focus on well-being is instrumental in creating well-rounded students and helping them to improve, their well-being would not eliminate the problem of stress for teachers in the school. It has been long documented that teaching in North America is a stressful occupation (Davis & Palladino, 2011; Guglielmi & Tatrow, 1998; Kyriacou, 1987; Roeser et al., 2013; Skaalvik & Skaalvik, 2015; Skaalvik & Skaalvik, 2017). The causes of teacher stress are numerous. Some of these stressors include, but are not limited to, workload, discipline, student needs,
administrative issues, and academic performance demands. Many of these stressors cannot be eliminated from the requirements of the profession, but they have to be negotiated (Burke, Greenglass, & Schwarzer, 1996; Kim, Youngs, & Frank, 2017; Roeser et al., 2013). No research has been identified regarding correlations between teaching mindfulness and being mindful. However, if teachers use the same mindfulness techniques that they are teaching their students, it would be reasonable to hypothesize that there could be direct benefits or even synergistic effects between students’ well-being and the teachers’ well-being.

While student success is at the forefront of the profession, teacher well-being often fails to be a priority. Immense pressure is put on teachers to fulfil their ever-evolving roles as teachers; teacher burnout and stress have been identified as occupational hazards worldwide for the past three decades (Aboagye et al., 2018; García-Arroyo, Osca Segovia, & Peiró, 2019; Huk, Terjesen, & Cherkasova, 2019; Kyriacou, 1987; Lambert & McCarthy, 2006; Richards, 2012; Rudow, 1999; Skinner & Beers, 2014). According to Skinner and Beers (2014), teacher workload, managing parent relationships, working with students, and communicating with administration all lead to workplace stress, burnout, and emotional exhaustion for teachers. There is a need for innovative and cost-effective methods of training and supporting school staff (Meiklejohn et al., 2012). Although mindfulness has been studied for decades in clinical settings and is now emerging as an essential area of study in the field of education for students, little research has been done to consider the effects of mindfulness on teachers.
**Purpose Statement**

The purpose of this quantitative study was to investigate whether and to what extent a relationship existed between teaching mindfulness and the self-reported mindfulness practices and well-being of teachers in Alberta. The specific research questions that were explored included:

1. What mindfulness techniques do teachers in Alberta implement in their own lives?
2. Is there a relationship between the extent to which teachers in Alberta report implementing mindfulness in their classrooms and their self-reported mindfulness scores?
3. Is there a relationship between the extent to which teachers in Alberta report implementing mindfulness in their classrooms and their self-reported well-being scores?
4. What is the relationship between self-reported mindfulness and well-being scores of teachers in Alberta?

**Hypothesis**

There was a hypothesized relationship between all three variables, teaching mindfulness, mindfulness, and well-being in teachers, as depicted in Figure 4. It was hypothesized that there was a relationship between teaching mindfulness and mindfulness scores. It was also hypothesized that well-being scores for teachers would be positively correlated with both increases in mindfulness scores and the degree to which they teach mindfulness in their classrooms.
In Canada, the financial investment in education and teachers is immense. In 2015/2016, the cost of public elementary and secondary education in Canada surpassed $66 billion (StatCan, n.d.-c); in the province of Alberta, funding for education was $8 billion (Alberta Government, 2016) to educate 691,648 students (Alberta Government, 2019a) and employ 47,289 (StatCan, n.d.-d) teachers in 63 school boards. No Canadian research is currently available on the financial burden of replacing teachers or on the total annual costs related to retaining teachers. However, the general costs of training and teacher salaries should be considered. According to the University of Alberta (2019), Canadian residents would spend roughly $32,619 on university-related expenses to obtain a four-year Bachelor of Education degree. An average teacher’s salary in Alberta is $78,971 per year (Alberta Government, 2019b). In addition to salary and benefits, the investment of professional development can easily exceed $500 annually per teacher. The investment in a 5\textsuperscript{th}-year teacher would be roughly $114,090; by the time that teacher is of retirement age (typically 65), that investment is nearly $3.5 million. However, this substantial investment may not result
in increased job satisfaction or retention. In 2013, 50% of respondents to an Alberta Teachers’ Association survey said that teaching brings them satisfaction, which is a 14% decrease from a similar 2011 survey (Alberta Teachers’ Association, 2015). In a separate survey regarding workload, approximately 60% of Alberta teachers surveyed identified being dissatisfied with their workload and hours; additionally, 45% of teachers have missed a day of work as a result of fatigue (Alberta Teachers’ Association, 2015). There is an identified negative trend regarding job satisfaction among Alberta teachers.

Mindfulness is one method of self-care that can be utilized to increase well-being (Slutsky, Chin, Raye, & Creswell, 2019; Tang, Tang, & Gross, 2019). Although mindfulness may be described in a particular way by experts or religious groups (Chapter 2), it may not be described in the same way by teachers. Teachers frequently take a concept and adapt it; thus, it is crucial to capture the teachers’ perception of the concept of mindfulness to ensure it captures the intent of the study. Teacher autonomy in schools often results in teachers altering programs or concepts to suit their needs and the needs of their classrooms. Furthermore, teacher autonomy allows teachers to choose which programs or models to utilize within their classrooms. These decisions are typically based on an observable benefit to student achievement or behaviours. Teachers may seek to expand their knowledge base by seeking out additional resources or professional development for techniques or programs they deem beneficial to the students. The results of this study will contribute to a developing body of research in the area of mindfulness in education. School divisions need to understand the effects that mindfulness programs have on both the students and
teachers. No studies were identified that discussed the impact that teaching a mindfulness program has on the well-being of the teacher. This study examined the relationship between personal mindfulness in teachers, mindful teaching practices, and teacher well-being through a quantitative lens, filling this gap in the current research.

Definitions

The following key terms are used in this investigation.

*Adverse childhood experiences (ACEs)* AKA: childhood trauma. Experiences of abuse (physical, emotional, sexual), neglect (physical, emotional), and household dysfunction (mental illness, mother treated violently, divorce, incarcerated relative, substance abuse) (Felitti et al., 1998).

*Burnout.* A chronic psychological response mainly affecting people in jobs with a high social and ethical responsibility. The response is comprised of three dimensions: exhaustion, low personal accomplishment, and depersonalization (Bauer et al., 2006; Freudenberger, 1974; Maslach, 1976; Maslach, Schaufeli, & Leiter, 2001).

*Compassion fatigue:* A form of vicarious trauma, compassion fatigue is “an emotional state with negative psychological and physical consequences that emanate from caregiving of people stricken with trauma” (Bush, 2009, p. 28).

*Curriculum or Program:* A document or manual designed around organizing principals and essential concepts that focus on intentionality and in-depth exploration (National Research Council, 2002). For the purpose of this study, the term *curriculum* and the term *program* are used synonymously when referring to scripted teaching formats within the classroom.
**Mindfulness:** According to Kabat-Zinn (1994), mindfulness is not a religious practice, but a system of mental training that positively impacts an individual’s ability to perceive and respond to themselves, their relationships, and the world. It is an awareness that emerges through paying attention to purpose, in the present moment, and to non-judgmentally unfold the experience moment by moment (Kabat-Zinn, 2003). Weick and Sutcliffe (2006) support this definition by referring to mindfulness as a frame of mind in which an individual maintains continuous attention to detail.

**Mindfulness-based interventions:** Programs that include practices adapted primarily from Buddhist contemplative traditions with the goal of promoting holistic development and well-being (Maloney, Lawlor, Schonert-Reichl, & Whitehead, 2016, p. 1). The purpose of a mindfulness-based intervention is to train the individual to achieve mindful awareness.

**Recovery:** The process of returning an individual’s functioning to its pre-stressor level and in which strain is reduced. Recovery is focused on the activities which may reduce fatigue and stress to restore a status of physiological and psychological performance (Demerouti, Bakker, Geurts, & Taris, 2009; Sonnentag & Natter, 2004).

**Self-care:** A type of recovery that restores energy and mental resources. Self-care is a positive, intentional, integrated, and sustainable practice that allows individuals to feel prepared to engage in life’s demands (Gluschkoff et al., 2016; Wise, Hersh, & Gibson, 2012).

**Social and emotional learning:** A growing field in education that aims to foster core social and emotional competencies. These competencies include self-awareness,
self-regulation, initiating and maintaining healthy relationships, and treating others with respect and care (Maloney et al., 2016, p. 314).

**Stress:** An imbalance between risk and preventative measures, which negatively affects an individual’s well-being and results in an increase of negative thoughts, feelings, and behaviours (Prilleltensky, Neff, & Bessell, 2016).

**Vicarious trauma:** A process of cognitive change resulting from chronic empathic engagement with trauma survivors (Pearlman, 1995).

**Well-being:** A subjective concept, as defined in the psychological field, it broadly focuses on two types: hedonic well-being (how satisfying and enjoyable one’s life is); and eudemonic well-being (pertaining to personal experiences of growth and authenticity) (Metler & Busseri, 2017; Stewart-Brown & Janmohamed, 2008).

**Summary**

Incorporating mindfulness into education supports the twenty-first century goal of educating the whole child. According to Greenberg and Harris (2012), students graduating from the public education system must work well with others, practice healthy behaviours, and be responsible and respectful. This means that schools and teachers have a tremendous task set before them as they address challenges that are not academic in nature but are related to the development in students of social and emotional learning and dispositions not generally associated with a particular subject or content area. Teachers’ work involves helping students develop the social and emotional skills necessary to be productive and healthy citizens as well as learn and retain fundamental content information. Current literature indicates that the demands of the profession can have a tremendous impact on teacher well-being. Trauma,
compassion-fatigue, and burnout are all legitimate concerns in the field of education. However, the literature also shows that schools are placing significant attention on students’ well-being. Therefore, the next step is to transfer that focus on to the staff members.

This dissertation is arranged into five chapters. Chapter 1 introduces the purpose of the study and describes its significance by exploring concepts of teacher well-being, self-care, mindfulness in the Canadian context. Chapter 2 presents a synthesis of current and historical literature on mindfulness, well-being, teacher stress, burnout, compassion fatigue, social cognitive theory, and self-determination theory. The methodology used for this study is described in Chapter 3, in which the participants, instruments, and data collection processes are further detailed. In Chapter 4, the findings of the study are presented. Finally, a discussion of the findings, recommendations for practice, and future research possibilities are outlined in Chapter 5.
Chapter 2: Review of Literature

This chapter synthesizes a review of current and historical literature on the topics of mindfulness and well-being in the context of education and teaching practice. In order to explore the concept of mindfulness-based instruction and the effect it could have on teachers who teach it in schools, it is necessary to:

1. create a framework for the term mindfulness;
2. explain the history and current practices of mindfulness-based instruction in schools;
3. identify critiques of mindfulness;
4. create a framework for the term well-being;
5. define stress, burnout, and compassion fatigue; and,
6. identify the theories that will be used to frame the current study.

Mindfulness

Mindfulness practices have increased in popularity over the past 30 years. A search on Google Scholar on March 5, 2020, identified 397,000 results for the term *mindfulness*. Table 1 depicts a rapid increase of academic publications within a Google Scholar search of the term mindfulness, as well as the term mindfulness in conjunction with *school*, and mindfulness in conjunction with the term *teacher*. 
Table 1

Number of Academic Publications in Google Scholar by Search Term(s)

<table>
<thead>
<tr>
<th>Year</th>
<th>mindfulness</th>
<th>mindfulness + school</th>
<th>mindfulness + teacher</th>
</tr>
</thead>
<tbody>
<tr>
<td>1981-1990</td>
<td>2,080</td>
<td>1,090</td>
<td>726</td>
</tr>
<tr>
<td>2001-2010</td>
<td>77,000</td>
<td>29,100</td>
<td>14,500</td>
</tr>
<tr>
<td>2011-2020</td>
<td>190,000</td>
<td>104,000</td>
<td>24,700</td>
</tr>
<tr>
<td>Current</td>
<td>521,000</td>
<td>276,000</td>
<td>91,000</td>
</tr>
</tbody>
</table>

Note: Search conducted March 5, 2020.

Considerable evidence exists supports the effectiveness of mindfulness practices and mindfulness-based interventions in reducing stress and improving health outcomes in both children and adults (Frias, 2015; Greenberg & Harris, 2012; Hernández, Suero, Barros, González-Mora, & Rubia, 2016; Kabat-Zinn, 1982; Maloney et al., 2016; Meiklejohn et al., 2012; Metler & Busseri, 2017; Schonert-Reichl, et al., 2015; Vestergaard-Poulsen et al., 2009). As the Buddhist concept of mindfulness became mainstream globally, numerous definitions emerged. Table 2, created by Dane (2011) and adapted by Nguyen (2017) as well as the researcher of this study, outlines some of the most prominent names in the study of mindfulness and their definition of the term. This study utilized the following definition of mindfulness: a system of mental training that positively impacts an individual’s ability to perceive and respond to themselves, their relationships, and the world. It is “an awareness that emerges through paying attention on purpose, in the present moment, and to non-judgmentally unfold the experience moment by moment” (Kabat-Zinn, 2003, p. 144).
Mindfulness is loosely based on Buddhist spiritual practices. It is a process of regulating attention through directing awareness to the current experience (Bishop et al., 2004) while relating to the present experience through curiosity, experiential openness, and acceptance (Graepel, 2015). In the Western world, the use of mindfulness techniques was first documented at the Center for Mindfulness and Stress Reduction Clinic. Kabat-Zinn (1982) assessed the effectiveness of mindfulness-based stress reduction on adult patients with a variety of medical conditions by utilizing a 10-week Stress Reduction and Relaxation Program that entailed patients attend a two-hour session once a week. The program was designed to teach self-regulation to 51 patients (18 males and 33 females, ranging in age from 22 to 75) whose previous treatments of their chronic pain had proven ineffective. The Stress Reduction and Relaxation Program relied on the internal capacities of the patient. Patients were taught how to live with their pain through the practice of mindfulness meditation, which was rooted in Theravada Buddhism, Mahayana Buddhism, and yogic traditions that emphasized detached observation. The intent of the sessions was for the patient to internalize a detached observation toward the pain; instead of feeling the pain as rehabilitating, the patient would simply observe it as a bare sensation. Following the 10-week program, 65% of patients indicated a reduction of ≥ 33% in the mean total Pain Rating Index, and 50% indicated a reduction of ≥ 50%. Upon follow-up at 2.5, 7, and 11 months, the improvements were relatively stable in both mood disturbances and psychiatric symptomology. The study concluded that the meditation done through the Stress Reduction and Relaxation Program was an effective method of self-regulation for patients experiencing chronic pain. Although this study was conducted
in a medical setting, the results of this study became the foundation for many future studies in the area of mindfulness.

Mindfulness does not appear to be something that an individual innately possesses. Instead, it is a skill that an individual must develop over time through intentional, focused practice, and requires an ongoing commitment if it is to continue. It is through this deep commitment to being mindful that the individual will develop the capacity to attend, especially in instances of stress or unrest (Kabat-Zinn, 2003). In an attempt to operationalize a definition of mindfulness, Bishop et al., (2004) proposed a two-component model: (a) self-regulation of attention to the here-and-now through careful attention to thoughts, feelings, and sensations and (b) accepting each experience through a state of curiosity and openness. Buddhism and Western psychology both assert that the well-being resulting from stimulus-driven pleasures is less durable than the well-being resulting from internal mental training (Brickman & Campbell, 1971; Ryan & Deci, 2001).
Table 2

*Definitions of Mindfulness*

<table>
<thead>
<tr>
<th>Source</th>
<th>Domain</th>
<th>Definition of Mindfulness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bishop et al. (2004, p. 234)</td>
<td>Academia</td>
<td>“A process of regulating attention in order to bring a quality of non-elaborative awareness to current experience and a quality of relating to one’s experience within an orientation of curiosity, experiential openness, and acceptance.” The authors proposed a two-component model of mindfulness: (a) self-regulation of attention on the immediate experience by allowing for increased mental and bodily awareness of the present moment; and (b) adopting an orientation toward one’s experiences in the present moment through being curious, open, and accepting, leading to “increased cognitive complexity as reflected by an ability to generate differentiated and integrated representations of cognitive and affective experience.”</td>
</tr>
<tr>
<td>Brown, Ryan, and Creswell (2007, p. 212)</td>
<td>Academia</td>
<td>“A receptive attention to and awareness of present moment events and experience.”</td>
</tr>
<tr>
<td>Epstein (1995, p. 96)</td>
<td>Academia</td>
<td>“Bare attention in which moment-to-moment awareness of changing objects of perception is cultivated.”</td>
</tr>
<tr>
<td>Greenberg and Harris (2012, p. 162)</td>
<td>Academia</td>
<td>“Become aware of the moment-to-moment fluctuations in the stream of consciousness and to adopt an open and accepting stance toward these experiences.”</td>
</tr>
<tr>
<td>Hanh (1976, p. 11)</td>
<td>Buddhism</td>
<td>“Keeping one’s consciousness alive to the present reality.”</td>
</tr>
<tr>
<td>Herndon (2008, p. 32)</td>
<td>Academia</td>
<td>“Being attentively present to what is happening in the here and now.”</td>
</tr>
<tr>
<td>James (1890)</td>
<td>Psychology</td>
<td>“Taking possession by the mind, in clear and vivid form.”</td>
</tr>
<tr>
<td>Source</td>
<td>Academic Domain</td>
<td>Quotation</td>
</tr>
<tr>
<td>--------</td>
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<td>-----------</td>
</tr>
<tr>
<td>Kabat-Zinn (2005, p. 4)</td>
<td>Academia and Medical practice</td>
<td>“The psychological capacity to stay willfully present with one’s experiences, with a non-judgemental or accepting attitude, engendering a warm and friendly openness and curiosity.”</td>
</tr>
<tr>
<td>Langer (1992, p. 289)</td>
<td>Academia - Social Science</td>
<td>“Mindfulness is a state of conscious awareness in which the individual is implicitly aware of the context and content of information. It is a state of openness to novelty in which the individual actively constructs categories and distinctions. In contrast, mindlessness is a state of mind characterized by an over reliance on categories and distinctions drawn in the past and in which the individual is context-dependent and, as such, is oblivious to novel (or simply alternative) aspects of the situation.”</td>
</tr>
<tr>
<td>Lau et al. (2006, p. 1447)</td>
<td>Academia</td>
<td>“A mode, or state-like quality, that is maintained only when attention to experience is intentionally cultivated with an open, nonjudgmental orientation to experience.”</td>
</tr>
<tr>
<td>Rosch (2007, p. 259)</td>
<td>Academia</td>
<td>“A simple mental factor that can be present or absent in a moment of consciousness. It means to adhere, in that moment, to the object of consciousness with a clear mental focus.”</td>
</tr>
<tr>
<td>Shapiro, Carlson, Astin, and Freedman (2006, p. 26)</td>
<td>Academia</td>
<td>“Three fundamental components: (a) intention, (b) attention, and (c) attitude. Intention involves knowing why one is paying attention. It involves motivation, a conscious direction and purpose. Attention involves the direct, moment-to-moment knowing of what is happening as it is actually happening. The mind is trained to focus, aim, and sustain attention. Attitude describes how one pays attention, and refers to the accepting, caring, and discerning qualities of mindfulness.”</td>
</tr>
<tr>
<td>Smallwood, Mrazek, and Schooler (2011, p. 1077)</td>
<td>Academia</td>
<td>“Enhanced attention in a manner that is consistent with the assumption that it decreases mind wandering.”</td>
</tr>
<tr>
<td>Author/Source</td>
<td>Tradition</td>
<td>Quote</td>
</tr>
<tr>
<td>--------------</td>
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</tr>
<tr>
<td>Thera (2005, p. 32)</td>
<td>Buddhism</td>
<td>“The clear and single-minded awareness of what actually happens to us and in us at the successive moments of perception.”</td>
</tr>
<tr>
<td>Thondup (1998, p. 48)</td>
<td>Buddhism and Academia</td>
<td>“Giving full attention to the present, without worries about the past or future.”</td>
</tr>
<tr>
<td>Tolle (2004, p. 56)</td>
<td>New Earth Spirituality</td>
<td>“Fullest attention to whatever the moment presents . . . implies that you also completely accept what is, because you cannot give your full attention to something and at the same time resist it.”</td>
</tr>
<tr>
<td>Weick and Sutcliffe (2006, p. 518)</td>
<td>Academia</td>
<td>“Mindfulness means having the ability to hang on to current objects, to remember them, and not to lose sight of them through distraction, wandering attention, associative thinking, explaining away, or rejection.”</td>
</tr>
</tbody>
</table>

**Mindfulness-Based Training and Mindful Meditation in Neuroscience**

Mindfulness meditation had not been the focus of neuroscience until recently. Tang, Holzel, and Posner (2015) noted that the quality of many meditation research studies is still relatively low, and there are insufficient controlled longitudinal studies or large-scale studies. Additionally, there are concerns about the groupings being considered in studies because most mindful practitioners have trained intensively to create their state of mindfulness. For these reasons, caution must be exercised when stating causation in studies focused on mindfulness and neuroscience.

Hernandez et al. (2016) conducted a study of the long-term effects of Sahaja Yoga Meditation to identify if regional differences in brain grey matter existed. Grey matter in the brain plays a vital role in mental health, behaviour, and cognitive function; it begins thickening in childhood and then, after its adolescent peak, begins to decrease with age. Abnormality in grey matter volume is associated with reduced
cognitive and behavioural functioning. In the Hernandez et al. study, the brains of 46 individuals from age 21 to 63 years were evaluated. Of these individuals, 23 identified as experts in Sahaja Yoga Meditation with five to 26 years of experience and who meditated an average of 32.2 minutes each day; the remaining 23 non-meditators were used as a control. A 3T MRI scanner was used to obtain images of each participant’s brain. The results indicated that the meditators had significantly larger grey matter volume across the brain, with the most significant differences existing in the right hemispheric brain areas associated with sustained attention, self-control, compassion, and introspective perception. Despite these results and their best attempts to match participants’ age, gender, education, and body mass, there may have been extraneous impacts of the development of grey matter; thus, causation could not be stated.

In a similar study, conducted in Denmark by Vestergaard-Poulsen et al. (2009), 10 meditating participants were compared with 10 corresponding controls who had no history of meditation. The meditating participants had all engaged in the same style of meditation for the past 14 to 31 years ($M = 16.5$, $SD = 5.1$). The MRI scans and voxel-based morphometry was used to analyze grey matter density and volume differences in the brains of these two groups of individuals. This study indicated that structural differences exist in the grey matter of the medulla oblongata, the anterior cerebellum (bilaterally), the left superior and inferior frontal gyrus, as well as the left fusiform gyrus that is likely attributed to long-term meditation (Vestergaard-Poulsen et al., 2009). A significant limitation of this study was the small sample size and that it was conducted after the participants had already engaged in a substantial amount of meditative practice. It failed to consider the pre-existing brain structures, which may
have impacted the individual’s decision to participate in meditation. This study could have been strengthened had pre-meditation scans been obtained.

Both of these studies showed that the grey matter involved in decision making and self-control is affected positively by mindful meditation. Even short-term meditation has shown to induce white matter in the fractional anisotropy of the anterior corona radiate (Tang, Lu, Fan, Yang, & Posner, 2012; Tang, Lu, Geng, Stein, Yang, & Posner, 2010). It is not only the grey and white matter within the brain that neuroscientists have noted changes; “regular practice of meditation is associated with increased thickness in the subset of cortical regions related to somatosensory, auditory, visual, and introspective processing” (Lazar et al., 2005, p. 1895). Furthermore, a meta-analysis by Fox et al. (2014) focused on the brain structure and sought to determine if it is altered through the practice of meditation. Although the authors are cautious about stating causation, they believe that “meditation is consistently associated with changes in brain morphology” (p. 69). They identified both the prefrontal cortex and hippocampus as consistently being altered in meditation practitioners. Findings that show increases in grey matter, white matter, cortical thickness, and overall brain structure are all positive supports for mindfulness, as they are contributing factors in an individual’s ability to resolve conflict, enhance cognition and emotion (Tang et al., 2012), introspectively process (Lazer et al., 2005), and exhibit personal growth and self-acceptance (Hernandez et al., 2016). Tang, Holzel, and Posner (2015) identified “emerging evidence that mindfulness meditation may cause neuroplasticity changes in the structure and function of brain regions involved in
the regulation of attention, emotion, and self-awareness” (p. 222). However, causation may not be stated until additional in-depth research has been conducted in this area.

**Teacher-Facilitated Mindfulness Programs**

There are numerous teacher-facilitated mindfulness programs available for schools to utilize. Table 3, created by Meiklejohn et al. (2012) and adapted for this study, details several programs that are currently in use by North American teachers. Some, but not all, are research-based. Many of these programs utilize Kabat-Zinn’s mindfulness-based stress reduction (Kabat-Zinn, 1982; Meiklejohn et al., 2012) as one method of social and emotional learning.
Table 3

**Mindfulness Focused Programs**

<table>
<thead>
<tr>
<th>Program Name and Source</th>
<th>Program Overview</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Empowering Education</strong>[^a] empoweringeducation.org/mindfulness-in-schools</td>
<td>Founded in 2009, <em>Empowering Education</em> began as a collaborative partnership with 12 schools in the United States. The goal of <em>Empowering Education</em> is to provide high-quality, universal social and emotional learning to as many students, teachers, and families as possible through a partnership with the Center for Practice Engaged Education Research (C-PEER) at the University of Colorado Denver. The current evidence-based program provides a starting point from which educators can incorporate their uniqueness and interpretations of social-emotional learning to tailor the program to their unique community.</td>
</tr>
<tr>
<td><strong>Inner Resilience Program</strong> lindalantieri.org/the-inner-resilience-program</td>
<td>The <em>Inner Resilience Program</em> was designed with the goal of cultivating the inner lives of students, teachers, and schools through the integration of social and emotional learning into the classroom setting following September 11, 2001. This program was funded through multiple grants and private funders to serve 11 schools in the Lower Manhattan area. The program was not a curriculum and ceased operation in July 2017; however, the practices of the program were detailed for implementation by other schools and individuals.</td>
</tr>
</tbody>
</table>

[^a]: Note: The source URL is provided for additional information.
Supporting peer-reviewed research:

**Learning to BREATHE**

*learning2breathe.org*

*Learning to BREATHE* is a social and emotional learning curriculum intended for use in classrooms. The 6, 12, or 18 session curricula are focused on six themes built around the acronym BREATHE. Through the program, students learn to strengthen attention and emotion regulation, cultivate positive emotions, develop stress management skills, and identify ways to integrate mindfulness into their daily lives.

Supporting peer-reviewed research:

**Mindful Schools**

*www.mindfulschools.org*

Through research-based professional development training and adaptable K-12 curricula (including guided audios and lessons), teachers are guided to strengthen their capacities for awareness, attention, connection, and compassion. The Oakland, California based program is founded on a belief that teachers are the heart of school communities and that the enduring health of schools is
dependent on the continuity of educators who create and nurture school relationships, traditions, and culture.

Supporting peer-reviewed research:

Created in 2011 by the Hawn Foundation, *MindUP* is a scripted, evidence-based curriculum built around four pillars: neuroscience, positive psychology, mindful awareness, and social-emotional learning. The 4-unit, 15-lesson program provides the structure for promoting positive mental health and well-being in classrooms with students from Kindergarten to Grade 8.

Supporting peer-reviewed research:

The Mindfulness Curriculum is a 20-topic Australian program that supports Grade 1 to Grade 6 students in developing self-awareness, self-management, social awareness, and social
management skills. The program includes educator manuals, student journals, a mobile app, and parent support resources.

Supporting peer-reviewed research:

**Still Quiet Place**
www.stillquietplace.com

*Still Quiet Place* offers both an online training platform for educators and athletes as well as a curriculum to work through with students. The 10-week training is designed to support educators in developing the capacity to work with their pre-kindergarten to Grade 12 students as they build on their pre-existing abilities for focused attention, engaged learning, emotional fluency, respectful communication, and compassionate action. During the training, educators will develop their own knowledge of the 8-week program.

**Wellness Works in Schools**
www.wellnessworkinschools.com

*Wellness Works in Schools* offers both an online training platform for educators as well as three, grade-specific curriculums. Through a multiple lesson approach, the curricula support teachers in engaging students in the development of personal mindfulness skills, social-emotional competencies, and trauma-informed strategies.

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*a These programs were identified following the research study and thus were not included in the options on the survey instrument.
The *MindUP* curriculum is a product of the Hawn Foundation (2011). This brain research-based curriculum was the passion project of founder Goldie Hawn and is informed by experts in neuroscience, social-emotional learning, and positive psychology (Maloney et al., 2016). “*MindUP* is a comprehensive, classroom-tested, evidence-based curriculum framed around 15 easily implemented lessons that foster social and emotional awareness, enhance psychological well-being, and promote academic success” (Hawn Foundation, 2011, p. 6). The curriculum fosters classroom environments of tolerance, mindful attention, and supports learning. The developers of *MindUP* believe in creating a classroom environment that is joyful and allows students to see beyond the daily stresses that they are encountering. The objectives of the curriculum are based around self-awareness, self-management, social awareness, relationship skills, and responsible decision making (Hawn Foundation, 2011). The developers of the curriculum make seven claims regarding the outcomes of using it in a classroom, all of which are centred around positively influencing social-emotional well-being and academic success.

The Hawn Foundation (2011) identified both the prefrontal cortex and hippocampus as areas of focus in the *MindUP* curriculum, where students are taught to attend to three parts of their brain: the prefrontal cortex (wise owl), the amygdala (guard dog), and the hippocampus (happy hippo). Students are taught the importance of controlling their guard dog through practices of breathing and meditation.

In 2016, Maloney, et al. conducted a meta-analysis of the mindfulness-based interventions in the Canadian context. The authors identified a significant limitation within their meta-analysis; the studies they considered used a variety of mindfulness
programs, thus making comparisons challenging. Although the authors stated that a variety of mindfulness-based interventions were considered, it appears the focus was on the MindUP curriculum. The authors concluded that there appeared to be benefits for students who were taught using the MindUP curriculum, and that the curriculum is an “acceptable and effective universal mindfulness-based social and emotional learning program” (p. 326). Several positive themes emerged from the meta-analysis, including increases in student self-regulation (the ability to return to a calm state), well-being (optimism and gratitude), mindful attention and awareness, and prosocial behaviour. The meta-analysis supports the use of controlled breathing, as well as focusing attention on creating a conscious awareness of the present moment. However, student boredom with the program emerged as a negative theme. Studies of mindfulness-based interventions within the school context are in their infancy, and the authors noted a need for longitudinal studies to understand long term effects of teaching mindfulness in schools. Additionally, more in-depth data collection through interviews, focus groups, or quantitative measures may be beneficial.

An additional Canadian study suggesting the promise of social and emotional learning programs was conducted by Schonert-Reichl et al. (2015). The study hypothesized that programs focused on mindful learning and caring for others would impact cognitive control, reduce stress, promote well-being and prosociality, and produce positive school outcomes as measured by end-of-the-year math grades. Cognitive control can also be referred to as executive functioning; it is an individual’s ability to organize, sequence, and regulate behaviour. The subjects were four classes of Grade 4 and Grade 5 students ($N = 99$). Two teachers in the experimental group-
administered twelve 40 to 50-minute MindUP lessons, once per week; two teachers in
the control group administered the district social responsibility program. Student
outcomes were measured based on behavioural assessments of executive functioning,
cortisol levels, student self-reports, peer reports, and teacher administered math
assessments. The results were preliminary and suggested promising findings regarding
the behavioural and cognitive change in the students. The students who participated in
the MindUP program demonstrated improvements in executive functioning, self-
reported measures of well-being, self-reported and peer-reported prosocial behaviour,
and math scores. However, it should be noted that the analysis of the cortisol level
differences was non-conclusive. The authors of this study identified a gap in the
literature related to the impact upon the teacher of teaching a curriculum that focused
on social-emotional learning. Limitations with sample-size and with the assignment of
subjects-to-treatment were identified. Treatments were randomly assigned by
classrooms as opposed to randomly assigning individual students to a particular
treatment, resulting in difficulties identifying intervention effects.

In addition to MindUP, Learning to BREATHE is a research-based program
that provides intentional, child-focused instruction on how to implement mindfulness
and social-emotional learning to youth. Learning to BREATHE (Broderick, 2013) is a
mindfulness curriculum for adolescents that is built around the BREATHE acronym
and can be implemented using either 6 or 18 sessions. Each session can be adapted to
the age of the students and takes roughly 30–45 minutes. According to (Meiklejohn et
al., 2012), the five goals of the program are to:

1. Provide universal, developmentally appropriate mindfulness instruction that fosters mental health and wellness.
2. Enhance capacity for emotion regulation.
3. Strengthen attention.
4. Expand the repertoire of skills for stress management.
5. Help students integrate mindfulness into everyday life.

A pre-post pilot intervention study conducted by Bluth, Roberson, Gaylord (2015) with adolescents age 10 to 18 years ($N = 28$) used *Learning to BREATHE* as an after-school intervention on two unique cohorts. Students’ life satisfaction and perceived stress were determined through the use of the Children and Adolescent Mindfulness Measure (Greco, Baer, & Smith, 2011). The study identified improvements in mindfulness, self-compassion, perceived stress, and life satisfaction between preintervention to post-intervention.

*Mindful Schools* was created by a small team in a classroom at Emerson Elementary School in Oakland, CA. Through a series of five online courses (Mindful Fundamentals, Mindful Teacher Essentials, Mindful Communication, and Difficult Emotions), *Mindful Schools* provides teachers with “practical skills for self-care, facilitation, and connecting with youth, providing simple, effective mindfulness practices that can be integrated into the school day and adapted for diverse environments” (Mindful Schools, n.d.). The program also offers a certification program, which entails a yearlong training course and retreat. The *Mindful Schools* program acknowledges that mindfulness causes changes to three areas of the brain: the
amygdala, the hippocampus, and the prefrontal cortex (Chiesa & Serretti, 2010; Desbordes et al., 2012; Goldin & Gross, 2010; Hölzel et al., 2009; Lutz, Slagter, Dunne, & Davidson, 2008). The Mindful Schools developers state that teachers who engage in mindful learning benefit from reduced stress and burnout, and report greater efficacy in doing their jobs, (Jennings, Frank, Snowberg, Coccia, & Greenberg, 2013). An experimental-design study conducted by Liehr and Diaz (2010) implemented classes based on Mindful Schools with 18 minority youth ($M = 9.5$ years, $SD = 1.6$) during a summer camp. The intervention consisted of ten 15-minute classes, once daily for two weeks. A significant reduction in depressive symptoms and a decrease in anxiety symptoms was noted in the study. Liehr and Diaz (2010) identified the results of the Mindful Schools curriculum-intervention showed promise for decreasing particularly depressive symptoms in minority children.

**The Impact of Mindfulness Practices for Students**

Students today are exposed to multiple stressors, such as those pertaining to family dynamics, peer dynamics, death, and separation (Costello & Lawler, 2014). Students who are struggling with social-emotional and behavioural challenges are likely to encounter problems, both within and outside of the school setting. To prepare for these emotional challenges, students need to have well developed coping strategies. Social and emotional learning through mindfulness is one strategy that can be taught to students as a means of fostering positive social-emotional well-being. Dodge, Daly, Houton, and Saunders (2012) define well-being based on positive affect, happiness, and life satisfaction, as it descends from hedonistic traditions. However, Statham and Chase (2010) believe that a child’s well-being is multidimensional and
includes physical, emotional, mental, and social components. Students who are able to establish the fundamentals of self-awareness, self-management, social awareness, relationship skills, and responsible decision-making during their formative years are more likely to experience school and life success (Payton et al., 2008).

The first identified meta-analysis on the topic of mindfulness in schools was conducted by Durlak, Weissberg, Dymnicki, Taylor, and Schellinger (2011). The study looked at 213 school-based social and emotional learning programs focused on improving academic achievement, attitudes, and behaviour. The meta-analysis examined studies related to 270,034 kindergarten to Grade 12 students who had been previously studied and results reported in English journals (published or unpublished) between 1955 and 2007. The meta-analysis concluded that instructing students using social and emotional learning models resulted in significant positive effects on social-emotional capacity and attitudes about school, self, and others. Another significant finding of the study was that social and emotional learning programs could be conducted by teachers within the classroom setting and that external expert instruction is not required for students to experience positive effects on their social and emotional well-being. One major limitation of this meta-analysis was the time frame in which it was conducted, as even at the time of publication, all studies considered were older than five years. Replication of this study looking at more recent research would be beneficial.

Subsequently, a meta-analysis conducted by Zenner, Herrnleben-Kurz, and Walach (2014) identified 24 mindfulness-based studies conducted on over 2,000 students from both elementary and secondary schools. The authors concluded that
school-based mindfulness training interventions have promising effects on the cognitive domain ($g = 0.80$, $p < 0.05$) and psychological measures of stress ($g = 0.39$, $p < 0.05$) and resilience ($g = 0.36$, $p < 0.05$). Also, Zoogman, Goldberg, Hoty, and Miller (2015) conducted a meta-analysis of 20 studies that had been published in English, peer-reviewed journals between 2004 and 2011. The studies all included mindfulness interventions that had taken place in both clinical and non-clinical settings with subjects between the ages of 6 and 21 ($N = 1,914$). It was determined that the universal effect size was small ($d_{el} = 0.227$) for a broad range of sub-samples and outcomes and also that greater effect sizes were identified in the clinical sample than in the non-clinical sample. Noted limitations of this meta-analysis were the varied methodologies and the small sample sizes of the studies under analysis. There were four key findings identified through the meta-analysis:

1. Mindfulness can safely be used with youth to address a broad range of social and emotional targets.

2. Mindfulness can be integrated into a broad range of settings for youth, to include community, youth programs, and schools.

3. The mass dissemination of mindfulness could allow data collection in order to find which form of mindfulness helps with specific outcomes or to determine that many forms are equally helpful.

4. Existing evidence suggests that mindfulness shows particular promise for youth who suffer with high levels of symptomology. (Zoogman, et al., 2015, p. 300)
Most recently, a meta-analysis was conducted by Klingbeil et al. (2017). Klingbeil et al. (2017) acknowledge multiple past meta-analyses but stated that the increase in the number of research projects and more objective nature of research on mindfulness-based interventions were a rationale for their study. Their meta-analysis also considers the results of mindfulness-based interventions after a follow-up period; this variable had not been considered as part of previously conducted meta-analyses. Klingbeil et al. (2017) analysed 76 published research studies from North America, Europe, Australia, and Asia. Of the total participants ($N = 6,121$), reported data identified that the males (50.9%) and females (49.1%) in the studies were between the ages of 3 and 17 ($M = 13.7$, $SD = 3.3$). The meta-analysis examined research that had intentional mindfulness training as a method of modifying behaviour in students. A total of 36 different mindfulness-based interventions were analysed from 50 controlled and 26 pre-post studies. An analysis of effect size for studies that included a follow-up component included 12 controlled studies ($n = 1,501$) and 12 pre-post studies ($n = 532$). The meta-analysis concluded that a small, positive, average treatment effect was identified for mindfulness-based interventions in both the controlled studies ($g = 0.322$, 95% CI [0.242, 0.402], $p < 0.001$) and the pre-post studies ($g = 0.305$, 95% CI [0.223, 0.387], $p < .001$). Additionally, they identified the effect size for studies which included a follow-up component was small for both the controlled studies ($g = 0.402$, 95% CI [0.220, 0.584], $p < .001$) and the pre-post studies ($g = 0.462$, 95% CI [0.202, 0.723], $p = 0.003$). Klingbeil et al. (2017) stated that mindfulness-based interventions have a similar impact in both the school and clinical settings and that mindfulness-based interventions have a small yet consistent effect on the academic, social,
emotional, behavioural, and physical health of youth. They also suggested that researchers undertake additional long-term studies to observe the lasting effects of mindfulness-based interventions on youth.

**The Impact of Mindfulness Practices for Teachers**

According to Meiklejohn et al. (2012), mindfulness training within the kindergarten to Grade 12 education system has multiple positive impacts for both training of teachers and the teaching of students. The authors indicated that kindergarten to Grade 12 teachers face numerous stressors; however, they are provided with few resources to help mitigate these stressors. According to Meiklejohn et al. (2012), “personal training in mindfulness skills can increase teachers’ sense of well-being and teaching self-efficacy, as well as their ability to manage classroom behaviour and establish and maintain supportive relationships with students” (p. 291). Furthermore, their research review concluded that mindfulness techniques had positive cognitive, social, and psychological impacts on students. They also explored three teacher training and wellness programs: Cultivating Awareness and Resilience in Education (CARE); Mindfulness-Based Wellness Education (MBWE); and Stress Management and Relaxation Techniques (SMART) in Education. All three are based on teachers’ understanding of and incorporating mindfulness in their personal and professional lives, as opposed to focusing on intentionally teaching mindfulness skills to students in the classroom. Meiklejohn et al. (2012) compared this type of training to the “toolbox” approach frequently used in kindergarten to Grade 12 education. The review concluded that “training teachers to embody mindfulness by developing a
Mindfulness-based stress reduction is one strategy that could be used by teachers to reduce stress (Roeser et al., 2013). Using a quasi-experimental, pretest-posttest comparison, Frank, Reibel, Broderick, Cantrell, and Metz (2015) assessed the effects of a mindfulness-based stress reduction program on the levels of stress and well-being of 36 high school teachers aged 24 to 62 years (\(M = 40.72, SD = 10.77\)) in Pennsylvania. The treatment group (\(n = 18\)) participated in an 8-week adapted mindfulness-based stress reduction program twice per week for 2.5 hours; the content of the sessions included body scanning, awareness of breathing, eating meditation, walking meditation, and mindful yoga. The participants in the treatment group were also encouraged to practice mindfulness meditation for 25 to 30 minutes a day, six days a week, on their own time. Quantitative data were collected using six separate instruments: the Brief Symptom Inventory (Derogatis 1975), Pittsburgh Sleep Quality Index (Buysse et al., 1989), Self-compassion Scale (Raes et al., 2011), Maslach Burnout Inventory (Maslach & Jackson, 1981), The Five Facet Mindfulness Questionnaire (Baer et al., 2008), and the 14-item Affective Self-Regulatory Efficacy Scale (Bandura, Caprara, Barbaranelli, Gerbino, & Pastorelli, 2003). At the onset, no significant differences at baseline were observed between the treatment group or the control group. This study demonstrated that educators who participated in the eight-week mindfulness-based stress reduction program had notable improvements in their ability to remain calm, adopt a present-moment focus, and to engage in self-kindness, mindfulness, and overall self-compassion. There were also noticeable improvements
in the sleep quality of the participants in the treatment group. However, there was no significant change in the participants’ ability to accept challenging thoughts, sensations, and emotions. Also, there were no significant reductions in depression, somatization, or anxiety levels. Limitations of this study include self-reporting by participants, sample selection, and the length of study. Further longitudinal studies of this nature are recommended by Frank et al. (2015).

The use of mindfulness-based stress reduction as a means of combatting the stress of the teaching profession has been investigated by Cook et al. (2017) through an experimental design with pre-post data. The study examined the effects of a treatment on 32 high school and 12 middle school teachers from the Midwest United States with an average of 12 years of teaching experience ($M = 11.8, SD = 4.2$). The treatment group engaged in five 2.5-hour sessions of free, web-based ACHIEVER Resilience Curriculum (ARC); ARC includes training in mindfulness, values clarification, gratitude practices, and sleep hygiene. Pre-post data were collected through the following scales: Perceived Stress Scale (Cohen, Kamarck, & Mermelstein, 1983); Teacher Self-Efficacy Scale (Schwarzer, Schmitz, & Daytner, 1999); the Satisfaction with Work Scales (Diener, Emmons, Larsen, & Griffin, 1985); Intentions to Implement (Kortteisto, Kaila, Komulainen, Mantyranta, & Rissanen, 2010), and the Intervention Rating Profile (Martens, Witt, Elliott, & Darveaux, 1985). The Cook et al. (2017) study found that teachers who engaged in the ARC training identified moderate reductions in perceived stress ($F(1, 42) = 11.55, p = 0.001$), moderate improvements in self-efficacy ($F(1, 42) = 8.58, p = .005$), moderate increases in job satisfaction ($F(1, 42) = 6.72, p = .05$), and moderate intentions to
implement evidence-based practices \( (F(1, 42) = 17.23, p < .001) \). It is also noteworthy that 100\% of the participants in the treatment group expressed a desire to maintain healthy habits such as exercising, eating well, and engaging in good sleep practices. According to Cook et al. (2017), there is evidence supporting the development and delivery of targeted training that provide teachers with knowledge and techniques to implement changes in their lives that may potentially improve well-being.

Frias (2015) sought to add the teacher’s voice to the current research through a qualitative study that used a phenomenological research approach to explore the feelings of kindergarten to Grade 12 teachers who also identified as mindfulness-practitioners. In the study, three 60 to 90-minute interviews were conducted with four participants. The kindergarten to Grade 12 teachers in the study were between the ages of 28 and 42 years; two were elementary teachers with one and 15 years of experience, and two were secondary teachers with one and eight years of experience. The first interviews focused on the participants’ history by asking them to provide responses to questions regarding their journey into the teaching profession and mindful practices. All participants identified having embarked on the journey of a mindfulness practitioner as a method of overcoming some sort of personal suffering, and they opted to continue the practice as a means of dealing with the challenges of daily life. Additionally, the career of teaching was the first choice for one participant but was a second career for the other three participants. The second interview focused on the participants’ contemporary experiences; they were encouraged to provide details regarding what a day in the life of a teacher and mindfulness practitioner looks like. The third and final interview was centred around reflection; specifically, having the
participants share what it means to be a mindfulness practitioner and teacher. Three of the participants identified mindfulness as a cognitive tool; the fourth participant identified as Buddhist and spoke of mindfulness in a spiritual manner. All four participants provided unique definitions of mindfulness; however, each focused on the principle of being present in the here and now. Following the interviews, four themes were identified from the coded transcripts:

1. Mindfulness helps cope with the stressors of teaching.
2. Classroom relationships are paramount.
3. Teaching is an act of caring for others.
4. Being a mindfulness practitioner can cause feelings of isolation from teaching colleagues.

Frias (2015) identified significant challenges locating participants for the study; the most significant limitation of this study was its small sample size. Also, it should be noted that the researcher was a mindfulness practitioner and former teacher, so researcher bias is cautioned. Frias (2015) states that mindfulness may be an effective pedagogical tool and could potentially be a useful method of increasing teacher retention.

**Critiques of Mindfulness**

Despite research in the clinical and non-clinical settings, which has demonstrated varying degrees of effectiveness of mindfulness in both adults and in youth, the construct is not without criticism. With its roots in Buddhist practices, the
Mindfulness has been uprooted from rich wisdom traditions and has thus lost sight of its ethical orientation becoming a programmatic rather than pedagogical practice. Mindfulness is a commodity sold to and through a variety of institutional settings, rather than the practice of offering teachings as a gift and students respond with generosity or dana as originally envisioned and practiced in Buddhism. (pp. 188-193)

However, O’Donnell (2015) also identified that despite many criticisms of mindfulness, perhaps it is best to simply consider if the practice is in some small way making a difference in the life of a person, improving their will to live, or strengthening their relationships.

Greenberg and Harris (2012) conducted a review of multiple studies in which the effectiveness of mindfulness and yoga as contemplative practices in both treatment and preventative settings for youth and adolescents were evaluated. It was identified that although there may be potential benefits of mindfulness, including building resiliency, the actual research-based evidence that is currently available does not support the claims being made. The authors identified that consumers are currently interested in the products and practices without fully understanding the outcomes and suggest that well developed experimental studies are required before causation can be determined.

Black, Milam, and Sussman (2009) conducted an empirical study of 16 research studies published between 1982 and 2008 on the health-related effects of sitting-meditative practices implemented among youth aged 6 to 18 years (N = 860).
The participants in the studies were from elementary school \((n = 2)\), middle school \((n = 3)\), high school \((n = 6)\), clinical settings \((n = 4)\), and community settings \((n = 1)\) and included primarily youth with pre-existing medical conditions. Of the 16 studies, five examined physiologic outcomes, and 11 examined psychosocial or behavioural outcomes. The studies included both randomized, controlled trials \((n = 11)\) and pretest-posttest, no control group design \((n = 5)\). Interventions in the studies included mindfulness meditation, transcendental meditation, mindfulness-based stress reduction, and mindfulness-based cognitive therapy. Small to moderate effects were identified for physiologic outcomes \((\text{Cohen’s} \, d = 0.16 \text{ to } 0.29)\), and psychosocial/behavioural outcomes \((\text{Cohen’s} \, d = 0.27 \text{ to } 0.70)\); these effects sizes were slightly smaller than other previously reported findings with adult participants. Black et al. \(2009\) cautioned against the presumption that mindfulness-based programs were beneficial to youth simply because studies had shown their effectiveness in adults in the clinical setting. Future studies are required among younger and more diverse populations before generalizations can be made.

**Well-Being**

Researchers, teachers, and businesspeople alike have identified the importance of measuring well-being but are at odds with how to accomplish this task. However, it is generally agreed upon that well-being lies at the opposite end of the spectrum from mental illness and mental disorders \((\text{Huppert & So,} \, 2013)\). A historical definition of well-being put forth by Bradburn \(1969\) stated that well-being was only psychological and that “an individual will be high in psychological well-being in the degree to which he has an excess of positive over negative affect and will be low in well-being in the
degree to which negative effect predominates over positive” (p. 9). However, more recently, well-being has been defined as “the experience of life going well” (Huppert & So, 2013, p. 838). Well-being is not a single entity; it is instead a collection of indicators (Diener, 1984; Dodge Daly, Houton, & Saunders., 2012; Huppert & So, 2013; Longo, Coyne, & Joseph, 2017; Seligman, 2011). There are multiple theories in the literature about the facets of well-being. Both Metler and Busseri (2017) and Stewart-Brown and Janmohamed (2008) indicated that mental well-being covers both the hedonic perspective (an individual’s subjective experience of happiness and life satisfaction) and the eudemonic perspective (an individual’s optimistic psychological functioning, quality relationships with others and self-realization).

According to Dodge, Daly, Houton, and Saunders (2012), the concept of well-being is a three-dimensional construct comprised of psychological well-being, social well-being, and physical well-being. Likewise, Diener (1984) also had a three-dimensional model of subjective well-being, and suggested that life satisfaction, positive affect, and negative affect combine to assess how satisfied one is overall with their life. However, Longo, Coyne, and Joseph (2017) state that well-being has 14 constructs: happiness, vitality, calmness, optimism, involvement, self-awareness, self-acceptance, self-worth, competence, development, purpose, significance, self-congruence, and connection. Results of multiple studies (Chen, Jing, Hayes, & Lee, 2013; Coffey, Wray-Lake, Mashek, & Branand, 2016; de Bruin & du Plessis, 2015; Disabato, Goodman, Kashdan, Short, & Jarden, 2016; Gallagher, Lopez, & Preacher, 2009; Huppert and So, 2013; Jovanović, 2015; Keyes, 2002) have concluded that well-
being facets are influenced by specific factors and form a hierarchical structure (Longo et al., 2017).

In an attempt to define the structure of well-being, Metler and Busseri (2017) conducted two studies. The first study used first-year university students recruited to complete a paper and pencil survey on psychological health and well-being; they were also given three subsequent online surveys (the last being at the end of their third-year of university). The second study included 195 undergraduate students, who were given an online survey, then participated in an experimental session nine days later. Experimental conditions consisted of five tasks: reading a passage about a well-being component; a comprehension task; a summary of a reading passage; an open-ended question about their life; and a persuasive writing task. Metler and Busseri (2017) state that the results gathered from both studies support well-being as a hierarchical construct, comprised of life satisfaction, positive affect, and negative affect. A noted limitation of study two is that it only generated results from one session; duplication of this study with a separate follow-up session is warranted before long-lasting effects can be identified.

**Teacher Stress, Burnout, and Compassion Fatigue**

Stress is the emotional and physiological reactions to stressors (Maslach, Jackson, & Leiter, 1996). Stress in and of itself does not lead to burnout; instead, not having a means to deal with negative stress over a significant timeframe may lead to burnout (Farber, 1984). If stress is not properly managed, individuals can become part of a dangerous negative spiral, which can impact school climate (Collie, Shapka, & Perry, 2012), student-teacher relationships (Collie et al., 2012; Grayson & Alvarez,
2008; Shernoff, Mehta, Atkins, Torf, & Spencer, 2011), instructional quality (Grayson & Alvarez, 2008; Jennings & Greenberg, 2009), physical and mental health (Collie et al., 2012), and job satisfaction (Klusmann, Kunter, Trautwein, Lüdtke, & Baumert, 2008). Prolonged exposure to stress is associated with a variety of physical and psychological ailments, including chronic anxiety, psychosomatic illness, and a variety of other emotional problems (Maslach et al., 1996). Stress and burnout are severe issues for teachers (Braun, Roeser, Mashburn, & Skinner, 2019; Burke, Greenglass, & Schwarzer, 1996; Clunies-Ross, Little, & Kienhuis, 2008; Grayson & Alvarez, 2008; Haydeon, Alter, Hawkins, & Kendall Theado, 2019; Kim, Youngs, & Frank, 2017; Prilleltensky, Neff, & Bessell, 2016). Factors which impact teacher stress include bureaucratic obstacles, student behaviours (Clunies-Ross, Little, & Kienhuis, 2008), discipline, student-teacher relations (Collie et al., 2012), lack of supervisory support, (Burke et al., 1996), self-doubt, reduced budgets, pressure to increase students’ academic achievements (Kim et al., 2017), workload, and lack of collaborative time (Roeser et al., 2013). Haydeon et al. (2019) also identify the inability for teachers to walk away and take a break when encountering a student with challenging behaviours as an additional contributor to stress faced by teachers.

A frequently cited study conducted by Burke, Greenglass, and Schwarzer (1996) over two decades ago identified teacher stress as a job hazard. This longitudinal study considered antecedents and consequences of psychological burnout among 362 (178 male and 184 female) school staff. Data were collected through two mail-out questionnaires; the Wave 1 questionnaire was mailed out one year before the Wave 2 questionnaire. Researchers used the Maslach Burn Inventory (Maslach &
Jackson, 1986) to score burnout. The Maslach Burn Inventory is a questionnaire based on three subscales: (a) emotional exhaustion, (b) depersonalization, and (c) personal accomplishment. Results indicated that gender is a factor and identified that there were higher rates of burnout for men (Wilks’ lambda = .956 \( p < .01 \)), with notable differences in the depersonalization (\( F[1,312] = 9.65, p < .01 \)) subscale. Depersonalization towards students is an ineffective coping mechanism that allows the individual to disconnect from the situation and continue to focus on his or her career. The results also identified that burnout was higher for teachers than for administrators (Wilks’ lambda = .963 \( p < .03 \)), which may be attributed to the occupational pressures placed on teachers to attend to the academic and social-emotional needs of students. The second wave of questionnaires considered five predictors (bureaucratic red tape, disruptive students, self-doubts, supervisory support, and social integration) as well as three consequences (physical exhaustion, heart symptoms, and depressive mood.) The study concluded that red tape and disruptive students are the greatest predictors of burnout for teachers. Burke, Greenglass, and Schwarzer (1996) also concluded that the strongest consequence of burnout was a depressive mood. Further exploration into this concept through a multi-year study would add reliability to the results.

Stress can impact a teacher’s health and well-being as well as increase attrition (McCarthy, Lamberts, & Reiser, 2014). Teachers are expected to assume many roles, which often contradict each other, while attempting to maintain quality academic instruction, maintain classroom decorum, attend to students’ well-being, and meet the expectations of parents, administration and community (Burke et al., 1996). These abundant stressors can, if left unattended, lead to teacher burnout.
The term *burnout* is currently included in the ICD-11 (World Health Organization, 2019), but is not a recognized disorder in the DSM-5 (American Psychiatric Association, 2013). It was coined by Freudenberger (1974) as a means of referring to occupational fatigue, after he observed the effects of high-stress employment on staff and himself at a free drug addiction clinic. He professed that the verb burnout, as defined in the dictionary, closely aligned with the experiences of the clinic’s employees. Freudenberger identified multiple physical and behavioural signs and symptoms, which typically manifest approximately one year after commencing employment in a high-stress environment. Physical signs include exhaustion, fatigue, inability to ward off common seasonal illnesses, headaches, stomach-aches, and disruptions to sleep patterns. Behavioural symptoms include irritation, frustration, crying, suspicion, paranoia, risk-taking, and substance abuse. Freudenberger (1974) believed that individuals who are dedicated, committed, had a desire to help others, or were bored with their professions were at the most significant risk of burnout.

In the 1980s, the Maslach Burnout Inventory was created and revised. This instrument uses a 6-point scale to measure three distinct components of burnout in adults over the age of 18 (Maslach & Jackson, 1981; Maslach & Jackson, 1986; Maslach, Jackson, Leiter, Schaufeli, & Schwab, 1986). Maslach and Schaufeli (2017) defined burnout as a psychological syndrome of emotional exhaustion, depersonalization, and reduced personal accomplishment. Effects of burnout can include, but are not limited to: heart symptoms; depressive mood (Burke et al., 1996); reduced energy; increased attrition (Kim et al., 2017); emotional exhaustion (Maslach, 2003); depersonalization (Maslach, 1982; Maslach, Schaufeli, & Leiter, 2001); and
lack of personal accomplishment (Burke & Greenglass, 1995; Maslach, 1982).

Maslach et al. (1996) stated that there are multiple dimensions to burnout: emotional exhaustion, depersonalization, and reduced feelings of personal accomplishment.

Roeser et al. (2013), wrote that when an individual identifies a situation stressful, they are likely to redirect emotional and cognitive resources toward coping as a method of protection from the perceived threat. “In the case of teachers, such diverted resources are no longer available for investment in classroom relationships and the processes of motivating and teaching students” (Roeser et al., 2013, p. 3). The isolated structure of the teaching profession may result in an increased prevalence of burnout in teachers (Prilleltensky, Neff, & Bessell, 2016; Schlichte, Yssel, & Merbler, 2005). The current ICD-11 defines burnout as:

A syndrome conceptualized as resulting from chronic workplace stress that has not been successfully managed. It is characterized by three dimensions: 1) feelings of energy depletion or exhaustion; 2) increased mental distance from one’s job, or feelings of negativism or cynicism related to one’s job; and 3) reduced professional efficacy. Burnout refers specifically to phenomena in the occupational context and should not be applied to describe experiences in other areas of life. (World Health Organization, 2019)

Historically, burnout has been a concern for teachers around the world, and it has a direct negative impact on their mental and physical well-being (Toppinen-Tanner, Ahola, Koskinen, & Väänänen, 2009). A nonrandomized cross-sectional study (Bauer et al., 2006) of 408 teachers working in grammar schools around Freiburg, Germany, identified burnout as a concern for teachers. Utilizing the AVEM Work-
Related Behaviour and Experience Patterns, a diagnostic tool for assessing behaviour and experience in relation to occupational requirements (Schaarschmidt & Fischer, 2003), researchers were able to explore the four patterns of work-related coping behaviour: healthy-ambitious, unambitious, tense, and exhausted/resigned. Of the 26 possible stressors, teachers in this study indicated that the most substantial stress factors were both the size of school class and behaviour difficulties; 30.8% of the teachers in the study scored outside of the healthy population range, with an alarming 20.3% of teachers scoring in the range of significant mental health symptoms. Women scored higher on the burnout scales than men (42.5%, \( p < .05 \)); however, individuals in relationships (living or married) recorded lower levels of burnout. Caution should be given to the interpretation of these results, as the study had a 58.1% return rate. Bauer et al. (2006) concluded that teachers would benefit from resilience interventions and training.

The term burnout continues to evolve, as is research regarding prevention and treatments. According to Weber and Jaekel-Reinhard (2000), individual-focused therapy, including meditations, psychotherapy, relaxation techniques, and reorganization or change of work environment, can all be effective in preventing burnout. Additionally, at the organizational level, pre-screening employees, stress monitoring, and targeted programs for those in high-risk positions and professions should be considered. Burnout has no cure, and thus, stress levels should be attended to prior to employees reaching the point of burnout.

Those in helping professions cannot provide quality care without compassion and empathy. According to Figley (2002b), compassion fatigue is defined as a
reduction in capacity or interest to bear the suffering of others; clinical presentation of compassion fatigue can range from acute to chronic and may manifest in an alarming array of symptoms: cognitive (decreased concentration, low self-esteem); emotional (anxiety, guilt, anger); behavioural (irritability, moodiness, sleep disturbances); personal relation (withdrawal, mistrust, isolation); somatic (aches pains, impaired immunity); work performance (exhaustion, low motivation, absenteeism); and spirituality (questioning of purpose). Since teachers are in close contact with children daily, there is a risk that teachers can be at risk of vicarious traumatization through exposure to the stories, narratives, art, or play, of child trauma survivors (Bride, 2007; Figley, 1995; Whitfield & Kanter, 2014). According to Whitfield and Kanter (2014), 50% of professionals in helping careers may be at risk. Individuals in these roles know the importance of self-care (exercise, spirituality, and social support), but may not put those techniques to practice, turning instead to toxic coping mechanisms such as alcohol, drugs or social withdrawal, which will likely intensify the state of secondary trauma. Hill (1991) states that caregivers must recognize their coping mechanisms and seek mental and physical health balance. Establishing preventative measures to cope with stress, burnout, and compassion fatigue are instrumental in improving teacher well-being; mindfulness may be an effective preventative tool (Skinner & Beers, 2014).

There is a relationship between the role of recovery in coping with stress and preventing burnout. Recovery is defined as all the activities and experiences that ameliorate the adverse effects of strain and restore a person’s resources (Demerouti, Bakker, Geurts, & Taris, 2009). In their longitudinal study of sleep and burnout,
Söderström, Jeding, Ekstedt, and Perski (2012) utilized well-established instruments: for sleep, the Karolinska Sleep Questionnaire (Åkerstedt, Knutsson et al., 2002); for burnout, the Shirom-Melamed Burnout Questionnaire (Kushnir & Melamed, 1992; Melamed et al., 1992), and, for anxiety and depression, the Hospital Anxiety and Depression Scale (Zigmond & Snaith, 1983) to identify risk factors for burnout in 388 IT company employees over the span of two years. The Söderström et al. (2012) study identified insufficient sleep (< 6 hours) as the most significant risk factor for burnout. They also concluded that the development of burnout results from inadequate recovery from work stress, not the stress itself (Söderström et al., 2012). Prilleltensky et al. (2016) identified the immense pressures placed on teachers and the need for early intervention, even prior to teachers beginning their careers. The authors state that teacher preparation programs should focus on psychological techniques for reducing stress, such as mindfulness, self-compassion, and active coping.

Self-Care and Recovery

The terms self-care and recovery are inter-related. Self-care is a type of recovery that restores energy and mental resources; it is a positive, intentional, integrated, and sustainable practice that allows individuals to feel prepared to engage in life’s demands (Gluschkoff et al., 2016; Wise, Hersh, & Gibson, 2012). Recovery is the process during which an “individual’s functioning returns to its pre-stressor level and in which strain is reduced” (Demerouti et al. 2009, p. 93). Thus, self-care is a method through which recovery from stress can be achieved.

Expectations and the demands of the profession have been steadily increasing on a global level. Stress and burnout are severe and pervading problems around the
world (Demerouti et al. 2009). It is essential to ensure individuals have the time and strategies to recover from the effort expended at work and stress which accumulates, to ensure these perceived adverse effects are not damaging for health or well-being (Demerouti et al. 2009; Geurts & Sonnentag, 2006; Totterdell, Spelten, Smith, Barton, & Folkard, 1995). Understanding the cycle of work and recovery is essential to protecting employee health and well-being (van Hooff, Geurts, Beckers, & Kompier, 2011).

Further investigation of the topics must still be completed prior to researchers having a complete understanding of the processes of self-care and recovery. However, in terms of occupational stress recovery, it is paramount that individuals have sufficient time of rest, outside of the work environment, to focus on self-care. This time must be substantial enough that the stress levels and fatigue that built up during the working time can be restored to pre-stressor levels (van Hooff et al., 2011). There are two types of recovery: internal and external. Internal recovery occurs during the workday and includes short breaks from the work environment. In Alberta, these breaks are regulated by the federal government and local unions of employees. According to the Alberta Employment standards code, individuals employed in the province are entitled to 30 minutes of rest within a five-hour work period (Alberta Government, 2019c). External recovery is time outside of working hours when individuals can engage in self-care and recover; this can include vacations, weekends, evenings, and days off. Studies have identified that vacations alone may not be sufficient for recovery as well-being and burnout levels return rapidly to pre-vacation levels, providing only temporary solutions to issues of burnout (Westman & Eden,
Daily attention to self-care and recovery, such as evening or weekend activities, are fundamental to support well-being (Sonnentag, 2001, 2003). Whether it is internal recovery, external recovery, or a combination of both, “adequate recovery on a daily basis is crucial for the maintenance of well-being and job performance” (Demerouti et al. 2009, p. 86). van Hooff et al. (2011) identified that daily stress levels at bedtime are predictive of the need for recovery. Individuals with high levels of reported stress when they go to bed would benefit significantly from self-care. Conversely, individuals with low levels of reported stress when they go to bed likely have self-care mechanisms in place to recuperate from the daily stress that is experienced.

There are multiple types of self-care activities which an individual can engage in that will promote recovery: sleep, low effort activities, relaxation activities, social activities, physical activities, creative activities, humour, and psychological detachment (Demerouti et al. 2009). Sleep is an essential basic need that is restorative and aids in maintaining performance (Campbell, 1992; Horne, 2001). A deficiency or abundance of sleep can negatively impact an individual’s health and well-being. The optimal sleep time for adults is seven to nine hours per night, although six to 10 hours is considered appropriate (Hirshkowitz et al., 2015). Low effort activities are passive and do not require the individual to expend energy or resources, and could include watching television, doing nothing, or listening to music. In a study of 100 Dutch teachers, Sonnentag (2001) used diary information and a questionnaire to explore the effects of leisure time activities on well-being. For five consecutive days, participants completed diary entries regarding work-related activities, household and child-care
duties, low effort activities, social activities, and physical activities. Also, participants provided daily self-reports of their well-being and responded to a well-being questionnaire at the end of the five days. The study indicated that low-effort activities are favourable for reducing bedtime stress levels of teachers.

Relaxation activities such as meditation, yoga, or walking in nature (Ulrich et al., 1991) require the individual to expend very little energy but bring about positive recovery. Demerouti et al. (2009) stated that relaxation activities reduce psychophysiological activation, allowing the psychobiological system to return to the pre-stressor state. Additionally, the fact that relaxation exercises are pleasurable can increase the individual’s well-being.

Social activities are those that focus on engaging in social contact, such as going for dinner, attending a party, or participating with others in a chat room or over the telephone. Social activities can be beneficial; by engaging with other people, individuals open channels of social support. Social activities also draw on different resources than those required to complete occupational tasks (Demerouti et al. 2009). Physical activities refer to behaviours in which an individual moves their body; these can include exercise, fitness classes, physical training, and sports. Extensive research has been completed regarding the health and well-being benefits of physical activity. Even though physical activity requires exertion of physical energy, it has still demonstrated positive stress recovery effects (Demerouti et al. 2009; Mandolesi et al., 2018; Rook & Zijlstra, 2006; Wiese, Kuykendall, & Tay, 2018). Creative activities or hobbies are activities that allow for the expression of individuality and stimulate the pleasure centre in the brain. In an online survey study of 314 healthy employed adults,
the individuals who “reported higher levels of active leisure activities, exercise, and creative (hobby) and social activity, reported significantly better sleep, recovery between work periods, and lower chronic maladaptive fatigue symptomology” (Winwood, Bakker, & Winefield, 2007, p. 862).

Humour refers to engaging in humorous states and associated laughter. These lighthearted actions have demonstrated benefits such as reduced stress and improved coping (Demerouti et al. 2009; Richards, 2012). Psychological detachment is when an individual ceases to think about work and mentally disengages (Sonnentag & Bayer, 2005). This method of self-care is associated with an elevated mood and reduced fatigue. Demerouti et al. (2009) have demonstrated that there are multiple methods of self-care to facilitate stress recovery. Recovery is a personal practice, and what is effective will differ between individuals (Rook & Zijlstra, 2006). Self-care and care for others are interwoven; if teachers are to bring their best selves to the classroom every day, then they need to care for themselves and ensure they engage in adequate recovery.

**Theoretical Framework**

This study is grounded in the social cognitive theory (Bandura, 1977) and the self-determination theory (Ryan & Deci, 2000). These theories relate to both an individual’s decision to engage in mindfulness strategies as well as their desire to better themselves through the application of mindfulness strategies.

Bandura’s (1977) social cognitive theory frames the working of a classroom. Social cognitive theory considers observational learning, imitation, and modelling. This study was discussed in reverse of the traditional teacher-student role; the belief
was that as students model the mindfulness strategies that they’re being taught, their teacher would then observe and witness their students’ success, resulting in the teacher modelling and using the mindfulness approach in his or her own life.

In social cognitive theory, human functioning is continuously under the influence of both self-generated and outside sources of influences (Bandura, 1977, 1989, 1991, 2001). Individuals operate on “three principal subfunctions: self-monitoring of one’s behaviours, its determinants and its effects; judgment of one’s behaviour in relation to personal standards and environments circumstances; and affective self-reaction” (Bandura, 1977, p. 248). Self-monitoring occurs through paying attention to performance, social conditions, and also the effects on self and others. The judgment of an individual’s behaviours means considering if the effects of an action are positive or negative when compared to personal beliefs and standards. The last subfunction, affective self-reaction, refers to an individual’s tendency to act based on the likelihood it will produce positive self-reactions (Bandura, 1977). It is not merely through exposure to stimuli, participation in an experience, or engagement through a process that an individual will bring about change.

Social cognitive theory is based on emergent interactive agency, which is the ability to control one’s choices in life; it is the essence of humanness (Bandura, 2001). According to Sperry (1993), it is the interaction of downward cognitive causation and upward activation by stimuli that causes humans to act in particular ways. This human agency, an individual’s ability to act of their own free will, is shaped through four agentic features: intentionality, forethought, self-reactiveness, and self-reflectiveness (Bandura, 2001). Intentionality refers to the intentional act of an individual. This
forethought represents how people consider the future effects and then base their actions on a path to achieve the desired outcomes.

When projected over a long-time course on matters of value, a forethoughtful perspective provides direction, coherence, and meaning to one’s life. As people progress in their life course they continue to plan ahead, reorder their priorities, and structure their lives accordingly. (Bandura, 2001, p.7)

Being able to predict future events will shape current behaviours. The concept of forethought is instrumental as people generate an expected outcome due to their observation of the events occurring around them, and then shape their decision-making based on these observations.

Self-reflectiveness is the second feature of human agency that is instrumental for this study. Self-reactiveness moves the role of the agent beyond being intentional and using forethought when making decisions. This agentic feature incorporates the individual’s need to be self-motivated and continuously self-regulate. It is an action regulated through self-monitoring, self-guidance via personal standards, and corrective self-reactions (Bandura, 1989). “The metacognitive capability to reflect upon oneself and the adequacy of one’s thoughts and actions is another distinctly core human feature of agency. Through reflective self-consciousness, people evaluate their motivation, values, and the meaning of their life pursuits.” (Bandura, 2001, p. 10).

Instrumental for personal success is an individual’s ability to align self-evaluation with personal standards, resulting in positive experiences that support well-being and self-worth.

Human agency is not restricted to one individual. Bandura (2001) elaborated
that social cognitive theory identifies direct personal, proxy, and collective as three unique modes of human agency. Direct personal agency is exercised by the individual; it relates to the things that the individual has direct control over. By contrast, proxy agency is socially mediated; individuals attempt to get others with expertise, power, or influence to secure the outcomes they desire. Proxy agency is the fundamental structure of mindfulness-teaching curricula. The teacher, a non-expert, seeks the step-by-step direction from the curriculum or calls experts into the classroom in order to have the necessary knowledge for students to learn the mindfulness techniques. The teacher may reach out to experts in the field of mindfulness, who may be more capable of exerting influence over the students, due to training and experience and thus their perceived expertise. Collective agency is the shared belief in the collective power (Bandura, 2001); this is the overall work taking place in the classroom. According to Durlak, Weissberg, Dymnicki, Taylor, and Schellinger (2011), teachers and students align to improve their classroom environment through collaborative, collective learning. Kabat-Zinn (2003) states that in order for the students to reap the full effects of the experience, their teacher must be a mindful practitioner.

Although Bandura’s theory has been presented and supported repeatedly over the past 40 years, there are critiques which challenge parts of the theory. McLeod (2016) asserts that social cognitive theory fails to identify the relationships between social cognition, behaviour, environment, and personality. Additionally, Spielman et al. (2014), identify maturation and biological development as missing considerations of the theory. They further define the differences in learning styles between children and adults as being absent from social cognitive theory. Bandura himself has
elaborated on the relationship between the three principle subfunctions; this relationship is defined as reciprocal determinism (Bandura, 1978). Social cognitive theory is based on learned behaviour. It places emphasis on the situation that a person is observing and whatever elements of the situation that lead to positive reinforcement. However, the theory does not consider emotions, unconscious motives, physiological factors (such as hormones), or psychological conditions, all of which may affect a person’s decision-making process. Social cognitive theory also fails to consider internal wishes, such as a desire for a better life or a desire to be a happier person, as motivators for engaging in mindfulness practices.

In their prime, human beings are agentic and inspired; they continuously strive to better themselves. However, the human spirit can also be bruised and in these times will struggle to maintain their innately curious and self-motivated tendencies. Self-determination theory (Ryan & Deci, 2000) incorporates intrinsic motivation, social development, and well-being; it is at the foundation of an individual’s desires to seek ways to improve well-being. According to Ryan and Deci (2000), “self-determination theory is an approach to human motivation and personality that uses traditional empirical methods while employing an organismic metatheory that highlights the importance of humans evolved inner resources for personality development and behavioural self-regulation” (p. 68). Motivation is about activation and intention. It requires that an individual has a desire to reach towards a goal and the persistence to continue giving the energy to the process. Motivation can be intrinsic, done for self-satisfaction or extrinsic, done for an external reason. Deci and Ryan’s theory of intrinsic motivation looks at ways to enhance and support the innately curious state of
intrinsic motivation that humans are born with (Deci & Ryan, 2000; Harter, 1978).
The concept of motivation, as a means of intrinsically activating oneself to improve well-being, is foundational in this study, as it directly applies to the desire and willingness of teachers to implement mindfulness strategies in their own lives. This study will consider the intrinsic motivation necessary for individuals to employ mindfulness techniques voluntarily as a possible means of improving well-being. Since there is no external reward for wellness, the self-determination theory was identified as the grounding theory behind an individual opting into mindfulness techniques.

A critique of Ryan and Deci’s self-determination theory is that it oversimplifies the identification of needs into three categories: competence, autonomy, and relatedness. Many other researchers in this area have proposed alternate models of need that include numerous categories. Maslow (1954) identified a five-tier model, the Hierarchy of Human Needs. Murray (1938) believed there are 27 psychogenic needs, divided into five primary categories. Additionally, Reiss (2002) developed the 16 basic desires theory regarding motivation. Although there is no empirical research that states one theory is correct over another, these alternatives support the idea that identifying only three categories of needs may lack substance. Like the social cognitive theory, the self-determination theory fails to consider physiological or psychological factors for intrinsic motivation. It is important to note that the concept of mindfulness stems from Buddhist practices; the role of religion, culture, and social context are not considered by self-determination theory but should not be overlooked as influences on an individual’s decision to engage in mindfulness practices.
Summary

The existing literature on the topic of stress and compassion fatigue provides overwhelming proof that teachers are at risk for burnout. The extant research on self-care, recovery, and mindfulness offers insight into ways that teachers can reduce the impact of occupational stressors and increase their well-being. The following chapter provides a comprehensive description of the methodology that this study employed to explore the relationships between teaching mindfulness and the mindfulness practices and well-being in teachers.
Chapter 3: Methods

The following chapter presents the methodology for this quantitative study. The purpose of this quantitative study was to investigate whether and to what extent a relationship existed between teaching mindfulness and the self-reported mindfulness practices and well-being of teachers in Alberta. In this chapter, the research design, data collection, and data analysis for this study will be explained. The chapter also includes information about the researcher’s personal journey as a mindful teacher and outlines the anticipated limitations of the study.

Research Questions and Hypothesis

No extant research was identified documenting a direct relationship between teaching mindfulness and teacher well-being. However, the logic that a relationship may exist is well-founded based on existing literature where research demonstrates links between personal mindfulness and well-being. This study hypothesized that a relationship existed between teaching mindfulness and well-being in teachers and employed a methodology designed to address the following research questions:

1. What mindfulness techniques do teachers in Alberta implement in their own lives?

2. Is there a relationship between the extent to which teachers in Alberta report implementing mindfulness in their classrooms and their self-reported mindfulness scores?

3. Is there a relationship between the extent to which teachers in Alberta report implementing mindfulness in their classrooms and their self-reported well-being scores?
4. What is the relationship between self-reported mindfulness and well-being scores of teachers in Alberta?

Rationale for Methodology

This study was conducted using a correlational quantitative approach. Quantitative research approaches are applied to describe current conditions, investigate relations, and study cause-effect phenomena (Mills & Gay, 2016). This correlational study involved collecting data to determine whether and to what degree a relationship existed between two or more quantifiable variables; in this case, there were three variables: teaching mindfulness, mindfulness, and well-being. This study was also a descriptive research study that sought to describe the current conditions of teacher mindfulness practices and well-being.

These descriptive and correlational data were collected using an anonymous online survey (Appendix A), which was the appropriate method of data collection due to the sensitive nature of the well-being data being collected. When asking individuals to be open and reflective, it was essential that they felt safe and comfortable with the method of data collection; an anonymous survey afforded them this safety and comfort. Quantitative research necessitates a large sample size with high response rates, requires minimal interaction between the participants and the researcher, and can be conducted in a relatively short period of time. The quantitative survey allowed for the collection of measurable numerical data on mindfulness, well-being, and demographics, and also the ability to calculate descriptive statistics analyses and correlations between a variety of scores.
Setting and Participants

Quantitative research is based on the philosophical belief or assumption that humans inhabit a relatively stable, uniform, and coherent world that can be measured, understood, and generalized to an additional population (Mills & Gay, 2016). If the participants are selected to represent the population, the study can be generalizable to the representative population. The population in this research were the teachers in the province of Alberta, Canada. According to Statistics Canada, 47,289 teachers were employed in the province of Alberta for the 2016-2017 school year (StatCan, n.d.-d). Since the province of Alberta is geographically vast, participants were chosen using a nonrandom selection process from an accessible population. The nonrandomized selection method was purposive sampling or judgment sampling, where an intact group was selected. The main objective of a purposive sample is to produce a sample that can be logically assumed as representative of the population and that represents the characteristics of the larger group from which the sample is drawn (Battaglia, 2008; Mills & Gay, 2016). This study has a sample that was closely representative of the population, as outlined in Table 4.
Table 4

Population and Sample Comparison Using Publicly Available Data from 2016-2017

<table>
<thead>
<tr>
<th></th>
<th>Sample</th>
<th>Percentage of Total</th>
<th>Alternate School Division in Alberta</th>
<th>Percentage of Total</th>
<th>Population (Alberta)</th>
<th>Percentage of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECS to Grade 3</td>
<td>3,843&lt;sup&gt;a&lt;/sup&gt;</td>
<td>35%</td>
<td>31,544&lt;sup&gt;a&lt;/sup&gt;</td>
<td>33%</td>
<td>236,510&lt;sup&gt;a&lt;/sup&gt;</td>
<td>34%</td>
</tr>
<tr>
<td>Grade 4 to Grade 6</td>
<td>2,337&lt;sup&gt;a&lt;/sup&gt;</td>
<td>21%</td>
<td>20,940&lt;sup&gt;a&lt;/sup&gt;</td>
<td>22%</td>
<td>155,372&lt;sup&gt;a&lt;/sup&gt;</td>
<td>22%</td>
</tr>
<tr>
<td>Grade 7 to Grade 9</td>
<td>2,293&lt;sup&gt;a&lt;/sup&gt;</td>
<td>21%</td>
<td>19,543&lt;sup&gt;a&lt;/sup&gt;</td>
<td>20%</td>
<td>143,142&lt;sup&gt;a&lt;/sup&gt;</td>
<td>20%</td>
</tr>
<tr>
<td>Grade 10 to Grade 12</td>
<td>2,650&lt;sup&gt;a&lt;/sup&gt;</td>
<td>24%</td>
<td>23,981&lt;sup&gt;a&lt;/sup&gt;</td>
<td>25%</td>
<td>169,866&lt;sup&gt;a&lt;/sup&gt;</td>
<td>24%</td>
</tr>
<tr>
<td>Total Students</td>
<td>11,123&lt;sup&gt;a&lt;/sup&gt;</td>
<td>100%</td>
<td>96,008&lt;sup&gt;a&lt;/sup&gt;</td>
<td>100%</td>
<td>704,890&lt;sup&gt;a&lt;/sup&gt;</td>
<td>100%</td>
</tr>
<tr>
<td>Total Certified Staff</td>
<td>692&lt;sup&gt;b&lt;/sup&gt;</td>
<td>n/a</td>
<td>4,887&lt;sup&gt;c&lt;/sup&gt;</td>
<td>n/a</td>
<td>47,289&lt;sup&gt;d&lt;/sup&gt;</td>
<td>n/a</td>
</tr>
<tr>
<td>Student to Staff Ratio</td>
<td>16:1</td>
<td>n/a</td>
<td>20:1</td>
<td>n/a</td>
<td>15:1</td>
<td>n/a</td>
</tr>
</tbody>
</table>

<sup>a</sup>(Alberta Government, 2019a)

<sup>b</sup>citation redacted to protect anonymity

<sup>c</sup>citation redacted to protect anonymity

<sup>d</sup>(StatCan, n.d.-d)

The participants of this study were all certified teachers who were currently employed by the sample school division within the province of Alberta. Principals and vice/assistant principals with no teaching assignment were not included. The school division was located in Alberta and employed over 780 teachers in 32 schools with a
school-based FTE of 664. The schools in the division were from urban, suburban, and rural communities. The teachers in this division taught a variety of grade and class configurations from pre-kindergarten through Grade 12. Expert knowledge of the population was used to select a sample in a nonrandomized manner while ensuring that the sample of subjects represents a cross-section of the population (Battaglia, 2008). This nonrandomized selection was completed by using student enrollment and teacher employment numbers to ensure the sample aligned with the population. Additionally, an alternative school division was also compared to provide additional reassurance that the sample was representative. The survey was open to all teachers in the school division, with data collected from both those who have taught mindfulness and those who have not.

**Instruments**

A necessary facet of successful quantitative research is identifying and using the correct survey instrument. When examining phenomena that do not naturally exist in quantitative form, data that may not naturally appear in quantitative form can be collected and analysed in a quantitative way (Muijs, 2010). Mindfulness and well-being are not typically thought of as numerical concepts. However, these constructs can be explored quantitatively through the use of well-documented instruments, which have been generated, tested, and validated. This study used pre-existing validated instruments that were combined into a single, three-section survey, which took approximately six minutes to complete. This survey generated numeric data that could be objectively analysed for this study.
Freiburg Mindfulness Inventory. The Freiburg Mindfulness Inventory was created by Walach, Buchheld, Buttenmüller, Kleinknecht, and Schmidt (2006) out of the need for an instrument to measure the concept of mindfulness objectively. The original instrument contained 30 statements; however, a 14-item short-form version was later developed. The original instrument was tested with 115 subjects using a pretest/posttest at a mindfulness retreat and demonstrated “high internal consistency (Cronbach’s alpha = .93/.94), sufficient homogeneity (mean r_{it} = .32/.33), no flooring or ceiling effects, a reasonably normal distribution, and a significant mean change (p < .001; Wilcoxon test) in mindfulness from before (m_{t1} = 77.12; SD_{t1} = 12.45) to after the retreat (m_{t2} = 89.4; SD_{t2} = 11.33)” (Walach et al., 2006, p. 1545). Walach et al. concluded that a second study of more diverse subjects was warranted. The subsequent analysis demonstrated that this instrument is not simply applicable to a unique population of mindfulness meditators. Subsequent investigations also sought to reduce the length of the survey. The analysis of the revised short-form of the instrument contained 257 subjects from diverse backgrounds (some with meditative experience, others without) and was deemed psychometrically stable (alpha = .86). The validity of the test was established through correlations with other relevant constructs: “self-awareness, dissociation, global severity index, meditation experience in years” (Walach et al., 2006, p. 1544). To confirm the validity of the shortened instrument a correlation was calculated between the short-form (14 items) and long-form (30 items), resulting in an r = .95 with reliability of alpha = .86. Walach et al. (2006) suggested using the long-form for mindfulness research and the short-form when subjects lack a background in Buddhist mindfulness. Thus, the short-form was chosen
for this study on teacher mindfulness knowledge with the assumption that Albertan teachers generally do not have a background in Buddhist mindfulness.

The Freiburg Mindfulness Inventory can be viewed as a one-dimensional or a two-factorial construct. Studies were conducted by Kohls, Saur, and Walach, (2009), which indicated heuristic value in the two-factorial as outlined in Figure 5. However, the authors found the one-dimensional construct of mindfulness, as outlined in Figure 6, to be “more practical for most clinical purposes and when assessing mindfulness as a global moderator or indicator variable” (p. 229). For this reason, the one-dimensional construct is better suited and will be utilized for the purpose of this study.

![Figure 5. Two-factorial construct confirmatory factor analysis for The Freiburg Mindfulness Inventory (Kohls, Saur, & Walach, 2009, p. 227)](image-url)
The Freiburg Mindfulness Inventory is commonly used in research; it has been cited 1,167 times since its development in 2006, 166 of those since 2019. Three statements that are representative of the 14 statements in the instrument are:

I am open to the experience of the present moment.
I pay attention to what’s behind my actions.
I accept unpleasant experiences.

Participants score each of the 14 statements on a 4-point modified Likert scale (rarely = 1, occasionally = 2, fairly often = 3, and almost always = 4). The Freiburg Mindfulness Inventory is scored by summing the scores, including the item that is reverse coded (statement 13). Gauge data identifies an average score or age-standardized norms for the overall score; this instrument does not generate gauge data. The scores on this instrument range from 14 to 56, with higher scores indicating
higher levels of individual mindfulness. Consent was obtained from Hans Vogt at the Frankfurt University on June 24, 2019, to utilize this instrument in the study (Appendix D).

**Teaching and Practising Mindfulness.** The second section of the survey, Teaching and Practising Mindfulness, was adapted from a survey by Yetick, Lloyd, Harwin, Riemer, and Swanson (2016) on growth mindset. No reliability or validity data are available on this instrument. However, only two questions were created based on the original instrument format:

To what extent have you integrated mindfulness into your teaching practice?

To what extent have you integrated mindfulness into your personal life?

Participants score each of the 2 questions on a sliding scale from 0 to 100 (0 = not integrated at all, 50 = sometimes/occasionally integrated, 100 = integrated all the time).

**Warwick-Edinburgh Mental Well-Being Scale.** The Warwick-Edinburgh Mental Well-Being Scale was created by Tennant et al. (2007) to fill a gap that emerged from increasing global interest in the concept of well-being. The scale was validated in the United Kingdom on individuals over the age of 16. This 14-item scale covers the “majority of the range of concepts associated with positive mental health, including both hedonic and eudemonic aspects, positive affect, satisfying interpersonal relationships and positive functioning” (Tennant et al., 2007, p. 9). Validation on 348 university student subjects resulted in the conclusion that this is a psychometrically robust scale, which fails to demonstrate ceiling effects in a population sample. After one week, the test-retest reliability was 0.83 ($p < .01$) (Tennant et al., 2007). The
Warwick-Edinburgh Mental Well-Being Scale demonstrates high levels of internal consistency (Cronbach’s alpha = 0.89) and reliability. Two subsequent validation studies were conducted on 1,749 individuals from the general Scottish population indicating a good level of internal consistency (Cronbach’s alpha = 0.91). The provisional population mean score is 50.7 with a 95% confidence interval 50.3 – 51.1 (Stewart-Brown & Janmohamed, 2008, p. 13).

The Warwick-Edinburgh Mental Well-Being Scale has been correlated to a wide range of other scales, including WHO-Five Well-being Index, Short Depression Happiness Scale, Global Life Satisfaction Scale, Positive and Negative Affect Scale – Positive and Negative Subscales, Satisfaction With Life Scale, Global Life Satisfaction Scale, Scale of Psychological Well-being, EQ-5D Thermometer, and Emotional Intelligence Scale. Correlation coefficients between these scales and the Warwick-Edinburgh Mental Well-Being Scale ranged from 0.42 for the EQ-5D Thermometer to 0.77 for the WHO-Five Well-Being, indicating an acceptable level of construct validity.

The Warwick-Edinburgh Mental Well-Being Scale has been cited 1,777 times since its development in 2007. Of the total, 360 of these citations were in conjunction with the term teachers, and 396 have been cited since 2019. Three statements that are representative of the 14 statements in the instrument include:

I have been feeling close to other people.

I have been feeling cheerful.

I have been able to make up my own mind about things.
Participants score each of the 14 statements on a 5-point Likert scale (none of the time = 1, rarely = 2, some of the time = 3, often = 4, all of the time = 5). The Warwick-Edinburgh Mental Well-Being Scale - Rasch - Derived Short-Form is scored by summing the scores. The lowest possible score is 14; the highest score is 70. Scores on the low end of the scale indicated low mental well-being; scores on the high end of the scale indicate high mental well-being. Research in the UK on population samples confirmed that the instrument approximates to a normal distribution, thus allowing for parametric analysis. The top 15% of scores on Warwick-Edinburgh Mental Well-Being Scale range from 60 to 70 (high mental well-being), the mid-range are scores from 43 to 59 (average mental well-being), and the bottom 15% are scores ranging from 14 to 42 (low mental well-being) (Warwick Medical School, n.d.). Consent was obtained from Professor Stewart-Brown at the University of Warwick on September 21, 2019, to utilize this instrument in the study (Appendix D).

Survey. To provide a well-rounded view of teachers’ mindfulness practices and well-being, the survey (Appendix A), designed by the researcher, combined questions from the three instruments into one survey. This survey was distributed using Qualtrics. To test content-validity and trustworthiness, this survey was reviewed by four university faculty and piloted with 10 members of a Doctor of Education cohort.

The first piece of feedback expressed was a concern about participants answering honestly due to the emotional requirements of the survey. To address this concern, the anonymity of the survey was more thoroughly clarified for participants, to increase participant trust in the survey and reduce concerns regarding judgment.
Dillman, Smith, and Christian (2014) reviewed the element of trust, stating that trust is the most crucial issue affecting response rates. They provide the following suggestions to maximize trust: (1) provide ways for sample members to assess the authenticity of a survey request and ask questions about it; (2) emphasize sponsorship by a legitimate authority; (3) build upon previously established relationships and friendships; (4) provide a token of appreciation in advance; (5) assure confidentiality and protection of data; and (6) design communications with professionalism in mind (p. 37). In order to maximize both the quality and number of survey responses, the researcher attended a meeting of the division principals to share the research study and survey administration steps with them (Appendix C). Additionally, the researcher provided contact emails contact for herself, and also the faculty advisor, should the respondents wish to contact them for clarification on the survey or any of the questions. To legitimize authority, all communication regarding the survey was sent out in a professional manner using the University of Portland email, and the survey was conducted on the University of Portland Qualtrics server. Due to the online nature of the survey and the survey taking place in a variety of locations on the same date, the researcher was unable to provide an incentive ahead of survey completion. However, respondents were eligible to enter a draw for cash incentives following completion of the survey.

The second piece of feedback from the pilot study identified confusion about the definition of mindfulness, resulting in difficulty for respondents to select an accurate score on the sliding scale. This extremely valuable feedback resulted in altering the flow of the survey to place the Freiburg Mindfulness Inventory ahead of
the Teaching and Practising Mindfulness section, as well as incorporating a definition of mindfulness at the start of the Teaching and Practising Mindfulness section.

The feedback received from the faculty and cohort members during the piloting stage was invaluable. Following the quality control and pilot testing procedures, the survey was submitted to the Institutional Review Board at the University of Portland for approval.

**Design and Procedures**

The nature of a quantitative study is determined by the hypothesis; once this was created, then the development of instruments, design, and procedures took place. A hypothesis was derived from reviewing the related literature, was based on a sound rationale, provided a reasonable explanation for the predicted outcome, stated a clear and concise relation between variables, and was testable (Mills & Gay, 2016).

The potential for a low response rate is a concern of using surveys as a research instrument. A key to maximizing the response rate and minimizing this concern is through contact and cooperation (Dillman, Smith, & Christian, 2014). The necessary first step in administering a survey is to make contact with the sample members and entice them to complete the survey. Dillman et al. (2014) suggested several methods for increasing response rates, including respondent-friendly questionnaires, shorter surveys, incentives, follow-up requests, and switching survey modes. To recruit survey participants in this study the researcher contacted the superintendent of the identified school division. Following a telephone meeting with the superintendent, consent was granted. The researcher met with the division principals to explain the significance of the research and personally extend an invitation to participate in the
The survey (Appendix A) was then distributed to 780 certified staff members during a monthly staff meeting. The survey distribution would be considered successful if more than 50% (Mills & Gay, 2016) of the certified teaching staff responded. Knowing that others have completed a survey can encourage people to participate (Dillman et al. 2014). Using this theory, the researcher drew on this normatively-oriented human behaviour in a follow-up email sent to all division staff, thanking them for the positive response rate and offering an opportunity for those who have not yet participated to complete the survey. The appearance of the e-mail addresses of multiple sample members in the “To” field raises serious ethical considerations, as confidentiality can no longer be ensured” (Dillman et al. 2014, p. 330). Therefore, the emails were sent through a group label, not to individual email addresses. The following survey collection schedule was followed to ensure maximum responses:

October 17, 2019: Attended the division principals’ meeting to explain the research project and seek the principals’ support and participation. Requested that principals share the introduction script with all certified staff at the November 6, 2019 staff meeting.

November 4, 2019: Sent a reminder e-mail to all division principals that built upon the information contained in the original invitation email. The email contained the survey link, introduction script (Appendix C), and incentive information. The email also informed the principals of the $50 cash incentive draws for survey participants as well as the $100 cash school incentive draw. To be eligible for the school incentive draw, the principal must have added
this research study to the Staff Meeting agenda, read the letter aloud to all certified staff, and provided all certified staff 10 minutes to complete the survey electronically while in the meeting. If the principal completed all three of these requirements at the November 6, 2019 staff meeting, they were eligible to be entered into the draw for a $100 cash incentive. To be eligible for the $50 cash incentive, the certified teachers must have completed the survey and clicked on the draw entry link at the end.

*November 6, 2019:* Division principals provided the survey to staff by 3:06 p.m.

*November 12, 2019:* Sent a final e-mail request reminding participants that the survey remained open.

**Data Analysis**

To evaluate the research questions, the four measures, teaching mindfulness, personal mindfulness integration, teaching mindfulness integration, and well-being were correlated. Teaching mindfulness integration and personal life mindfulness integration were a scale score from 0 to 100. Mindfulness scores were calculated using the Freiburg Mindfulness Inventory, with scores ranging from 14 to 56. Well-being scores were calculated using the Warwick-Edinburgh Mental Well-Being Scale, with possible scores ranging from 14 to 70. Data analysis was conducted on each of the measures independently; then, the measures were correlated to identify existing relationships.

**Survey.** Three separate forms of data were collected through the survey. The scores of the survey were calculated for each participant based on the scoring guides for each instrument. Descriptive statistics were calculated on each variable to calculate
the mean, median, mode, and standard deviation. The mean is the average of all the scores and is calculated by adding together all the values and dividing by the number of values. The median is the centre value in the distribution and is calculated by ordering the values from lowest to highest and identifying the middle value. The mode is the most common value which appears in the data. Finally, the standard deviation, which is the measure of the extent to which the values in the distribution centre around the mean (Muijs, 2010). Descriptive statistics, frequency counts, and percentages were reported for the individual items; mean and standard deviation were reported on all composite scores. Descriptive statistics and frequencies were calculated using the IBM® Statistical Package for the Social Sciences (SPSS).

Correlational analysis determines to what degree a relationship exists between measures (Mills & Gay, 2016). The first determination was whether teaching mindfulness increased the likelihood of a teacher implementing mindfulness techniques in his or her own life. It was then be determined if implementing mindfulness resulted in higher teacher well-being scores and higher mindfulness scores. A fourth variable emerged during the data analysis: personal life mindfulness integration. This variable was added to all correlations. The relationships between the four measures were analysed using a Spearman’s Rho. Correlation is expressed as a correlation coefficient, with the highest correlation being +1.00 or -1.00. Values between 0 and ± 0.09 indicate a weak relationship; a modest relationship is indicated by scores between ± 0.10 and ± 0.29, scores ranging from ± 0.30 and ± 0.49 indicate a moderate relationship. A strong relationship is indicated by scores from ± 0.50 and ± 0.79. Any score at or above ± 0.80 is considered a very strong relationship (Muijs,
Statistical significance was established at the 95% confidence level \( (p < 0.05) \). Additionally, the data were disaggregated, and independent sample \( t \)-tests were used to identify if any statistically significant differences existed between gender (male/female) or grade level taught (elementary/secondary). The effect size was calculated using Cohen’s \( d \) (Cohen, 1988) for all statistically significant relationships that were identified in the \( t \)-test analyses. According to Muijs (2010), values between 0 and 0.20 indicate weak effect; a modest effect is indicated by values between 0.21 and 0.50. A moderate effect is indicated by values 0.51 to 1.00; anything > 1.00 is indicative of a strong effect. SPSS was used to calculate Spearman’s Rho, linear regressions, and \( t \)-tests among the four variables. Table 5 outlines each of the research questions in this study and the corresponding questions from the survey that were used to answer the research question.
Table 5

Data Analysis Plan

<table>
<thead>
<tr>
<th>Research Question</th>
<th>Data Collected</th>
<th>Data Analysis Technique</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. What mindfulness techniques do teachers implement in their own lives?</td>
<td>Survey Items #16, #19</td>
<td>frequencies of nominal data, code responses</td>
</tr>
<tr>
<td>2. Is there a relationship between the extent to which teachers report implementing mindfulness in their classrooms and their self-reported mindfulness scores?</td>
<td>Survey Items #1-16</td>
<td>descriptive statistics, frequencies, correlations between the Freiburg Mindfulness Inventory total score and sliding scale score #15 (Spearman’s Rho, linear regression)</td>
</tr>
<tr>
<td>3. Is there a relationship between the extent to which teachers report implementing mindfulness in their classrooms and their self-reported well-being scores?</td>
<td>Survey Items #15, #20-34</td>
<td>descriptive statistics, frequencies, correlations between the Warwick-Edinburgh Mental Well-Being Scale total score and sliding scale score #15 (Spearman’s Rho, linear regression)</td>
</tr>
<tr>
<td>4. What is the relationship between teacher self-reported mindfulness and well-being scores?</td>
<td>Survey Items #1-14, #20-34</td>
<td>descriptive statistics, frequencies, correlations between the Freiburg Mindfulness Inventory total score and the Warwick-Edinburgh Mental Well-Being Scale total score (Spearman’s Rho, linear regressions)</td>
</tr>
</tbody>
</table>

Ethical Considerations

This study was completed according to high ethical standards and was approved by the Institutional Review Board (IRB) at the University of Portland. The study was reviewed, and permission was granted on September 9, 2019 to conduct this research study (Appendix E). This study contained no anticipated risk to the participants. Participation in this study was voluntary and the decision of whether or not to participate did not affect respondents’ relationship with the researcher, the
sample division, or the University of Portland. If an individual agreed to participate, he or she was free to withdraw consent and discontinue participation at any time without penalty. A written information sheet (Appendix B) was embedded at the beginning of the Qualtrics instrument. This was an anonymous survey, and every attempt was made to ensure participant anonymity. However, it was unlikely, yet possible, that a data breach could occur with the Qualtrics survey, and the data may not remain truly anonymous. All data was kept in a password-protected computer and was reported in the aggregate.

**Role of the Researcher**

“The researcher must be honest and vigilant about her own perspective, pre-existing thoughts and beliefs by engaging in the self-reflective process of bracketing” (Starks & Trinidad, 2007, p. 1376). Bracketing originated in the phenomenology research methodology and does not have a commonly accepted definition. Generally, bracketing is described as “the task of sorting out the qualities that belong to the researcher’s experience of the phenomenon” (Drew, 2004, p. 215); it is a “scientific process in which a researcher suspends or holds in abeyance his or her presuppositions, biases, assumptions, theories, or previous experiences to see and describe the phenomenon” (Gearing, 2004, p. 1430). Although bracketing is not typically utilized in quantitative research, the researcher believed it was necessary to include bracketing as a method of increasing the rigour of this study. As such, the researcher will set aside her thoughts, feelings, and pre-existing beliefs regarding the topic of mindfulness and well-being to engage in bracketing.
It is necessary to acknowledge that the researcher is an elementary school teacher in the province of Alberta, who has spent the entirety of her career teaching kindergarten to Grade Two. She has both an academic and personal interest in mindfulness. In her role as a teacher, the researcher has taught the *MindUP* curriculum for four consecutive years. Also, conducted a mixed-methods study as the capstone project for her Master of Educational Leadership. In that project, she sought to determine the extent to which the intentional, daily implementation of the *MindUP* curriculum, within an eight-week period, improved the social-emotional well-being of students aged five to eight.

In that study, Division One students from a combined Grade 1 and 2 class participated in eight weeks of mindfulness training, using the *MindUP* curriculum and teacher-implemented intentional mindfulness breaks throughout the day. Student perception of their own social-emotional well-being was evaluated through the students’ pretest and posttest scores on the How I Feel About Myself and School Questionnaire. The teacher’s perception of students’ social-emotional well-being was evaluated through the pretest and posttest scores from the Social and Emotional Wellness Rubric, which the teacher completed for each student in the study. Lastly, anecdotal data were also collected from the teacher, outlining the dates the lessons were taught and any anecdotal comments regarding the curriculum or the student’s social-emotional well-being. The researcher hypothesized that the intentional, daily implementation of mindfulness techniques within an eight-week period would improve the social-emotional well-being of students aged five to eight. Data collected demonstrated that the teacher’s perception of the students’ improvements in social-
emotional well-being was more substantial than the students’ self-assessment of their improvements in social-emotional well-being. A paired samples t-test was used to analyze the increase of scores on questions related to social-emotional well-being. The teacher’s rubric showed statistically significant growth in students’ social-emotional well-being ($p = .003$). The pretest mean was 71.27, and the standard deviation was 19.17. The posttest mean was 89.63, and the standard deviation was 12.69. The student self-assessment also demonstrated statistically significant growth in students’ social-emotional well-being ($p = .02$). The pretest mean was 33.46, and the standard deviation was 3.83. The posttest mean was 36.82, and the standard deviation was 2.71. Further, there was no statistically significant correlation between the teacher assessment differences and the students’ assessment differences ($r = -.03, p = .84$).

The results indicate that there were improvements to students’ social-emotional well-being following eight weeks of intentional, daily mindfulness education, utilizing the MindUP curriculum.

The researcher does not identify personally as a mindfulness practitioner. However, she has observed positive outcomes for some students when mindfulness techniques are implemented in the classroom, as outlined in the study described above.

**Summary**

This chapter outlined the purpose and rationale of this quantitative study that was designed to explore the possible impact that mindfulness-based interventions have on the well-being of the teachers who implement those interventions in their classrooms, schools, or districts. The study was also designed to discover if a relationship exists for teachers between implementing mindfulness programming and
positive mental health and emotional well-being (as self-reported by teachers). The correlational quantitative study was conducted in one school division in Alberta, Canada. This division was selected using nonrandom purposive sampling, as it was representative of the provincial education system. Teachers in the division were asked to consider completing a survey, which was provided to them as an agenda item at a staff meeting. This request was followed by an email from the researcher to all division certified teachers requesting their participation. The survey remained open for two weeks, and upon culmination, the incentives were delivered. Data from the survey was analysed using SPSS, and the findings of each of the four research questions in this study will be presented in Chapter 4.
Chapter 4: Results

This quantitative study was divided into two main components: personal mindfulness and teaching mindfulness. It investigated whether and to what extent a relationship existed between teaching mindfulness and self-reported mindfulness practices and well-being of teachers in Alberta. This study also sought to identify the differences in personal and classroom mindfulness implementation across grades. The results of this study answered the following four research questions:

1. What mindfulness techniques do teachers in Alberta implement in their own lives?
2. Is there a relationship between the extent to which teachers in Alberta report implementing mindfulness in their classrooms and their self-reported mindfulness scores?
3. Is there a relationship between the extent to which teachers in Alberta report implementing mindfulness in their classrooms and their self-reported well-being scores?
4. What is the relationship between self-reported mindfulness and well-being scores of teachers in Alberta?

In the previous chapter, the design, setting, and instruments were discussed. The methodology of the data collection and analysis procedures were also described in detail. This chapter presents the findings of the research and identifies themes that emerged through the research, and is organized by each theme accordingly. The themes will be introduced with their accompanying data and will be discussed in further detail in Chapter 5.
Sample Demographics

The survey was distributed by email to 780 certified staff currently employed by the school division, including those on leaves, in administrative positions, or working in division offices. Of these 780 individuals, 606 were eligible to complete the survey, as they fit the criteria of being a certified teacher working in a school setting. A total of 426 responses were collected during the survey process, resulting in a 70% response rate. Of the original 426 participants, 40 (9%) opened the survey but did not complete any of the items, 11 (3%) completed the first section on mindfulness but did not complete any of the additional items, and 4 (1%) completed half of the survey, which included the first two sections, but not the final section. These 55 (13%) non-completers were removed from the dataset, which left 371 participants in the final research study. Of the total participants ($N = 371$), 22% identified as male ($n = 80$), 76% identified as female ($n = 283$), 1% identified as other ($n = 2$), and the remaining 2% prefer not to respond ($n = 6$). The gender distribution of this study closely aligns with the gender distribution of teachers in the province of Alberta and in Canada during the 2016/2017 school year (StatCan., n.d.-d). The underrepresentation of males is typical of the profession, as outlined in Table 6. The statistics from 2016/2017 are the most recent publicly available publication for both provincial and national data.
Table 6

Teacher Demographic Comparison with 2016/2017 Alberta and Canada

<table>
<thead>
<tr>
<th>Gender</th>
<th>Participants</th>
<th>Alberta</th>
<th>Canada</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>21%</td>
<td>25%</td>
<td>25%</td>
</tr>
<tr>
<td></td>
<td>(n = 80)</td>
<td>(n = 12,012)</td>
<td>(n = 102,495)</td>
</tr>
<tr>
<td>Female</td>
<td>76%</td>
<td>75%</td>
<td>75%</td>
</tr>
<tr>
<td></td>
<td>(n = 283)</td>
<td>(n = 35,118)</td>
<td>(n = 304,689)</td>
</tr>
<tr>
<td>Other</td>
<td>0%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>(n = 2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prefer not to respond</td>
<td>2%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>(n = 6)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unknown</td>
<td>-</td>
<td>&lt; 1%</td>
<td>&lt; 1%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(n = 162)</td>
<td>(n = 1,623)</td>
</tr>
</tbody>
</table>

Note. Due to rounding, totals may not add to 100%.

Both Table 7 and Table 8 identify the number of teachers at each grade level. In this study, there were a total of 195 participants (53%) from the exclusively elementary grade range (pre-kindergarten to Grade 6) and 104 participants (28%) from the exclusively secondary grade range (Grade 7 to 12). The data in Table 7 indicates the grade selection by teacher and gender, but does not include the multiple category (n = 50). Of these 50 participants, a total of 14 indicated a teaching assignment that includes multiple grades, which span both elementary and secondary. For example, a participant who teaches classes that are in Grades 1 to 3 and also in Grades 4 to 6 was re-coded to belong to the elementary classification; however, a participant who teaches Grades 4 to 6 and also in Grades 7 to 9 will remain coded in the multiple grades classification, because they cannot be identified as exclusively elementary or secondary. Any multiple grade classification that spanned both elementary and
secondary \((n = 14)\) were excluded from all further elementary and secondary comparisons. The remaining 41 were coded into their respective elementary or secondary classification, resulting in 218 participants from the elementary grade range (pre-kindergarten to Grade 6) and 122 participants from the secondary grade range (Grade 7 to 12). The classification of other was for individuals who did not feel that their position fit into one of the grade classifications and included an optional text response for participant elaboration. Some of the teaching positions identified as other included, but were not limited to, administrators with teaching assignments, learning support teachers, music teachers, and counsellors. From the classification of other \((n = 22)\), 17 were not considered in comparisons within the study, as they did not identify with teaching one particular grade classification, while the remaining five individuals were re-coded to their respective elementary or secondary classification.

Table 7 outlines the number of participants by gender and grade taught. Of the overall participants \((N = 371)\), six individuals chose the prefer not to respond category. This gender classification was not included in the table; thus, the total participants exceeds the sum of the male, female, and other categories by a total of six individuals. The majority of the participants in the study teach in the Grade 1 to 3 range. The lowest number of participants were in the Grade 7 to 9 range. There was a notable difference between the number of participants from elementary \((n = 195)\) and secondary \((n = 104)\) grade classifications; 53% of the participants in the study were from elementary, and only 28% were from secondary, resulting in an underrepresentation of secondary teachers. The remaining 19% of participants were from a combination of other and multiple grade ranges.
Table 7

*Teacher Sample Distribution, by Grade and Gender*

<table>
<thead>
<tr>
<th>Grade</th>
<th>Male (n = 80)</th>
<th>Female (n = 283)</th>
<th>Other (n = 2)</th>
<th>All Participants (N = 371)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elementary</td>
<td>8% (n = 23)</td>
<td>45% (n = 168)</td>
<td>0% (n = 0)</td>
<td>53% (n = 195)</td>
</tr>
<tr>
<td>Pre-K -Kindergarten</td>
<td>0% (n = 1)</td>
<td>8% (n = 30)</td>
<td>-</td>
<td>8% (n = 31)</td>
</tr>
<tr>
<td>Grade 1-3</td>
<td>1% (n = 4)</td>
<td>22% (n = 82)</td>
<td>-</td>
<td>24% (n = 89)</td>
</tr>
<tr>
<td>Grade 4-6</td>
<td>5% (n = 18)</td>
<td>15% (n = 56)</td>
<td>-</td>
<td>20% (n = 75)</td>
</tr>
<tr>
<td>Secondary</td>
<td>11% (n = 39)</td>
<td>17% (n = 63)</td>
<td>0% (n = 1)</td>
<td>28% (n = 104)</td>
</tr>
<tr>
<td>Grade 7-9</td>
<td>5% (n = 19)</td>
<td>8% (n = 30)</td>
<td>-</td>
<td>13% (n = 49)</td>
</tr>
<tr>
<td>Grade 10-12</td>
<td>5% (n = 20)</td>
<td>9% (n = 33)</td>
<td>0% (n = 1)</td>
<td>15% (n = 55)</td>
</tr>
<tr>
<td>Other</td>
<td>1% (n = 4)</td>
<td>4% (n = 16)</td>
<td>0% (n = 1)</td>
<td>6% (n = 22)</td>
</tr>
<tr>
<td>Multiple GradeRanges</td>
<td>4% (n = 14)</td>
<td>10% (n = 36)</td>
<td>-</td>
<td>13% (n = 50)</td>
</tr>
</tbody>
</table>

Note. Statistics for those individuals who selected *prefer not to respond* were not disaggregated.

While Table 7 identified the gender distribution of teachers in each grade, an additional demographic comparison of the participants was made by disaggregating the data by years of experience and grade in Table 8. The highest percentage of participants (64%) in the study were from the elementary grade ranges and have taught for 3 to 5 years. Excluding *other and multiple grades*, the lowest percentage of
participants (18%) were from the secondary with 21 to 27 years of experience. It is also notable that the highest percentage of secondary participants was from the 28+ year category.
Table 8

*Teacher Sample Distribution, by Grade and Years of Experience*

<table>
<thead>
<tr>
<th>Grade</th>
<th>1-2 (n = 28)</th>
<th>3-5 (n = 74)</th>
<th>6-12 (n = 113)</th>
<th>13-20 (n = 88)</th>
<th>21-27 (n = 39)</th>
<th>28+ (n = 29)</th>
<th>All Participants (N = 371)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elementary</td>
<td>1% (n = 14)</td>
<td>13% (n = 48)</td>
<td>17% (n = 63)</td>
<td>12% (n = 44)</td>
<td>11% (n = 20)</td>
<td>2% (n = 7)</td>
<td>53% (n = 195)</td>
</tr>
<tr>
<td>Pre-K -Kindergarten</td>
<td>0% (n = 0)</td>
<td>22% (n = 7)</td>
<td>3% (n = 10)</td>
<td>2% (n = 8)</td>
<td>1% (n = 5)</td>
<td>0% (n = 1)</td>
<td>8% (n = 31)</td>
</tr>
<tr>
<td>Grade 1-3</td>
<td>2% (n = 8)</td>
<td>7% (n = 26)</td>
<td>6% (n = 24)</td>
<td>6% (n = 22)</td>
<td>2% (n = 7)</td>
<td>0% (n = 2)</td>
<td>24% (n = 89)</td>
</tr>
<tr>
<td>Grade 4-6</td>
<td>2% (n = 6)</td>
<td>4% (n = 14)</td>
<td>8% (n = 29)</td>
<td>4% (n = 14)</td>
<td>2% (n = 8)</td>
<td>1% (n = 4)</td>
<td>20% (n = 75)</td>
</tr>
<tr>
<td>Secondary</td>
<td>3% (n = 10)</td>
<td>5% (n = 20)</td>
<td>8% (n = 30)</td>
<td>7% (n = 25)</td>
<td>2% (n = 12)</td>
<td>3% (n = 7)</td>
<td>28% (n = 104)</td>
</tr>
<tr>
<td>Grade 7-9</td>
<td>2% (n = 6)</td>
<td>2% (n = 6)</td>
<td>6% (n = 21)</td>
<td>3% (n = 11)</td>
<td>0% (n = 1)</td>
<td>1% (n = 4)</td>
<td>13% (n = 49)</td>
</tr>
<tr>
<td>Grade 10-12</td>
<td>1% (n = 4)</td>
<td>4% (n = 14)</td>
<td>2% (n = 9)</td>
<td>4% (n = 14)</td>
<td>2% (n = 6)</td>
<td>2% (n = 8)</td>
<td>15% (n = 55)</td>
</tr>
<tr>
<td>Other</td>
<td>0% (n = 1)</td>
<td>0% (n = 2)</td>
<td>0% (n = 3)</td>
<td>2% (n = 6)</td>
<td>0% (n = 3)</td>
<td>2% (n = 7)</td>
<td>6% (n = 22)</td>
</tr>
<tr>
<td>Multiple Grade Ranges</td>
<td>0% (n = 3)</td>
<td>1% (n = 5)</td>
<td>5% (n = 17)</td>
<td>4% (n = 13)</td>
<td>2% (n = 9)</td>
<td>0% (n = 3)</td>
<td>13% (n = 50)</td>
</tr>
</tbody>
</table>

Note. Teaching experience includes the current year.
The overall demographics of participants were representative of the province. The overall gender distribution was congruent with that of provincial and national norms. Additionally, there was a wide range of participants from all genders, grades, and experience represented in the study.

**Personal Mindfulness of Teachers**

The study identified the extent to which teachers integrated mindfulness into their personal life, as depicted in Figure 7. Participants were asked to choose the percentage to which they integrate mindfulness into their personal lives. The sliding scale had a range of responses from 0% \( (n = 7) \) to 100% \( (n = 3) \), with the most commonly selected responses of 60% and 70% \( (n = 24) \). Of the participants who indicated 0% integration of mindfulness techniques into their personal lives, 86% \( (n = 6) \) were secondary teachers. Overall, teachers integrated mindfulness in their personal life 58% of the time \( (SD = 24) \). Elementary teachers \( (n = 218) \) integrated mindfulness in their personal lives 59% of the time \( (SD = 22) \), while secondary teachers \( (n = 122) \) integrated mindfulness in their personal lives 59% \( (SD = 26) \). The section of teachers who indicated teaching multiple grades, which span the elementary and secondary, \( (n = 14) \) had integrated mindfulness into their personal lives 58% of the time \( (SD = 25) \). The final classification of teaching assignments, other \( (n = 17) \), had the lowest integration percentages, with integration percentages of 46% \( (SD = 17) \).
Figure 7. The percentage of integration of mindfulness into teachers’ personal lives disaggregated by grade level taught. Participants identified their integration level from a sliding scale where 0 = not integrated at all, 50 = sometimes/occasionally integrated, and 100 = integrated all the time.

The participants’ personal mindfulness was also evaluated using the Freiburg Mindfulness Inventory. The inventory was administered as one aspect of the overall survey. Participants were asked to reflect on their mindfulness experiences from the last 14 days and provide an honest and spontaneous response for each statement based on their own personal experience. There were a total of 14 statements and the responses are detailed in Table 9.

Two statements had notably high scores in the rarely column. 15% of respondents who indicated rarely experiencing moments of inner peace and ease, even when things get hectic and stressful. As well, 20% of respondents indicated that they
rarely see my mistakes and difficulties without judging them. The statement *I am impatient with myself and with others* is a reverse score, and thus a higher rarely score is not indicative of a lower degree of mindfulness. On the opposite end of the scale, the statement *I pay attention to what’s behind my actions* (31%), and *I am open to the experiences of the present moment* (29%), were the two statements with the highest response rate in the *almost always* column.
Table 9

*Responses to the Freiburg Mindfulness Inventory*

<table>
<thead>
<tr>
<th>Statement</th>
<th>Rarely</th>
<th>Occasionally</th>
<th>Fairly Often</th>
<th>Almost Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>I am open to the experiences of the present moment.</td>
<td>1%</td>
<td>18%</td>
<td>52%</td>
<td>29%</td>
</tr>
<tr>
<td>(n = 5)</td>
<td>(n = 65)</td>
<td>(n = 193)</td>
<td>(n = 108)</td>
<td></td>
</tr>
<tr>
<td>I sense my body, whether eating, cooking, cleaning or talking.</td>
<td>10%</td>
<td>29%</td>
<td>38%</td>
<td>23%</td>
</tr>
<tr>
<td>(n = 37)</td>
<td>(n = 108)</td>
<td>(n = 140)</td>
<td>(n = 86)</td>
<td></td>
</tr>
<tr>
<td>When I notice an absence of mind, I gently return to the experience of the here and now.</td>
<td>6%</td>
<td>33%</td>
<td>50%</td>
<td>12%</td>
</tr>
<tr>
<td>(n = 23)</td>
<td>(n = 121)</td>
<td>(n = 184)</td>
<td>(n = 43)</td>
<td></td>
</tr>
<tr>
<td>I am able to appreciate myself.</td>
<td>5%</td>
<td>27%</td>
<td>45%</td>
<td>23%</td>
</tr>
<tr>
<td>(n = 19)</td>
<td>(n = 99)</td>
<td>(n = 168)</td>
<td>(n = 85)</td>
<td></td>
</tr>
<tr>
<td>I pay attention to what’s behind my actions.</td>
<td>2%</td>
<td>14%</td>
<td>53%</td>
<td>31%</td>
</tr>
<tr>
<td>(n = 7)</td>
<td>(n = 53)</td>
<td>(n = 197)</td>
<td>(n = 144)</td>
<td></td>
</tr>
<tr>
<td>I see my mistakes and difficulties without judging them.</td>
<td>15%</td>
<td>43%</td>
<td>36%</td>
<td>6%</td>
</tr>
<tr>
<td>(n = 57)</td>
<td>(n = 159)</td>
<td>(n = 132)</td>
<td>(n = 23)</td>
<td></td>
</tr>
<tr>
<td>I feel connected to my experience in the here-and-now.</td>
<td>3%</td>
<td>29%</td>
<td>53%</td>
<td>16%</td>
</tr>
<tr>
<td>(n = 11)</td>
<td>(n = 106)</td>
<td>(n = 195)</td>
<td>(n = 59)</td>
<td></td>
</tr>
<tr>
<td>I accept unpleasant experiences.</td>
<td>4%</td>
<td>31%</td>
<td>50%</td>
<td>15%</td>
</tr>
<tr>
<td>(n = 15)</td>
<td>(n = 114)</td>
<td>(n = 186)</td>
<td>(n = 56)</td>
<td></td>
</tr>
<tr>
<td>I am friendly to myself when things go wrong.</td>
<td>13%</td>
<td>34%</td>
<td>43%</td>
<td>10%</td>
</tr>
<tr>
<td>(n = 47)</td>
<td>(n = 126)</td>
<td>(n = 161)</td>
<td>(n = 37)</td>
<td></td>
</tr>
<tr>
<td>I watch my feelings without getting lost in them.</td>
<td>9%</td>
<td>33%</td>
<td>44%</td>
<td>14%</td>
</tr>
<tr>
<td>(n = 32)</td>
<td>(n = 121)</td>
<td>(n = 166)</td>
<td>(n = 52)</td>
<td></td>
</tr>
<tr>
<td>In difficult situations, I can pause without immediately reacting.</td>
<td>5%</td>
<td>18%</td>
<td>49%</td>
<td>20%</td>
</tr>
<tr>
<td>(n = 18)</td>
<td>(n = 98)</td>
<td>(n = 118)</td>
<td>(n = 74)</td>
<td></td>
</tr>
<tr>
<td>I experience moments of inner peace and ease, even when things get hectic and stressful.</td>
<td>15%</td>
<td>45%</td>
<td>32%</td>
<td>8%</td>
</tr>
<tr>
<td>(n = 55)</td>
<td>(n = 168)</td>
<td>(n = 118)</td>
<td>(n = 30)</td>
<td></td>
</tr>
<tr>
<td>I am impatient with myself and with others. a</td>
<td>20%</td>
<td>54%</td>
<td>22%</td>
<td>4%</td>
</tr>
<tr>
<td>(n = 75)</td>
<td>(n = 201)</td>
<td>(n = 82)</td>
<td>(n = 13)</td>
<td></td>
</tr>
<tr>
<td>I am able to smile when I notice how I sometimes make life difficult.</td>
<td>12%</td>
<td>39%</td>
<td>37%</td>
<td>11%</td>
</tr>
<tr>
<td>(n = 46)</td>
<td>(n = 144)</td>
<td>(n = 139)</td>
<td>(n = 42)</td>
<td></td>
</tr>
</tbody>
</table>

Note. *N* = 371. *a* Reverse scored item. Due to rounding, totals may not add to 100%.
Overall scores on the Freiburg Mindfulness Inventory range from 14 to 56, with scores closer to 14 indicating lower personal mindfulness, and a score of 56 indicating the highest level of personal mindfulness. Scores in Table 10 demonstrate the participants’ responses were relatively consistent for each statement, with an individual response ranging from 1 to 4. The overall scores for all participants were in the mid to mid-high range for mindfulness, with a mean score of 38.09. The lowest recorded score was 17; that individual did not report using any mindfulness techniques, either personally or in the classroom. Two other participants scored under 20. On the high end, 16 participants scored over 50, with 1 individual scoring the maximum of 56. This participant reported integrating personal mindfulness 83% of the time and integrating mindfulness in the classroom 84% of the time. Table 22 indicates that the scores of elementary ($M = 37.95$, $SD = 6.65$) and secondary ($M = 38.00$, $SD = 6.66$) participants were similar, with a difference in mean scores of 0.05. Both the elementary ($M = 37.95$, $SD = 6.65$) and secondary scores ($M = 38.00$, $SD = 6.66$) indicate a score that is above the middle possible score of 35 and also slightly higher than that of the full sample in the Freiburg Mindfulness Inventory development study ($M = 34.52$, $SD = 6.77$) (Walach et al., 2006). Table 10 details the mean and standard deviation for each individual statement from the Freiburg Mindfulness Inventory.
Table 10

*Mean and Standard Deviation for Freiburg Mindfulness Inventory*

<table>
<thead>
<tr>
<th>Item</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>I am open to the experiences of the present moment.</td>
<td>3.09</td>
<td>0.72</td>
</tr>
<tr>
<td>I sense my body, whether eating, cooking, cleaning or talking.</td>
<td>2.74</td>
<td>0.92</td>
</tr>
<tr>
<td>When I notice an absence of mind, I gently return to the experience of the here and now.</td>
<td>2.67</td>
<td>0.76</td>
</tr>
<tr>
<td>I am able to appreciate myself.</td>
<td>2.86</td>
<td>0.82</td>
</tr>
<tr>
<td>I pay attention to what’s behind my actions.</td>
<td>3.13</td>
<td>0.72</td>
</tr>
<tr>
<td>I see my mistakes and difficulties without judging them.</td>
<td>2.33</td>
<td>0.81</td>
</tr>
<tr>
<td>I feel connected to my experience in the here-and-now.</td>
<td>2.81</td>
<td>0.73</td>
</tr>
<tr>
<td>I accept unpleasant experiences.</td>
<td>2.76</td>
<td>0.75</td>
</tr>
<tr>
<td>I am friendly to myself when things go wrong.</td>
<td>2.51</td>
<td>0.84</td>
</tr>
<tr>
<td>I watch my feelings without getting lost in them.</td>
<td>2.64</td>
<td>0.83</td>
</tr>
<tr>
<td>In difficult situations, I can pause without immediately reacting.</td>
<td>2.84</td>
<td>0.80</td>
</tr>
<tr>
<td>I experience moments of inner peace and ease, even when things get hectic and stressful.</td>
<td>2.33</td>
<td>0.83</td>
</tr>
<tr>
<td>I am impatient with myself and with others.</td>
<td>2.91</td>
<td>0.75</td>
</tr>
<tr>
<td>I am able to smile when I notice how I sometimes make life difficult.</td>
<td>2.48</td>
<td>0.85</td>
</tr>
</tbody>
</table>

**Total Scores** 38.09 6.67

Note. *N* = 371. Item mean scores reflect the following response choices: rarely = 1, occasionally = 2, fairly often = 3, and almost always = 4. *Reverse scored item.*
Participants were asked to identify all of the mindfulness techniques that they use in their personal lives. They were able to choose multiple responses for this question, resulting in the elevated $N$ value in Table 11. As per Table 11, the list included: yoga, meditation, breathing, colouring, walking, writing, music, and other. The greatest percentage of participants engaged in techniques related to walking, music, and breathing. There was an option for participants to provide text responses for techniques not listed. Some of the mindfulness techniques provided by participants (Appendix H) included: prayer, sensory deprivation, crocheting, knitting, cooking, reading, audiobooks/podcasts, gardening, art, time with family/friends, and various forms of exercise.

In total, 1,158 unique personal mindfulness techniques were identified as being utilized by the participants ($n = 371$) in the study. Elementary participants ($n = 281$) indicated using a combined total of 699 techniques, which is an average of 2.49 techniques per person. Secondary participants ($n = 122$) identified a total of 365 techniques, which is an average of 2.99 techniques per person. The most common technique for elementary participants was breathing (21%), and the least common technique was writing (4%). The most common technique for secondary participants was walking (21%), and the least common technique was colouring (5%). The total column in Table 11 includes all participants ($N = 371$) from the study, including individuals from the multiple grade and other categories that are excluded from the elementary and secondary columns.
Table 11

*Number of Personal Mindfulness Techniques (N = 1,158) Used by Teachers*

<table>
<thead>
<tr>
<th>Technique</th>
<th>Elementary (n = 699)</th>
<th>Secondary (n = 365)</th>
<th>Total (N = 1,158)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yoga</td>
<td>87 (12%)</td>
<td>44 (12%)</td>
<td>141 (12%)</td>
</tr>
<tr>
<td>Meditation</td>
<td>61 (9%)</td>
<td>30 (8%)</td>
<td>100 (9%)</td>
</tr>
<tr>
<td>Breathing</td>
<td>144 (21%)</td>
<td>66 (18%)</td>
<td>226 (20%)</td>
</tr>
<tr>
<td>Colouring</td>
<td>32 (5%)</td>
<td>18 (5%)</td>
<td>53 (5%)</td>
</tr>
<tr>
<td>Walking</td>
<td>141 (20%)</td>
<td>77 (21%)</td>
<td>238 (21%)</td>
</tr>
<tr>
<td>Writing</td>
<td>26 (4%)</td>
<td>23 (6%)</td>
<td>56 (5%)</td>
</tr>
<tr>
<td>Music</td>
<td>145 (21%)</td>
<td>80 (22%)</td>
<td>242 (21%)</td>
</tr>
<tr>
<td>Other</td>
<td>53 (8%)</td>
<td>19 (5%)</td>
<td>81 (7%)</td>
</tr>
<tr>
<td>No Techniques Used</td>
<td>10 (1%)</td>
<td>8 (2%)</td>
<td>21 (2%)</td>
</tr>
</tbody>
</table>

Note. Due to rounding, totals may not add to 100%.

The number of techniques identified by each individual was totalled and is represented in Table 12. Of the 371 participants, 5% indicated using no personal mindfulness techniques, and 95% used one or more mindfulness techniques. The distribution among grade levels was relatively consistent.
Table 12

*Number of Techniques Used by Teachers (N = 371)*

<table>
<thead>
<tr>
<th>Number of Techniques</th>
<th>Elementary (n = 218)</th>
<th>Secondary (n = 122)</th>
<th>Total Count (N = 371)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 techniques</td>
<td>10 (5%)</td>
<td>7 (6%)</td>
<td>19 (5%)</td>
</tr>
<tr>
<td>1 technique</td>
<td>27 (12%)</td>
<td>20 (16%)</td>
<td>52 (14%)</td>
</tr>
<tr>
<td>2 techniques</td>
<td>36 (17%)</td>
<td>25 (20%)</td>
<td>68 (18%)</td>
</tr>
<tr>
<td>3 techniques</td>
<td>57 (26%)</td>
<td>24 (20%)</td>
<td>85 (23%)</td>
</tr>
<tr>
<td>4 techniques</td>
<td>37 (17%)</td>
<td>24 (20%)</td>
<td>67 (18%)</td>
</tr>
<tr>
<td>5 techniques</td>
<td>34 (16%)</td>
<td>12 (10%)</td>
<td>51 (14%)</td>
</tr>
<tr>
<td>6 techniques</td>
<td>6 (3%)</td>
<td>6 (5%)</td>
<td>12 (3%)</td>
</tr>
<tr>
<td>7+ techniques</td>
<td>11 (5%)</td>
<td>4 (3%)</td>
<td>17 (5%)</td>
</tr>
</tbody>
</table>

Note. Due to rounding, totals may not add up to 100%. a Sample size was reduced by 31 to exclude individuals that did not fit exclusively into the elementary or secondary categories.

Table 13 displays the number of personal techniques, means, and standard deviations among the various grade levels. An analysis of variance showed that there was not a statistically significant difference among the groups by grade level.
Table 13

Comparison of Number of Personal Techniques, by Grade Level

<table>
<thead>
<tr>
<th>Grade Level</th>
<th>n</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elementary</td>
<td>218</td>
<td>3.25</td>
<td>1.82</td>
</tr>
<tr>
<td>Secondary</td>
<td>122</td>
<td>2.98</td>
<td>1.74</td>
</tr>
<tr>
<td>Multiple</td>
<td>14</td>
<td>3.93</td>
<td>2.53</td>
</tr>
<tr>
<td>Other</td>
<td>17</td>
<td>2.53</td>
<td>1.70</td>
</tr>
<tr>
<td>Total</td>
<td>371</td>
<td>3.15</td>
<td>1.83</td>
</tr>
</tbody>
</table>

The mindfulness scores of the participants, the number of techniques, and the type of techniques that were used by the participants demonstrate that the individuals in the study are engaging in personal mindfulness practices. However, there is one individual in the study that did not report using any mindfulness techniques, either personally or in the classroom.

Teacher-Implemented Mindfulness in Classrooms

Multiple survey questions were used to evaluate the extent to which teachers implement mindfulness in the classroom. The study indicated the extent to which teachers integrated mindfulness into their classrooms, as depicted in Figure 8. Participants were asked to choose the percentage to which they integrate mindfulness into their classrooms. The sliding scale had a range of responses from 0% (n = 11) to 100% (n = 3) with the most commonly selected response of 60% (n = 27). Overall, teachers integrated mindfulness in their classroom 54% of the time (SD = 26). Elementary teachers (n = 218) had the highest rates of integration. They indicated integrating mindfulness in their classroom 59% of the time (SD = 22), whereas the
secondary teachers \((n = 122)\) had the lowest rates of integration, integrating mindfulness in their classroom 46% of the time \((SD = 28)\). Of the 122 secondary teachers, 9 \((n = 10)\) indicated 0% integration of mindfulness into their classrooms. The section of teachers who indicated teaching multiple grades, which span the elementary and secondary levels \((n = 14)\), had a mean of 57% and a standard deviation of 26%.

The final classification of teaching assignments, other, \((n = 17)\) integrated mindfulness into their classrooms 51% of the time \((SD = 36)\).

![Figure 8](image)

**Figure 8.** The percentage of integration of mindfulness into teaching practice disaggregated by grade level taught. Participants identified their integration level from a sliding scale where 0 = not integrated at all, 50 = sometimes/occasionally integrated, and 100 = integrated all the time.

Although Table 11 showed teacher implementation of personal mindfulness techniques was relatively consistent among the grades, Table 14 indicates that there are classroom implementation discrepancies between elementary and secondary
grades. 88% of participants surveyed used one or more mindfulness techniques in the classroom. However, one notable area was the use of no techniques; 12% of the total teachers surveyed did not use any technique. A significantly higher percentage of teachers (27%) in secondary ($n = 33$) identified using no techniques, whereas only 3% of teachers in elementary ($n = 7$) used no classroom mindfulness techniques. This means that although the secondary teachers are using personal mindfulness techniques, a greater number of them are not transferring this practice into their classrooms.
Table 14

*Number of Classroom Techniques (N = 371) Used by Teachers*

<table>
<thead>
<tr>
<th>Number of Techniques</th>
<th>Elementary (n = 218)</th>
<th>Secondary (n = 122)</th>
<th>Total (N = 371)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 techniques</td>
<td>7 (3%)</td>
<td>33 (27%)</td>
<td>46 (12%)</td>
</tr>
<tr>
<td>1 technique</td>
<td>16 (7%)</td>
<td>17 (14%)</td>
<td>39 (11%)</td>
</tr>
<tr>
<td>2 techniques</td>
<td>20 (9%)</td>
<td>27 (22%)</td>
<td>51 (14%)</td>
</tr>
<tr>
<td>3 techniques</td>
<td>47 (22%)</td>
<td>16 (13%)</td>
<td>67 (18%)</td>
</tr>
<tr>
<td>4 techniques</td>
<td>60 (28%)</td>
<td>18 (15%)</td>
<td>85 (23%)</td>
</tr>
<tr>
<td>5 techniques</td>
<td>41 (19%)</td>
<td>7 (6%)</td>
<td>50 (13%)</td>
</tr>
<tr>
<td>6 techniques</td>
<td>16 (3%)</td>
<td>1 (0%)</td>
<td>19 (5%)</td>
</tr>
<tr>
<td>7+ techniques</td>
<td>11 (5%)</td>
<td>3 (2%)</td>
<td>14 (4%)</td>
</tr>
</tbody>
</table>

Note. Due to rounding, totals may not add to 100%. a Sample size was reduced by 31 to exclude individuals that did not fit exclusively into the elementary or secondary categories.

Overall, elementary teachers utilized a greater number of techniques than did any other grouping of teachers. Table 15 displays the number of teaching techniques, means, and standard deviations for the grade level groupings. Elementary teachers utilized nearly twice as many mindfulness techniques ($M = 3.76$, $SD = 1.67$) than did secondary teachers ($M = 2.08$, $SD = 1.82$). Additionally, among the four groupings, secondary teachers implemented the lowest number of techniques.
Table 15

*Comparison of Number of Teaching Techniques, by Grade Level*

<table>
<thead>
<tr>
<th>Grade Level</th>
<th>n</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elementary</td>
<td>218</td>
<td>3.76</td>
<td>1.67</td>
</tr>
<tr>
<td>Secondary</td>
<td>122</td>
<td>2.08</td>
<td>1.82</td>
</tr>
<tr>
<td>Multiple</td>
<td>14</td>
<td>2.79</td>
<td>1.81</td>
</tr>
<tr>
<td>Other</td>
<td>17</td>
<td>2.18</td>
<td>1.94</td>
</tr>
<tr>
<td>Total</td>
<td>371</td>
<td>3.10</td>
<td>1.91</td>
</tr>
</tbody>
</table>

Participants in the study were asked to choose multiple responses to identify all of the mindfulness techniques that they use in the classroom. Overall, 1,185 techniques were identified as being used in the classroom. Table 16 shows that 96% of the total participants identified using mindfulness techniques in the classroom, although there was a difference between elementary (100%) and secondary teachers (89%). Of all participants surveyed, 3% indicated utilizing *other* techniques in their classrooms. Some of these techniques, as detailed by participants (Appendix G), include: calming corner, *GoNoodle* reflective movement activities, glitter jars, prayer, stillness, sharing circles, and stretching. Of the techniques listed, yoga is used as a mindfulness classroom strategy twice as frequently in elementary classrooms (12%) than in secondary classrooms (6%). Music is used frequently in both elementary (22%) and secondary classrooms (20%).
Table 16

*Number of Each Mindfulness Technique (N = 1,185) Used in the Classroom*

<table>
<thead>
<tr>
<th>Technique</th>
<th>Elementary (n = 814)</th>
<th>Secondary (n = 289)</th>
<th>Total (N = 1,185)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yoga</td>
<td>101 (12%)</td>
<td>18 (6%)</td>
<td>125 (11%)</td>
</tr>
<tr>
<td>Meditation</td>
<td>59 (7%)</td>
<td>13 (4%)</td>
<td>77 (7%)</td>
</tr>
<tr>
<td>Breathing</td>
<td>170 (21%)</td>
<td>51 (18%)</td>
<td>238 (20%)</td>
</tr>
<tr>
<td>Colouring</td>
<td>139 (17%)</td>
<td>31 (11%)</td>
<td>184 (16%)</td>
</tr>
<tr>
<td>Walking</td>
<td>88 (11%)</td>
<td>41 (14%)</td>
<td>139 (12%)</td>
</tr>
<tr>
<td>Writing</td>
<td>49 (6%)</td>
<td>35 (12%)</td>
<td>87 (7%)</td>
</tr>
<tr>
<td>Music</td>
<td>177 (22%)</td>
<td>57 (20%)</td>
<td>251 (21%)</td>
</tr>
<tr>
<td>Other</td>
<td>24 (3%)</td>
<td>10 (3%)</td>
<td>39 (3%)</td>
</tr>
<tr>
<td>No Techniques Used</td>
<td>7 (0%)</td>
<td>33 (11%)</td>
<td>45 (4%)</td>
</tr>
</tbody>
</table>

Note. Due to rounding, totals may not add to 100%. \(^a\) Sample size was reduced by 31 to exclude individuals that did not fit exclusively into the elementary or secondary categories. \(^b\) Sample size (N = 371).

Participants were also asked if they used any specific mindfulness programs with their students. Table 3 outlined a wide range of mindfulness programs on the market. Six of the programs were listed on the survey, with additional space for participants to add text responses in the *other* category. Table 17 identifies the number and percentages of programs used by participants. Overall, 37% of the participants in
the study indicated using the MindUP curriculum. This can likely be attributed to the sample division’s implementation of training of the MindUP curriculum. The division continues to support the use of this research-based program and provides occasional training programs; most recently was a half-day MindUP introduction, which took place in the fall of 2019. A total of 13% of participants in the study indicated using a program that was not listed; some of the programs identified in the other category included: Kimochis, Zones of Regulation, GoNoodle, Cosmic Yoga, Headspace, ZenDen, Social Detective, and Growth Mindset (Appendix F).
Table 17

*Number of Mindfulness Programs (N = 520) Used in the Classroom*

<table>
<thead>
<tr>
<th>Programs</th>
<th>Elementary (n = 329)</th>
<th>Secondary (n = 136)</th>
<th>Total (N = 520)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inner Kids Program</td>
<td>2 (0%)</td>
<td>0 (0%)</td>
<td>2 (0%)</td>
</tr>
<tr>
<td>Inner Resilience Program</td>
<td>1 (0%)</td>
<td>1 (0%)</td>
<td>2 (0%)</td>
</tr>
<tr>
<td>Learning to BREATHE</td>
<td>20 (6%)</td>
<td>8 (6%)</td>
<td>32 (6%)</td>
</tr>
<tr>
<td>Mindful Schools</td>
<td>7 (2%)</td>
<td>4 (3%)</td>
<td>22 (2%)</td>
</tr>
<tr>
<td>MindUP</td>
<td>150 (46%)</td>
<td>24 (18%)</td>
<td>186 (37%)</td>
</tr>
<tr>
<td>Wellness Works in Schools</td>
<td>10 (3%)</td>
<td>5 (4%)</td>
<td>15 (3%)</td>
</tr>
<tr>
<td>Other</td>
<td>49 (15%)</td>
<td>8 (6%)</td>
<td>64 (13%)</td>
</tr>
<tr>
<td>Self-Created Program</td>
<td>55 (17%)</td>
<td>19 (14%)</td>
<td>81 (16%)</td>
</tr>
<tr>
<td>No Program Used</td>
<td>35 (11%)</td>
<td>67 (49%)</td>
<td>116 (23%)</td>
</tr>
</tbody>
</table>

Note. Due to rounding, totals may not add to 100%. a Sample size was reduced by 31 to exclude individuals that did not fit exclusively into the elementary or secondary categories. b Sample size (N = 371).

Teachers in the division appear to be using a wide range of programs and techniques as part of mindfulness implementation in their classrooms. Elementary teachers indicated a higher percentage of classroom integration than did their secondary colleagues. Also, elementary teachers identified using more techniques. Both elementary and secondary teachers reported using music and breathing
frequently in the classroom. Notably, yoga (a common mindfulness technique) is used twice as often in elementary classrooms. Teachers in secondary are far more likely not to use a program as part of integrating mindfulness into their classrooms, and elementary teachers are most likely to implement mindfulness through *MindUP*. Although the differences between the grades are minimal, the data clearly showed that the majority of the participants in the study are implementing some degree of mindfulness in their classrooms.

**Well-Being of Teachers**

Teacher well-being was evaluated using the Warwick-Edinburgh Mental Well-Being Scale. The scale was administered as one aspect of the overall survey. Participants responded to 14 statements that focused on positive aspects of their mental well-being. Participants were asked to respond on a five-point scale, with one as the lowest value and five as the highest value for each statement, based on their experiences over the last 14 days. Participants were reminded that there were no correct or incorrect responses. A summary of the statements and the response totals are detailed in Table 18.

One response item had notably high scores in the *none* column in the column: *I have energy to spare* (14%). On the other end of the 5-point scale, the statement: *I have energy to spare* (2%), *I have been feeling relaxed* (2%) and *I’ve been dealing with problems well* (3%), have a notably low number of responses in the *all of the time* column. The majority of the responses (*N = 371*) were within the *some of the time* and *often* responses. It is notable that the majority of responses on this instrument were
scored on the higher end of the scale, indicating overall positive well-being of the participants.
Table 18

*Responses to the Warwick-Edinburgh Mental Well-Being Scale*

<table>
<thead>
<tr>
<th>Statements</th>
<th>None</th>
<th>Rarely</th>
<th>Some of the time</th>
<th>Often</th>
<th>All of the time</th>
</tr>
</thead>
<tbody>
<tr>
<td>I’ve been feeling optimistic about the future</td>
<td>2%</td>
<td>10%</td>
<td>34%</td>
<td>43%</td>
<td>11%</td>
</tr>
<tr>
<td></td>
<td>(n = 6)</td>
<td>(n = 37)</td>
<td>(n = 127)</td>
<td>(n = 160)</td>
<td>(n = 41)</td>
</tr>
<tr>
<td>I’ve been feeling useful</td>
<td>1%</td>
<td>6%</td>
<td>23%</td>
<td>57%</td>
<td>14%</td>
</tr>
<tr>
<td></td>
<td>(n = 4)</td>
<td>(n = 21)</td>
<td>(n = 84)</td>
<td>(n = 221)</td>
<td>(n = 51)</td>
</tr>
<tr>
<td>I’ve been feeling relaxed</td>
<td>4%</td>
<td>30%</td>
<td>42%</td>
<td>23%</td>
<td>2%</td>
</tr>
<tr>
<td></td>
<td>(n = 13)</td>
<td>(n = 110)</td>
<td>(n = 155)</td>
<td>(n = 87)</td>
<td>(n = 6)</td>
</tr>
<tr>
<td>I’ve been feeling interested in other people</td>
<td>2%</td>
<td>6%</td>
<td>31%</td>
<td>43%</td>
<td>17%</td>
</tr>
<tr>
<td></td>
<td>(n = 8)</td>
<td>(n = 24)</td>
<td>(n = 116)</td>
<td>(n = 161)</td>
<td>(n = 62)</td>
</tr>
<tr>
<td>I’ve had energy to spare</td>
<td>14%</td>
<td>38%</td>
<td>32%</td>
<td>14%</td>
<td>2%</td>
</tr>
<tr>
<td></td>
<td>(n = 52)</td>
<td>(n = 141)</td>
<td>(n = 119)</td>
<td>(n = 51)</td>
<td>(n = 8)</td>
</tr>
<tr>
<td>I’ve been dealing with problems well</td>
<td>1%</td>
<td>4%</td>
<td>40%</td>
<td>52%</td>
<td>3%</td>
</tr>
<tr>
<td></td>
<td>(n = 4)</td>
<td>(n = 14)</td>
<td>(n = 149)</td>
<td>(n = 191)</td>
<td>(n = 13)</td>
</tr>
<tr>
<td>I’ve been thinking clearly</td>
<td>1%</td>
<td>5%</td>
<td>36%</td>
<td>54%</td>
<td>5%</td>
</tr>
<tr>
<td></td>
<td>(n = 2)</td>
<td>(n = 20)</td>
<td>(n = 132)</td>
<td>(n = 200)</td>
<td>(n = 17)</td>
</tr>
<tr>
<td>I’ve been feeling good about myself</td>
<td>2%</td>
<td>10%</td>
<td>39%</td>
<td>42%</td>
<td>8%</td>
</tr>
<tr>
<td></td>
<td>(n = 9)</td>
<td>(n = 37)</td>
<td>(n = 143)</td>
<td>(n = 154)</td>
<td>(n = 28)</td>
</tr>
<tr>
<td>I’ve been feeling close to other people</td>
<td>2%</td>
<td>11%</td>
<td>35%</td>
<td>44%</td>
<td>8%</td>
</tr>
<tr>
<td></td>
<td>(n = 6)</td>
<td>(n = 41)</td>
<td>(n = 131)</td>
<td>(n = 164)</td>
<td>(n = 29)</td>
</tr>
<tr>
<td>I’ve been feeling confident</td>
<td>3%</td>
<td>10%</td>
<td>36%</td>
<td>44%</td>
<td>8%</td>
</tr>
<tr>
<td></td>
<td>(n = 10)</td>
<td>(n = 38)</td>
<td>(n = 133)</td>
<td>(n = 162)</td>
<td>(n = 28)</td>
</tr>
<tr>
<td>I’ve been able to make up my own mind about things</td>
<td>1%</td>
<td>4%</td>
<td>21%</td>
<td>55%</td>
<td>18%</td>
</tr>
<tr>
<td></td>
<td>(n = 3)</td>
<td>(n = 16)</td>
<td>(n = 79)</td>
<td>(n = 205)</td>
<td>(n = 68)</td>
</tr>
<tr>
<td>I’ve been feeling loved</td>
<td>1%</td>
<td>4%</td>
<td>19%</td>
<td>49%</td>
<td>27%</td>
</tr>
<tr>
<td></td>
<td>(n = 3)</td>
<td>(n = 14)</td>
<td>(n = 72)</td>
<td>(n = 181)</td>
<td>(n = 101)</td>
</tr>
<tr>
<td>I’ve been interested in new things</td>
<td>2%</td>
<td>12%</td>
<td>31%</td>
<td>42%</td>
<td>13%</td>
</tr>
<tr>
<td></td>
<td>(n = 7)</td>
<td>(n = 43)</td>
<td>(n = 115)</td>
<td>(n = 156)</td>
<td>(n = 50)</td>
</tr>
<tr>
<td>I’ve been feeling cheerful</td>
<td>2%</td>
<td>9%</td>
<td>32%</td>
<td>49%</td>
<td>8%</td>
</tr>
<tr>
<td></td>
<td>(n = 7)</td>
<td>(n = 33)</td>
<td>(n = 120)</td>
<td>(n = 181)</td>
<td>(n = 30)</td>
</tr>
</tbody>
</table>

Note. $N = 371$. Due to rounding, totals may not add to 100%.
Participants in the study responded to the 14 items on the Warwick-Edinburgh Mental Well-Being Scale by choosing from 5 responses: none of the time, rarely, some of the time, often, and all of the time. The minimum score on this instrument was 14, and the maximum score was 70. Scores in Table 19 demonstrate that the participants’ responses were relatively similar for most statements. However, scores for *I’ve been feeling relaxed* ($M = 2.90$, $SD = 0.85$) and *I have energy to spare* ($M = 2.52$, $SD = 0.97$) are notably lower. The overall scores for all participants were in the mid-range (43 to 59) for well-being. The lowest recorded score was 14. This individual reported a Warwick-Edinburgh Mental Well-Being Scale score of 32 and indicated mindfulness integration in both personal life (66%) and classroom (64%). Seven participants scored under 28, and 72 participants scored under 42 on the Warwick-Edinburgh Mental Well-Being Scale. One overall Warwick-Edinburgh Mental Well-Being Scale score of 70 was recorded. This participant reported a mindfulness score of 46 and indicated using personal mindfulness (92%) of the time and mindfulness in the classroom (92%) of the time.
### Table 19

*Mean and Standard Deviation for Warwick-Edinburgh Mental Well-Being Scale*

<table>
<thead>
<tr>
<th>Statements</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>I’ve been feeling optimistic about the future</td>
<td>3.52</td>
<td>0.88</td>
</tr>
<tr>
<td>I’ve been feeling useful</td>
<td>3.77</td>
<td>0.80</td>
</tr>
<tr>
<td>I’ve been feeling relaxed</td>
<td>2.90</td>
<td>0.85</td>
</tr>
<tr>
<td>I’ve been feeling interested in other people</td>
<td>3.66</td>
<td>0.91</td>
</tr>
<tr>
<td>I’ve had energy to spare</td>
<td>2.52</td>
<td>0.97</td>
</tr>
<tr>
<td>I’ve been dealing with problems well</td>
<td>3.53</td>
<td>0.68</td>
</tr>
<tr>
<td>I’ve been thinking clearly</td>
<td>3.57</td>
<td>0.69</td>
</tr>
<tr>
<td>I’ve been feeling good about myself</td>
<td>3.42</td>
<td>0.86</td>
</tr>
<tr>
<td>I’ve been feeling close to other people</td>
<td>3.46</td>
<td>0.85</td>
</tr>
<tr>
<td>I’ve been feeling confident</td>
<td>3.43</td>
<td>0.88</td>
</tr>
<tr>
<td>I’ve been able to make up my own mind about things</td>
<td>3.86</td>
<td>0.79</td>
</tr>
<tr>
<td>I’ve been feeling loved</td>
<td>3.98</td>
<td>0.83</td>
</tr>
<tr>
<td>I’ve been interested in new things</td>
<td>3.54</td>
<td>0.93</td>
</tr>
<tr>
<td>I’ve been feeling cheerful</td>
<td>3.52</td>
<td>0.84</td>
</tr>
</tbody>
</table>

**Total Scores**  
48.66 8.48

*Note. N = 371. Item mean scores reflect the following response choices: none of the time = 1, rarely = 2, some of the time = 3, often = 4, all of the time = 5.*

Overall, the participants in this study indicated scoring in the average range for well-being. According to the Warwick-Edinburgh Mental Well-Being Scale analysis guide, the 14 Warwick-Edinburgh Mental Well-Being Scale scores approximate to a normal distribution, thus permitting parametric analysis. The analysis tool for the instrument states that:
Scores can be divided into high, average and low mental well-being using cut points. One statistical approach is to put the cut points at plus or minus one standard deviation. In UK population samples, the top 15% of scores on WEWMBS range from 60 to 70 and the bottom 15% 14 to 42. (Warwick Medical School, n.d.).

The results of the well-being scale indicate that notable areas of concern for teachers in the study included energy and the ability to relax. Mindfulness practices address focused relaxation and intentionally paying attention to the present.

**Relationships Among Mindfulness, Teaching Mindfulness, and Well-Being**

In this study, mindfulness scores were calculated using the Freiburg Mindfulness Inventory and well-being scores were assessed using the Warwick-Edinburgh Mental Well-Being Scale. The scores from both instruments were compared to determine potential relationships between mindfulness and well-being.

To further explore relationships among these constructs, the participants in the study were asked to score their mindfulness implementation on a sliding scale, where participants rated their implementation from 0% to 100%. The descriptive statistics for mindfulness score, teaching mindfulness integration, personal life integration, and well-being scores are detailed in Table 20.
Table 20

*Mean and Standard Deviation of the Four Domain Scores*

<table>
<thead>
<tr>
<th>Domain</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mindfulness Score</td>
<td>38.09</td>
<td>6.67</td>
</tr>
<tr>
<td>Teaching Mindfulness Integration</td>
<td>54.18</td>
<td>25.71</td>
</tr>
<tr>
<td>Personal Life Integration</td>
<td>58.47</td>
<td>23.95</td>
</tr>
<tr>
<td>Well-Being Score</td>
<td>48.66</td>
<td>8.48</td>
</tr>
</tbody>
</table>

Note. Sample size ($N = 371$).

A Spearman’s Rho correlation was calculated among the four domain scores, as depicted in Table 21, to identify relationships among the variables. According to Muijs (2010), relationships can be classified as weak (0 to ± 0.09), modest (± 0.10 to ± 0.29), moderate (± 0.30 to ± 0.49), strong (± 0.50 to ± 0.79) and very strong (> ± 0.80). All of the correlations were statistically significant, with the greatest relationship ($r = .61, p < .001$) existing between the well-being and mindfulness scores. The smallest relationship ($r = .18, p < .001$) was between well-being scores, calculated using the Warwick-Edinburgh Mental Well-Being Scale and the degree to which teachers were integrating mindfulness in the classroom.
Table 21

*Spearman’s Rho Correlations Among the Four Domain Scores*

<table>
<thead>
<tr>
<th>Scale</th>
<th>Mindfulness Score</th>
<th>Teaching Mindfulness Integration</th>
<th>Personal Life Mindfulness Integration</th>
<th>Well-Being Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mindfulness Score</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching Mindfulness</td>
<td>.28*</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Integration</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personal Life</td>
<td>.47*</td>
<td>.53*</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Mindfulness Integration</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Well-Being Score</td>
<td>.61*</td>
<td>.18*</td>
<td>.38*</td>
<td>-</td>
</tr>
</tbody>
</table>

*Note. N = 371. * p < .001, two tailed.*

An analysis was performed to disaggregate the data by grade level in order to determine whether there was a relationship among grade levels and the correlations among variables. The disaggregated descriptive statistics for mindfulness score, teaching mindfulness integration, personal life integration, and well-being scores are detailed in Table 22. Percentage of teaching mindfulness integration had the greatest variance between elementary mean scores (M = 59.09, SD = 21.91) and secondary mean scores (M = 45.54, SD = 28.18).
Table 22

*Mean and Standard Deviation of the Four Domain Scores, by Grade*

<table>
<thead>
<tr>
<th>Domain</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mindfulness Score a</td>
<td>38.09</td>
<td>6.67</td>
</tr>
<tr>
<td>Elementary b</td>
<td>37.95</td>
<td>6.65</td>
</tr>
<tr>
<td>Secondary c</td>
<td>38.00</td>
<td>6.66</td>
</tr>
<tr>
<td>Teaching Mindfulness Integration a</td>
<td>54.18</td>
<td>25.71</td>
</tr>
<tr>
<td>Elementary b</td>
<td>59.09</td>
<td>21.91</td>
</tr>
<tr>
<td>Secondary c</td>
<td>45.54</td>
<td>28.18</td>
</tr>
<tr>
<td>Personal Life Integration a</td>
<td>58.47</td>
<td>23.95</td>
</tr>
<tr>
<td>Elementary b</td>
<td>58.98</td>
<td>21.76</td>
</tr>
<tr>
<td>Secondary c</td>
<td>59.36</td>
<td>26.28</td>
</tr>
<tr>
<td>Well-Being Score a</td>
<td>48.66</td>
<td>8.48</td>
</tr>
<tr>
<td>Elementary b</td>
<td>48.34</td>
<td>7.94</td>
</tr>
<tr>
<td>Secondary c</td>
<td>48.66</td>
<td>9.54</td>
</tr>
</tbody>
</table>

*Sample size (N = 371). b Sample size was reduced by 31 to exclude individuals that did not fit exclusively into the elementary category (n = 218). c Sample size was reduced by 31 to exclude individuals that did not fit exclusively into the secondary category (n = 122).*

Table 23 illustrates that the results of the elementary disaggregated data were very similar to the overall correlations, with the one exception being the correlation between teaching mindfulness integration and well-being scores. The correlation coefficient was 0.10 higher than the correlation coefficient of the overall comparisons.
Table 23

*Spearman’s Rho Correlations Among the Four Domain Scores - Elementary*

<table>
<thead>
<tr>
<th>Scale</th>
<th>Mindfulness Score</th>
<th>Teaching Mindfulness Integration</th>
<th>Personal Life Mindfulness Integration</th>
<th>Well-Being Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mindfulness Score</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Teaching Mindfulness</td>
<td>.29*</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Integration</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personal Life</td>
<td>.45*</td>
<td>.53*</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Mindfulness Integration</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Well-Being Score</td>
<td>.60*</td>
<td>.29*</td>
<td>.39*</td>
<td>-</td>
</tr>
</tbody>
</table>

*Note. n = 218. Sample size was reduced by 31 to exclude individuals that did not fit exclusively into the elementary category. *p < .001, two-tailed.*

The results of the secondary disaggregated data, in Table 24, indicated a stronger relationship between personal mindfulness integration and mindfulness scores \((r = .56, p < .001)\) than was present in the total participant comparisons \((r = .47, p < .001)\). Additionally, in the analysis of the relationship between personal life mindfulness integration and teaching mindfulness integration, the correlation coefficient for teaching mindfulness integration was slightly higher in the secondary sample \((r = .57, p < .001)\) than in the total participant comparisons \((r = .53, p < .001)\). It is also noteworthy that the relationship between well-being scores and teaching mindfulness integration was not statistically significant in the secondary teacher disaggregated data.
Table 24

*Spearman’s Rho Correlations Among the Four Domain Scores - Secondary*

<table>
<thead>
<tr>
<th>Scale</th>
<th>Mindfulness Score</th>
<th>Teaching Mindfulness Integration</th>
<th>Personal Life Mindfulness Integration</th>
<th>Well-Being Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mindfulness Score</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching Mindfulness Integration</td>
<td>.33*</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personal Life Mindfulness Integration</td>
<td>.56*</td>
<td>.57*</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Well-Being Score</td>
<td>.62*</td>
<td>.10</td>
<td>.40*</td>
<td>-</td>
</tr>
</tbody>
</table>

*Note. n = 122. Sample sized was reduced by 31 to exclude individuals that did not fit exclusively into the secondary category. They may have indicated teaching across both elementary and secondary or who chose other without specifying. * p < .001, two-tailed.*

Table 25 displays the means and standard deviations for elementary and secondary teachers’ mindfulness and well-being scores, as well as their teaching mindfulness integration and personal life integration percentages. Teachers who chose multiple grade range (n = 14) and other (n = 17) were excluded from this analysis as the numbers of individuals in these two classifications were small, and the size differential between them and the elementary (n = 218) and secondary (n = 122) was substantial. An independent samples t-test revealed that there is a statistically significant difference between elementary and secondary on the percentage by which they integrate mindfulness into their teaching practice t(338) = 4.92, p < .001. According to Muijs (2010), effect sizes can be classified as weak (0 to 0.20), modest (0.21 to 0.50), moderate (0.51 to 1.00), and strong (> 1.00). Cohen’s d analysis
indicated a moderate effect between the two grades exists in the percentage of mindfulness integration elementary and secondary teachers are implementing in their classrooms.

Table 25

<table>
<thead>
<tr>
<th></th>
<th>Elementary M (SD)</th>
<th>Secondary M (SD)</th>
<th>t</th>
<th>df</th>
<th>p</th>
<th>d</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mindfulness Score</td>
<td>37.95 (6.65)</td>
<td>38.00 (6.66)</td>
<td>-0.07</td>
<td>338</td>
<td>.94</td>
<td>0.01</td>
</tr>
<tr>
<td>Teaching Mindfulness Integration</td>
<td>59.09 (21.91)</td>
<td>45.54 (28.12)</td>
<td>4.92</td>
<td>338</td>
<td>&lt; .001</td>
<td>0.54</td>
</tr>
<tr>
<td>Personal Life Mindfulness Integration</td>
<td>58.98 (21.76)</td>
<td>59.36 (26.28)</td>
<td>-0.15</td>
<td>338</td>
<td>.21</td>
<td>0.02</td>
</tr>
<tr>
<td>Well-Being Score</td>
<td>48.34 (7.94)</td>
<td>48.66 (9.54)</td>
<td>-0.33</td>
<td>338</td>
<td>.11</td>
<td>0.04</td>
</tr>
</tbody>
</table>

Additionally, in order to determine whether there was a relationship among gender and the correlations among variables, an analysis was performed to disaggregate the data by gender. Table 26 is a summary of all descriptive statistics. As stated previously, the sample size of females ($n = 283$) is far greater than that of males ($n = 80$) or other ($n = 2$); however, this is representative of the gender distribution in the province of Alberta. The classification of prefer not to respond ($n = 6$) was excluded from this analysis due to confounding variables with the classification; it was unable to be determined if the individuals did not identify with a gender or were withholding gender to prevent identification. The overall mindfulness of teachers ($M = 38.09$, $SD = 6.67$) is very similar between both male ($M = 38.67$, $SD = 6.85$) and
female \((M = 38.08, SD = 6.55)\) participants. The mean scores for individuals in the 
other category are very different from the mean scores of the overall participant totals.

It must be noted that there are only two individuals who identified as other in the 
gender category, and this is likely a contributor to the extremely different scores.

Males reported lower \((M = 52.24, SD = 26.13)\) teaching mindfulness integration than 
females \((M = 54.42, SD = 25.40)\), but males \((M = 60.41, SD = 24.16)\) had higher 
personal mindfulness integration than female \((M = 58.29, SD = 23.64)\) participants.
Table 26

*Mean and Standard Deviation of the Four Domain Scores, by Gender*

<table>
<thead>
<tr>
<th>Domain</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mindfulness of Teachers</td>
<td>38.09</td>
<td>6.67</td>
</tr>
<tr>
<td>Male</td>
<td>38.67</td>
<td>6.85</td>
</tr>
<tr>
<td>Female</td>
<td>38.08</td>
<td>6.55</td>
</tr>
<tr>
<td>Other</td>
<td>25.00</td>
<td>11.31</td>
</tr>
<tr>
<td>Teaching Mindfulness Integration</td>
<td>54.18</td>
<td>25.71</td>
</tr>
<tr>
<td>Male</td>
<td>52.24</td>
<td>26.13</td>
</tr>
<tr>
<td>Female</td>
<td>54.42</td>
<td>25.40</td>
</tr>
<tr>
<td>Other</td>
<td>50.00</td>
<td>70.71</td>
</tr>
<tr>
<td>Personal Life Mindfulness Integration</td>
<td>58.47</td>
<td>23.95</td>
</tr>
<tr>
<td>Male</td>
<td>60.41</td>
<td>24.16</td>
</tr>
<tr>
<td>Female</td>
<td>58.29</td>
<td>23.64</td>
</tr>
<tr>
<td>Other</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Well-Being</td>
<td>48.66</td>
<td>8.48</td>
</tr>
<tr>
<td>Male</td>
<td>48.49</td>
<td>8.03</td>
</tr>
<tr>
<td>Female</td>
<td>49.01</td>
<td>8.24</td>
</tr>
<tr>
<td>Other</td>
<td>27.00</td>
<td>18.39</td>
</tr>
</tbody>
</table>

Note. Statistics for those individuals who selected *prefer not to respond* were not disaggregated.

a Sample size (N = 371). b Sample size (n = 80). c Sample size (n = 283). d Sample size (n = 2).
In order to determine whether there was a relationship among gender and the correlations among variables, an analysis was performed to disaggregate the data by gender. Due to the sample size of two, correlations were not calculated on the other gender category. Table 27 explores the correlations of males in the sample. There was a lower correlation between teaching mindfulness integration and mindfulness scores in males ($r = .17, p = .134$) than for the population ($r = .28, p < .001$). There were also lower correlations between personal life integration and mindfulness scores in males ($r = .38, p < .001$) than in the total sample ($r = .47, p < .001$). However, there is a 0.10 higher score correlating personal mindfulness integration and teaching mindfulness integration in males ($r = .63, p < .001$) than the total sample ($r = .53, p < .001$). In the male sample, there was not a statistically significant correlation between teaching mindfulness integration and well-being scores, nor personal mindfulness integration and well-being scores.
### Table 27

**Spearman Rho Correlations Among the Four Domain Scores - Male Gender**

<table>
<thead>
<tr>
<th>Scale</th>
<th>Mindfulness Score</th>
<th>Teaching Mindfulness Integration</th>
<th>Personal Life Mindfulness Integration</th>
<th>Well-Being Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mindfulness Score</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Teaching Mindfulness Integration</td>
<td>0.17</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Personal Life Mindfulness Integration</td>
<td>0.38*</td>
<td>0.63*</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Well-Being Score</td>
<td>0.73*</td>
<td>0.01</td>
<td>0.19</td>
<td>-</td>
</tr>
</tbody>
</table>

*Note. n = 80. * *p* < .001, two-tailed.*

Table 28 continues the exploration into the gender-segregated correlations by examining the relationships between the responses of females. All of the correlations in this table are statistically significant (*p* < .001). The greatest relationship (*r* = .58, *p* < .001) existed between mindfulness scores and well-being scores.
Table 28

*Spearman Rho Correlations Among the Four Domain Scores - Female Gender*

<table>
<thead>
<tr>
<th>Scale</th>
<th>Mindfulness Score</th>
<th>Teaching Mindfulness Integration</th>
<th>Personal Life Mindfulness Integration</th>
<th>Well-Being Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mindfulness Score</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching Mindfulness Integration</td>
<td>0.31*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personal Life Mindfulness Integration</td>
<td>0.49*</td>
<td>0.51*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Well-Being Score</td>
<td>0.58*</td>
<td>0.24*</td>
<td>0.43*</td>
<td></td>
</tr>
</tbody>
</table>

*Note. n = 283. * p < .001, two-tailed.*

Table 29 displays the means and standard deviations for male and female teachers’ mindfulness and well-being scores, as well as their teaching mindfulness integration and personal life integration percentages. Teachers who identified as *other* (*n = 2*) and *prefer not to respond* (*n = 6*) were excluded from this analysis, as the numbers of individuals in these two classifications were small, and the size differential between them and those who identified as male (*n = 80*) and female (*n = 283*) was substantial. An independent samples *t*-test revealed that there are no statistically significant differences between male and female survey results in mindfulness scores, teaching mindfulness integration, personal life mindfulness integration, or well-being scores. Cohen’s *d* analyses were not calculated due to a lack of statistically significant correlations (Cohen, 1988).
Table 29

t-test Results Comparing Survey Results, by Gender

<table>
<thead>
<tr>
<th></th>
<th>Male</th>
<th>Female</th>
<th>t</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mindfulness Score</td>
<td>38.67 (6.85)</td>
<td>38.08 (6.55)</td>
<td>0.71</td>
<td>361</td>
<td>.47</td>
</tr>
<tr>
<td>Teaching Mindfulness Integration</td>
<td>52.24 (26.13)</td>
<td>54.42 (25.40)</td>
<td>-0.68</td>
<td>361</td>
<td>.48</td>
</tr>
<tr>
<td>Personal Life Mindfulness Integration</td>
<td>60.41 (24.16)</td>
<td>58.29 (23.64)</td>
<td>0.71</td>
<td>361</td>
<td>.79</td>
</tr>
<tr>
<td>Well-Being Score</td>
<td>48.49 (8.03)</td>
<td>49.01 (8.24)</td>
<td>-0.50</td>
<td>361</td>
<td>.65</td>
</tr>
</tbody>
</table>

Table 21 detailed the relationships among variables in the study; the greatest correlation in the data was identified to be between mindfulness scores and well-being scores ($r = .61$, $p < .001$). Linear regression was used to examine the relationships among variables further. Table 30 displays the regression model for predicting well-being scores for the dataset of 371 teacher participants. This model is a moderate fit ($R^2 = .39$, $p < .001$). The mindfulness score is the strongest predictor in the model with a beta of 0.56. A one-point increase in the mindfulness score results in a 0.71-point increase in well-being scores. Regressions were also calculated on the disaggregated grade and gender data; however, they were not identified as predictive.
Table 30

**Linear Regression for Well-Being Scores**

<table>
<thead>
<tr>
<th>Predictor</th>
<th>B</th>
<th>SE</th>
<th>beta</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mindfulness Score</td>
<td>0.71</td>
<td>0.06</td>
<td>0.56</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Teaching Mindfulness Integration</td>
<td>-0.21</td>
<td>0.16</td>
<td>-0.06</td>
<td>.184</td>
</tr>
<tr>
<td>Personal Life Mindfulness Integration</td>
<td>0.06</td>
<td>0.02</td>
<td>0.17</td>
<td>.001</td>
</tr>
</tbody>
</table>

Multiple correlations, t-tests, and regressions were conducted seeking to identify the relationships which exist among the variables in the study. There were statistically significant ($p < .001$) relationships between mindfulness score, teaching mindfulness integration, personal life mindfulness integration, and well-being scores. The greatest relationship exists between mindfulness and well-being; even when the data were disaggregated by gender and grade level taught, mindfulness and well-being consistently exhibited the strongest relationship.

**Summary**

Chapter 4 presented the results of the exploration of teacher mindfulness, personal mindfulness, and teacher well-being that was conducted in the province of Alberta. There was a total of 371 participants in this study; 22% identified as male ($n = 80$), 76% identified as female ($n = 283$), 1% identified as other ($n = 2$), and the remaining 2% preferred not to respond ($n = 6$). Participants were certified teachers in a school division in Alberta who had a teaching assignment as part of their contract. Males were underrepresented in these data, as is consistent with the gender
distribution of the provincial and national statistics for the profession. A range of participants from all genders, grades, and experience were represented in the study.

The survey was focused on two primary elements: mindfulness (personal mindfulness, personal mindfulness implementation, and teaching mindfulness integration) and well-being. Multiple analyses were calculated using SPSS to determine if a relationship existed among the various aspects of mindfulness and well-being.

The survey asked teachers to identify the percentage that they integrated mindfulness into their personal life and their classroom practices. The sliding scale for personal life mindfulness integration had a range of responses from 0% \((n = 7)\) to 100% \((n = 3)\), with the most commonly selected responses of 60% and 70% \((n = 24)\). The sliding scale for classroom mindfulness integration had a range of responses from 0% \((n = 11)\) to 100% \((n = 3)\), with the most commonly selected response of 60% \((n = 27)\). The participants’ personal mindfulness was also evaluated using the Freiburg Mindfulness Inventory. The overall scores for all participants were slightly above the middle possible score of 35 \((M = 38.09, SD = 6.67)\). Participants were also asked to identify all of the mindfulness techniques that they used in their personal lives \((N = 1,158)\) and their classrooms \((N = 1,185)\), in addition to any programs they use to teach mindfulness \((N = 520)\). Scores to all mindfulness-related questions indicated that all of the individuals, with the exception of one, are engaging in a personal mindfulness practice either personally or in the classroom.

The 14-item Warwick-Edinburgh Mental Well-Being Scale was used to evaluate teacher well-being. Overall, the participants in this study indicated scoring in
the mid-range (43 to 59) for well-being ($M = 48.66, SD = 8.48$). The scores on the individual items of the well-being scale indicated notable areas of concern for teachers in the study, including energy and the ability to relax.

Spearman’s Rho correlations and linear regressions calculated the relationships between the four variables in the study. There were statistically significant ($p < .001$) relationships among the mindfulness score, teaching mindfulness integration, personal life mindfulness integration, and well-being score. The weakest correlation was between teaching mindfulness integration and well-being scores ($r = .18, p < .001$), indicative of a weak to a modest relationship (Muijs, 2010). According to Muijs (2010), a strong relationship is indicated by scores from ± 0.50 and ± 0.79, and any score at or above ± 0.80 is considered very strong. The data for the Spearman’s Rho correlations between well-being scores and mindfulness scores ($r = .61, p < .001$) were the strongest relationship, closely followed by the relationship between personal mindfulness integration and teaching mindfulness integration ($r = .53, p < .001$). Linear regression identified the mindfulness score as the strongest predictor of well-being score (beta = 0.56). To more thoroughly explore the relationships between the variables, the data were disaggregated by gender and grade level taught to determine if either of these factors were associated with those relationships. All relationships were statistically significant when the data were disaggregated by female gender or elementary grade level taught. However, several not statistically significant relationships emerged when the data were disaggregated by male gender.

Chapter 5 examines the data analysis as a means to respond to the four research questions. The results are aligned with current literature, and
recommendations for further study in the area of mindfulness and well-being are discussed. Additionally, current implications for the field of education will be identified.
Chapter 5: Discussion

The purpose of this quantitative study was to investigate whether and to what extent a relationship existed between teaching mindfulness and the self-reported mindfulness practices and well-being of teachers in Alberta. Despite a growing body of research regarding the effects of mindfulness education on students (Durlak et al., 2011; Payton et al., 2008; Zenner et al., 2014; Zoogman et al. 2015), no identified research has been conducted which explores if teaching mindfulness impacts the teacher. This study aimed to fill the research gap by identifying if teaching mindfulness in the classroom was related to teacher mindfulness or teacher well-being. It was hypothesized that there would be relationships between all three variables: teaching mindfulness, mindfulness, and well-being. It was also hypothesized that well-being scores would be positively correlated with both increases in mindfulness scores and the degree to which teachers teach mindfulness in their classrooms.

In Chapter 1, the current Canadian statistics related to wellness identified that the mental health of Canadians is a concern (Canadian Mental Health Organization, 2017; Mental Health Commission of Canada, 2016). More specifically, the demands of the teaching profession (Larrivee, 2012; Noddings, 2003; O’Meara et al. 2018; UNESCO, 2019; Zenner et al. 2014) and resulting teacher stress (Canadian Teacher’s Federation, 2004; Hodge et al. 1994; Leyba, 2009; McGuire, 1979; Mykletun, 1984; Wilhelm et al., 2000) were identified as concerns for individuals in the teaching profession. A review of literature demonstrated that mindfulness techniques are effective for adults and children in the clinical setting (Frias, 2015; Greenberg & Harris, 2012; Hernández et al. 2016; Kabat-Zinn, 1982; Maloney et al., 2016;
Meiklejohn et al., 2012; Metler & Busseri, 2017; Schonert-Reichl et al. 2015; Vestergaard-Poulsen et al., 2009) and also that they show promise for children in school settings (Bluth et al. 2015; Durlak et al. 2011; Meiklejohn et al., 2012; Schonert-Reichl et al., 2015).

The methodology used for this study was detailed in Chapter 3. The quantitative data were collected through a 36-question survey of teacher well-being and mindfulness. The instrument incorporated two pre-existing instruments, the Freiburg Mindfulness Inventory (Walach et al. 2006) and the Warwick-Edinburgh Mental Well-Being Scale (Tennant et al., 2007), as well as self-reporting questions related to personal and classroom mindfulness integration. Due to the vast geography of the province of Alberta, a purposeful sample was identified from the population through a nonrandom selection process (Battaglia, 2008; Mills & Gay, 2016). One anonymous school division from the province of Alberta was chosen to participate in the study. Participants who qualified for inclusion in this study were teachers from pre-kindergarten through Grade 12 who were currently employed by the selected school division; those in division office or exclusively administrative positions were not included in this study. A 70% response rate was achieved from eligible participants, which can be confidently generalized to the population (Mills & Gay, 2016). A total of 371 responses were included in the study; of those, 195 teachers identified teaching exclusively elementary (pre-kindergarten to Grade 6), 104 exclusively taught secondary (Grade 7 to Grade 12), 50 taught a combination of grades from elementary and secondary, and 22 individuals identified that their teaching assignment could not be classified in any of the three previously mentioned
categories. Also, the gender distribution of the sample was representative of the population. This sample was comprised of 76% females \((n = 283)\), 22% males \((n = 80)\), 1% other \((n = 2)\), and 2% prefer not to disclose \((n = 6)\). Males were underrepresented in the sample; this is similar to the male representation in the overall provincial statistics for male teachers.

Statistically significant findings \((p < .05)\) were identified through quantitative data analyses. Chapter 5 presents a summary of the significant findings drawn from the results outlined in Chapter 4, and also identifies connections to current research in the fields of mindfulness, well-being, and the teaching profession. The discussion of key findings follows the order presented by the five research questions that guided this study:

1. What mindfulness techniques do teachers in Alberta implement in their own lives?
2. Is there a relationship between the extent to which teachers in Alberta report implementing mindfulness in their classrooms and their self-reported mindfulness scores?
3. Is there a relationship between the extent to which teachers in Alberta report implementing mindfulness in their classrooms and their self-reported well-being scores?
4. What is the relationship between self-reported mindfulness and well-being scores of teachers in Alberta?
Limitations, implications for the teaching profession (particularly surrounding intentional professional development to support teacher well-being), and suggestions for future research will also be explored throughout this chapter.

**Interpretation of Findings**

Results of the surveys indicated that mindfulness and well-being are multi-faceted. The data also indicated that both gender and grade level appeared to play a role in the relationships between mindfulness, teaching mindfulness, and teacher well-being. This study only attempted to identify relationships between variables and did not attempt to state causation. The quantitative data revealed that relationships existed between the variables, but not all relationships were statistically significant. Thus, it can be concluded that teaching mindfulness curricula does not directly impact well-being. However, the data provided promising evidence that those who teach mindfulness are more likely to implement mindfulness in their own lives. The data also indicated that including mindfulness practices in an individual’s personal life is related to increased well-being. These relationships will be elaborated on briefly through the key findings related to each of the individual research questions.

The grounding theories for this study, social cognitive theory (Bandura, 1977) and the self-determination theory (Ryan & Deci, 2000), provide the rationale for an individual to engage in activities, such as mindfulness, that benefit his or her well-being with primarily intrinsic and intangible benefits. The present study considered social cognitive theory in reverse of the traditional teacher-student role; in this case, students were modelling the mindfulness strategy, the teacher was observing the students and witnessing their success, which then led to the teacher deciding to model
and use the approach in his or her own life. The present study identified that there was a relationship between teachers’ personal mindfulness and teaching mindfulness. However, due to the nature of the study, causation cannot be stated. It was also not possible to determine which came first: teaching the mindfulness strategies to students, identifying the benefits via that experience of teaching, and then the teacher incorporating the mindfulness strategies into the their own personal life; or, whether the teacher was already personally mindful, and thus be more inclined to incorporate mindfulness into their teaching practice. Individual interviews and in-depth qualitative analysis would be required to explore these relationships further.

Self-determination theory (Ryan & Deci, 2000), which incorporates intrinsic motivation, social development, and well-being, was supported through the findings of this study. Ryan and Deci (2000) state that human beings are agentic and strive to become better constantly. Positive well-being is an intangible benefit that results from an individual taking care of him or herself. Although there was no specific question on the instrument which could measure this theory, the results of the well-being and mindfulness correlation demonstrated that there was a relationship between personal mindfulness scores and well-being scores. Individuals who were integrating mindfulness into their lives, a method of self-improvement, demonstrated higher well-being scores, and thus supported the self-determination theory.

**Teacher Mindfulness Techniques**

The first research question was: *What mindfulness techniques do teachers in Alberta implement in their own lives?* To explore this question, the study first determined if teachers in the province of Alberta identify as being personally mindful.
Personal life mindfulness integration was established through a self-reporting sliding scale, where participants chose the number that represented their perceived percentage of mindfulness integration from 0% to 100%. Of the 371 participants, 2% \((n = 7)\) said they do not engage in any form of personal mindfulness. On average, the participants in the study indicated integrating mindfulness in their personal life 58% of the time \((M = 58.47, SD = 24)\). The most commonly chosen percentage on the integration scales were 60% \((n = 24)\) and 70% \((n = 24)\). The highest possible response (100%) was chosen by 1% \((n = 3)\) of the participants. Therefore, it was concluded that, although the percentages of integration were vast, the majority of the participants were engaging in a personal mindfulness journey.

Subsequently, the personal mindfulness techniques that the participants engaged in were explored. As this question was primarily descriptive, the research question was explored through descriptive data. Participants identified a total of 1,137 mindfulness techniques; 2% \((n = 21)\) of the participants indicated using no techniques. The survey question required the participants choose from a list of seven pre-identified mindfulness techniques (yoga, meditation, breathing, colouring, walking, writing, music, and other) that were identified based on the pre-existing mindfulness research obtained during the literature review. Participants also had the opportunity to provide a text response if they thought their mindfulness technique was not in the provided list. Lastly, participants also had the opportunity to choose \textit{I do not engage in mindfulness strategies}. The most commonly chosen mindfulness techniques, with 21% of the responses, included music \((n = 242)\) and walking \((n = 238)\). The least commonly identified technique, 5%, was colouring \((n = 53)\).
Of the 371 participants, 20 individuals had inconsistent responses. Four individuals identified 0% integration of mindfulness into their personal lives; however, they later identified using 2 \((n = 1)\), 3 \((n = 1)\), or 4 \((n = 2)\) mindfulness techniques. It would appear that these individuals do not identify as mindfulness practitioners, although they do use the techniques. Further qualitative exploration would be required to determine the rationale for the discrepancy; however, the anonymous nature of the survey prevents any kind of follow-up. Also, 16 individuals identified integrating mindfulness into their personal lives, ranging from 2% to 78%, but identified using zero mindfulness techniques. Qualitative follow-up with these individuals would be required to determine how they are integrating mindfulness into their lives outside of utilizing known techniques, but this is outside the scope of this study.

Gender differences had an impact on the degree to which participants indicated integrating mindfulness into their personal lives. Males \((n = 80)\) reported the highest mean scores \((M = 60, SD = 24)\), with females \((n = 283)\) reporting only a two-point mean score difference, \((M = 58, SD = 24)\). Both participants in the other category \((n = 2)\) identified no integration \((M = 0, SD = 0)\). The last gender category, prefer not to disclose \((n = 6)\), had the lowest integration percentages \((M = 39, SD = 16)\). Male participants \((n = 80)\) indicated utilizing a combined total of 211 techniques \((2.64 \text{ techniques per person})\). Female participants \((n = 283)\) identified a total of 283 techniques \((3.26 \text{ techniques per person})\). The data for the other \((n = 2)\) gender category had one technique per person. Lastly, the category of prefer not to respond had 20 techniques \((3.33 \text{ techniques per person})\). The most commonly chosen techniques for males were music \((n = 53)\), breathing \((n = 42)\), and walking \((n = 41)\); the least
common was colouring \((n = 6)\). The most commonly chosen techniques for females were walking \((n = 191)\), music \((n = 186)\), and breathing \((n = 181)\); the least common was writing \((n = 43)\). The most commonly chosen techniques for the other gender category were yoga \((n = 1)\) and walking \((n = 1)\). The most commonly chosen techniques for individuals who chose prefer not to respond was walking \((n = 5)\); the least common were yoga \((n = 1)\) and writing \((n = 1)\). The data demonstrates that gender impacts the degree of personal mindfulness integration as well as the number and type of techniques that the teachers are incorporating into their personal lives.

Grade level did not appear to affect the degree to which teachers integrate mindfulness into their personal lives. There was consistency in mean scores of elementary and secondary teachers; elementary teachers \((n = 218)\) identified integrating mindfulness in their personal lives 59% of the time \((SD = 22)\), secondary teachers \((n = 122)\) integrated mindfulness in their personal lives 59% \((SD = 26)\). The multiple grades classification \((n = 14)\) was slightly lower, indicating 58% \((SD = 25)\) integrate mindfulness into their personal lives. The other classification \((n = 17)\) had the lowest integration percentage, with 46% \((SD = 17)\). The number of techniques used by elementary and secondary teachers was also relatively consistent. Elementary participants \((n = 281)\) indicated using a combined total of 699 techniques \((2.49\) techniques per person). Secondary participants \((n = 122)\) identified a total of 365 techniques \((2.99\) techniques per person). Therefore, it can be concluded that the personal mindfulness of teachers across grades is relatively stable. The most common technique for elementary participants was breathing \((21%)\), and the least common
technique was writing (4%). The most common technique for secondary participants was walking (21%), and the least common technique was colouring (5%).

In the context of this study, the conclusion is that teachers in the province of Alberta are engaging in mindfulness practices in their personal lives. Also, teachers are employing a variety of techniques as part of their mindfulness practice. This discovery is promising, as it suggests that teachers have the foundational knowledge about mindfulness and techniques, which would be beneficial in the development of intentional mindfulness and wellness programs in the school divisions. This implication will be discussed later in Chapter 5.

**Relationship Between Teaching Mindfulness and Personal Mindfulness**

The second research question was: *Is there a relationship between the extent to which teachers in Alberta report implementing mindfulness in their classrooms and their self-reported mindfulness scores?* Personal mindfulness was explored using both a sliding scale and a validated instrument. The correlation between these two variables \( r = .47, p < .001 \) demonstrated a moderate relationship (Muijs, 2010). Both of these variables were later correlated with teaching mindfulness to answer this research question, thus supporting the use of the two variables as measures of personal mindfulness.

Two separate correlations were used to explore this research question. The first looked at the relationship between the personal life mindfulness integration and the teaching mindfulness integration. Both self-reported scores were from a sliding scale with a range of 0% to 100%. The mean score for personal life mindfulness integration was 58.47, with a standard deviation of 23.95. The mean score for teaching
mindfulness integration was 54.18, with a standard deviation of 25.71. Spearman’s Rho correlations conducted on personal life mindfulness integration and the teaching mindfulness integration indicated there was a strong relationship \( (r = .53, p < .001) \) between these two variables (Muijs, 2010). Thus, it appears possible that teachers who are more personally mindful are more likely to integrate this practice into their classrooms. However, this study does not attempt to identify causation, and cannot identify which came first, being mindful or teaching mindfulness. Future experimental research would be required to determine whether teachers who learn mindfulness practices as a classroom strategy then implement the strategies in their lives, or if personally mindful teachers then implement these techniques in their classroom.

The second correlation sought to identify if a relationship existed between mindfulness scores (Freiburg Mindfulness Inventory) and teaching mindfulness integration (sliding scale score). The sliding scale is a self-reporting tool with a range from 0% to 100%. The Freiburg Mindfulness Inventory is a 14-statement instrument that has participants score each of the 14 statements on a 4-point modified Likert scale (rarely = 1, occasionally = 2, fairly often = 3, and almost always = 4). The scores range from 14 to 56, with higher scores indicating higher levels of individual mindfulness (Walach et al., 2006). There were several statements that were of particular importance for teachers. This study used the one-dimensional framework, where all scores together add up to create a single mindfulness score. The total mean was 38.09 with a standard deviation of 6.67. The statement with the highest mean \( (M = 3.13, SD = 0.72) \) was I pay attention to what is behind my actions. If the data collected were analysed using the two-factorial construct (Kohls, Saur, & Walach,
there are several statements related to the presence factor of mindfulness that are particularly relevant to teachers. Teachers are required to be accepting of their environments, patient, and cognizant of the needs of others. Multiple statements on the Freiburg Mindfulness Inventory from the acceptance factor were indicative of a teacher’s ability to cope during stressful times. These statements included, *I accept unpleasant experiences* ($M = 2.76$, $SD = 0.75$), *In difficult situations, I can pause without immediately reacting* ($M = 2.84$, $SD = 0.80$), and *I experience moments of inner peace and ease, even when things get hectic and stressful* ($M = 2.33$, $SD = 0.83$).

It would be reasonable to anticipate that these scores would have been higher in teachers; however, the results of this survey did not demonstrate that these are areas of strength for teachers. Teachers’ scores for the presence factor were notably higher, which seems logical, as there is an expectation for teachers to be attentive to the needs and feelings of their students. The statements *I am open to the experiences of the present moment* ($M = 3.09$, $SD = 0.72$), *I pay attention to what’s behind my actions* ($M = 3.13$, $SD = 0.72$), and *I feel connected to my experience in the here-and-now* ($M = 2.81$, $SD = 0.73$) demonstrate that teachers’ strength in the area of mindfulness lay in their ability to be present. The reverse score statement, *I am impatient with myself and with others* ($M = 2.91$, $SD = 0.75$), is particularly noteworthy, as teaching is a helping profession where patience is paramount. Thus, the hope would be for teacher scores to be low in that area; however, the results of this study indicate it has a relatively high score. Spearman’s Rho correlations conducted on mindfulness scores and the teaching mindfulness integration indicated there was a modest relationship ($r = .28$, $p < .001$) between these two variables (Muijs, 2010). With a correlation of this strength, it
would not be possible to generalize to the population. When disaggregated by gender, there were no statistically significant relationship between the variables for males; however, a moderate relationship existed for females ($r = .31, p < .001$). When disaggregated by grade level taught, there was a slightly lower correlation for elementary ($r = .29, p < .001$) than for secondary ($r = .33, p < .001$).

It was hypothesized that there was a relationship between teaching mindfulness and mindfulness scores. The results of the study support this hypothesis. Several findings warrant discussion. This study provided two methods for individuals to describe their personal mindfulness: a self-reporting sliding scale and a validated instrument. Results show that a strong correlation existed between the integration of mindfulness practices both in the teachers’ personal lives and teaching. However, correlations between individual mindfulness scores and teaching mindfulness integration indicated only a moderate relationship between mindfulness and teaching mindfulness.

**Relationship Between Teaching Mindfulness and Well-Being**

The third research question was: *Is there a relationship between the extent to which teachers in Alberta report implementing mindfulness in their classrooms and their self-reported well-being scores?* This question was the foundation of the research study and was designed to fill the research gap, which sought to determine if teaching mindfulness was related to higher well-being. This study was not causal in nature, but indications of a relationship of this nature would warrant significant future exploration.
Well-being scores were determined using the Warwick-Edinburgh Mental Well-Being Scale (Tennant et al., 2007). Participants scored each of the 14 statements on a 5-point Likert scale (none of the time = 1, rarely = 2, some of the time = 3, often = 4, all of the time = 5). A score ranging from 60 to 70 indicates high mental well-being, average mental well-being is represented by scores from 43 to 59, and a score ranging from 14 to 42 indicates low mental well-being (Warwick Medical School, n.d.). The overall means score on the Warwick-Edinburgh Mental Well-Being Scale was 48.66, with a standard deviation of 8.48; this is within the average mental well-being range. The lowest scores, by a significant margin, were on the statements *I have energy to spare* ($M = 2.52$, $SD = 0.97$) and *I feel relaxed* ($M = 2.90$, $SD = 0.85$). It seems reasonable that these items would be scored lower in individuals whose profession has stress and burnout concerns (Braun et al. 2019; Grayson & Alvarez, 2008; Kim at al. 2017). Also, it is notable that the highest score was from the statement *I feel loved* ($M = 3.98$, $SD = 0.83$).

The mean score for the second variable in this correlation, teaching mindfulness integration, was 54.18, with a standard deviation of 25.71. A statistically significant modest relationship was determined through the calculation of a Spearman’s Rho ($r = .18$, $p < .001$). The data were also disaggregated by gender and by grade level taught to identify if either was a factor in the relationships. There was a statistically significant relationship present in the elementary data ($r = .29$, $p < .001$), indicating that elementary teachers’ implementation of mindfulness programs and techniques in their classrooms was correlated with increases in teacher well-being scores. Potentially, this could be attributed to the increased frequency that elementary
teachers are implementing mindfulness, as discussed in the implications. There was also a statistically significant relationship between the variables when the data were disaggregated to include only females \( (r = 0.24, p < .001) \). Conversely, there was no statistically significant relationship was found when data were disaggregated by secondary grades taught or male gender.

Several additional aspects of teaching mindfulness were explored in a descriptive nature, including the identification of the programs used to teach mindfulness in the classrooms, the number of techniques used in classrooms, and descriptions of particular techniques. Participants were provided with a list of eight programs (Inner Kids Program, Inner Resilience Program, Learning to BREATHE, Mindful Schools, MindUP, Wellness Works in Schools, Other, Self-Created Program) and an additional option for no program used. There was no limit to the number of choices the participants could choose; a total of 520 programs were identified. The most commonly used program was MindUP (37%); the least commonly used programs were Inner Kids Program (< 1%) and Inner Resilience Program (< 1%).

Teaching mindfulness integration scores were relatively high in the sample; the higher usage of this program could be due in part to the school division’s implementation of MindUP education as a multi-year, division-wide initiative. Additionally, the division’s professional development opportunities in the area of teacher and student wellness likely facilitated the overall implementation rates of various programs and techniques.

A total of 1,185 techniques were identified as being implemented in the classrooms. Of the total sample, breathing \( (n = 238) \) and music \( (n = 251) \) were the
most commonly used. On average, there were 3.10 ($SD = 1.91$) techniques used by the participants. There was a noticeable difference in the number of techniques used in elementary ($M = 3.76, SD = 1.67$) and secondary ($M = 2.08, SD = 1.82$) classrooms. The lower number of techniques at the secondary level aligns with the lower levels of implementation in secondary classrooms that are seen in the overall population.

As it was hypothesized, well-being scores were positively correlated with the degree to which teachers teach mindfulness in their classrooms. It is notable to recognize that both elementary school teachers and female teachers had higher correlation coefficients than the overall population.

**Relationship Between Mindfulness and Well-Being**

The fourth research question was: *What is the relationship between self-reported mindfulness and well-being scores of teachers in Alberta?* This question sought to identify if the mindfulness and well-being of Albertan teachers aligned with the research from the clinical setting. Based on the existing literature (Ludwig & Kabat-Zinn, 2008; Kabat-Zinn & Chapman-Waldrop, 1988; Kabat-Zinn et al. 1985; Kabat-Zinn et al. 1986; Kabat-Zinn et al., 1998; Kabat-Zinn & Hanh, 2009; Peterson & Pbert, 1992; Werdani, 2017) higher mindfulness scores should be correlated with higher well-being scores. Scores from the Warwick-Edinburgh Mental Well-Being Scale ($M = 48.66, SD = 8.48$) and the Freiburg Mindfulness Inventory ($M = 38.09, SD = 6.67$) were correlated using the Spearman’s Rho correlation. The strongest statistically significant correlation of the study was identified between mindfulness scores and well-being scores ($r = .61, p < .001$). The statistical significance carried
through all disaggregated data, elementary \((r = .60, p < .001)\), secondary \((r = .62, p < .001)\), males \((r = .73, p < .001)\), and females \((r = .58, p < .001)\).

The final hypothesis from this study was that well-being scores would be positively correlated with increases in mindfulness scores. There was a statistically significant strong relationship between the variables. These findings are broadly in line with much of the literature reviewed in Chapter 2. It is promising to see that the correlations and causation identified in clinical experiments align with the correlations found in this study’s sample population.

**Limitations of the Study**

This study has concentrated on creating a framework for future quantitative research on teacher mindfulness and well-being in the field of education. Less than 10 years ago, Burke (2010) identified mindfulness practice within the school setting as a new, but growing practice. Burke (2010) states that an upsurge in the use of mindfulness-based interventions has been identified over the recent decade, resulting in an increase in teaching mindfulness skills to promote psychological health and well-being in the classroom. The relative infancy of incorporating mindfulness into the teaching practice in the field of education is a limitation of this study. One glaring limitation of the study is that correlation does not equate to causation; although the variables of the study may be related, there is no way to identify if one caused another. It is therefore difficult to determine if participants were mindful and then integrated that into their teaching practice, or if they learned techniques through teaching the programs and then opted to incorporate these techniques into their lives.
The researcher attempted to identify trends in the use of mindfulness and its impacts on well-being in the field of education by collecting survey data from a small group of teachers within one school division in the province of Alberta. The sample size, chosen by nonrandom purposive sampling, is a limitation of this case study. The sample was chosen from the population with the aim to represent the population of teachers in the province of Alberta. Although clear criteria were established, and the sample was chosen using the information available, there is a potential for inaccuracy in either the criteria or the selection (Mills & Gay, 2016). The potential for error in selection reduces generalizability. Ideally, participants would be randomly selected from a variety of grades and multiple school divisions across the province.

Additionally, the use of a self-reporting survey is limiting, in that respondents simply may not be honest. Respondents may provide responses that they believe align with the vision of the study. The term, mindfulness, was in the title of the principals’ presentation to staff. Despite being provided with time at the meeting to complete the survey, there is the potential that those who are not interested in mindfulness, or who are disbelievers in mindfulness, may have opted out of the survey; similarly, those who are supporters of mindfulness or mindfulness practitioners may have been more likely to complete the survey. Additionally, participants completing the survey may not have felt comfortable responding to questions that may be deemed personal, thus resulting in an incomplete survey or arbitrarily chosen responses.

Furthermore, the use of the sliding scales required individuals to employ a level of self-reflection and was a calculation that was possibly overly subjective. Lastly, there were multiple questions on the survey which required background
knowledge as to what mindfulness is, despite being provided a definition in the survey. The responses to the question, *What, if any, mindfulness technique(s) do you currently use in your classroom* clearly indicated confusion between the terms mindfulness, growth mindset, and restorative practice. For example, *Zones of Regulation, We Are Thinkers*, restorative practice, and *Kimochis* are not mindfulness programs; they are self-regulation and social and emotional learning programs. Also, *Calm.com, Headspace, Peace Out, Go Noodle*, and *Cosmic Kids Yoga* are not mindfulness programs; they are tools that support regulation. All of the aforementioned reinforce the observation that results generated from self-reporting must be viewed cautiously.

This study did not include a pretest-posttest. Historically, the sample school division had implemented mindfulness training as part of multiple division-wide professional development opportunities. Also, there was also a team of individuals who travelled to schools in the division, providing training specific to the *MindUP* curriculum. Had pre-implementation data been available, a pretest-posttest comparison would have provided valuable insight into causation.

Generalizations cannot be made based on the findings of this study. However, this study will provide a framework for continued research on teacher well-being and mindfulness practices in the educational setting.

**Recommendations for Future Research**

The purpose of this quantitative study was to identify if correlations existed between variables. This study created a framework for future research in the area of mindfulness and well-being in the educational setting. The survey utilized in this study
provided a tool for obtaining quantitative scores; however, the voice of the individuals is missing. Thus, additional mixed-methods research, allowing for the quantitative support in conjunction with the qualitative voice, is encouraged.

There was a notable difference between the implementation and techniques used in elementary versus secondary classrooms. It would be useful to identify if elementary students will continue to utilize mindfulness as they enter secondary school. A longitudinal study is warranted to determine if an upward trend would emerge.

**Implications for Professional Practice**

Implications for mindfulness and teacher well-being can be garnered from this research. First, the vision for school systems is to have knowledgeable, healthy teachers standing before all students. Results suggest that there are positive correlations between personal mindfulness, teaching mindfulness, and well-being. This would suggest that both personal mindfulness and teaching mindfulness may be factors influencing teacher well-being. Billions of dollars are spent reactively by the federal and provincial governments on mental illness; however, the time has arrived to allocate additional funds to identifying and implementing pro-active methods of supporting mental health. Additionally, educational administrators should implement techniques to support teacher knowledge regarding mindfulness and well-being. This can be achieved through both professional development and clauses in collective contracts that support mental health.

Secondly, this study offers suggestive evidence that a discrepancy exists in the amount of mindfulness-based instruction that is taking place in elementary and
secondary classrooms. Based on the means and standard deviations for teaching mindfulness integration, elementary teachers are faster to integrate mindfulness ($M = 59.09, SD = 21.91$) than are secondary teachers ($M = 45.54, SD = 28.18$). One possible rationale for this discrepancy is that it is easier to integrate social and emotional learning into elementary classrooms, particularly due to the fact that most teachers have their students for the entire day and can integrate aspects of mindfulness easier than teachers who are on a strict timetable. Additionally, it could be due to the playful nature of elementary school classrooms, leading to a more fluid integration of yoga, breathing exercises, or meditation. It seems teachers in secondary education would require more intentionality to integrate mindfulness into their classrooms. This research also suggests that grade-specific training and resources are required for teachers to present mindfulness to their students accurately.

**Conclusion**

Mindfulness and well-being are concepts that have been repeatedly correlated in the medical field (Fox et al., 2014; Khoury et al., 2013). However, this study was the first to explore the relationships between mindfulness teaching practices and teacher well-being in the educational setting. The teaching practice is becoming increasingly complex (Larrivee, 2012; Zenner et al. 2014) and stress is prevalent in helping professions, such as teaching (Finlay-Jones, 1986; Hodge et al. 1994; McGuire, 1979; MetLife, 2012; Mykletun, 1984; Wilhelm et al., 2000). Each day, over 40,000 teachers stand before over 700,000 students in the province of Alberta, where they impart knowledge and model behaviours. Identifying cost-effective
methods of supporting teacher mental health is paramount in ensuring teachers are able to fulfil their essential role.

This study makes a contribution to the field, looking at the relationships of mindfulness and well-being. Results suggest well-being, in conjunction with teaching, mindfulness is one piece of the equation. Results also show that teaching mindfulness and engaging in mindfulness practices as a method of improving well-being are promising. The study also revealed many descriptive insights into how mindfulness techniques and programs are used in the classroom as well as in teachers’ personal lives. However, despite the insight gleaned from this study, the individual voices of teachers were absent. Future qualitative and mixed methods approaches would further support research on mindfulness and well-being. Additionally, experimental research is warranted to identify causation for improved well-being. Focused attention must be paid to researching teacher well-being, not only in the province of Alberta but across Canada.

Establishing a province-wide understanding of well-being and mindfulness would be a method of proactively engaging teachers with their mental health. All teachers should be provided with the knowledge, techniques, and tools to support both their own mental health and the mental health of the students in their classrooms. Everyone in education must continue to stand up and speak out for well-being initiatives. It is only when teachers are healthy that they are able to support their students.


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Appendix A

Research Survey

University of Portland

This is an anonymous survey.

This survey is part of a research study being conducted by LeAnna Murtha-Toles as part of the University of Portland School of Education doctoral program. The purpose of the survey is to identify if there is a relationship between teacher well-being and mindfulness. If you agree to participate and are a teacher in the province of Alberta, please complete the following survey. If you do not want to participate or are not a teacher in the province of Alberta, please do not complete this survey.

This is an anonymous survey; however, it is unlikely, yet possible, that a data breach could occur with the Qualtrics survey and that the data may not be truly anonymous. All data will be kept in a password protected computer and will be reported in the aggregate.

There is no anticipated risk to the participants in this research, but the data collected will potentially be beneficial to the field of education and may affect future professional learning for teachers. Results of this research may be published a journal paper or presented in a conference. However, I cannot guarantee that you personally will receive any benefits from this research. Your participation is completely voluntary. If you decide to participate, you are free to withdraw your consent and discontinue participation at any time without penalty.

If you have any questions about the study, please feel free to contact LeAnna Murtha-Toles at murthato18@up.edu or the faculty advisor, Eric Ancil, at anctil@up.edu. If you have questions regarding your rights as a research subject, please contact the IRB (IRB@up.edu).

Directions: This anonymous survey is completely voluntary and is open to certified teachers in the school division. It should take approximately 5 minutes to complete. Please provide your response to each question by choosing the most appropriate option and complete each screen fully as you will not be able to return to it. Your honesty and participation are appreciated. As a token of appreciation, $50 cash prizes will be issued to two randomly chosen survey participants. Following the completion of the survey, you will automatically be redirected to a separate database, where you can enter this draw. Many thanks in advance.
**Freiburg Mindfulness Inventory**

© Copyright by Walach, Buchheld, Grossman, & Schmidt

The purpose of this inventory is to characterize your experience of mindfulness.

*Directions: Please use the last 14 days as the time-frame to consider each item. Provide an answer for every statement as best you can. Please answer as honestly and spontaneously as possible. There are neither right nor wrong answers, nor good or bad responses. What is important to us is your own personal experience. Please complete this screen fully as you will not be able to return to it.*

<table>
<thead>
<tr>
<th>Item</th>
<th>Rarely</th>
<th>Occasionally</th>
<th>Fairly Often</th>
<th>Almost Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>I am open to the experience of the present moment.</td>
<td>⬜️</td>
<td>⬜️</td>
<td>⬜️</td>
<td>⬜️</td>
</tr>
<tr>
<td>I sense my body, whether eating, cooking, cleaning or talking.</td>
<td>⬜️</td>
<td>⬜️</td>
<td>⬜️</td>
<td>⬜️</td>
</tr>
<tr>
<td>When I notice an absence of mind, I gently return to the experience of the here and now.</td>
<td>⬜️</td>
<td>⬜️</td>
<td>⬜️</td>
<td>⬜️</td>
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<tr>
<td>I am able to appreciate myself.</td>
<td>⬜️</td>
<td>⬜️</td>
<td>⬜️</td>
<td>⬜️</td>
</tr>
<tr>
<td>I pay attention to what's behind my actions.</td>
<td>⬜️</td>
<td>⬜️</td>
<td>⬜️</td>
<td>⬜️</td>
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<tr>
<td></td>
<td>Rarely</td>
<td>Occasionally</td>
<td>Fairly Often</td>
<td>Almost Always</td>
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<tr>
<td>--------------------------------</td>
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</tr>
<tr>
<td>I see my mistakes and difficulties without judging them.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I feel connected to my experience in the here-and-now.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I accept unpleasant experiences.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I am friendly to myself when things go wrong.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I watch my feelings without getting lost in them.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>In difficult situations, I can pause without immediately reacting.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I experience moments of inner peace and ease, even when things get hectic and stressful.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I am impatient with myself and with others.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I am able to smile when I notice how I sometimes make life difficult.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>
Teaching and Practicing Mindfulness

Mindfulness is not a religious practice; it is a system of mental training that may impact an individual’s ability to perceive and respond to themselves, their relationships, and the world. It is an awareness that emerges through paying attention on purpose (Kabat-Zinn, 1994; Kabat-Zinn, 2003).

This portion of the questionnaire is designed to provide information regarding the degree to which mindfulness is integrated into your professional practice and personal life.

Directions: Please complete this screen fully as you will not be able to return to it.

Instructions: For the question below, please slide the bar to indicate the answer that best reflects your experience.

0 = not integrated at all  
50 = sometimes/occasionally integrated  
100 = integrated all the time

To what extent have you integrated mindfulness into your teaching practice?

To what extent have you integrated mindfulness into your personal life?
What, if any, mindfulness program(s) do you currently use in your classroom? (choose all that apply)

- [ ] Inner Kids Program
- [ ] Inner Resilience Program
- [ ] Learn to Breathe
- [ ] Mindful Schools
- [ ] MindUP
- [ ] Wellness Works in Schools
- [ ] Other (please specify) _____________
- [ ] I created my own mindfulness program.
- [ ] I do not use a mindfulness program in my classroom

What, if any, mindfulness technique(s) do you currently use in your classroom? (choose all that apply)

- [ ] Yoga
- [ ] Meditation
- [ ] Breathing
- [ ] Colouring
- [ ] Walking
- [ ] Writing
- [ ] Music
- [ ] Other (please specify) _____________
- [ ] I do not use mindfulness techniques in my classroom

What, if any, mindfulness strategies do you employ in your own life? (choose all that apply)

- [ ] Yoga
- [ ] Meditation
- [ ] Breathing
- [ ] Colouring
- [ ] Walking
- [ ] Writing
- [ ] Music
- [ ] Other (please specify) _____________
- [ ] I do not engage in mindfulness strategies
**Warwick-Edinburgh Mental Well-Being Scale**

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*Directions: Below are some statements about feelings and thoughts. Please choose the answer that best describes your experience of each over the last 14 days. There are no right or wrong answers. Please choose the answer that best reflects your experience rather than what you think your experience should be. Please complete this screen fully as you will not be able to return to it.*

<table>
<thead>
<tr>
<th>Statement</th>
<th>None of the time</th>
<th>Rarely</th>
<th>Some of the time</th>
<th>Often</th>
<th>All of the time</th>
</tr>
</thead>
<tbody>
<tr>
<td>I've been feeling optimistic about the future</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
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<tr>
<td>I've been feeling useful</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
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</tr>
<tr>
<td>I've been feeling relaxed</td>
<td>○</td>
<td>○</td>
<td>○</td>
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</tr>
<tr>
<td>I've been feeling interested in other people</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I've had energy to spare</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Experience</td>
<td>None of the time</td>
<td>Rarely</td>
<td>Some of the time</td>
<td>Often</td>
<td>All of the time</td>
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<tr>
<td>I've been dealing with problems well</td>
<td>○</td>
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</tr>
<tr>
<td>I've been thinking clearly</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I've been feeling good about myself</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I've been feeling close to other people</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I've been feeling confident</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I've been able to make up my own mind about things</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I've been feeling loved</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I've been interested in new things</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I've been feeling cheerful</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>
Demographic Information

Gender

☑ Male
☑ Female
☑ Other (please specify) [__]  
☑ Prefer not to respond

What is your current teaching assignment? (choose all that apply)

☐ PreK-Kindergarten
☐ Grades 1-3
☐ Grades 4-6
☐ Grades 7-9
☐ Grades 10-12
☐ Other (please specify) [__]

Years of teaching experience (including this year)

☑ 1-2 years
☑ 3-5 years
☑ 6-12 years
☑ 13-20 years
☑ 21-27 years
☑ 28+ years

Survey Link

https://uportland.qualtrics.com/jfe/form/SV_72Iz1R2TVAY0Hlj
Appendix B

Information Sheet

This survey is part of a research study being conducted by LeAnna Murtha-Toles as part of the University of Portland School of Education doctoral program. The purpose of the survey is to identify if there is a relationship between teacher well-being and mindfulness. If you agree to participate and are a teacher in the province of Alberta, please complete the following survey. If you do not want to participate or are not a teacher in the province of Alberta, please do not complete this survey.

This is an anonymous survey; however, it is unlikely, yet possible, that a data breach could occur with the Qualtrics survey and that the data may not be truly anonymous. All data will be kept in a password protected computer and will be reported in the aggregate.

There is no anticipated risk to the participants in this research, but the data collected will potentially be beneficial to the field of education and may affect future professional learning for teachers. Results of this research may be published a journal paper or presented in a conference. However, I cannot guarantee that you personally will receive any benefits from this research. Your participation is completely voluntary. If you decide to participate, you are free to withdraw your consent and discontinue participation at any time without penalty.

If you have any questions about the study, please feel free to contact LeAnna Murtha-Toles at murthato18@up.edu or the faculty advisor, Eric Anctil, at anctil@up.edu. If you have questions regarding your rights as a research subject, please contact the IRB (IRB@up.edu).

Directions: This anonymous survey is completely voluntary and is open to certified teachers in the school division. It should take approximately 5 minutes to complete. Please provide your response to each question by choosing the most appropriate option and complete each screen fully as you will not be able to return to it. Your honesty and participation are appreciated. As a token of appreciation, $50 cash prizes will be issued to two randomly chosen survey participants. Following the completion of the survey, you will automatically be redirected to a separate database, where you can enter this draw. Many thanks in advance.
Appendix C

This presentation was provided to all principals to share with their staff during the November 6, 2019 staff meeting. It provided participants with information regarding the research and also the links to the survey.

Mindfulness Research within the Alberta Context

This survey is part of a research study being conducted by LeAnna Murtha-Toles as part of the University of Portland School of Education doctoral program. The purpose of the survey is to identify if there is a relationship between teacher well-being and mindfulness.

All data will be kept in a password protected computer without any link to your name. This is an anonymous survey and there are no anticipated risks to your participation in this survey, however it is unlikely yet possible that a data breach could occur with the Qualtrics survey, and that the data may not be truly anonymous. All data will be kept in a password protected computer and will be reported in the aggregate.

There are no anticipated risks to your participation in this survey. Results of this research may be published in a conference or journal paper. However, I cannot guarantee that you personally will receive any benefits from this research. Your participation is completely voluntary. If you decide to participate, you are free to withdraw your consent and discontinue participation at any time without penalty.

If you have any questions about the study, please feel free to contact LeAnna Murtha-Toles at murthato18@up.edu or the faculty advisor, Eric Ancill, at ancill@up.edu. If you have questions regarding your rights as a research subject, please contact the IRB (IRB@up.edu).
Directions
This anonymous survey is completely voluntary and is open to certified teachers in the school division. It should take approximately 5 minutes to complete. Please provide your response to each question by choosing the most appropriate option and complete each screen fully as you will not be able to return to it. Your honesty and participation are appreciated.

As a token of appreciation, $50 cash prizes will be issued to two randomly chosen survey participants. Please click on the link at the end of the survey to enter this draw.

Consent
If you agree to participate and are a certified teacher in this school division in the province of Alberta, please complete the following survey.

If you do not wish to participate or are not a certified teacher in this school division in the province of Alberta, please do not complete this survey.
Please note that bit.ly links are case sensitive.

bit.ly/mindfulnessinalberta
Appendix D

Consent to use Freiburg Mindfulness Inventory

Vogt, Hans <Vogt@europa-uni.de>
Mon 6/24/2019 3:57 AM
Munthe-Tøle, Leanne; Walach, Harald <Walach@europa-uni.de>

Dear Anna,

attached you find papers on the fmi. You are welcome to use it.
I cc Prof Walach.

Best
Hans

Ans Voigt
Research Fellow M.A.
Europa-Universität Viadrina Frankfurt (Oder)
Dessauerstraße 20
10485 Berlin
vogt@europa-uni.de
Tel.: 030 - 402360 6449963

Consent to use Warwick-Edinburgh Mental Well-Being Scale

no-reply@warwick.ac.uk
Sat 5/1/2019 11:17 AM
Munthe-Tøle, Leanne

Thank you – this email confirms you have permission to use WEMWBS in accordance with the details entered in your registration shown below. We suggest you bookmark this page for future reference: https://www.wemwb.org/yourself/register%?
url=https%3A%2F%2Fwarwick.ac.uk%3Fac%2Fes%2Fme%2Fresearch%2Fplatform%2FWemwbs%2Findex%2Fregister%2Fresources&amp;date=02%7C01%7C00

If you have any questions please feel free to contact us via email: ventures@warwick.ac.uk
Appendix E

Memorandum

To: LeAnna Murtha-Toles
From: John Orr, Ph.D.
Date: 9/9/2019
RE: IRB Notification of University of Portland Project #2019113

Dear LeAnna Murtha-Toles:

On behalf of the University of Portland’s federally registered Institutional Review Board (IRB00006544), a member of the Board has reviewed your research proposal, titled “From Teacher of Mindfulness to Mindful Teacher.” The IRB concludes that the project satisfies all IRB-related issues involving human subjects research under the “Exempt” classification. A printout of this memorandum should serve as written authorization from IRB to proceed with your research.

Projects classified as exempt based on Title 45, Part 46.104 of the Code of Federal Regulations do not require further review by University of Portland’s Institutional Review Board unless you modify some portion of your project. If the study is modified, you must submit a Continued Review Form (located on the IRB website) for continuing review before continuing with your project.

Please note that you are required to abide by all requirements as outlined by the Institutional Review Board.

A copy of this memorandum, along with your Request for Review and its documentation, will be stored in the IRB Committee files for three years from the completion of your project, as mandated by federal law. If you have any questions, please contact me at irb@up.edu.

Respectfully,

John C. Orr, Ph.D.
Assistant Provost
Chair, Institutional Review Board
Professor of English
Appendix F

Below is a complete list of unedited text responses provided as additional information for participants who chose the other category for the question What, if any, mindfulness program(s) do you currently use in your classroom?

smiling mind
Zones of Regulation & Dojo
Zones of regulation
Zones of Regulation and Social Detective
Zones of Regulation, Growth Mindset
yoga videos, music, breathing
Zones of Regulation
Yoga Videos
you tubes
Zones, Go Noodle, Cosmic yoga
CALM App
Go Noodle and Zones of Regulation
Kimochis
Zen Den, my own yoga practice techniques
Zones, WeThinkers, Wellness Coach
Zones of Regulation, Go Noodle Cosmic Yoga
I have mindfulness cards with activities we do in class.
Zones of Regulation
Kimochis/zones
DOJO, Go Noodle, Zones
Teachings of Gabor Mate, Gordon Neufeld, Martin Brokenleg, Stan Kutcher and Kevin Cameron. Zones of Regulation.
CALM and Headspace
cosmic yoga zen den and peace out
Calm
cosmic kids yoga
Zones of Regulation
Zones of Regulations
Restorative Practice
Calm
Integrated assignments in Health Curriculum
Head Space
Calm
Classroom meditation
Different random strategies learned through videos or people in my personal life. Not a specific program.
Calm
Calm.com
CALM app
Calm
yoga
Zones of Regulation-adapted with other aspects of my professional and personal learning
Zones of Regulation
kimochis
Calm
Music while writing and cosmic yoga, coloring
yoga, music, books for mindfulness
Zones of Regulation
We Thinkers
zen den
calm.com
CALM app
2 minutes of mindfulness website/ocean sounds
circles and restorative practices
Headspace
Board games, activities
Mindup. Students are pulled from class occasionally.
youtube meditation videos
Calm App
Social thinking
Zones of Regulation
I am extremely cautious when using any of these programs as several invoke religious practice or are not sensitive to possibility of trauma and cautionary consideration of it.
Breathing and chilling
Appendix G

Below is a complete list of unedited text responses provided as additional information for participants who chose the other category for the question *What, if any, mindfulness technique(s) do you currently use in your classroom?*

Noise cancelling headphones, calming corner stretching, calming videos Listening, watching, stillness Prayer Videos
Short brain breaks in the calming section of “GoNoodle” - practices breathing strategies.
Prayer quiet times, relaxing poems, body breaks We also read daily tips from a book that often includes mindfulness exercises and strategies for stress-management
Glitter Jars Art Obstacle Courses, Kindness, Sharing Circles, growth and fixed mindsets stretching, body breaks Talking/sharing/ Running, cardio, puzzles class meetings talking Classroom conversation and sharing reading Exercises Stretching Dancing Child-centered Play calming tools In my counselling office Art reflection I use some of these things for myself, which in turn help me to be a better, more effective teacher focus circles and restorative practices Sudoku neuroscience connections positive self talk, promoting positives of others Pressure, mindful noticing
Appendix H

Below is a complete list of unedited text responses provided as additional information for participants who chose the other category for the question What, if any, mindfulness strategies do you employ in your own life?

Prayer
I read research on the topic that I feel upset about to understand it better.
Reading
pulling weeds
Sports
Podcasts
Sensory deprivation, crocheting, cooking
Prayer, Exercise
Dance
Running
red wine
hiking, running
Prayer
spending time with my dog
calm app
Running
working out, audio books
rugby
Art
Cooking, Travelling, Researching, Swimming, Dancing,
playing sports
creating
Exercise
sports
Sports
exercise
Running
Calm app
Puzzles, Prayer, Spending time outside
Running
exercise
exercise
Sports
running, thinking
exercise
knitting, spinning
being in the moment with my kids
sports
sports
podcasts
Sports, Gym
Exercise
outdoor activities, friend and family time
animal therapy; hard, physical work
spending time with my dog
sewing/quilting
daily time spent reading the bible
Self doodle/thought journal, horseback riding (animal connection/therapy), personal
    reading about mindfulness/personal empowerment
Prayer, quilting, sewing, reading
eexercise
eexercise
reflection
Running
knitting
Exercise and art
Getting lost in a tv show
Exercise
Play sports
self reflection
focus
I’m a vegan.
hot pilates and restorative interactions with people
prayer
Knitting, crochet, reading
purposeful in-the-moment analysis of feelings and reactions to situations
working
exercise
Running Swimming
Reading
gardening, cooking, working out
crafts
being active, hockey, running, reading, tea and coffee breaks, conversations with
    friends and family, family time
Guided meditation
Baths
Reading
bathing rituals
Dance
Boot Camp
(redacted)
reading, activity based strategies