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## **Building Emotionally Skilled Teachers: A Mixed-methods Study Exploring the Impact of MBI on Perceptions of Self-management, Enhanced Mindfulness, Well-being, and Stress**

Emily Coffin Daigle

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**BUILDING EMOTIONALLY SKILLED TEACHERS: A MIXED-METHODS STUDY  
EXPLORING THE IMPACT OF MBI ON PERCEPTIONS OF SELF-MANAGEMENT,  
ENHANCED MINDFULNESS, WELL-BEING, AND STRESS**

EMILY COFFIN DAIGLE

A DISSERTATION

In the

Isabelle Farrington College of Education and Human Development

Presented to the Faculty of Sacred Heart University

in Partial Fulfillment of the Requirements for the

Degree of Doctor of Education

2022

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## ABSTRACT

### BUILDING EMOTIONALLY SKILLED TEACHERS: A MIXED-METHODS STUDY EXPLORING THE IMPACT OF MBI ON PERCEPTIONS OF SELF-MANAGEMENT, ENHANCED MINDFULNESS, WELL-BEING, AND STRESS

Emily C. Daigle

This Improvement Science Dissertation in Practice (ISDiP) aimed to understand to what extent mindfulness-based interventions (MBIs) designed for the school setting aided in the development of middle school teachers' perceptions of self-management skills and what impact MBIs had on participants' perceptions of enhanced mindfulness, well-being, and stress. Additionally, the study reported on the indirect impact participation in the mindfulness program had on teachers' perceptions of classroom management, climate, and relationships with students. Using a mixed-methods design, the researcher investigated the impact of a two-phase mindfulness program designed to provide high-quality professional learning and structured intervention to a group of 20 middle school teachers after data from multiple district measures indicated teachers' social-emotional competencies were a necessary focus within the context of district goals. The researcher utilized a pre- and post-intervention survey measure, self-report questionnaires completed during the training and intervention phases, and participant voice garnered during a structured focus group to answer the proposed research questions. Results of the study support previous conclusions as cited in the literature. School-based MBIs offer effective strategies for teacher self-management that are feasible within the scope of the school day. The data presented supports this conclusion; participants reported improvements on all measures when comparing growth on pre- and post-intervention scores. Results revealed statistically significant improvement when measuring perceived self-management skills and enhanced mindfulness

(total score), and statistically significant reductions in perceived stress levels. Additionally, participants reported that their ability to use mindfulness to self-manage emotions throughout the day had an indirect impact on their positive interactions with students and on the classroom environment. Finally, to inform program expansion the researcher designed the study to understand what components of the school-based program were most effective and why, and which specific MBIs participants found most useful to manage stress and improve well-being. Based upon the results, leaders invested in developing comprehensive social-emotional learning (SEL) programs within their school districts may find this study relevant in a climate indicative of elevated teacher stress and compromised well-being.

*Keywords:* mindfulness, stress, well-being, self-management, teachers

## DEDICATION

To my husband, for his patience on late nights and tired mornings, for ignoring the piles of paper on the dining room table, for endless support, and for always believing in me. Gratitude to you always on every step of our journey.

To my two sons who are the air that I breathe, I hope that you always value education, hard work, and accomplishment.

To my parents, for raising me to believe in myself and for always loving me unconditionally.

To my doctoral cohort, your passion for changing the world is contagious; I have learned something from each of you and I am so proud of all of us. With special thanks to Kemen Holley, so grateful for your intelligence and willingness to share it.

Lastly, to my mom Jill, my sister Katie, my Aunt Suzie, my mother in law Cindy, my sister in law Amy, my girlfriend ride or die tribe, and my two smart and beautiful nieces Anna and Charlotte: "Never do anything by halves if you want to get away with it. Be outrageous. Go the whole hog. Make sure everything you do is so completely crazy it's unbelievable." (Roald Dahl, Matilda)

## ACKNOWLEDGEMENTS

To all of the teachers who volunteered to be in this study, without your participation this would not have been possible. The work is just beginning, the researcher dedicates this study to educators everywhere, who roll up their sleeves and dig deep with a passion to shape the future.

Thank you for all you do.

To Dr. Title, for hours of your time, for sharing your wisdom and experience, for helping me slay the passive-voice dragon, and for making it fun to learn.

To Dr. Morgan, for your intelligence, energy, and passion.

To Dr. Haskins, I am in awe of the work you do and it is an honor that you said yes. You are an amazing human.

To Karie Frost for your editing eyes, Jocelyn Tamborello-Noble for facilitating the focus group, and Dr. Cathleen Swody for sharing your SPSS knowledge.

To T. Moore, who leads without fear.

To Dean Alfano for vision and to my professors of this very first doctoral cohort, I have never learned so deeply and completely. With special thanks to Dr. Ruby, Dr. Marmo, and Dr.

O'Leary... fierce women are ye, it has been an unforgettable cerebral journey.

## TABLE OF CONTENTS

COPYRIGHT.....	ii
ABSTRACT.....	iii
DEDICATION.....	v
ACKNOWLEDGEMENTS.....	vi
TABLE OF CONTENTS.....	vii
LIST OF TABLES.....	xiii
LIST OF FIGURES.....	xv
CHAPTER I: The Problem of Practice.....	1
Background.....	2
Statement of the Problem.....	7
Setting.....	12
The System.....	14
Root Cause Analysis.....	25
Purpose Statement.....	36
Significance of Study.....	36
Methodology.....	39
Research Design.....	39



Target Population and Participants.....	40
Sampling.....	41
Procedures.....	41
Data Collection Instruments/Measures.....	43
Research Questions.....	44
Hypotheses.....	45
Data Analysis.....	47
Limitations.....	48
Positionality.....	50
Definitions of Key Terms.....	53
Summary.....	59
CHAPTER II: Review of Literature and Practice.....	60
Student Outcomes.....	60
Why SEL Matters.....	60
Adult Actions.....	64
The Connection Between Teacher SEL and Student SEL.....	64
The Impact of Teacher Stress on Students.....	65
Teacher Stress.....	69

Causes of Teacher Stress.....	70
Consequences of Teacher Stress: Personal and Systems Implications.....	75
Working Theory of Improvement.....	77
Strategies.....	80
Attempts to Address Teacher Stress.....	80
High Impact Strategy: Mindfulness-Based Interventions.....	85
A Brief History of Mindfulness.....	85
Adult Outcomes: The Direct Benefits of MBI.....	86
Student Outcomes: The Indirect Benefits of MBI.....	88
Best Practices for School-Based MBI.....	90
Addressing a Knowledge Gap: What Research is Needed?.....	93
Summary.....	94
CHAPTER III: Methodology.....	95
Theory of Improvement.....	95
Purpose of Study.....	97
Methodology.....	97
Research Design.....	99
Theoretical Lens.....	100

Target Population and Participants.....	101
Sampling.....	101
Participants.....	102
Procedures.....	106
Treatment Intervention.....	106
Fidelity Check.....	109
Research Questions and Data Measures.....	109
Hypotheses.....	119
Data Analysis.....	121
Threats to Validity.....	123
Summary.....	124
CHAPTER IV: Results.....	126
Sample Characteristics.....	126
Results.....	126
Training Effectiveness.....	127
Intervention Fidelity and Effectiveness.....	134
Development of Self-Management as a Result of MBI Participation.....	146
Statement of Hypotheses: Conclusion.....	151

Summary.....	154
CHAPTER V: Discussion and Implications.....	155
Discussion.....	155
Practical Importance of Study Impacts.....	156
Impact on Teachers.....	156
Impact on Students.....	159
Program Implications/Next Steps.....	160
Study Strengths.....	164
Limitations.....	165
Suggestions for Future Directions.....	168
Conclusion.....	170
REFERENCES.....	171
APPENDICES.....	197
Appendix A: Letter from Superintendent.....	197
Appendix B: Study Invitation Email.....	198
Appendix C: Informed Consent.....	201
Appendix D: Informed Consent for Focus Group.....	203
Appendix E: Module Calendar, Sequence, and Topics.....	205

Appendix F: Weekly Action Plan Template.....	206
Appendix G: Daily Reflection Data Sheet.....	207
Appendix H: Survey Slip for Professional Learning Modules.....	209
Appendix I: Pre- and Post-Intervention Survey Battery.....	211
Appendix J: Protocol Structured Focus Group.....	221
Appendix K: Practice Consultation Protocol.....	222
Appendix L: Frequency of Daily Practice Data Table.....	224

## LIST OF TABLES

Table 1. End-User Feedback: Mandatory SEL Targets in Teacher Evaluation Plans.....	19
Table 2. End-User Feedback: Train-the-Trainer Model for Districtwide SEL Training.....	22
Table 3. Fishbone Diagram: Understanding the Problem.....	26
Table 4. Professional Learning Themes Identified Upon Review of Middle School Climate Surveys.....	28
Table 5. Themes Identified Upon Review of Open-Ended Comments on Exit Slips Following Districtwide Professional Learning.....	29
Table 6. Wellness Inventory: Middle School Educators' Reasons for Stress.....	31
Table 7. Middle School Climate Themes Identified Upon Review of Climate Survey.....	34
Table 8. Why SEL Matters: Themes that Emerge in Authentic Practice.....	62
Table 9. How is Teacher Stress Being Addressed in Authentic Contexts?.....	84
Table 10. Descriptive Information of Participants.....	103
Table 11. Demographic Information of Target Population.....	104
Table 12. Alignment of Research Questions, Data Measures, and Data Analysis.....	110
Table 13. Participant Voice: MBI Trainings.....	133
Table 14. Daily Use: Which MBIs Were Used Most Frequently .....	136
Table 15. Participant Voice: Most Effective/Least Effective MBI and Why?.....	138
Table 16. Participant Perceptions: Effectiveness of Intervention.....	140

Table 17. Independent-Samples t-Tests: Frequency and Perceived Effectiveness.....	144
Table 18. Paired-Samples $t$ – Test for Pre- and Post-Test.....	148
Table 19. Exploring Connections: How Teacher Mindfulness Might Impact Students.....	153

## LIST OF FIGURES

Figure 1. Wellness Inventory: Middle School Educators.....	8
Figure 2. Stress and Well-Being: Middle School Department Survey.....	9
Figure 3. Middle School Suspensions/Expulsions by Race/Ethnicity, 2018-2019 .....	11
Figure 4. Systems Map: Providing Context for the Problem of Practice.....	16
Figure 5. Driver Diagram: Organizing Mechanisms for Change.....	78
Figure 6. Improvement Theory: How Leveraging MBI Will Lead to Improved Outcomes.....	96
Figure 7. Participant Response to Training: Did Training Impact Understanding?.....	128
Figure 8. Participant Response to Training: Did Training Impact Confidence?.....	129
Figure 9. Participant Response to Training: Incorporating MBIs.....	130
Figure 10. Participant Perceptions on the Effectiveness of Training Components for All Modules.....	131
Figure 11. Daily Completion Tally: Daily Reflection Data Sheet.....	135



## **Chapter I: The Problem of Practice**

Research provides evidence of a strong relationship between students' social-emotional competencies and positive student outcomes. Studies correlate high-quality social-emotional learning (SEL) programming to improvements in student achievement (Corcoran et al., 2018; Durlak et al., 2011; Jones et al., 2017), indicators of well-being (Taylor et al., 2017), and the development of the life skills necessary to thwart negative outcomes (Brackett, 2019; Gubi & Bocanegra, 2015; Schonert-Reichl, 2017, Weissberg & Cascarino, 2013).

Based on the research completed, to implement high-quality SEL programming with fidelity and sustainably, school plans must include teacher SEL (Hanley, 2017; Jones et al., 2013; Schonert-Reichl, 2017; Walker, 2020). Research suggests that because the current climate generates high stress, burnout, and impaired well-being, any district looking to foster change should treat explicit educator instruction in self-management as paramount to achieving success (Garner, 2010; Heller, 2017; Larson et al., 2018).

Through the application of improvement science, this researcher determined that an inadequate focus on teacher SEL is one of many causes for elevated stress and impaired well-being for Westly Middle School teachers. This mixed-methods study explored to what extent mindfulness-based interventions (MBIs) designed for the school setting aided in the development of middle school teachers' perceptions of self-management skills and what impact MBIs had on participants' perceptions of enhanced mindfulness, well-being, and stress. Additionally, the study reported on the indirect impact participation in the mindfulness program had on teachers' perceptions of classroom management, climate, and relationships with students.

## The Problem

### Background

Over the last decade, educators witnessed a surge of interest in and research on the link between social-emotional learning competencies and positive student outcomes (Durlak et al., 2011; Gordon et al., 2016; Gubi & Bocanegra, 2015; Jones et al., 2017; Schonert-Reichl, 2017, 2019). Research provides evidence that the impact of SEL is maintained over time, with lasting benefits for students regardless of race, socioeconomic status, or geographic location (Taylor et al., 2017). Set in the context of a global pandemic, the current educational landscape amplifies the critical need for schools to address the comprehensive needs of students, including their emotional well-being (CASEL, 2021).

Numerous studies suggest that for students to access reading, writing, and math, they must first feel safe, secure, and regulated (Brackett, 2018; Cramer & Bennett, 2015; Elias, 2019; Schonert-Reichl, 2019). The district leaders in this study embrace the Collaborative for Academic, Social, and Emotional Learning (CASEL) definition, competencies, and recommendations for best practice as a framework while developing and implementing programming:

**Social and emotional learning (SEL)** is an integral part of education and human development. SEL is the process through which all young people and adults acquire and apply the knowledge, skills, and attitudes to develop healthy identities, manage emotions, and achieve personal and collective goals, feel and show empathy for others, establish and maintain supportive relationships, and make responsible and caring decisions. (CASEL, 2020)

In December of 2020, CASEL adopted this definition, reflecting an adjustment in the existing language. CASEL cited “insights that explored SEL as a lever for equity and excellence” as a driver for these updates. The five core competencies that anchor the framework include self-awareness, self-management, responsible decision-making, relationship skills, and social-awareness (CASEL, 2020).

Despite growing evidence of the connection between student and teacher SEL, conclusions warrant further research (Garner, 2010; Jennings & Greenberg, 2009; Jones et al., 2017). Most models focus myopically on the development of student SEL competencies but negate the impact of teacher SEL competencies and teacher well-being on student outcomes and the school climate in general (Collie et al., 2012; Gregory & Fergus, 2017; Weissberg & Cascarino, 2013).

As schools design and implement programming, a better understanding of professional learning (PL) for educators built to foster high-quality SEL program implementation will help drive equitable learning outcomes for students (Jagers et al., 2019). Too often, teachers report that despite a cohesive understanding of the critical need for SEL programming, teacher training and support in SEL interventions remains inadequate (Collie et al., 2012; Durlak et al., 2015). For SEL programming to be effective, educators must receive high-quality professional learning to develop their SEL skillset (Brackett, 2018; Durlak et al., 2011, 2015; Heller, 2017). To optimize SEL environments for students, teacher well-being must be addressed (Brackett, 2018).

Teachers’ well-being directly correlates to social-emotional (SE) competencies (Zakrzewski, 2013). Teacher stress levels act as a barometer for well-being, and teacher stress and burnout are often identified as primary barriers to SEL program fidelity (Brackett et al., 2010). According to researchers, the development of teacher SEL must be included in planning

to promote successful program implementation on a large scale and to address these potential barriers (Jennings & Greenberg, 2009). The need to address teacher stress and well-being as reflected in the literature becomes evident when analyzing potential barriers to successful implementation of SEL programming in the district studied.

### ***District Background***

Westly Public Schools (WPS) is located in a suburban community in the northeastern United States, with 16 schools serving approximately 9,654 students during the 2018-2019 school year. Minoritized-enrollment hovers slightly below the state average (47.6%) at 43.5% with enrollment as follows: Hispanic or Latino 19.4% (state average 25.8%); Asian 10.9% (state average 5.2%); Black or African American 8.1% (state average 12.8%); White 56.5% (state average 52.4%). English Learners comprise 6.1% of the student population (state average 7.6%), students with disabilities 13.3% (state average 15.4%), and 25.8% of Westly students were eligible for free or reduced-price meals (42.1% state average) (CSDE, 2019). The researcher selected these categorical descriptions to align with the descriptions utilized on the state website.

The mission of WPS is to inspire and prepare all students to realize their full potential and enhance our global community (whps.org). A District Performance Index (DPI) reports the average performance of students in a subject area on the state summative assessments. The DPI ranges from 0-100, with the state's DPI target set at 75. For the 2018-2019 school year, the district earned a DPI of 75.4 for English Language Arts, 70.6 for math, and 73.4 for science (CSDE, 2019). Data for the 2018-2019 school year represents the last year of full-time, in-person programming before the global coronavirus disease 2019 (COVID-19) pandemic.

Westly is dedicated to developing and implementing high-quality SEL programming that drives equitable outcomes for all learners. In 2015, the Superintendent of Schools articulated a vision for the Office of Diversity Advancement. In response to prioritization, in 2019 the office was rebranded as the Office of Equity Advancement, under which the Equity and Diversity Council (EDC) functions. Members of the EDC represent educators who volunteer their time and passion for equity from all school levels and disciplines across the district. With a renewed allocation of resources, the EDC began the systematic process of analyzing and improving district practices to dismantle systemic racism and historical inequities in Westly Public Schools.

In 2020-2021, the Board of Education approved an additional equity advancement and family engagement clinical position to support partnerships with parents and community stakeholders. The 2021-2022 budget included new resources for a full-time Family Services social worker to develop and implement structures aimed at fostering strong dual-capacity home-school-community partnerships, that facilitate student access to and engagement in full, safe, and equitable learning environments. The vision of the EDC supports the district's commitment to advance equity, honor diversity, and foster inclusiveness in all areas of the district's programs, practices, and services. The district's vision for equity and anti-racism captures the organizational vision, which the Board of Education approved on December 1, 2020:

We, the members of Westly Public Schools, dedicate ourselves to the pursuit of equity. Equitable schools are those that value and honor all in our community as unique individuals capable of maximizing their true potential. We make a solemn promise to identify and dismantle all elements of systemic racism and historical inequities. We vow to clear paths, with a relentless duty to those in traditionally marginalized groups. We pledge to partner with all families in the service of the success of each child. (whps.org)

The researcher grounded this study in a theory of change rooted in improvement science. As such, the researcher collaborated with leader colleagues through a partnership with the Department of Pupil Services, the Office of Equity Advancement, and the EDC. During the 2020-2021 school year, the Westly leadership team worked to understand the current climate of each school and implemented professional learning to address leader and teacher cohesiveness around SEL definitions and philosophies: One must begin where schools are in the present (Elias, 2019). The leadership team of the Office of Equity Advancement and the EDC developed this professional learning in partnership with district and building leaders.

In Westly Public Schools, the executive leadership team articulated a vision statement that leverages SEL as a tool for equitable change. Despite this commitment, discipline data from all three middle schools confirms inequities for students from historically marginalized groups that are incongruent with the organization's goals. When conceptualizing and implementing SEL as a foundation for discipline reform that has historically revealed over-representation for students of color, SEL has the power to be a game-changer (Gregory & Fergus, 2017; Gubi & Bocanegra, 2015). These implications from the research suggest that if Westly leaders and educators commit to SEL as a tool for equity, then they must prioritize teacher SEL and well-being.

Further data analysis shows that Westly educators currently experience symptoms of stress and seek strategies to manage their stress and improve well-being throughout the workday. Westly Public Schools commits to excellence for all learners, dedicates resources to SEL advancement, and articulates a vision that leverages SEL as a tool for equity advancement. A comprehensive plan for the development of teacher SE competencies is essential as the Westly school system aligns organization goals with reality.

## Statement of the Problem

Without a skillset to promote well-being, educators risk serious personal and occupational health implications that may lead to burnout (Heller, 2017; Larson et al., 2018, Martinez, 2016). Whether emotionally exhausted teachers leave the profession or stay and exist unhappily in their careers, the impact on their personal well-being and the well-being of their students is undeniable: Burned-out teachers are not effective teachers (Jennings & Greenberg, 2009). Teacher well-being is a key element when considering how to improve schools and impact equitable positive student outcomes (Larson et al., 2018).

Educators in Westly identified a need for professional learning that provides explicit instruction in self-management strategies designed to target stress and well-being. In the spring of 2021, all middle school educators completed a wellness inventory to drive planning for the 2021-2022 professional learning calendar. Educators responded to the survey ( $n=121$ ) with 20.7% representing educators at Bonny Middle School, 36.4% from Smith Middle School, and 43.8% at Prince Middle School. Survey results yielded concerning trends as educators reported high levels of work-related stress, increased stress in the COVID-19 climate, and high teacher interest in explicit strategies to manage stress (Figure 1).

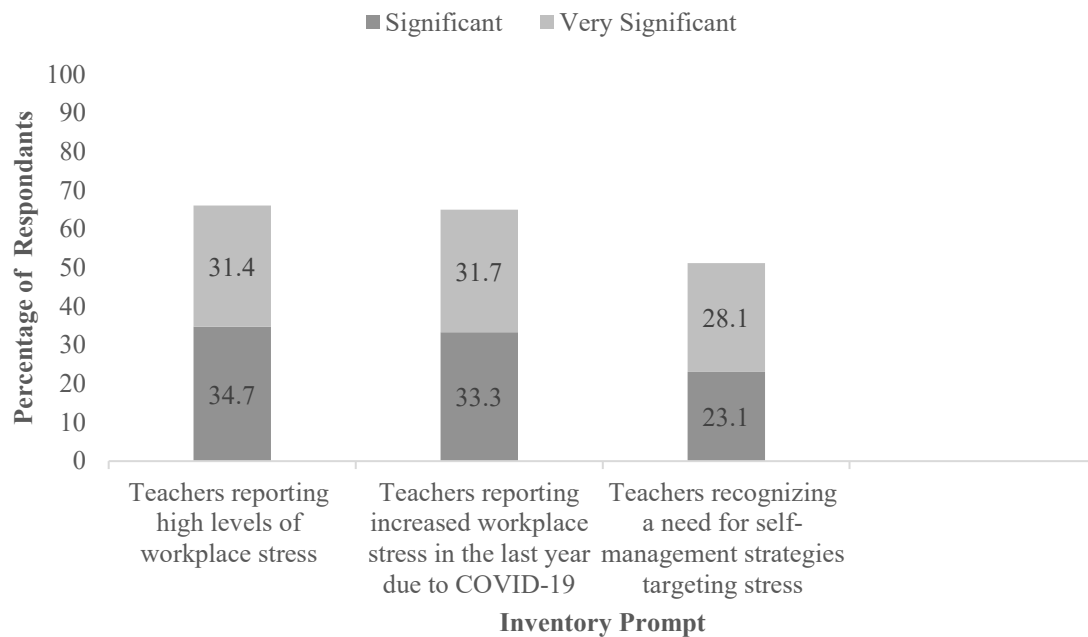
**Figure 1***Wellness Inventory: Middle School Educators*

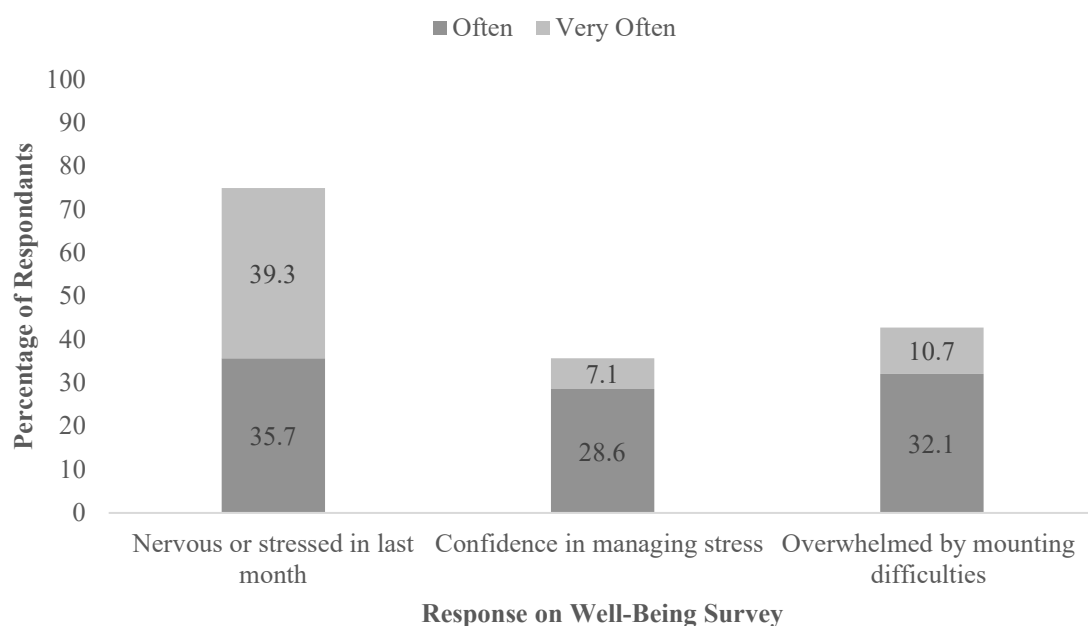
Figure 1 provides evidence that middle school educators in Westly ( $n=121$ ) are experiencing high levels of stress, with 66.1% reporting significant or very significant levels of workplace stress that impact their well-being. Sixty-five percent report increased levels of stress in the past year due to the COVID-19 landscape and 51.2% are seeking strategies to manage workplace stress. Additional prompts on the wellness inventory revealed that for workplace stress-management strategies to work, they must be something that educators can do on their own time without needing to collaborate (40%), the strategies must be simple and accessible (33.3%), and the tools taught must be brief (21.7%). When asked what primary barrier exists that prevents participation in workplace stress management, 51.7% of respondents identified time, 28% shared they had difficulty sticking with a daily plan, and 12.7% said they lacked knowledge of specific strategies designed for work.



As part of a department initiative on self-care in winter 2021, a cohort of teachers and related service providers at the middle school level ( $n=28$ ) completed a department-created survey assessing stress and well-being (Figure 2).

**Figure 2**

*Stress and Well-Being: Middle School Department Survey*



As shown in Figure 2, 75% of the 28 respondents reported that in the past month they often, or very often, felt nervous or stressed; 35.7% reported feeling confident that they could manage their stress; and 42.8% shared that in the last month they felt overwhelmed by mounting difficulties. These data indicate a need to address teacher stress and well-being for middle school teachers in Westly.

A review of the literature echoes district concerns: Teachers nationwide report an inadequate focus on teacher SEL and well-being (Collie et al., 2012; Durlak et al., 2015;

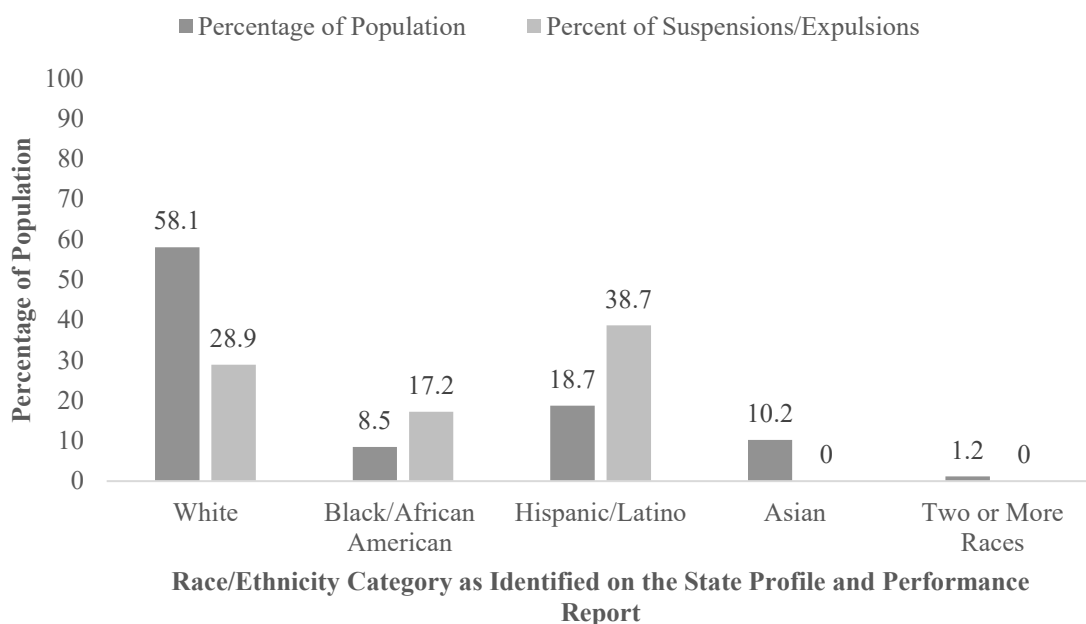
Greenberg et al., 2016; Schonert-Reichl, 2017). An inadequate focus on teacher SEL affects all stakeholders within the school system.

The problem addressed in this study: Middle school teachers in Westly Public Schools lack adequate self-management competencies designed to target stress and improve well-being. This problem becomes more urgent and profound when examining it through a social justice lens: Teachers who lack SEL competencies struggle to respond to student behavior with a restorative approach and are more likely to resort to punitive removal practices, such as suspensions and expulsion (Jennings & Greenberg, 2009).

Analyses of national data reveal disproportionate removal practices for students from historically marginalized groups (Elias, 2019; Gregory & Fergus, 2017; Gubi & Bocanegra, 2015). As shown in Figure 3, Westly discipline data at the middle school level provide local evidence of disparities when disaggregating data by race/ethnicity (CSDE, 2019). The race/ethnicity categories identified align with those utilized on the School Profile and Performance reports (CSDE, 2019). Native Hawaiian/Pacific Islander and American Indian/Alaska Native are not included as no middle school students identified as such during the 2018-2019 school year. Suspension data included both in-and out-of-school suspensions.

**Figure 3**

*Middle School Suspensions/Expulsions by Race/Ethnicity, 2018-2019*



The data in Figure 3 reveal a gap between the organization's goals for equitable outcomes and reality. For example, during the 2018-2019 school year, 18.7% of the middle school student population identified as Hispanic or Latino, yet they accounted for 38.7% of suspensions and expulsions. Black or African American students represented 8.5% of the total student population and 17.2% of the suspensions and expulsions assigned. Consider these data when examining the prevalence of out-of-school suspensions and expulsions for White students who comprised 58.1% of the student population and represent 28.9% of the suspensions and expulsions assigned. These data suggest that disparate removal practices exist within Westly's middle schools.

If Westly does not address disparities indicative of opportunity inequities, a critical component to successful SEL implementation may be compromised. Comprehensive SEL programs include professional learning for teachers to develop adult competencies that then drive

equitable outcomes for students as teachers proactively address student behavior through an SEL lens (Zakrzewski, 2013). If teachers lack a toolkit of their own SEL strategies, then teaching SEL to students will be untenable (Walker, 2020). “If we want children to flourish, we have to begin by taking care of our teachers” (Brackett, 2019, p. 191).

This problem of practice, a critical need to address teacher stress and well-being, is one component of a systematic, multi-phase plan developed by the EDC in collaboration with district leaders to implement districtwide SEL as a lever for equity. To support the development of a districtwide plan, this pilot study addressed the well-being of middle school teachers. The researcher selected the three middle schools for the location of this study based upon the extant data reviewed and for convenience and accessibility. The researcher identified certified teachers as the participant group to drive a deeper understanding of how participation in the intervention indirectly affected classrooms.

## **The Setting and the System**

### **Setting**

This pilot study was one achievable step within the scope and sequence of a multi-year implementation plan for equitable SEL programming designed in collaboration with the Westly Public Schools’ Office of Equity Advancement and Department of Pupil Services. The study took place in all three of Westly’s public middle schools. The results of the study will drive next-step conversations as teacher SEL is addressed districtwide. All reported school data is from the 2018-2019 school year, the last year of full-time, in-person programming before the COVID-19 pandemic. The researcher organized the following section to provide background on each of the three middle schools in which this study took place.

***Prince Middle School***

During the 2018-2019 school year, Prince Middle School (PMS) enrolled 903 students in grades 6-8 with enrollment as follows: White, 59%; Hispanic/Latino, 16.9%; Asian, 9.6%, Black/African American, 8.3%. English Learners represented 4.2% of the student body, 13.4% of students were identified as students with disabilities, and 21.6% were eligible for free or reduced-price meals. A school performance index (SPI) records the average performance of students in a given subject area on the state's summative assessment. The SPI range is 0-100 and the state target is 75. PMS scored an SPI of 77.5 in English Language Arts, a 71.5 in math, and a 72.7 in science (CSDE, 2019). The leadership team at PMS includes one principal and two assistant principals.

***Smith Middle School***

During the 2018-2019 school year, Smith Middle School (SMS) registered 887 students in grades 6-8 with enrollment as follows: White, 55.1%; Hispanic/Latino, 22.7%; Asian, 10.4%; Black/African American, 8.5%. English Learners represented 3.8% of the student population, students with disabilities, 12.2%, and students eligible for free or reduced-price meals, 31.3%. SMS scored an SPI of 74.0 in English Language Arts, a 65.2 in math, and a 68.4 in science (CSDE, 2019). The leadership team at SMS includes one principal and two assistant principals.

***Bonny Middle School***

Bonny Middle School (BMS) is the smallest of the three public middle schools in Westly and, based upon a lottery system, draws its student body from all of the neighborhoods of Westly. During the 2018-2019 school year, 417 students enrolled at BMS in grades 6-8 with enrollment as follows: White, 62.4%; Hispanic/Latino, 14.1%; Asian, 11.3%; Black/African

American, 8.9%. English Learners represented 2.4% of the student body, 14.1% of students identified as students with disabilities, and 23.3% were eligible for free or reduced-price meals. BMS scored an SPI of 76.7 in English Language Arts, a 71.3 in math, and a 75.5 in science (CSDE, 2019). The leadership team at BMS includes one principal and one assistant principal.

### **The System**

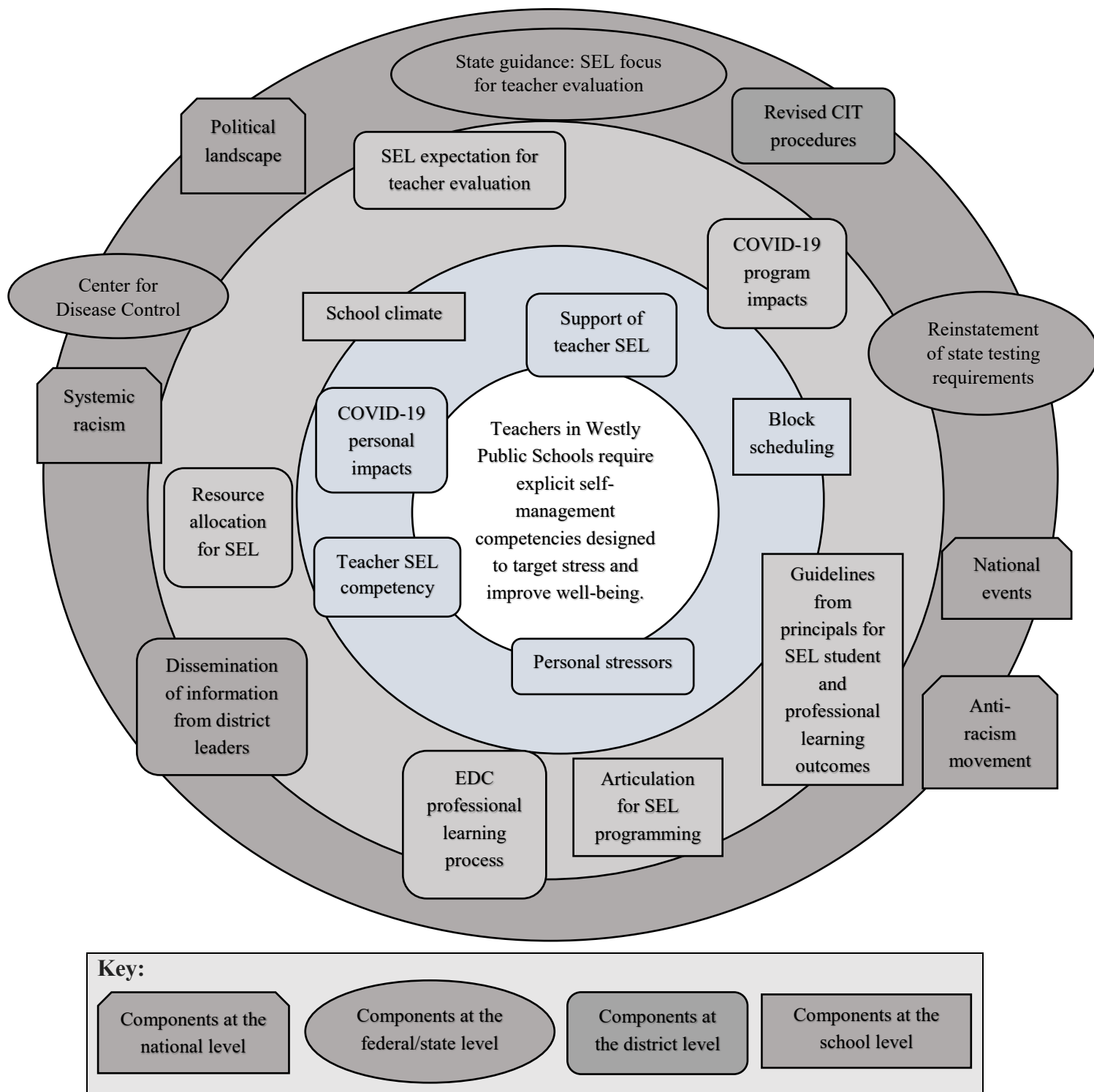
Understanding the systems that influence the problem of practice supports the identification of potential solutions, avoiding what Bryk et al. call solutionitis, “the propensity to jump quickly to a solution before fully understanding the problem to be solved” (2015, p. 24). Recognizing that systems are fluid and that a problem is complex necessitates input from multiple stakeholders, or end-users (Perry et al, 2020). Examining distal and proximal impacts is critical as the researcher identifies access points for intervention. The researcher conducted empathy interviews with end-users to drive a deeper understanding of how system contexts influence stakeholder perceptions (Perry et al., 2020). End-users included middle school classroom teachers and related service providers from all three schools. Empathy interviews involve informally discussing the problem of practice with end-users to garner multiple perspectives and develop a deeper understanding of the contexts and systems that contribute to the problem by realizing end-user experience (Hinnant-Crawford, 2020; Perry et al., 2020).

System analysis assists the researcher in identifying how current practices may lead to current outcomes (Bryk et al., 2015). A school system is complex; failure to examine the systems in which a problem resides can lead to “unintended consequences” (Hinnant-Crawford, 2020, p. 101). System mapping enables the scholarly practitioner to “achieve a deeper understanding about the problem situation by clearly defining the problem context” (Perry et al., 2020, p. 57). Figure 4 illustrates the systems impacting the presented problem of practice for Westly Public

Schools, using a model modified from Perry et al. (2020, p. 58) and Hinnant-Crawford (2020, p. 107).

**Figure 4**

*Systems Map: Providing Context for the Problem of Practice*





Based upon empathy interviews conducted with end-users, the map displayed in Figure 4 supports the identification of problem priorities, to lend context to the problem of practice. The researcher organized systems that contribute to the problem distally to proximally to represent the level of impact on the problem of practice. As outlined in the map key, systems influencing the problem reside at the district level, school level, and federal and state level. The shades included in the map provide contrast to aid in distinguishing each system's impact on the problem of practice.

Most distal to the problem of practice, yet significant when considering educator well-being, are the external systems that affect stress. A recent Gallup poll (Harlan & Nichols, 2020) identifies the year 2020 as the most stressful year in recent history. The adoption of Westly's vision for equity and anti-racism required persistent commitment from the leaders in the district. During the 2020-2021 school year, the executive team tasked the Office of Equity Advancement with developing its vision statement and informing the board of education in the development of an Educational Equity Policy. This work was set within the context of a national climate grappling with conversations around systemic racism and the anti-racism movement. As evidenced by public comment at numerous Board meetings, multiple perspectives and diverse opinions exist in the Westly community regarding equity and racism. The Board of Education adopted the Educational Equity Policy on June 1, 2021 (whps.org).

Conflicting belief systems reflected in national and local media influence the personal stress and well-being of educators at all levels. Teachers educate students in times of peace and conflict. The murder of George Floyd on May 25, 2020, the Capitol Riot on January 6, 2021, the political climate during the last election season, and the Atlanta shootings on March 26, 2021, represent a scant handful of events within the external systems that affect personal stress levels.

Through all of the conflict, teachers relentlessly commit to their craft: educating their students and preparing them to be citizens of the world they are inheriting. To address the national climate, CASEL updated its SEL definition and framework to emphasize SEL's ability to advance educational equity (CASEL, 2020).

In response to this critical need to leverage SEL as a tool for equity, in August of 2020, the State Commissioner of Education sent a letter to all Superintendents, Directors, and Executive Directors outlining adjustments to the Educator Evaluation Plan. The letter contents cited the importance of the social and emotional learning and well-being of students and educators and the recognition that, for students to achieve academically, SE needs must be addressed first (Cardona, 2020). In response to this state governance, Westly Public Schools adjusted districtwide expectations for teacher evaluation plans for the 2020-2021 school year. The state's updated teacher evaluation language included an expectation that all educators have SEL targets in both professional learning objectives (PLOs) and student learning objectives (SLOs).

To support teachers, principals provided templates for PLOs and SLOs to all staff at mandatory building meetings and via email at the start of the school year. While the end-users interviewed appreciated the model goal language, evidence of lack of clarity arose as the SE professional learning provided during the school year occurred in the months following goal development. This timeline left many educators feeling like they incorporated goals into their evaluation plans that they did not fully understand (Table 1).

**Table 1***End-User Feedback: Mandatory SEL Targets in Teacher Evaluation Plans*

Discourse theme	Example quote
Lack of clarity	“At one of our first building meetings we were told that we would need to include SEL targets for both our professional goals and our student goals... I honestly wasn’t even sure what that meant... but then I just cut and pasted the goal I was emailed.” (Middle School Teacher)
Horizontal articulation	“I work in multiple buildings as a (related service provider). In one building, I had a helpful conversation with my evaluator about the background of the SEL targets...what I might incorporate and why.... In my other buildings, we were just told we could ‘use this goal’. I was grateful I had the time with my evaluator; otherwise, I would have no idea what I was even including.... The idea that I would be evaluated on something I had not received training on was concerning.” (Middle School Related Service Provider)
Confusion around language	“I appreciate the template offered, but I had to get my head around how to measure something I wasn’t even clear about myself... there are a lot of buzz words and acronyms being used... even now after a year of training I am not confident—but I had to include those goals before we even had training.” (Middle School Teacher)

*Note.* SEL = Social Emotional Learning.

Table 1 provides evidence that the rollout of mandated SEL language in teacher evaluation plans may have been premature, as the training required to build educator understanding around core concepts of SEL happened after educators wrote their evaluation goals. These sample quotes suggest that educators did not feel adequately trained or versed in SEL concepts prior to including evaluation targets in their plans. This is one example of how state and local governments can contribute to teacher stress levels.

Additionally, in response to federal and state guidance regarding COVID-19, Westly Public Schools adjusted scheduling and programming for students throughout the 2020-2021 school year. To maximize in-person learning time and decrease cross-cohort exposure, the district moved to a block schedule at the start of the school year. The district assigned students at the middle school level to a cohort based on the first letter of their last name. Students attended

an in-person block schedule every other week, with an early dismissal on all days. The district offered one optional building-level training on teaching in a block schedule to all middle school teachers before the change, which included additional online resources for self-directed learning. During their off week, students accessed classes remotely. Teachers had access to professional learning opportunities to understand how to engage learners in the remote setting.

Students with extensive special education needs could attend full in-person school from the start of the school year and, in November of 2020, additional students with special education plans returned to in-person learning based upon criteria established by the Director of Pupil Services. On March 17, 2021, all middle school students returned for in-person learning. The district maintained the block schedule and shorter day through the end of the school year. A cohort of students remained in full remote learning for the entire year, based upon parent/guardian choice.

Despite a year that was in constant schedule flux due to the COVID-19 pandemic, the state resumed its state testing requirement after canceling testing typically administered during the spring of 2019. Studies often cite adherence to state testing requirements and expectations as a driver of teacher stress (Von der Embse et al., 2016). State testing at the middle school level began on April 19, 2021, one month after welcoming back all students to full in-person learning. When interviewing end-users, they frequently cited constantly changing schedules due to COVID-19 and concern that students were not prepared due to challenges with online engagement and consistency, as triggers for teacher stress.

In response to the state SEL requirements, leaders within the district curriculum office adjusted the professional learning calendar developed for the 2020-2021 school year to provide districtwide SEL training throughout the year. While preserving all Wednesdays as half-days,

this shift in training required the elimination of Collaborative Inquiry Teams (CIT). Historically, staff selected CIT days to provide autonomy in professional learning opportunities. In the year preceding this change, the district offered seven CIT sessions to WPS educators. Recognizing a critical need to provide SEL professional learning for all staff, the Office of Equity Advancement and the EDC, in collaboration with the curriculum office, provided mandatory SEL trainings focused on philosophy, equity, and alignment with the WPS instructional framework during five sessions throughout the 2020-2021 school year in lieu of all CIT sessions. Researchers cite lack of autonomy in decision-making as a source of teacher stress (Greenberg et al., 2016); however, the district prioritized time for SEL training. Educators at all levels within a school system often cite time constraints as a trigger for workplace stress (Durlak et al., 2015; Larson et al., 2018). In a wellness inventory administered to all middle school educators in the spring of 2021 ( $n=121$ ), 56.7% of respondents cited lack of time as a trigger for workplace stress. Finding time for essential training is a constant challenge for district and building leaders. The district reinstated six CIT sessions for the 2021-2022 school year.

The 2020-2021 school year represented the first of a multi-year projection aimed to understand, develop, and implement SEL to drive equitable outcomes. In line with what the literature suggests district leaders recognize that bringing effective and sustainable SEL into Westly schools will take years (Elias, 2019). During the 2020-2021 school year, the Office of Equity Advancement and the EDC focused on training district and building leaders. Professional learning sessions aimed to build districtwide cohesiveness and a deeper understanding of how to embed SEL into the district's instructional framework. The goal of these trainings was to build district leadership capacity so that building leaders could then train teachers; the district frequently uses a train-the-trainer professional learning model. When the researcher interviewed

end-users to garner a deeper understanding of the model, responses revealed that this current practice might be compounding educator initiative fatigue and resistance to new initiatives, both of which may be potential sources of educator stress (Table 2).

**Table 2**

*End-User Feedback: Train-the-Trainer Model for Districtwide SEL Training*

Discourse theme	Example quote
Consistency with SEL philosophy	“We have a great core group of admin on board with SEL... but you all need to know everyone is not on the same page... I feel like for some it is just a checkbox that needs to get done... even with our trainings this year, in talking with other teachers in the other schools... what we all experienced was very different... length of the training, quality of the presentation... time spent all together or in breakouts ... very inconsistent.” (Middle School Teacher)
Trainer expertise	“I think with something this important we need consultants... people who really know SEL.” (Middle School Related Service Provider)
Consistency with trainings	“I work in multiple buildings and I rotate building meetings. What I get in one building is night and day from another... when so many people are disseminating information there is a lot of variability.” (Middle School Related Service Provider)

*Note.* SEL = Social Emotional Learning.

As evidenced in Table 2, when interviewing end-users about their experiences with principal-led SEL trainings, inconsistencies in training experiences became evident. The train-the-trainer model implemented enabled everyone in the district to receive essential professional learning but was vulnerable to fragmentation. Building principals participated in training first and were then responsible for running the same trainings within their buildings.

Lack of horizontal articulation, or alignment, across the middle schools may also be contributing to the problem of practice. Historically, the leaders, educators, and students at PMS have participated in a platform for Social Emotional Learning designed on the Yale Center for Emotional Intelligence RULER program. During the 2021-2022 school year PMS is participating

in a pilot program to implement the State Department of Education's Aperture Initiative, a comprehensive student SEL assessment system (Aperture Education, 2020). In prior years, leaders at SMS incorporated components of the Positivity Project into their school culture and climate plan to address SEL; however, during the 2019-2020 and 2020-2021 school years, no school wide SEL-specific curriculum existed. Similarly, BMS does not have a school wide SEL program in place. Neither SMS nor BMS are part of the pilot Aperture Initiative. Elias (2019) cautions that fragmented approaches can contribute to initiative fatigue and ultimately influence program effectiveness. All staff members across all three middle schools participated in the district's SEL initiative as designed by the Office of Equity Advancement and the EDC throughout the 2020-2021 school year.

Closest to the problem of practice are the personal stressors that influence teacher well-being throughout the workday and variability in adult SEL competencies, specifically with self-management skillsets. A department survey designed to assess middle school teacher stress, ( $n=28$ ) revealed the following: Seventy-five percent of respondents reported that in the past month they often, or very often, felt nervous or stressed; 35.7% reported feeling confident that they could manage their stress; and 42.8% shared that in the last month they felt overwhelmed by mounting difficulties. The literature cites teaching as one of the most stressful professions (Greenberg et al., 2016; Schonert-Reichl, 2017; Taxer et al., 2018). Workplace and personal stressors compounded by COVID-19 have amplified a critical need to address teacher well-being. End-users interviewed cited the following as triggers for high stress: the shift to block scheduling, rotating cohort groups, frequent changes to schedules, and a revolving list of students who were either full in-person, hybrid, or fully remote.

While the district professional learning calendar prioritized SEL training, these opportunities focused primarily on developing student SE competencies. During the 2020-2021 school year, one professional learning session dedicated twenty minutes to educator SEL in partnership with an outside clinical and SEL consultant. Additionally, other sessions during the year incorporated educator SEL during session grounding. Despite these efforts, professional learning sessions did not include explicit instruction in SE strategies for proactive or in-the-moment self-management.

In a wellness inventory administered to all middle school educators in the spring of 2021 ( $n = 121$ ), 51.2% responded that they recognize a need for strategies to manage workplace stress. In response to receiving this survey, multiple teachers reached out to share their opinions about the survey itself. Their comments were telling. One teacher shared, “I have been wishing for a long time that it would be nice if the district offered more for staff” (personal communication, April 22, 2021). Another educator stated, “This is the first time all year that anyone has taken a moment to consider our circumstances; just being asked these questions feels validating” (personal communication, April 23, 2021). These end-user comments provide additional evidence that perhaps leaders in Westly need to improve efforts to address teacher well-being.

Lastly, COVID-19 has a highly individual impact on every educator in the system. Some staff weathered considerable personal loss and had to come to work every day to support their learners. The global pandemic’s unprecedented landscape affected every stakeholder within the system. The SE needs of the entire community influence the day-to-day operations at every school. CASEL recognized this significance and in January of 2021 provided an SEL roadmap created specifically for SEL needs in the COVID landscape (CASEL, 2021). While COVID-19



no doubt will leave a lasting legacy, the longitudinal data required to understand the full impact of this pandemic on all is not yet available.

A thorough understanding of the systems that contribute to the problem of practice is a critical component of the science of improvement (Hinnant-Crawford, 2020). Integral systems mapping enables the scholarly practitioner to identify where and how to introduce change and if the change is improvement (Bryk et al., 2015).

### **Root Cause Analysis**

A root cause analysis, also referred to as causal analysis, provides a systematic process to explore and uncover the underlying causes of a problem (Perry et al., 2020). The systems analysis presented reveals context, a root cause analysis leads the scholarly practitioner to determine what about those systems is causing or leading to the problem of practice.

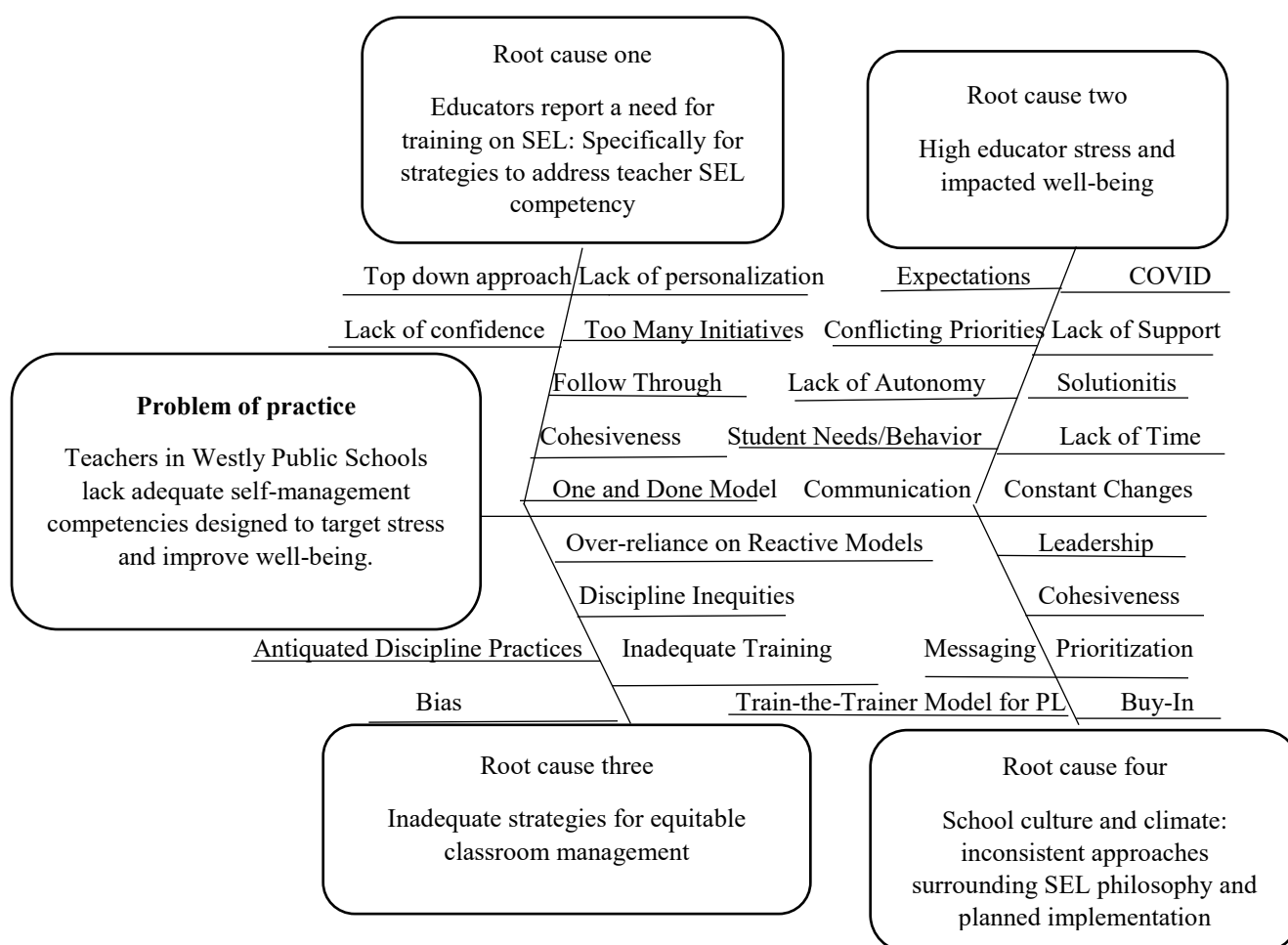
Unlike traditional action research, an improvement science dissertation in practice (ISDiP) first seeks to understand the complexities of the problem studied. Problems are “user-centered in that they generally pertain to system effects on constituents and stakeholders” (Perry et al., 2020, p. 59). As such, the root cause analysis presented informed the problem of practice examined and led a collaborative conversation towards what change to introduce to solve the problem (Hinnant-Crawford, 2020).

With support from leader colleagues within the Department of Pupil Services and the Office of Equity Advancement, the researcher self-selected the purpose of this study, situated in the work of the EDC. The researcher evaluated and summarized needs and recommendations following analysis of archived quantitative and qualitative data. Ultimately, the goal of the analysis was to develop an intervention plan within the scope and sequence of the long-term

goals rooted in equity work, for Westly Public Schools. A root cause analysis “directs attention to the question, ‘Why do we get the outcomes that we currently do?’ In working through this analysis, participants develop a shared understanding of the specific problem they are actually trying to solve” (Bryk, et al., 2015, p. 198). A fishbone diagram outlining the factors contributing to the problem in Westly conceptualizes what needs to change for improvement to occur (Table 3).

**Table 3**

*Fishbone Diagram: Understanding the Problem*



*Note.* SEL = Social Emotional Learning.

The factors identified in Table 3 represent results of a root cause analysis conducted to understand and validate the problem of practice. Fishbone diagrams support a visual understanding of the major factors contributing to the problem of practice (Hinnant-Crawford, 2020). Each of these factors has the potential to be leveraged as a change agent to address the problem of practice.

### **Root Cause One**

Research reveals that professional learning related to both teachers' and students' SEL is often not given enough time, care, or attention (Stickle et al., 2019). Data analysis from multiple sources confirms that Westly Public Schools echo the concerns addressed in the literature: Despite multiple sessions of professional learning, teachers continued to report that they are not trained to implement SEL with their students and that they lack their own SEL competencies to self-manage throughout the day. To provide historical context, the researcher assessed attitudes toward professional learning via an analysis of archived data: the 2018-2019 School Climate Staff Survey (all three middle schools,  $N=237$ ). Table 4 summarizes themes from the Climate Survey.

**Table 4***Professional Learning Themes Identified Upon Review of Middle School Climate Surveys*

Initial code	Resulting theme
Training	Training was not comprehensive
Positive training	More time for additional training
Negative training	Lack of clarity on the expectations
Effectiveness	for after the training/next-steps
Understanding	
Misunderstandings	

The themes summarized in Table 4 suggest that middle school educators in Westly find that learning opportunities are not comprehensive and that more time and clarity would improve their experiences. Fall 2020 professional learning planned by the Office of Equity Advancement and the EDC provided overarching understanding of the CASEL SEL competencies, how to use SEL as a lever for equity, and strategies to implement SEL as part of a universal design for best instruction. The EDC leadership team facilitated the first of five districtwide sessions and building principals facilitated the remaining sessions in a train-the-trainer model.

To understand more about the training in the context of the presented problem, the researcher reviewed open-ended responses on exit slips administered to all staff following the EDC's districtwide professional learning session in the fall of 2020. Professional learning sessions were facilitated by the EDC leadership team (session 1) and then by building leaders in a train-the-trainer model. To introduce the CASEL competencies and the EDC vision statement and long-term focus on equity, trainings consisted of PowerPoint presentations, YouTube video segments, and breakout sessions. Sessions occurred on Wednesday afternoons for approximately

90 minutes. Despite collaborative planning and implementation of these professional learning sessions, the themes revealed within these data suggest that staff seek additional training to clarify terminology, understand philosophy, and develop the confidence to work successfully with students (Table 5).

**Table 5**

*Themes Identified Upon Review of Open-Ended Comments on Exit Slips Following Districtwide Professional Learning*

Theme	Example quote
Additional SEL training	<p>“Teachers and paraprofessionals need more professional training on how to work with students with significant emotional disorders.”</p> <p>“Additional training and the setting of clear expectations are needed for teachers and paraprofessionals.”</p>
Strategies	<p>“Clarity is needed. Even simple definitions are confusing, the difference between SEL and transformative SEL and how we are defining racism and anti-racism as a district. ”</p>
Time/longevity of training	<p>“We are all professionals but we need more time for training, we cannot try and tackle this for a small period of time, this needs to be comprehensive...if administration wants it to be a priority it should be prioritized and there needs to be ongoing training.”</p>

*Note.* SEL = Social Emotional Learning.

The themes summarized in Table 5 align with themes that the EDC leadership team identified upon review of all staff responses: explicit SEL training, strategies for SEL, and time for SEL discussion and planning. Despite a clear direction articulated by the Office of Equity Advancement, reviews of these qualitative data disclose evident disconnects, Westly educators

continue to identify a need for SEL training. The EDC leadership team communicated these themes with the full committee to drive next-step plans.

When analyzing data specific to teachers' need for SEL competency training, patterns of inadequacy continue. When surveyed in the winter of 2021, 61.5% of educators at the middle school level responded that they need additional training to develop their SEL competencies and 57.7% were interested in learning specific strategies for well-being ( $n=26$ ). On the same survey, 38.5% of educators responded that they carve out time for self-care.

## **Root Cause Two**

A review of the literature strongly suggests that teachers are stressed and that stressed-out teachers do not respond in ways that foster positive and equitable learning environments (Gregory & Fergus, 2017; Schonert-Reichl, 2017; Zakrzewski, 2013). Data have revealed high levels of stress and inadequate self-management strategies to mitigate stress (Figures 1 and 2). To provide interventions, an understanding of what is causing stress and what has been tried in the past is first necessary: Why are Westly educators stressed and what within our system may be contributing to their stress? Table 6 summarizes antecedents for stress as identified by middle school educators in Westly.

**Table 6***Wellness Inventory: Middle School Educators' Reasons for Stress*

Reason for stress	Example quote	Frequency of response % (number)
Lack of time to get everything done	"There are so many things I need to do in my day. Just meeting the curricular expectations, when am I supposed to do all the extras?"	56.7% (68.6)
Student behavior	"I have to continually stop my instruction to manage behavior... I start to feel panicked. I have to keep up with my lesson, suddenly I am spending all this time with a student who is sabotaging everyone's learning." "Managing the needs of a high number of at-risk students."	10% (12.1)
Relationships with colleagues	"I do not even get to see my team. I keep reinventing the wheel, I do not have time to bounce ideas off of anyone." "No time to have positive relationships with my colleagues."	3.3% (4)
Relationships with administrators	"I feel pulled in too many directions by admin." "I am overwhelmed by administrative tasks that don't pertain to teaching" "Unrealistic expectations from administration." "There are just too many initiatives... everything is top importance."	3.3% (4)
Changes	"Changing expectations, due to COVID." "Constant changes with no teacher input." "Having to re-learn everything over and over has been exhausting."	1.6% (1.9)
Communication	"There has been a lack of communication in a Chaotic work environment."	<1% (<.12)

The quotations displayed in Table 6 suggest that respondents ( $N = 121$ ) perceive lack of time to meet daily expectations as the most significant antecedent for stress (56.7 %). Additional sources of stress include student behavior (10%), workplace relationships (3.3%), change (1.6%), and communication (<1%).

### **Root Cause Three**

Providing teachers with tools for stress management and addressing well-being may foster proactive classroom management, reductions in reactive discipline, and positive relationships with challenging students (Jennings et al., 2013). Research supports a link between student behavior and teacher stress: SEL programing must include strategies for teachers to support positive classroom management while addressing teacher stress and well-being (Collie et al., 2012).

Effective classroom management can reduce teacher dependency on reactive discipline that research shows exacerbate negative behavior (Rusby et al., 2011) and could increase instructional time (Hollingshead et al., 2016). A review of EDC exit slip data revealed that teachers in Westly schools require strategies to manage student behavior (Table 5). Researchers frequently cite student behavior and inadequate strategies to manage behavior as causes of teacher stress (Garner, 2010; Zakrzewski, 2013).

As previously presented in Figure 3, discipline data from all three middle schools reveals disparate removal practices for Hispanic/Latino and Black/African American students as compared to their White peers. These data suggest a systems pattern of inequity in Westly. Based upon the vision of the EDC and the commitment to equity at all levels, educators in Westly would prefer a reality that aligned more closely with system goals. Educators who demonstrate strong SE competencies can influence lasting changes at the community, district, and state level (Jagers et al., 2018).



## **Root Cause Four**

A review of the current literature supporting the implementation of SEL to teach critical life-long skills to students makes evident a school's culture and climate can make or break program sustainability and fidelity (Gregory & Fergus, 2017; Gubi & Bocanegra, 2015; Jennings & Greenberg, 2009). According to data, middle school teachers in Westly experience initiative fatigue, signs of burnout, and low morale and crave cohesiveness among leaders.

These perceptions affect a positive climate and could potentially undermine the effectiveness, fidelity, and sustainability of SEL programming. Elias (2019) warns that, too often well-intended solutions that in reality are fragmented may further compound stress for teachers and learners. To understand staff perceptions of school climate and culture, the researcher reviewed data from open-ended responses from the 2018-2019 School Climate Staff Survey ( $N=237$ ) and staff interviews conducted in the fall of 2019 as part of a CPS (Collaborative and Proactive Solutions) school review at PMS ( $N=8$ ) (Table 7).

**Table 7***Middle School Climate Themes Identified Upon Review of Climate Survey*

Theme	Example quote
Stress and burnout	“We just have too much on our plates. New curriculums, initiatives, the teacher evaluation process...it is just too much. Oh, and then there’s teaching.”
Initiative fatigue/solutionitis	“We are focused on too many goals to truly implement and perfect any of them.”
Climate/morale	“Morale is at an all-time low in my building”  “I feel like a major burden of student success is continually shifted towards teachers and away from parents and students. This can lead to low morale and teacher frustration.”
Cohesiveness	“The biggest problem is communication between administration and teachers.”  “There are different expectations held for staff depending on who the staff is. The inequities are obvious.”  “Principals cannot preach ‘meta moment’ and not give us time to take them.”

Despite efforts made by leaders within the Office of Equity Advancement and the EDC to develop and implement comprehensive SEL programming as a lever for equity, the data summarized in Table 7 reveal a gap between vision and reality. The current climate could present a barrier to the fidelity and sustainability of future SEL programs. As suggested in the literature, both teacher and student SEL must be included in all aspects of planning: “It will no longer be possible to discuss educational processes, pedagogy, curriculum and instruction, prevention, academic achievement, and the culture and climate of schools without discussing social-emotional competencies” (Elias, 2019, p. 233).

Root cause analysis was a critical step in the improvement science process as the researcher sought to answer the following: What the district is trying to accomplish, what change might be introduced and why, and how stakeholders will know that the change is an improvement (Bryk et al., 2015). Through an analysis of data, the researcher identified what problem needed to be solved, and what data indicated that the problem was actually a problem (Hinnant-Crawford, 2020). The data analyzed and presented revealed district trends that reflect national data stories: Educators in WPS are stressed, they require training in self-management strategies that target well-being, and a pervasive climate prevails when examining disproportionality data that confirms inequalities for historically marginalized students.

Westly's leadership team has committed to leveraging SEL as a tool for equity. Multiple sources of district data examined expose inadequacies and disconnect between vision and status. Westly leaders dedicated the 2020-2021 school year to professional learning geared toward understanding and developing skill sets to address student SEL. Despite a yearlong focus on the development and implementation of districtwide professional learning that provided a springboard for systemic SEL implementation, a root cause analysis revealed that program planning underestimated teacher stress and its impact on well-being and student outcomes. These data suggest that the district may have miscalculated the prerequisite work that must happen to develop teachers' SEL competencies. Data confirm that a problem exists; the next question Westly's leaders must ask, what should be done about it (Perry et al., 2020)?

## **Purpose and Significance of the Study**

### **Purpose Statement**

The purpose of this study was to understand to what extent mindfulness-based interventions designed for the school setting aided in the development of middle school teachers' perceptions of self-management skills and what impact MBIs had on participants' perceptions of enhanced mindfulness, well-being, and stress. Additionally, the study reported on the indirect impact participation in the mindfulness program had on teachers' perceptions of classroom management, climate, and relationships with students.

### **Significance of Study**

Social emotional learning is a front-burner issue in a field laden with competing priorities. The presented problem is high leverage for multiple stakeholders. The executive team tasked the Office of Equity Advancement with delivering clear guidelines and recommendations to the Westly Board of Education to drive the development of a districtwide Educational Equity Policy that leverages SEL as a mechanism for change. The Board adopted the policy in June of 2021 (whps.org). Additionally, district and building leaders seek effective strategies that will optimize climates for the reception and implementation of SEL programming.

Ample evidence exists that confirms Westly echoes national trends found in the literature: Teaching is stressful, teacher well-being is tenuous, and the development of teacher SEL competencies must be prioritized before and concurrent with SEL implementation for students (Jones et al., 2013; Schonert-Reichl, 2017; Walker, 2020; Zakrzewski, 2013). When developing district priorities for the 2021-2022 school year the executive team identified that "teachers must be active participants in their self-development" (whps.org). A root cause

analysis revealed that educators in Westly require explicit instruction in strategies for self-management that target stress and well-being. Improved educator well-being positions leaders, educators, students, and systems as beneficiaries.

For SEL programming to be successful, adult SEL must be addressed first (Brackett, 2018; Yoder & Nolan, 2018). When teachers have the SEL training they need to develop their SE competencies, they can be effective implementers: Teachers possess the desire, capacity, and ability to drive SEL instruction and optimize SEL environments for their students (Barnes et al., 2014; Durlak et al., 2011).

The Collaborative for Academic, Social, and Emotional Learning includes a focus on adult SEL as an essential indicator of both school-wide and site-wide SEL programming. The researcher designed the scope of this study to target one of the five CASEL competencies, self-management, the ability to manage one's emotions, thoughts and behaviors effectively in different situations (CASEL, 2020). This study represents one-step in a multi-phase process to address adult SEL in Westly. Research suggests that developing high-quality SEL that has effective foundations for sustainability and fidelity can take three to five years (Elias, 2019). If Westly does not develop a comprehensive plan to target teacher SEL there could be significant ramifications to the organization's goal to implement SEL as a lever for equitable change and the disconnect between Westly's vision and the reality evident upon data analysis will continue to manifest.

The potential outcomes of this research study could provide evidence that informs explicit professional learning for teachers and a framework for intervention to use as a model in other school and district communities. This study could contribute to the field as districts seek feasible solutions that address teacher well-being as a means to optimize equitable outcomes for

all students. Leaders and educators across the country and internationally are looking to maximize the potential that SEL holds for students: “Addressing teacher social-emotional competency becomes imperative to promote successful program implementation on a large scale, as well as to reduce teacher burnout” (Jenning & Greenberg, 2009, p. 506).

Researchers suggest that SEL plans must include strategies for teacher development of SE competencies to best benefit student outcomes and address teacher well-being (Durlak et al., 2015; Martinez, 2016). A knowledge gap in the literature reveals a need for more research that explores explicit training to support the development of teacher SEL (Zakrzewski, 2013). An inadequate focus on teacher SEL competencies remains a persistent theme in the current field (Collie et al., 2012; Durlak et al., 2015; Jennings & Greenberg, 2009; Schonert-Reichl, 2017). This study aimed to understand more about feasible and effective research-based interventions enacted within the scope of the school day.

Despite growing interest in the application of MBIs in school systems, researchers cite that relatively few MBI studies have been conducted in school settings (Hwang et al., 2017; Roeser et al., 2012) or look specifically at MBIs that target teacher stress and well-being (Flook et al., 2013). This study will contribute to the field to target this knowledge gap and provide a roadmap for the district and for other systems looking to enhance teacher well-being through explicit instruction in self-management strategies targeted to reduce stress. Outcomes of this pilot study have the potential to inform local practices and beyond.

## **Methodology and Research Design**

### **Methodology**

Action research is an appropriate methodology when the primary researcher is directly involved in understanding, implementing, and evaluating solutions in authentic contexts (Elden & Chisholm, 1993; Martella et al., 2013). The researcher grounded this action research study in an improvement science framework to drive a deeper understanding of the impact of mindfulness-based interventions on teacher perceptions of self-management, enhanced mindfulness, well-being, and stress.

The researcher's direct involvement with all aspects of the study is a hallmark of action research methodology (Elias, 2019). Seminal literature on action research as completed by Elden and Chisholm (1993) and further developed by Martella et al. (2013), summarized five characteristics of the methodology: purposes and value choice, contextual focus, change-based data and sense making, participation in the research process, and knowledge diffusion. This study incorporated all five characteristics of action research.

### **Research Design**

This study employed mixed-methods, explanatory-sequential design (Creswell & Plano Clark, 2018). Quantitative measures in this study included participant feedback following each training module, progress-monitoring data collected each day of the intervention phase, and a pre- and post-intervention survey battery that included instruments with established reliability and validity. The researcher used these tools to analyze the dependent variables: perceptions of self-management, mindfulness, well-being, and stress in response to the independent variable, participation in a school-based mindfulness professional learning and intervention program.

These data promoted a deeper understanding of what components of the intervention, including frequency and strategies selected, were most beneficial. In an explanatory-sequential research design, analysis of these data informed the collection of qualitative data after the conclusion of the intervention phase (Creswell & Plano Clark, 2018).

Qualitative data collected following the intervention period via a focus group fostered a deeper understanding of participants' experiences with the mindfulness program and the indirect impact on classroom environments. These qualitative data substantiated the quantitative data and will inform next steps for program expansion.

When conducting action research, scholars often employ mixed-methods design to understand complex problems (Creswell & Plano Clark, 2018). The qualitative data collected after the analysis of the quantitative data provided an opportunity for a more robust understanding of the impact of the intervention and allowed the researcher to garner participant voice to explain the why and how (Driscoll et al., 2007). Lakes et al. (2019) suggested that mixed-methods design can be helpful when researchers are looking to understand new interventions and inform next-steps.

### **Target Population and Participants**

The researcher invited all certified classroom teachers in Westly's three middle schools to participate in this voluntary study. All participants worked as a certified middle school teacher in Westly Public Schools during the 2021-2022 school year. The researcher selected the target population to assess participants' perceptions on the indirect impact of MBIs on their classrooms, thus related service providers and administrators were not included in the study invite. The researcher selected middle school teachers for convenience and accessibility.



Participants received a mindfulness kit as a thank you incentive for participation. Grant monies awarded to the researcher by The Foundation for Westly Public Schools funded these kits.

## **Sampling**

This study employed non-probabilistic convenience sampling with identical samples; the same individuals participated in both phases of the study and in the pre- and post-intervention survey battery (Creswell & Plano-Clark, 2018). The researcher selected participants for the focus group after analysis of the quantitative data to ensure sample heterogeneity with response to intervention. Selecting participants with varying experiences was important when understanding what components of the mindfulness program were effective or not. The researcher employed this sampling method based on the scope and sequence of this ISDiP, convenience, and accessibility.

## **Procedures**

Based upon educator feedback and in line with recommendations found in The CASEL Guide to School-Wide Social and Emotional Learning, the researcher designed the scope of this two-phase pilot study to address one of the five CASEL competencies, self-management (CASEL, 2021). Specifically, the interventions targeted teacher stress and well-being. Sacred Heart University's Institutional Review Board approved all intervention and data collection procedures. The Westly superintendent of schools provided written permission to conduct this study in the district (Appendix A). Additionally, all three middle school principals met with the researcher and approved the scope and sequence of the study.

The study was open to all certified middle school teachers. The researcher recruited participants via email (Appendix B) and secured informed consent prior to the training phase (Appendix C). An additional consent form was required from focus group participants (Appendix D).

Adapted specifically for use in the school setting, the mindfulness program was grounded in a modified Mindfulness-Based Stress Reduction (MBSR) program, conceptualized by Kabat-Zinn (1994). For purposes of this study, mindfulness was defined as, “paying attention in a particular way: on purpose, in the present moment, and non-judgmentally” (Kabat-Zinn, 1994, p. 4).

Phase 1 consisted of a 6-week training phase with weekly modules taught synchronously and recorded so that teachers could access trainings asynchronously as a resource throughout both phases (see Appendix E for module calendar, topics, and sequence). The MBI program designed for this study comprised the three formal practices that constitute MBSR: mindful movement (including yoga asana), body awareness (including the body scan), and mindful meditation (including mindful breathing) (Cullen, 2011).

Phase 2 of the study involved a 6-week intervention phase. Participants had autonomy in developing their weekly action plan using a template (Appendix F) and monitored their immediate response to intervention using a daily reflection sheet (Appendix G).

## **Data Collection Instruments/Measures**

### ***Quantitative Data***

To understand how participants perceived the effectiveness of the professional learning designed for this study, the researcher administered a brief survey following each training module (Appendix H). Throughout the intervention phase, participants monitored the use of their MBIs and documented their response to intervention on a daily reflection data sheet (Appendix G). Finally, the researcher collected quantitative data via a comprehensive survey battery administered pre- and post-intervention (Appendix I). The survey battery comprised established measures including the CASEL TOOL for Personal Assessment and Reflection: Self-Management (CASEL, 2017), the Five Facets Mindfulness Questionnaire (FFMQ) (Baer et al., 2006, 2008), the Panorama Teacher Well-Being Survey (Panorama, 2021), and the Perceived Stress Scale (PSS) (Cohen, 1994; Cohen et al., 1983). The survey battery included a section requesting optional demographic information. All four of the instruments included in the survey battery were available online for use by educators as long as there was no intention to profit from use.

### ***Qualitative Data***

Based upon analysis of the professional learning surveys, the daily reflection data sheet, and the pre- and post-intervention survey, the researcher invited five participants to a structured focus group (Appendix J for focus group protocol). These qualitative data substantiated the quantitative data and supported the researcher's conclusions about program effectiveness and the perceived impact of participation on classrooms and students.

## **Research Questions and Hypotheses**

The researcher planned this study to understand the impact of MBIs as a research-based tool for self-management to inform next steps across the district. The researcher organized the research questions and sub-questions to align with the order of the mindfulness program. The researcher answered some of the questions using quantitative data, some with qualitative data, and some with a combination of both.

### **Research Questions**

The researcher guided this ISDiP by the following three research questions:

#### ***RQ1***

To what extent were the mindfulness training modules, designed for a school setting, perceived as effective by participants and why?

#### **Sub-Questions.**

1. What training components were most effective and why?
2. What training components were least effective and why?
3. What suggestions do participants have for future trainings?

#### ***RQ2***

To what extent did participants enact the mindfulness-based interventions designed for a school setting and why?

### **Sub-Questions.**

1. What MBIs were used most frequently?
2. What MBIs were perceived as most effective and why?
3. What MBIs were perceived as least effective and why?
4. To what extent did the frequency of engagement in interventions impact perceptions of self-management skills, enhanced mindfulness, well-being, and stress levels?

### ***RQ3***

To what extent did a mindfulness-based program, designed for a school setting, aid in the development of middle school teachers' perceptions of self-management skills?

### **Sub-Questions.**

1. To what extent did participation in MBIs impact perceptions of enhanced mindfulness?
2. To what extent did participation in MBIs impact perceptions of well-being and stress?
3. To what extent did participants report impact on classroom management, climate, and relationships with students?

### **Hypothesized Outcomes**

The researcher hypothesized the following outcomes as a result of the implementation of this ISDiP. The quantitative portion of this study explored the impact of MBIs on teacher perceptions of self-management competency, enhanced mindfulness, well-being, and stress.

***H1<sub>0</sub>***

There is no statistically significant difference in teacher perceptions of self-management after participating in mindfulness-based interventions.

***H1<sub>1</sub>***

There is a statistically significant difference in teacher perceptions of self-management after participating in mindfulness-based interventions.

***H2<sub>0</sub>***

There is no statistically significant difference in teacher perceptions of enhanced mindfulness after participating in mindfulness-based interventions.

***H2<sub>1</sub>***

There is a statistically significant difference in teacher perceptions of enhanced mindfulness after participating in mindfulness-based interventions.

***H3<sub>0</sub>***

There is no statistically significant difference in teacher perceptions of well-being after participating in mindfulness-based interventions.

***H3<sub>1</sub>***

There is a statistically significant difference in teacher perceptions of well-being after participating in mindfulness-based interventions.

***H4<sub>0</sub>***

There is no statistically significant difference in teacher perceptions of stress after participating in mindfulness-based interventions.

***H4<sub>1</sub>***

There is a statistically significant difference in teacher perceptions of stress after participating in mindfulness-based interventions.

## **Data Analysis**

### **Quantitative Analysis**

In order to answer the research questions proposed, the researcher analyzed data using IBM version 26 SPSS statistics software to determine if relationships existed between the dependent and independent variables and if so, the strength of the relationships. The dependent variables included perceptions of self-management, mindfulness, well-being, and stress and the independent variable was participation in a mindfulness program designed for the school setting. The researcher employed inferential statistics to test the proposed hypotheses and to understand to what extent the frequency of daily practice influenced perceptions of self-management, enhanced mindfulness, well-being, and stress. Additionally, the researcher used descriptive statistics to describe central tendencies related to the frequency of intervention use and perceived program effectiveness. Once analyzed, these quantitative data informed the processes for qualitative data collection during a structured focus group, including the selection of participants (Creswell & Plano-Clark, 2018).

## **Qualitative Analysis**

In accordance with an explanatory-sequential research design, the final phase of data collection involved qualitative data (Creswell & Plano-Clark, 2018). The researcher developed a protocol for the structured focus group (Appendix J) and a facilitator from the EDC administered the protocol to participants. The facilitator recorded the focus group and the researcher transcribed responses and coded data by hand. The researcher analyzed these qualitative data through content analysis, first- and second-level coding for themes in data. Colleagues from the EDC and Department of Pupil Services were involved with reviewing coding and the researcher member-checked results. The researcher analyzed how these qualitative data substantiated the quantitative data collected from the pre- and post-intervention survey, the professional learning survey slips, and the daily reflection sheet.

## **Limitations**

Generalization of results to a larger population is limited when employing non-probabilistic convenience sampling (Creswell and Plano-Clark, 2018). As this study was only open to certified teachers at the middle school level, the sample was not representative of the population of educators across the district. Additionally, the participants in the sample population were not representative of the target population when considering identified gender, or race/ethnicity. These discrepancies further affected the generalizability of results. The sample size was relatively small ( $n=20$ ). Creswell and Plano-Clark (2018) suggest that for correlation analysis the sample size should be at least 30 participants. Despite a smaller sample size, the researcher was able to determine statistical significance on some measures.



The study relied on self-report measures to determine the perceived effectiveness of the intervention. While other studies utilized biological indicators to measure the impact of MBIs on teacher well-being as a way to address this limitation (Flook et al., 2013; Harris et al., 2015), collecting biological evidence was not feasible within the scope of this study.

The pre and post intervention battery comprised of established measures including the CASEL TOOL for Personal Assessment and Reflection: Self-Management (CASEL, 2017), the Five Facets Mindfulness Questionnaire (FFMQ) (Baer et al., 2006, 2008), the Panorama Teacher Well-Being Survey (Panorama, 2021), and the Perceived Stress Scale (PSS) (Cohen, 1994; Cohen et al., 1983). While each quantitative measure, except for the CASEL tool, are vetted for validity and reliability, the additional quantitative measures (the professional learning surveys and the daily reflection datasheet) and the qualitative measures (focus group protocol) were researcher-developed, and thus had not been used before this study. The researcher addressed these threats to validity through triangulation (the researcher collected quantitative data via multiple measures) and member checking (the researcher member-checked participants' responses after coding and theming the qualitative data to ensure that interpreted responses were accurate).

The study planned was voluntary and thus effectiveness may be predisposed: Teachers who were already interested in, or had a philosophical bias about the effectiveness of MBI, could have skewed data in a positive direction. This bias could have suggested that MBIs were more effective than they would have been in a non-voluntary population. However, MBI as a forced intervention would not be recommended; thus, this is a limitation that may be difficult to control for in future studies.

Finally, Westly Public Schools employs the researcher who was directly involved with the implementation of the study, the researcher has a relationship with the system stakeholders and with the participants. This relationship may have affected the outcomes of the study. Additionally, the participants in the study were aware that they were studied which may have resulted in bias when reporting results or discussing program effectiveness. Known as the Hawthorne effect, this awareness of participation could have posed a threat to the validity of the data collected in this study (Grimshaw, 1993; Jones, 1992, as cited in Martella et al., 2013). To address this limitation, a member of the EDC conducted the focus group interview. Additionally, colleagues within the Department of Pupil Services reviewed the coding of transcribed responses, and the researcher member checked responses garnered from the structured focus group to ensure accurate representation of participant voice.

### **Positionality**

The researcher in this ISDiP is pursuing a doctoral degree in Educational Leadership with a focus on Social-Emotional and Academic Learning at Sacred Heart University. A student scholar-practitioner, the researcher works as a district administrator in the schools where the study was completed. The researcher's interest in studying the effects of mindfulness-based interventions on educator stress and well-being is rooted in a 25-year career that began in occupational therapy. The researcher believes this holistic foundation provided opportunities for learning and practicing mindfulness strategies that will prove effective for her team of educators. The researcher has witnessed firsthand the cumulative impact that stress has on her teams and believes that solutions for addressing teacher well-being are critical when expecting educators to teach social-emotional learning to their students.

The researcher is a white female raised in a small rural town that lacked diversity. Despite the lack of authentic opportunity within the researcher's immediate community, her family valued diversity and advocated for equity. These early beginnings fostered a commitment to historically marginalized humans and a passion for a career with purpose. The Farrington College of Education at Sacred Heart University is a member of the Carnegie Project on the Education Doctorate (CPED). As defined by CPED, scholarly practitioners use research and applied theories as tools for change because they understand the importance of equity and social justice. This understanding resonates with the researcher as she pursues opportunities to ignite the changes needed within the educational system to mitigate inequities. The researcher selected this doctoral program because of its equity lens. As such, the researcher is a member of her district's Equity and Diversity Council and collaborates with the EDC leadership team to provide a research arm to support the work done to drive change.

The researcher holds a constructivist worldview and she believes in what Elden and Chisholm (1993) summarize about science that it "can contribute to people realizing their values, envisaging a preferred future and organizing effectively to achieve it" (p. 5). The researcher agrees that experience and interactions with the world determine reality: Researchers and what they study will mutually influence each other (Martella et al., 2013). In line with mindfulness philosophy, the interactions in the moment are the most salient. "The habit of ignoring our present moments in favor of others yet to come leads directly to a pervasive lack of awareness of the web of life which we are embedded" (Kabat-Zinn, 1994, 5). The researcher is as much a victim to the relentless to-do list that feeds stress as the participants in this study and is eager to understand more about the effect of mindfulness on well-being within the school setting.

The researcher's compassion for her staff, passion for her craft, role as a mother of two minority children, and commitment to all children influence her lens. Driven by her social-awareness, the researcher uses empathy as her moral compass. The researcher's transparency with her staff may have resulted in the potential for the participants in this study to be acutely aware of the data story that she hoped for: that mindfulness-based interventions reduced stress, improved well-being, and suggested an indirect opportunity to improve equitable classroom environments. These personal positions may have influenced participants and the outcomes of this study.

## Definitions of Key Terms

**Action Research:** Research that involves application of the scientific method to everyday problems in the classroom or other applied settings; personnel are involved directly with the implementation of the research (Martella et al., 2013).

**Body Scan:** One of the three formal practices of MBSR, the body scan is a strategy for body awareness: a mindfulness-based stress reduction that centers on building one's awareness of physical sensations. Participants focus attention systematically through the body in a sequence that is similar to progressive muscular relaxation. The aim of the practice is to direct non-judgmental attention to each part of the body rather than to deliberately promote relaxation (Thompson & Gauntlett-Gilbert, 2008, p. 399).

**Burnout:** According to Maslach et al. (2001), burnout is characterized by three dimensions: exhaustion, depersonalization, and inefficacy. When stress goes untreated it can lead to burnout.

**Chronic Stress/Toxic Stress:** When the brain lives in a perpetual state of heightened stress. This stress results in persistent high levels of cortisol (the body's stress hormone), which can be toxic to the brain. Results of chronic stress can lead to depression, anxiety, and weakened memory, and can impair the parts of the brain responsible for emotion-management (Larrivee, 2018). When left unaddressed chronic stress is can lead to burnout (Lovasova & Vasilova, 2017).

**Educator:** For the purpose of this study, the term educator refers to the adult stakeholders who are employed within a school system and may encompass administrators, all content and special-area teachers, related service providers (e.g. speech and language pathologists, school psychologists, and school social workers), and support staff (e.g. paraprofessionals and teaching assistants).

**Emotional Contagion:** A phenomenon that occurs when our emotions and moods transfer from one person to another and from one person to an entire team both consciously or unconsciously (Brackett, 2019, p. 222). Positive and negative feedback loops occur between teachers and students when studying the impact of teacher SEL on student SEL (Jennings & Greenberg, 2009; Zakrzewski, 2013).

**Emotion Regulation:** A social emotional skill that enables individuals to manage emotional responses: moving from knowing what we are feeling to what we are going to do about those feelings (Brackett, 2019).

**Empathy Interviews:** Informal processes that involve discussing the problem of practice with end-users to garner multiple perspectives and develop a deeper understanding of the contexts and systems that are contributing to the problem, by understanding end-user experience (Hinnant-Crawford, 2020; Perry et al., 2020).

**End-Users:** Stakeholders within a system who have direct experience with and perspective on a problem (Bryk et al., 2015; Hinnant-Crawford, 2020).

**Equity and Diversity Council (EDC):** The Equity and Diversity Council was originally incepted in Westly Public Schools in 2015 and has been tasked with developing and implementing Social-Emotional Learning programs that will leverage equitable outcomes for Westly learners. The vision of the EDC includes a promise to identify and dismantle all elements of systemic racism and historical inequities and a vow to clear paths with a relentless duty to those in traditionally marginalized groups (whps.org). The EDC functions under the Office of Equity Advancement.

**Exhaustion:** Exhaustion is the most frequently reported symptom of burnout. Exhaustion can result in people distancing themselves from others at work, potentially as a coping mechanism for feeling overwhelmed (Maslach et al., 2001).

**Guided Imagery:** This strategy to facilitate meditation, one of the three formal practices of MBSR, centers on a mind-body approach that creates harmony between the mental and physical self and can elicit relaxation and a more integrated nervous system response (Larivee, 2018; Neiman, 2015).

**Improvement Science:** The methodology that disciplines inquiries to improve practice. Undergirding it is an epistemology of what we need to know to improve practice and how we may come to know it (Bryk et al., 2015, p. 197). Improvement science is a change theory grounded in three questions: What is the specific problem I am trying to solve? What change might I introduce and why? How will I know whether the change is actually improvement? (Bryk et al., 2015; Hinnant-Crawford, 2020, Perry et al., 2020).

**Mindfulness:** While variations exist in the literature when defining mindfulness, for purposes of this study, mindfulness is “paying attention in a particular way: on purpose, in the present moment, and non-judgmentally” (Kabat-Zinn, 1994, p. 4). Grounded in Buddhism, mindfulness practices and perspectives focus on awareness, and the cultivation of clarity, emotional balance, and compassion through the honing and intentional development of attention (Mark et al., 2011, p. 3). There were no religious components (for example enlightenment, mantras, chanting) incorporated into the mindfulness program designed for the school setting.

**Mindfulness-Based Intervention (MBI) (plural MBIs):** Strategies designed to train individuals in cultivating awareness (see definition of mindfulness) (Cullen, 2011; Larrivve, 2018).

**Mindfulness-Based Stress Reduction (MBSR):** MBSR began in 1979 at the Stress Reduction Clinic at the University of Massachusetts Medical Center in Worcester, Massachusetts. Its inception is credited to Kabat-Zinn, scientist, writer, and meditation teacher. Kabat-Zinn developed MBSR as formal mindfulness practices with four foundations: awareness of the body, feeling tone, mental states, and mental contents (Cullen, 2011; Kabat-Zinn, 1994; Mark et al., 2011). Three formal practices constitute MBSR: mindful movement including yoga asana, body awareness with body scan, and mindfulness meditation including mindful breathing (Kabat-Zinn, 1994).

**Mindful Breathing:** Included as one of the three formal practices of MBSR under mindful meditation, mindful breathing is also referred to as intentional breath in the literature. For purposes of this study: noticing the movement of breath through the body and, when the mind wanders, returning the focus back to breath without judgement (Larrivve, 2018; Thompson & Gauntlett-Gilbert, 2008). “Mindful breathing helps us to hit the brakes on the activation of our stress response system by decreasing our heart rate” (Brackett, 2019, p. 147).

**Mindful Moments:** Short, manageable, personal, individualized moments throughout the day designed to create space for mindfulness to foster the benefits of mindfulness. Research provides evidence that very brief practices can produce significant results (Larrivee, 2018).

**Mindful Movement:** One of the three formal practices of MBSR, mindful movement encourages participants to raise their heartrate and change their mood (Larrivee, 2018).



**Mindful Walking:** Mindful walking is included as one of the three formal practices of MBSR (mindful movement). Also referred to as walking mindfulness in the literature: walking while focusing on the body (i.e. the physical sensations of the body) and being open to noticing other events (i.e. temperature, light, sound) (Thompson & Gauntlett-Gilbert, 2008, p. 399).

**Network Improvement Community (NIC):** A group of stakeholders working on a singular aim and guided by a deep understanding of the problem and the system that produces it (Bryk et al., 2015; Hinnant-Crawford, 2020).

**Professional Learning:** Also often referred to as professional development. For purposes of this study, professional learning refers to trainings provided to educators by Westly Public Schools or may be in reference to research completed that explores best practices for mindfulness training. Trainings are designed with adult learners as the target audience.

**Self-care:** “Involves incorporating activities aimed at restoring and improving your physical and emotional well-being into your everyday life” (Erdman et al., 2020, p. 31)

**Self-Management:** One of five core competencies identified by CASEL (2020) as integral to social-emotional learning. Self-management is the ability to manage one’s emotions, thoughts, and behaviors effectively in different situations. Self-management includes the capacity to manage stress.

**Social-Emotional Learning (SEL):** SEL is an integral part of education and human development. SEL is the process through which all young people and adults acquire and apply the knowledge, skills, and attitudes to develop healthy identities, manage emotions and achieve personal and collective goals, feel and show empathy for others, establish and maintain supportive relationships, and make responsible and caring decisions (CASEL, 2020). CASEL identifies five core competencies to SEL: self-awareness, self-management, social awareness, relationship skills, and responsible decision-making (2020).

**Solutionitis:** “The propensity to jump on a solution before fully understanding the exact problem to be solved” (Bryk et al., 2015, p. 24).

**Stress:** According to the American Psychological Association (2021), stress is a physiological or psychological response to a given antecedent (stressor) that causes mind-body changes that can affect nearly every system of the body. Severe stress can result in changes to physical and mental health and can lead to reduced quality of life.

**Teachers:** For the purpose of this study, teachers refer to all certified classroom teachers in any content or special area.

**Transformative SEL:** The term transformative SEL expands the definition as defined by CASEL to include processes that seek more equitable educational experiences for all students. “Transformative SEL is a process where students and teachers build strong, respectful relationships founded on an appreciation of similarities and difference; learn to critically examine root causes of inequity; and develop collaborative solutions to community and social problems” (Saavedra & Nolan, 2018, p. 2).

**Well-being:** The state of one's happiness, life-satisfaction, and balance of emotions (Larrivee, 2018).

**Yoga Asana:** MBSR (mindful movement) includes yoga asana as one of its three formal practices. An asana is a body posture, performed to improve flexibility, strength, and balance; asana is the physical practice of yoga. When paired with intentional breathing, asana can be used to stimulate, calm, and reduce anxiety (Neiman, 2015).

### Summary

The researcher grounded this action research study in an Improvement Science Dissertation in Practice guided by the following questions: To what extent were the mindfulness training modules, designed for a school setting, perceived as effective by participants and why? To what extent did participants enact the mindfulness-based interventions designed for a school setting and why? To what extent did a mindfulness-based program, designed for a school setting, aid in the development of middle school teachers' perceptions of self-management skills?

A root cause analysis revealed a critical need for educators in Westly: An inadequate focus on teacher SEL competencies is contributing to heightened stress and impacted well-being. If left unaddressed, the vision and directive for the Equity and Diversity Council to develop and implement a comprehensive and systematic rollout of SEL programming that mitigates opportunity inequities may come up short. The researcher designed the study to understand the impact of mindfulness-based interventions as a research-based tool for self-management to inform next steps across the district.

## **Chapter II: Review of Literature and Practice**

Improvement science necessitates a thorough process to understand problems, before naming them (Hinnant-Crawford, 2020). A review of the research designed to understand teacher stress and well-being contributed critical background knowledge to drive the identification of the problem of study. The researcher grounded this ISDiP in literature and practice that describe the undeniable influence that teacher stress has on professional and personal well-being, student outcomes, and classroom climate. This section outlines and explains the themes that emerged when exploring the impact and consequences of teacher stress and strategies for mitigating stress within school contexts, revealed within published literature and during practice consultations with four leader colleagues in districts other than the district of study. The section concludes with a summary of the research supporting the high-impact strategy selected for this study and the themes that emerged when leveraging this strategy as a mechanism for change.

### **Student Outcomes**

The researcher organized the following sections in a student-first hierarchy. Considering the interconnectedness of themes, the reality of the impact of stress on students, teachers, and systems is that there is no authentic hierarchy. The impact of stress exists in a constant feedback loop, not within siloes (Jennings & Greenberg, 2009; Schonert-Reichl, 2017; Zakrzewski, 2013).

### **Why SEL Matters**

#### ***Students Need SE Competencies***

When considering social emotional learning and the many factors that contribute to developing student competencies, it is important to understand why teaching these skills is necessary. Evidence from the literature suggests that a myopic focus on academics fails to

recognize the need to teach skills that support the development of students' emotional intelligence (Schonert-Reichl, 2017; Weissberg & Cascarino, 2013). When left unaddressed, lagging social-emotional skills can become a barrier to accessing academics (Cramer & Bennett, 2015) and can have negative long-term outcomes (Gubi & Bocanegra, 2015). Students with well-developed SE competencies are more likely to graduate from high school on time, obtain a college degree, and secure employment (Schonert-Reichl, 2017).

All students bring their unique lived experiences to school each day as they arrive for learning. The heterogeneity of backgrounds and experiences contribute to the rich diversity of a school's culture. For many students however, lived experiences may also include high-stress or trauma that drives the need for comprehensive school-based programming designed to build safe learning environments (Goodman, 2018). To understand more about how students feel at school, Brackett (2018) surveyed 22,000 high school students across the country: Seventy-five percent of the words respondents used to describe how they feel in school were negative. If schools are to provide the skills needed for lifelong success, programming must include a focus on social-emotional learning (Elias, 2019).

To substantiate the research found in the literature, the researcher conducted interviews with four administrators who lead in districts other than the district of study. When discussing why SEL matters with leader colleagues in the field, two core themes emerged that succinctly summarize just how critical the need is for student SEL programming: SEL impacts every aspect of student success and a lack of SE competencies may present barriers to success (Table 8) (see Appendix K for Practice Consultation Protocol).

**Table 8***Why SEL Matters: Themes That Emerge in Authentic Practice*

Discourse theme	Example quotes
SEL impacts every aspect of student success	<p>“SEL is the first thing to teach if we want to reach students.” (District Leader 1, personal communication, October 2, 2021).</p> <p>“Everything is interconnected: If we want students to be successful, if leaders want positive outcomes, if teachers want engaged learners, if parents want successful children, it all starts with SEL.” (District Leader 2, personal communication, October 22, 2021).</p>
Lack of SE competencies are a barrier to success	<p>“SEL effects everything. We remember those teachers who did not connect with us; it is seared into our memory. It doesn’t matter how good teachers are at the content, if they do not have relationships with kids, if their climate is not one of authentic trust, if students do not feel supported to take learning risks then content knowledge is useless.” (School Principal 1, personal communication, October 7, 2021).</p> <p>“SEL has everything to do with student outcomes. When kids do not have a teacher who is interested in them, who does not have a positive relationship with them, they tune out. It doesn’t matter if the student is 4 or 18, if they are gifted and talented or receive special education services, kids are intuitive they know when their needs are not being met and there is no learning until those needs are met.” (District Leader 2, personal communication, October 22, 2021).</p>

*Note.* SEL = Social Emotional Learning; SE = Social Emotional.

As evidenced by the cited quotations in Table 8, practice themes echo those found in published studies: If teachers are to optimize the success of their students and improve student outcomes, then the development of SE competencies must be at the core of pedagogy.

***How Does SEL Programing Develop Student Competencies?***

Compelling evidence supports a connection between student SEL and success in school (Durlak et al., 2011; Jones et al., 2017; Sklad et al., 2012). The studies reinforcing this connection led to a national call to recognize and prioritize SEL for students. In 2015, the Every

Student Succeeds Act (ESSA) passed at the federal level indicative of traction and momentum for SEL programming. Unlike federal mandates of the past, the ESSA specifically included language describing nonacademic factors as well as the need to assess these factors as a measure of student success. The ESSA included SEL competencies such as relationship skills, school engagement, and communication.

In seminal work by Durlak et al. (2011) and recent meta-analyses completed by Taylor et al. (2017) and Corcoran et al. (2018), four major findings emerged. Students who participated in SEL programming demonstrated significantly improved social and emotional skills, attitudes, behavior, and academic performance. The meta-analysis completed by Taylor et al. (2017) looked specifically at the long-term impact of SEL programming on positive student outcomes. The authors reported that statistically significant differences were maintained when analyzing long-term outcome data collected six months to 18 years post SEL intervention. The long-term benefits remained consistent regardless of geographic location, race, or socioeconomic status.

These studies and others provide evidence that high-quality SEL programming is associated with greater student well-being and school performance (Brackett, 2019; Gubi & Bocanegra, 2015; Schonert-Reichl, 2017; Taylor et al., 2017). But, for student SEL programming to be effective, teachers must have a well-developed understanding of social-emotional development and how it impacts learning, opportunities to develop their own SEL competencies, and strategies for managing stress (Durlak, et al., 2015; Larson et al., 2018).

## **Adult Actions**

### **The Connection between Teacher SEL and Student SEL**

In an analysis of 11 widely used school-based SEL programs, Jones et al. (2017) concluded that questions remain around the impacts of SEL on adult competencies and the connection between teacher SE competency and SEL efficacy. Research provides evidence that teacher SEL is critical if student SEL programming is to be implemented effectively and with fidelity (Larson et al., 2018; Schonert-Reichl, 2017). Students learn more in classrooms when they feel safe, secure, and accepted, and when students perceive teachers as caring (Brackett, 2019; Durlak et al., 2011; Elias, 2019; Schonert-Reichl, 2017).

Teachers with well-developed SE competencies can regulate their own emotions and manage stress, optimize equitable outcomes for all learners, and can feasibly implement high-quality SEL programming with fidelity and sustainability (Durlak et al., 2011). Teachers' social-emotional competence strongly influences the learning environment and the effectiveness of SEL instruction for students (Schonert-Reichl, 2017). For teachers to be effective implementers, they must first develop their own set of social-emotional competencies (Brackett, 2018, 2019). Without strategies to self-manage emotions at work, teacher well-being is compromised, resulting in ineffective instruction and negative outcomes for teachers and their students (Larson et al., 2018; Schonert-Reichl, 2017). Schonert-Reichl (2017) cautioned that without a firm understanding of the influence of teacher well-being on student SEL, educators would struggle to promote SEL in the classroom.

The leaders interviewed agreed. When asked by the researcher how teacher SEL affects student outcomes, interviewed administrators gave strikingly cohesive responses. For example,



District Leader 1 stated, “Happy teachers, happy kids” (personal communication, October 2, 2021). Similarly, District Leader 2 responded, “When adults can self-regulate and manage stress, it impacts the classroom, culture and climate, and student achievement” (personal communication, October 22, 2021). Finally, from the perspective of School Principal 1, “Teachers control every aspect of the climate in their classrooms. If they are not regulated, children are not regulated” (personal communication, October 7, 2021).

### **The Impact of Teacher Stress on Students**

While there are many consequences of teacher stress on student outcomes, a review of the literature and on the connection between teacher and student stress revealed three prevalent sub-themes worth exploring in the context of the presented problem of practice.

#### ***Emotional Contagion***

To fully understand the disconnect between what is known about the benefits of SEL programming and the implementation of high-quality SEL programming one must first examine the contexts and climates in which these skills must be taught (Elias, 2019; Schonert-Reichl, 2019). For schools to become spaces where SEL programming can be implemented successfully, each stakeholder must have a well-developed set of social-emotional competencies (Barnes & McCallops, 2019; Heller, 2017). Throughout a student’s educational career, teachers are the primary agent responsible for setting the emotional tone, providing SEL instruction, developing academic and interpersonal skills, and fostering a positive classroom environment optimized for student success (Durlak et al., 2015).

When teachers are stressed, students are stressed (Oberle & Schonert-Reichl, 2016). This theory of emotional contagion (Brackett, 2019) was supported in various studies that revealed

either a positive or negative feedback loop between teachers and students (Frenzel et al., 2009; Jones et al., 2013; Oberle & Schonert-Reichl, 2016).

In 2016, Oberle and Schonert-Reichl published one of the first studies that revealed a link between teachers' occupational stress and students' physiological stress regulation as measured by variability in students' cortisol levels, the body's primary stress hormone. Milkie and Warner (2011) found similar relationships between teacher stress and students' mental health: Teachers who reported higher levels of stress had more students in their classroom with mental health problems as compared to students with teachers reporting low stress. In both studies, the authors cited limitations in that directionality could not be determined: Did high teacher stress lead to high student stress or vice versa? The results from these studies indicate the presence of emotional contagion within the classroom environment. Stress is contagious and can have detrimental effects on student outcomes and well-being of both students and their teachers.

Interestingly, when summarizing similar results linked to emotional contagion Herman et al. (2018) suggested that teachers' lack of ability to manage stress was associated with poor outcomes, not stress level alone, highlighting a critical need to develop teachers' self-management strategies. When considering how teacher emotions affects students, this study and others (Arens et al., 2016) confirm that teaching is a stressful occupation and that teacher stress levels and their ability to manage stress impact both teacher well-being and student outcomes.

When exploring the impact of teacher stress on students, practice confirms themes from the literature. When interviewed, District Leader 2 suggested, "Teacher stress colors everything that goes on in the classroom environment. I bet cortisol levels go up for both teachers and students." School Principal 1 noted, "Stress makes it harder to respond. We are not at our best and the ability to take things seriously versus personally is compromised. Teachers lose their

buffer, everything is personal and this is how they react” (personal communication October 22, 2021; October 7, 2021). Based upon these consultations, emotional contagion is not merely a theme revealed in journal articles; emotional contagion is real, observable, and necessitates attention. As evidenced from the literature, researches have used cortisol collection to prove emotional contagion (Oberle & Schonert-Reichl, 2016) but based upon leaders’ responses, anecdotal evidence of emotional contagion is prevalent within the school environment.

### ***Over-Reliance on Reactive Discipline***

When teachers lack strategies for managing their own stress, they struggle to respond to student stress and emotional dysregulation effectively. Unmanaged stress results in an over-reliance on punitive discipline responses that often include removal, which results in lost instructional time for students (Hollingshead et al., 2016; Jennings & Greenberg, 2009).

Teachers who lack strategies to manage stress effectively at work are less equipped to positively support prosocial student behavior, and research cites maladaptive student behavior as one of the primary sources of teacher stress (Greenberg et al., 2016; Gubi & Bocanegra, 2015; Klopfer et al., 2019). This cycle perpetuates a negative feedback loop between the teacher and the student (Schonert-Reichl, 2017). As suggested by School Principal 1, when teachers cannot manage their stress, they respond personally instead of professionally, and often this communication results in reactive practices that are not restorative or effective.

Research provides a strong connection between exclusionary disciplinary practices and the perpetuation of disparities in achievement for historically marginalized students (Gregory & Fergus, 2017; Jagers et al., 2018). Disparate discipline data nationwide helped to drive the movement that recognizes that developing educator SE competencies equips adults with the tools

needed to teach all students effectively and may be advantageous for addressing educational inequities (Elias, 2019; Gubi & Bocanegra, 2015; Jagers et al., 2018). When teachers lack the skills necessary to manage their stress and maintain or restore well-being, students demonstrate lower performance and reduced on-task-behaviors, and are more prone to dysregulation in the classroom setting (Brackett, 2018; Larson et al., 2018; Schonert-Reichl, 2017).

### ***Fidelity of SEL Programming for Students***

How teachers self-manage their own emotions in response to stress can either contribute to or combat burnout. Teacher dysregulation can influence the fidelity of SEL programming for students, threatening to hinder the benefits SEL can have on student outcomes (Klopfer et al., 2019; Jennings & Greenberg, 2009). Despite an acute need to address teacher stress, teacher trainings that address stress reduction and teacher well-being have received limited attention (Hwang et al., 2017; Jennings et al., 2017). The implication of this research is that teachers cannot expect to teach SEL to students effectively, if they themselves do not have a well-developed set of SE competencies (Durlak et al., 2015; Schonert-Reichl, 2017; Walker, 2020). District Leader 2 summarized this theme well during the consultation session with the researcher:

We are so busy playing catch-up with our staff. If teacher preparation programs actually addressed teacher SE competencies we would not need to frontload adult SEL as extensively as we are... just because our teachers have content smarts, it does not mean they have emotional intelligence...there is not a test we can give them; we have to assume they need to be taught these skills... and because we missed the opportunity to do so, we are stuck in this reactive cycle...trying to teach our staff fast so they can teach our students. (District Leader 2, personal communication, October 22, 2021)

A review of the literature and practitioners in the field make evident that teacher stress has a significant impact on student outcomes. If schools fail to recognize this impact and forge ahead with SEL programming that fails to address teacher SE competencies and teacher well-being, then the visions they have for the success of SEL programming for students will fail to become reality.

### **Teacher Stress**

Jennings et al. (2013) suggested that teacher stress and burnout are a “pervasive problem in education today” and that “few, if any, programs address these issues” (p. 386). According to Maslach et al. (2001), three dimensions characterized burnout: exhaustion, depersonalization, and inefficacy.

In a survey of over 6,000 teachers across the country, respondents reported that they spend nearly 70% of their day feeling stressed, frustrated, and overwhelmed (Brackett, 2018). Teacher stress is not a new phenomenon plaguing education systems. Historically, teaching is recognized nationally as one of the most stressful professions (Montgomery & Rupp, 2005; Schonert-Reichl, 2017; Toppinen-Tanner et al., 2005). Most recently, COVID-19 has compounded stress for many adults. According to the American Psychological Association (2021), in the last year, 84% of responding adults reported feeling at least one symptom associated with prolonged stress. While a clear data story supports the statement that teachers are experiencing high-stress during the school day (Herman et al., 2018), a knowledge gap in the current literature persists when seeking specific strategies for reducing teacher stress (Jennings et al., 2017; Wong, 2017).

## **Causes of Teacher Stress**

The causes of teacher stress are well documented in the literature. While the sub-themes presented here do not represent an exhaustive list, they reoccur in a review of studies completed over the past decade.

### ***Adult Actions: Leadership and Colleagues***

The adults within a school community have significant influence on school climate and teacher stress (Clement, 2017; Greenberg et al., 2016). Multiple researchers of teacher stress have suggested that district and building leaders have a profound effect on teacher well-being (Barnes & McCallops, 2019; Berg, 2018; Larson et al., 2018; Tyre & Feuerborn, 2017). The implications from Clement (2017) are that school leaders either contribute to or alleviate teacher stress, suggesting that when leaders build trusting relationships with their staff, they know when teachers need support and dedicate the time to do so. Clement expanded further, summarizing that leaders can provide support to teachers when student behavior is a source of stress and can invest in teachers' lifelong learning when supporting and funding professional learning opportunities.

Based upon the research completed by Shernoff et al. (2011) and Richards et al. (2018), a theme connecting leadership and stress prevailed. Their studies on teacher stress revealed that perceived lack of support from administrators was an antecedent to the type of chronic workplace stress that led to burnout. Additional studies proposed that how teachers perceived their relationship and interactions with their leaders was critical when considering developing school climates primed for SE program success (Haydon et al., 2018; Greenberg et al. 2016).

Leaders have significant influence when modeling buy-in for SEL programming, another avenue for supporting the prioritization of SEL for both teachers and students (Barnes & McCallops, 2019). Berg (2018) indicated that in order for climates to be optimized for SEL success, administrators and teachers must “team up” (p. 82). Finally, Larson et al. (2018) tasked leaders with creating an “infrastructure of supports that focus on teacher well-being” within their districts and schools (p. 73). When consulting with colleagues, District Leader 1 shared, “When leaders have high emotional intelligence it makes a difference: Classroom teachers yes, but also leaders” (personal communication, October 2, 2021).

Teachers’ colleagues can also offer support for mitigating stress, or can contribute to stress (Clement, 2017). Researchers concluded that when considering the resources needed for successful SEL programming, access to supportive relationships must be considered. When relationships are healthy, colleagues can offer interpersonal opportunities at work that support collegiality as teachers leverage shared experiences as a tool to foster workplace well-being (Greenberg et al., 2016; Harris et al., 2015).

### ***Job Demands: So Much to Do, Too Little Time***

When exploring antecedents to teacher stress, the literature suggests that increasing job demands, state and local mandates, high-stakes testing, and lack of time significantly impact teacher stress and well-being (Greenberg et al., 2016; Haydon et al, 2018; Von der Embse, et al., 2016). The past two decades have given rise to an increased emphasis on high-stakes testing and accountability reforms, both of which emerged in the research as primary drivers for high teacher stress (Saeki et al., 2017). Stress linked to accountability practices are not new; Shernoff et al. conducted a study in 2011 that provided early evidence that such reforms revealed intense stress for teachers who felt compelled to raise student test scores and teach to the test. More recently,

Von der Embset et al. (2016) confirmed that using student test scores for decisions linked to teacher tenure, pay, and evaluations negatively affected teacher stress and well-being.

Contributing to heightened stress to meet demands is teachers' perception of lack of adequate time to complete job tasks. The same study completed by Shernoff et al. (2011) revealed that teachers experienced high occupational stress due to what they described as unreasonable expectations, excessive workloads, and, more specifically, not enough time or resources to complete job tasks. While exploring the reasons why teachers stay or leave the profession, Newberry & Allsop (2017) cited excessive workloads as a common theme for attrition. Richards et al. (2018) found similar responses in teachers characterized as having high levels of burnout. Participants cited role overload and role conflict as contributing to high stress. High-burnout teachers talked frequently about lack of time to get through their job demands. Erdman et al. (2020) cited similar concerns, as teachers strive to juggle competing demands; they perceive dedicating time to their own self-care during the workday as not feasible.

According to leaders in education, COVID-19 has intensified stress. According to District Leader 1, "Keeping up with demands, curriculum standards, testing requirements... all of that has been amplified by COVID. My teachers are in a constant state of survival, just trying to find the hours in the day to get their jobs done" (personal communication, October 2, 2021). School Principal 1 echoed these sentiments, "Pre-pandemic responsibilities on top of the new layers of stress around COVID grief and loss... my teams are tapped right now and I see it daily" (personal communication, October 7, 2021). These consultations revealed authentic examples of how the COVID pandemic has amplified teacher stress related to job demands and perceived inadequacies with time to meet mounting expectations.



### ***Managing Student Behavior***

Research on teacher well-being suggests that managing student behavior and discipline are a primary cause of stress (Klopfer et al., 2019; Greenberg et al., 2016; Haydon et al., 2018; Schonert-Reichl, 2017). Scholars frequently cited disciplinary problems as an antecedent to teacher burnout, depression, job dissatisfaction, and challenges with teacher retention (Klopfer et al., 2019; Greenberg et al., 2016; Shernoff et al., 2011). Multiple studies indicate that because of the established link between student behavior and teacher stress, SEL programming must include strategies for teachers to support positive classroom management while addressing teacher stress and well-being (Collie et al., 2012; Shernoff et al., 2011; Schonert-Reichl, 2017).

Teachers with high stress levels and lack of self-management competencies tend to respond reactively to student behavior, often times resorting to student removal (Hollingshead et al., 2016; Greenberg et al., 2016; Klopfer et al., 2019). This cycle of student behavior triggering teacher stress and teacher stress resulting in ineffective behavior management is prime for the recidivistic patterns that lead to poor student outcomes. Removal practices described by School Principal 1 are a “knee-jerk reaction when stress levels are high.” She identified student behavior as both a “symptom of stress and a cause of stress” in her building (personal communication, October 7, 2021).

### ***Solutionitis***

Solutionitis is an unintended consequence that results when school leaders try to solve problems before understanding these problems thoroughly (Bryk et al., 2015). The work of Elias (2019) affirmed that despite best intentions of school and district leaders, interventions could drive elevated stress levels as teachers navigated competing priorities and fragmented programming. Elias suggested that even SEL programming, designed to alleviate stress, could

contribute to stress: It becomes just one more initiative for teachers to manage. Oberle et al. (2016) shared similar words of caution: Teachers may view SEL initiatives as an additional burden for them to bear. These findings highlight the need to consider SEL programming through the teacher lens so that teachers can feasibly implement SEL within the scope of the busy school day.

### ***Lack of Teacher SE Competencies***

The last subtheme, a lack of professional learning geared toward the development of teachers' social emotional competencies, emerged from the literature. The implications from these studies suggest that if teachers do not have well-developed SE skillsets, then implementing student SEL programming with fidelity and sustainability will be nearly impossible (Brackett, 2019; Walker, 2020). Despite the strong link between teacher SEL and student SEL, an inadequate focus on developing teacher SE competencies prevailed (Collie et al., 2012; Greenberg et al., 2016; Schonert-Reichl, 2017).

Multiple studies suggest that effective SEL programming must include more than just access to SEL supports (Collie et al., 2015; Durlak et al., 2011; Zakrzewski, 2013). When seeking to understand the relationship between teachers' access to SEL supports and discipline practices, Zinsser et al. (2019) found that effective classroom management depended upon teachers' emotional health and well-being, supporting the argument that schools must provide explicit instruction in self-management tools designed to target stress. The seminal meta-analysis completed by Durlak et al. in 2011 revealed these findings: For SEL programming to be effective educators must have received high-quality professional learning to develop their own SEL skillset. Additional research confirms that when teachers develop tools for managing their SE needs, they can then support their students' ability to develop SEL strategies (Zakrzewski, 2013).

Self-management strategies are the tools necessary to mitigate stress and combat teacher burnout, enabling teachers to regulate their stress throughout the school day (Collie et al., 2015; Jennings et al., 2013).

District Leader 2 summarized this theme well. When the researcher asked about teacher competencies and training within her own district, she states:

If you do not know how to do something, you do not know how to teach it. If I do not know how to weave a basket, even if I have all of the tools I need the reeds, the dye, the twine... whatever I would need to make a basket then I cannot teach how to do it. I first have to be taught, explicitly, how to weave a basket. I have to practice it, a lot, before I am fluent enough to teach that process. It is the same with SEL. (District Leader 2, personal communication, October 22, 2021)

Despite evidence supporting the need to develop teachers' SE competencies, explicit instruction in strategies remains inadequate in both teacher preparation programs and ongoing professional learning offerings (Durlak et al., 2015). The work of Greenberg et al. (2016) echoed this theme, identifying teachers' SE competencies as one of four contributing factors of stress and leading to the conclusion that an insufficient focus on teaching tools for stress management prevailed in schools.

### **Consequences of Teacher Stress: Personal and Systems Implications**

Researchers have studied the effects of stress on teacher attrition, reduced self-efficacy, decreased job satisfaction, and serious health implications for years (Greenberg et al., 2016; Jennings et al., 2013; Lesh, 2020; Roeser et al. 2012). When teachers lack stress management strategies, they experience a cumulative stress effect, or toxic stress, which can be harmful to

their physical and physiological health (Schonert-Reichl, 2017). Teachers face challenges and stressors throughout their workday. Unique to the teaching profession is a need to be constantly “on.” Often emotionally charged events happen throughout the day that require teacher presence and active management: A teacher cannot simply leave the classroom and regroup. They must self-manage to regulate emotions in front of an audience of learners (Jennings & Greenberg, 2009).

The cost of teacher stress and declining well-being on systems is profound. When left unaddressed, teacher stress can have significant financial implications for districts. Healthcare costs, absenteeism, and teacher turnover due to attrition can tax district budgets and community stability (Greenberg et al., 2016; Jennings et al., 2017; Roeser et al., 2012).

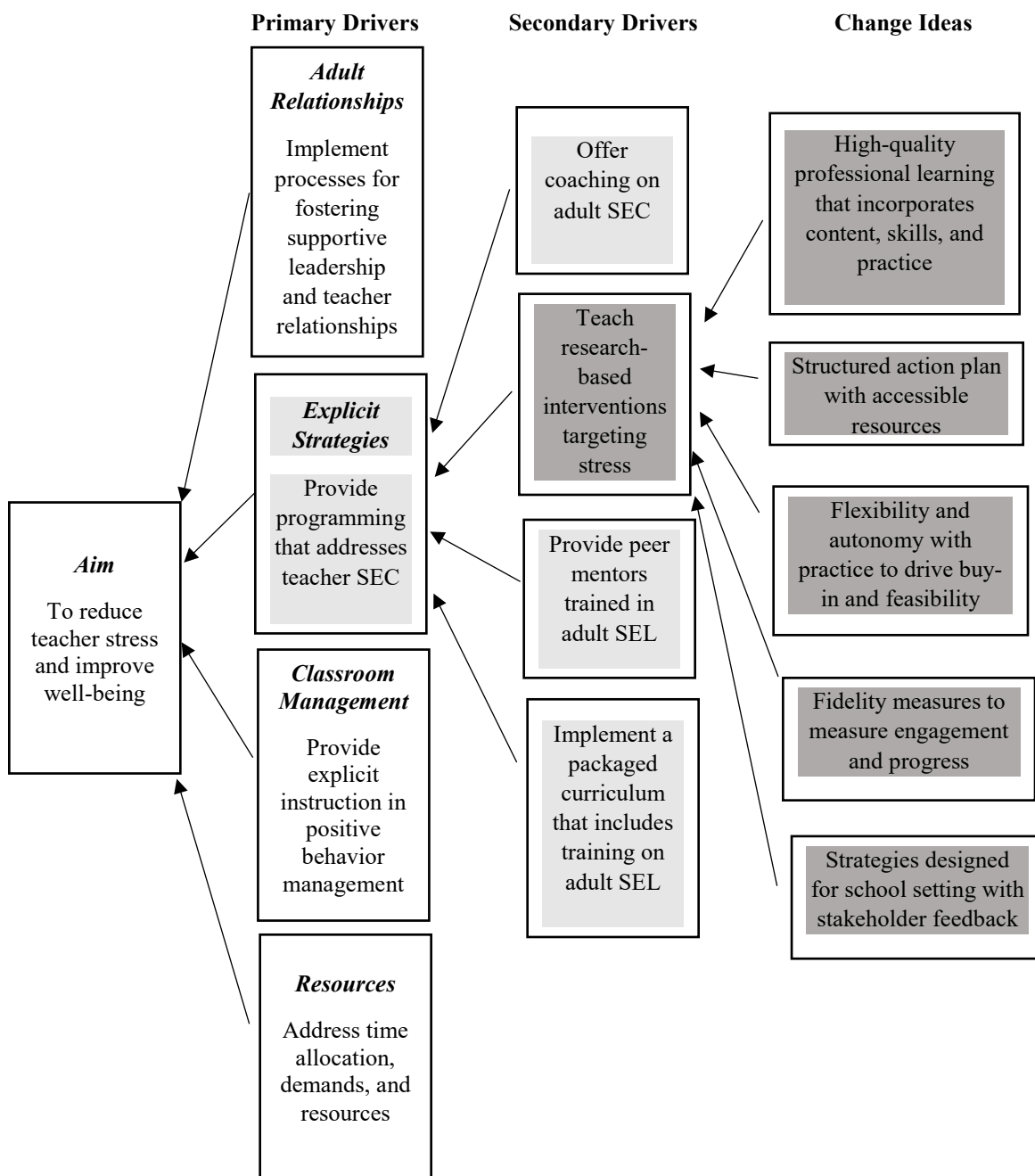
When considering personal implications, unaddressed stress has been correlated with unhealthy behaviors including poor diet, reduced sleep, increased alcohol and drug use, physical inactivity, social isolation, and unsatisfactory personal relationships (Brackett, 2019; Shernoff et al., 2011). Research correlated these same risk factors to heart disease, cancer, type 2 diabetes, addiction, and dementia; stress has lasting and detrimental impacts on health (Brackett, 2019, p. 41).

Scholars have linked investment in effective SEL programming to economic benefits for school systems: Brackett (2019) summarized a benefit-cost analysis of six SEL interventions in American schools that compared the cost of SEL programming to the monetary value of SEL outcomes. For every dollar of SEL investment, he found an eleven-dollar return. The evidence from the literature is clear. The consequences of unmanaged teacher stress have personal, professional, and systems implications that can profoundly influence student outcomes.

## **Working Theory of Improvement**

### **Driver Diagram**

A driver diagram allows the researcher to organize potential mechanisms of improvement that could be leveraged to address an identified problem of practice that is articulated as a measureable improvement aim (Bryk et al., 2015). Considering the systems' elements presented in the root cause analysis in Chapter I, along with the literature and practice reviews synthesized in this chapter, the driver diagram presented here in Figure 5 drove the working theory of improvement for this study.

**Figure 5***Driver Diagram: Organizing Mechanisms for Change*

*Note.* SEL = Social Emotional Learning; SEC = Social Emotional Competence.

As visualized in Figure 5, a driver diagram represents a list of solutions that the researcher could leverage to drive change. Primary drivers are the researcher's initial hypotheses about what could drive change, in the context of the current literature, practice, and the completed root cause analysis. Secondary drivers provide sub-hypotheses as the researcher moves to the specificities of the actual change ideas that will inform the theory of improvement (Bryk et al., 2015). The organizational activity intends to identify key mechanisms for change that are feasible within the scope of resources allocated to improvement within one phase of a multi-step process (Bryk et al., 2015). Ultimately, this process leads the scholarly practitioner to formulate a theory of improvement (Perry et al., 2020).

### **Root Cause Analysis: Findings Connected to the Literature**

In Chapter 1, the researcher understood the problem of practice within the context of the systems and root causes unique to the district that impact teacher well-being. The fishbone diagram presented (Table 3) provided a detailed model outlining the four root causes and the factors that contribute to the problem.

The complexities of the problem in the district of study reflect the themes that emerged from the review of the literature and practice offered in this chapter. When considering the potential drivers visualized in the driver diagram, one lever for change stands out as feasible within the scope of the ISDiP, providing teachers with research-based interventions designed to target stress. A review of the research concerning strategies for mitigating stress drove the selection of a high-impact strategy to leverage change.

## Strategies

### Attempts to Address Teacher Stress

As reviewed, a growing body of research over the past decade provides evidence of the impact of teacher stress on school systems, and on personal and student outcomes. This impact has resulted in a need for research-based strategies for alleviating stress that educators can apply within school settings. When reporting on the effects of teacher stress on teachers, schools, and students, Greenberg et al. (2016) charged districts with providing organizational and individual interventions to reduce stress and promote well-being. Empirical data suggest that the five strategies explored below may improve teacher well-being.

### *Professional Learning Communities*

When teachers' have positive and supportive relationships with one another they benefit personally, their students benefit, and all parties perceive the school climate more positively (Durlak et al., 2015; Newberry & Allsop, 2017). CASEL recognizes relationship skills as one of the five interactive competencies essential to the social-emotional health of the adults and students within a school environment (CASEL, 2020). Professional Learning Communities (PLCs) can cultivate the development of strong relationships with colleagues and provide opportunities for workplace support systems that can foster teacher well-being (Antinluoma et al., 2018; Clement, 2017). One challenge with the PLC model is a recognized lack of universal definition, noted in both seminal and current literature (Antinluoma et al., 2018; DuFour, 2004; Lomos, et al., 2011). Researchers suggested that PLCs provided time for collaborative discussion, the development of professional relationships, and a shared vision designed to improve school climate and student outcomes (DuFour, 2004; Lomos et al., 2011). Despite



incongruences in model and process, studies indicated that PLCs may improve pedagogical self-efficacy (Zonoubi et al., 2017) and collective efficacy (Voelkel & Chrispeels, 2017), and could enhance student achievement (Lomos et al., 2011). However, researchers cautioned that PLCs also require extensive time, consistent leadership support, buy-in, collegiality, and follow-through with work done within the PLC and classroom application. Without these elements, PLCs could actually perpetuate teacher stress (Antinluoma et al., 2018; Brodie, 2021; Schaap & de Bruijn, 2018; Schaap et al., 2019).

### ***Mentor Programs***

Mentoring programs emerge from the literature as a vehicle for building supportive workplace relationships to address teacher well-being and retention rates for early career teachers (Sowell, 2017; Kutsyuruba et al., 2019). In their study on attrition, Newberry and Allsop (2017) found a lack of mentoring as a common theme identified when asking teachers why they leave the profession. A key element within the mentoring model is coaching around classroom management skills (Sowell, 2017). As previously discussed, teachers often cite managing student behavior as one of the leading causes of teacher stress and burnout (Klopfer et al., 2019; Greenberg et al., 2016; Haydon et al., 2018; Schonert-Reichl, 2017). While the mentor model encourages the development of trusting relationships and can help new teachers develop more effective classroom management strategies, Sowell (2017) concluded that some limitations of the mentoring model include lack of specific training for the mentor and that personality and content matches can influence the success of a mentor-mentee relationship. Dias-Lacy and Guirguis (2017) found similar themes, concluding that when teachers partner with experienced teachers, it can improve stress levels and may combat attrition. The authors suggested successful implementation depends upon teacher training in the mentor role. In their large study on the

impact of mentoring on teacher retention and well-being, Kutsyuruba et al. (2019) found a strong correlation between mentoring and teacher well-being, but cautioned that experiences with mentoring could lead to increased anxiety for teachers if the mentor is in an evaluative role.

### ***SEL Coaching***

Stickle et al. (2019) called SEL coaching a “promising approach” to provide teachers with strategies for developing their own SE competencies (p. 42). The authors found that participants perceived SEL coaching as effective. Participants increased their use of SEL practices in authentic contexts, reported that the SEL coaching benefited their personal growth, and noted that their improved ability to create a positive classroom environment and manage student behavior. Similarly, Yoder and Gurke (2017) identified that SEL coaching provided focused support for teachers while offering direct feedback in classroom contexts as teachers implemented SEL strategies with students. In this way, teachers developed their own SE competencies while simultaneously teaching the competencies to their students. Both Yoder and Nolan (2018) and Stickle et al. (2019) suggested that SEL coaching is most effective when paired with additional and ongoing professional learning around SE programming.

### ***Teacher Resiliency***

Emerging in the growing field of stress-targeted interventions designed for teachers are specific curriculums for teaching educator resiliency. Larson et al. (2018) studied the impact of one such well-being intervention called the ACHIEVER Resilience Curriculum that provides educators with skills and routines targeted to improve social-emotional competencies, on teacher stress and classroom management strategies. The authors found that participating in the ACHIEVER intervention resulted in reduced perceptions of stress and improved fidelity when

implementing classroom management strategies. In a similar study on the potential of resiliency training, Chesak et al. (2019) studied the impact of Stress Management and Resiliency Training (SMART) on public school educators. The authors concluded that participation in the resiliency training led to a statistically significant improvement in multiple outcomes, including levels of stress and anxiety. In both studies, resiliency training incorporated mindfulness practices. The authors from both studies suggested that school systems provide teachers with explicit instruction in wellness interventions designed to target stress and recommended further research to understand the impact of stress management interventions embedded within the school day.

### ***Mindfulness-Based Interventions***

While multiple access points for addressing teacher well-being exist, MBIs have gained traction in the literature as an effective research-based intervention that may provide teachers with effective strategies for self-management to reduce stress and improve well-being (Erdman et al., 2020; Hwang et al., 2017; Reiser et al., 2016; Wong, 2017). Mindfulness practices led to reductions in stress and burnout while promoting emotion regulation, improved energy, and overall well-being (Harris et al., 2015; Jennings et al., 2019; Lee & Himmelheber, 2016).

MBIs are research-based, do not require extensive or expensive training, can be practiced anywhere, and do not require special equipment (Erdman et al., 2020). Practicing MBI is feasible within the scope of a busy school day (Meiklejohn et al., 2012), and research provides evidence that even brief practices can support significant results (Larrivee, 2018).

### *Strategies from the Field*

When consulting with leader practitioners about their school and district attempts to address teacher stress, responses revealed a variety of strategies with varying levels of success (Table 9).

**Table 9**

#### *How is Teacher Stress Being Addressed in Authentic Contexts?*

Strategy	Quotes from leader practitioners
RULER	“About five years ago, we invested in the RULER program out of Yale. We selected it and then told our staff they could not use it with students until we shifted to that phase of implementation. This is the front loading that we did for teacher SEL first. That we did well... We formed a charter committee first and modeled the feelings work and language that had to precede the work we would be doing with our teachers.” (District Leader 2, personal communication October 22, 2021).
Relationships and support	“We meet every week as a school-wide team. We talk about our kids, their needs, barriers... and all of my staff have been trained on trauma informed practices. We go through the language. We talk about poverty and toxic stress... (School Principal 1, personal communication October 7, 2021).
Rethink Ed	“We use Rethink Ed. It has a component for adult SEL so there is an adult lesson (video) for the teacher to learn before they teach. I wish we could track the data, as we are not sure how much they (teachers) use it. We do more messaging then we used to with adult SEL: In our newsletter, we have a section on SEL and well-being. This month was all about balance so it is not explicit teaching, but we are messaging it.” (District Leader 1, personal communication October 2, 2021).
Mindfulness	“We had a mindfulness program for a year. We invested in an outside trainer but it was not well received. She came once and did a PD on mindfulness and had everyone eat a raisin slowly (that is honestly what everyone still talks about...eating the raisin). There was not support daily around what to actually do when, how... and the feedback I got from my teachers was that without a relationship with her, it just was not working.” (School Assistant Principal 1, personal communication October 14, 2021).

*Note.* RULER = an acronym for the five skills of emotional intelligence developed at the Yale

Center for Emotional Intelligence; PD = professional development.

Table 9 and a review of the literature confirm that there are multiple levers to pull when seeking strategies to target teacher stress and well-being. A review of the literature and practice suggests that many components need consideration when selecting an intervention and that ultimately, the success of each depends on multiple factors.

### **High Impact Strategy: Mindfulness-Based Interventions Designed for the School Setting**

A decade ago, The National Child Traumatic Stress Network (NCTSN) identified that mindfulness is one of the most effective ways to combat the effects of stress for professionals working in careers susceptible to compassion fatigue (2011). Over the last 10 years, a growing body of research has provided evidence that while initially practiced in medical settings, MBIs have gained traction across a variety of contexts including in education (Jennings et al., 2017; Frank et al., 2015; Meikeljohn et al., 2012). Despite this momentum, a knowledge gap persists as researchers call for studies that specifically examine how to leverage MBIs as a tool to mitigate teacher stress (Hwang et al., 2017; Jennings et al., 2017; Wong, 2017).

Cullen (2011) stated, “Mindfulness is an antidote to the disease of 21<sup>st</sup> century life and its attendant and ever-increasing pull toward multi-tasking and 24/7 connectivity” (p. 189). When seeking to understand the application of mindfulness in school contexts, several themes emerged in the literature that are important to consider when understanding the impact of MBI on teachers and students and when designing MBIs for school settings.

#### **A Brief History of Mindfulness: Providing Context and Definition**

While there are variations in the literature when defining mindfulness and the interventions aligned with mindful practice, the origins of today’s practice are rooted in Buddhist

traditions (Cullen, 2011; Hwang et al., 2017; Mark et al., 2011). For purposes of this study, mindfulness was defined as “paying attention in a particular way: on purpose, in the present moment, and non-judgmentally” (Kabat-Zinn, 1994, p. 4).

Kabat-Zinn is credited with the inception of MBSR at the University of Massachusetts Medical Center in 1979. The three formal practices that constitute MBSR include mindful movement, body awareness, and mindful meditation (Cullen, 2011). While mindfulness is rooted in Buddhism, there were no religious components encompassed in this school-based program (for example enlightenment, mantras, chanting). The mindfulness programming solely incorporated strategies for stress-management.

### **Adult Outcomes: The Direct Benefits of MBI**

Emotion regulation, or self-management, is a critical skill set for teachers to employ as they respond to stressors throughout their day (Jennings et al., 2017; Roeser et al., 2013; Schonert-Reichl, 2017). Studies that have reported on stress often include multiple indicators of well-being: perceived stress levels, emotional regulation or self-management, self-efficacy, gratitude, sleep patterns, anxiety, life satisfaction and physical health (Chesak, et al., 2019, Harris et al., 2015; Taylor et al., 2016).

Jennings et al. (2013, 2017, 2019) presented a series of studies that provided evidence that interventions that included MBIs designed for the school setting substantially improved teachers’ emotion management skills, reduced levels of psychological distress, and improved mindfulness. Because of intervention, participants also reported significant positive effects on sleep and reduced emotional exhaustion (2017). In their follow-up study, Jennings et al. concluded that participants sustained the benefits of intervention over time (2019).

Further evidence from the research indicates that the positive effects of MBIs are lasting (Flook et al., 2013, Reiser et al., 2016; Taylor et al., 2016). While not completed in a school setting, Solhaug et al. (2019) suggested that participants maintained the intervention impact of mindfulness on mental distress and coping at a four-year follow-up to their initial study. These studies support the argument that explicit instruction in MBI has both immediate and lasting positive impact on well-being.

When considering MBI as a research-based tool for self-management, studies suggest that mindfulness interventions are effective. MBIs foster the development of SE competencies; teachers who participate in MBIs demonstrate reductions in negative emotional reactions to workplace stressors and report improved classroom management skills (Taylor et al., 2016). Additionally, researchers link MBIs to improved executive functioning (Meiklejohn et al., 2012). Finally, implications from the research indicate that MBIs might significantly reduce anxiety and stress, and improve gratitude and satisfaction with life (Chesak, et al., 2019). By targeting these outcomes, MBIs could also be a mechanism for reducing occupational burnout (Emerson et al., 2017).

Harris et al. (2015) included biological indicators to support their conclusion that participation in daily MBI improved teachers' emotional function, reduced burnout, and improved efficacy and well-being. Similar research (Beshai et al., 2016), provided evidence of the direct benefits that MBIs had on teacher well-being when applied as a tool for self-management and that school-based mindfulness programs were effective.

These studies represent a sampling of the research conducted that links school-based MBI to reductions in teacher stress and improved well-being. These direct benefits are important for school leaders to consider when identifying research-based interventions that affect teacher

wellness. Additionally, the research suggests that MBIs may have an indirect impact on student outcomes (Jennings et al., 2017; Roeser et al., 2012).

### **Student Outcomes: The Indirect Benefits of MBI**

When drawing conclusions from their systematic review of school-based MBIs published up until 2015, Hwang et al. (2017) determined that research rarely included both direct and indirect measures of the effects of MBI. Considering emotional contagion (Brackett, 2019, Jones et al., 2013; Oberle & Schonert-Reichl, 2016), it would be logical to hypothesize that if increased teacher mindfulness reduces stress, then indirect consequences might include a positive impact on student and climate outcomes. Emerging literature supports this indirect relationship between teacher mindfulness and student outcomes (Jennings et al., 2017; Roeser et al., 2012).

In a review of the seminal research on school-based MBIs, Meiklejohn et al. (2012) concluded that mindfulness programming focused on teaching explicit strategies to teachers had a positive impact on students. This indirect approach to improving student well-being is rooted in teachers' developed skillset: Reducing teacher stress shifts the tone of the classroom and enhances teacher SEL efficacy. Studies completed in the decade that followed have discovered similar relationships between mindfulness and student outcomes. Jennings et al. (2017) suggested that the results of their study were unique in that teacher participation in school-based MBIs correlated to improved classroom management and instruction skills, even though the intervention did not include explicit instruction on classroom management and instruction skills.

The implications from the literature suggest that participating in MBI improves teachers' self-management skills. When teachers possess well-developed self-management competencies, they have the capacity to regulate their own emotions in order to remain calm and positive. They



are better-equipped to build and maintain positive relationships with students, excel at modeling SEL for students as they navigate self-management throughout the school day, and can build and sustain classroom environments that include strategies for effective behavior management while promoting student strengths (Jones et al., 2013; Roeser et al., 2012; Wong, 2017).

When studying the impact of teacher well-being and mindfulness on indirect student outcomes linked to behavior management and classroom climate, Jennings (2015) found that teachers with well-developed SE competencies tended to proactively address student behavior. DiCarlo et al. (2019) and Harries et al. (2015) reported similar results linking teacher mindfulness and improved classroom climates with increased efficacy with classroom management skills. Similarly, Taylor et al. (2016) concluded that teachers who participated in MBIs dealt with stressful situations in their classrooms more effectively as compared to the reports on effectiveness from the control group.

Managing student behavior was one of the most prevalent themes found when exploring antecedents to teacher stress (Haydon et al., 2018; Klopfer et al., 2019; Schonert-Reichl, 2017). If MBI can directly affect teacher efficacy with classroom management (DiCarlo et al., 2019), indirectly foster teacher compassion, and improve classroom environments (Jennings et al., 2017; Taylor et al., 2016), then student behavior could improve. These studies provide evidence of the positive feedback loop that could result if schools use mindfulness as a tool for teacher well-being. The literature reports an overrepresentation of Hispanic or Latino and Black or African American students in reactive discipline data (Elias, 2019; Gregory & Fergus, 2017; Gubi & Bocanegra, 2015). There is potential for school leaders to leverage the indirect relationship between mindfulness and classroom management for equitable change.

Finally, if leaders expect teachers to teach explicit tools for self-management to their students, then they too must be well versed in how to use and model those tools (Durlak et al., 2015). Evidence in the literature supports the use of mindfulness with students. Lemberger-Truelove et al. (2021) studied the effects of SEL programming that incorporated mindfulness-based interventions for students. Results of the study indicated significant intervention effects for the treatment group that included improved academic achievement, stress tolerance, social curiosity, and executive functioning. MBIs have potential for both teachers and students, but first schools must have a comprehensive plan for professional learning and practice that is feasible and sustainable (Dariotis et al., 2017; Lee & Himmelheber, 2016; Meiklejohn et al., 2012). Teachers then can learn the MBI strategies proven to influence their own well-being and indirectly impact student outcomes and positive climates (Meiklejohn et al., 2012; Jennings et al., 2017).

## **Best Practices for School-Based MBI**

### ***MBI Training: Professional Learning***

Researchers have found that it is not enough to tell teachers that self-management is important to self-care; school leaders must provide professional learning that includes explicit instruction in stress-reduction strategies that teachers can then employ throughout their day (Brackett, 2018; Flook et al., 2013). Multiple studies have concluded that high-quality professional learning is an effective vehicle for teaching MBIs to educators. Mindfulness training must provide teachers with tools to build self-awareness and strategies for proactive self-management during stressful classroom situations (Roesser et al., 2012, 2013). Research suggests that teachers respond well to mindfulness training and find it beneficial, with high-levels of buy-in for continued use in authentic contexts (Reiser et al., 2016).

Many of the established mindfulness interventions reported in the literature employ extensive training as a necessary component to program implementation (Chesak et al., 2019; Jennings et al., 2017, 2019). The standard MBSR program as conceptualized by Kabat-Zinn (1994) includes extensive training (2.5 hours per week) over an 8-week period and a daylong session that typically lasts 6 to 8 hours. Limitations to these programs include the extensive time for training. Research on MBI for school settings suggests that modified MBSR can be both effective and accessible for teachers (Flook et al., 2013; Frank et al., 2015).

Despite the research that supports a critical need for professional learning in teacher self-management strategies designed to mitigate stress, Wong (2017) suggested that professional development programming in mindfulness practice is often inadequate. Durlak et al. (2015), summarized that the most effective professional learning included opportunities for adult learners to develop content knowledge, taught explicit skills, and embedded active participation, or practice, with the newly introduced skill. Martinez (2016) echoed these suggestions for high-quality professional learning, summarizing that teachers learning by doing influenced effective SEL programming. Teachers cannot teach self-management strategies until they themselves can utilize the strategies.

### ***MBI Practice: Setting Teachers up for Success***

High-quality professional learning that offers explicit instruction in self-management strategies is a critical first-step in addressing teacher wellness (Durlak et al., 2015). Just as important is the structure and support that teachers receive afterward so that teachers can apply what they have learned. When reviewing the literature on effective mindfulness plans, key elements for success emerged for leaders to consider when designing programs that foster practice fidelity and sustainability (Erdman et al., 2020; Flook et al., 2013; Lesh, 2020).

Stress management tools work best when used proactively: Self-management tools should not be used solely in response to dysregulation, but should be practiced regularly (Menakem, 2017). Based on their research Erdman et al. (2020) and Lesh (2020) suggested that MBI programs include a daily action plan to help teachers identify when proactive strategies may be most beneficial and to keep on track with a routine of practice. The authors indicated that a daily plan helped to ensure that teachers did not neglect self-care as other priorities surfaced throughout the workday.

While some of the more formal mindfulness programs in the literature required extensive training and practice time, ample research exists that offers evidence that MBSR modified for the school day provide effective tools in reducing stress and improving measures of well-being. Flook et al. (2013) adapted MBSR for an elementary school setting, included flexibility around length of mindfulness practice to accommodate teachers' schedules, and provided guided recordings for participants to access as needed. When designing their study, Beshai et al. (2016) sought to understand the feasibility of using MBIs shortened and adapted to fit within a busy school day. Like Flook et al. (2013), Beshai et al. (2016) concluded that adapted mindfulness programs proved effective at improving mindfulness, reducing stress, and improving well-being. Beshai and his colleagues reported significant results for all three outcomes: reduced stress, improved mindfulness, and improved well-being. Similarly, Frank et al. (2015) summarized that their modified MBSR program designed for the school setting resulted in significant improvements in participants' ability to self-regulate and that participants in the MBI group made significantly greater gains in mindfulness-related traits than the control group. The authors based their adjusted program on the core pillars of the MBSR program, including mindful breathing, body scan, yoga, and meditation. Finally, Meiklejohn et al. (2012) concluded that

mindfulness strategies were realistic within the scope of the school day based upon their review of the early research completed on school-based MBI programming, results that Harris et al. (2015) confirmed more recently.

When exploring themes that emerged from their study on the impact of mindfulness, Dariotis et al. (2017) concluded that when developing school-based programs, critical aspects like scheduling, physical setting, ensuring that instructors are engaging, and fostering effective communication maximized the effectiveness of MBIs. When considering effective programming, allowing for teacher flexibility and autonomy with specific strategies is essential. As summarized by Menakem (2017), learning strategies for self-care is not about reducing stress but rather how to manage stress when it occurs.

Finally, in their systematic review of mindfulness programs designed for teachers, Hwang et al. (2017) concluded that research rarely included attention to intervention fidelity. Including measures of fidelity and accountability systems for teachers to encourage their ongoing practice of learned interventions are important components to consider when designing school-based mindfulness programs (Erdman et al., 2020; Lesh, 2020).

### **Addressing a Knowledge Gap: What Research is Needed?**

Despite a surge of interest in mindfulness and emergent research on the use of mindfulness in schools, the literature reveals a knowledge gap that supports the need for additional school-based studies designed specifically to understand how MBI can be used to support teacher SE competency. Hwang et al. (2017) cited a need to address the impact of school-based MBIs on both direct and indirect measures. Wong (2017) suggested that the research on the benefits of mindfulness training for teachers is inadequate. Lastly, Jennings et al.

(2017) concluded that while the impact of teacher stress on negative student and classroom outcomes was clear, more research is needed to understand what specific strategies can be taught to mitigate teacher stress.

### **Summary**

Research within the field of teacher well-being confirms a dire need to address teacher stress. Mindfulness-based interventions are gaining traction as effective and feasible research-based strategies within the context of the school environment. Despite this momentum, a knowledge gap continues to drive the need for further studies that explore the connection between MBI and teacher stress and well-being.

### **Chapter III: Methodology**

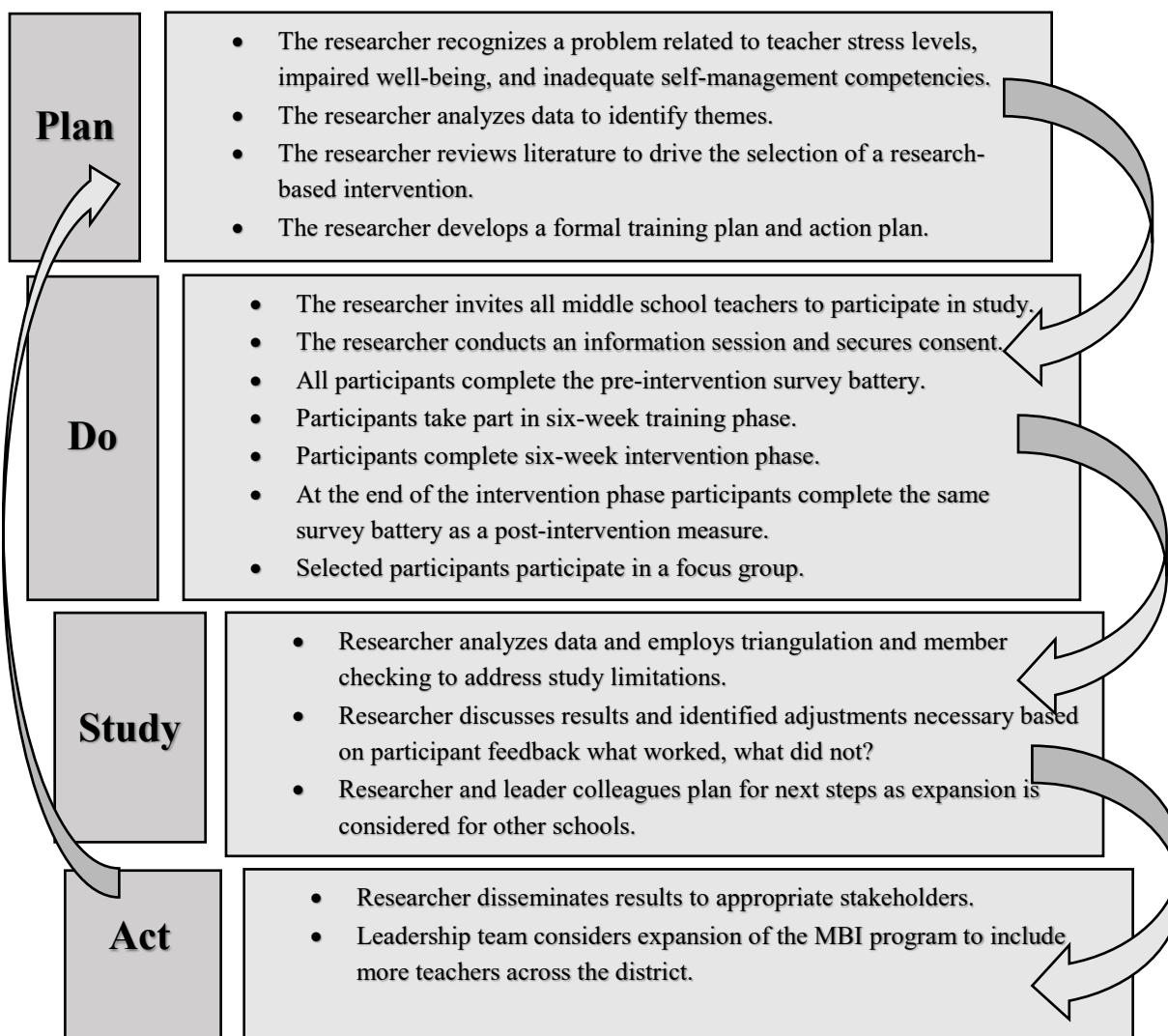
In this chapter, the researcher presents the change theory or theory of improvement that informed the development of this ISDip. The remainder of the chapter outlines the methodology, research design, participant characteristics, and procedures employed to answer the proposed research questions and to test the presented hypotheses.

#### **Theory of Improvement**

##### **Plan, Do, Study, Act**

The researcher identified mindfulness-based interventions designed for the school setting as a potential change agent for teacher stress and well-being based on data, practice themes, the unique factors that contribute to the problem of practice as outlined in the root cause analysis, and the lever for change visualized in the driver diagram (Figure 5). The researcher began this improvement science approach with an evaluation of data from multiple sources. Analysis of these data revealed a problem: Middle school teachers in Westly will benefit from self-management strategies to support stress and well-being. Based upon these results, the researcher reviewed the current literature and interviewed administrators in districts other than the district of study to identify themes related to the problem and to identify plausible interventions that could support the development of teacher self-management competencies.

As described in the literature, teacher stress has a profound impact on personal and student outcomes and on school climate. Also supported by the literature, mindfulness-based interventions effectively improve self-management, reduce stress, and improve well-being and are feasible for school settings. The synthesis of these parts come together to inform a change theory, or theory of improvement. Figure 6 represents the change theory using a model conceptualized and modified from Bryk et al. (2015) and Hinnant-Crawford (2020).

**Figure 6***Improvement Theory: How Leveraging MBI Will Lead to Improved Outcomes*

*Note.* MBI = mindfulness-based intervention.

The improvement theory of change informed the development of the procedures and methods for this ISDiP. As suggested by Bryk et al. (2015), as this study evolves it will drive future adjustments to this working theory of improvement. Thus, the Plan, Do, Study, Act



process visualized in Figure 6 is non-linear, constantly evolving as deeper understanding of the system drives change efforts.

The researcher, with support from leader colleagues within the Office of Equity Advancement and the Department of Pupil Services established the purpose of the study, informed the research design, identified study participants, established training and intervention procedures, selected the methods of data collection, developed the research questions to drive understanding, and selected methods for data analysis. The researcher details these plans in the following sections.

### **Purpose of the Study**

The purpose of this study was to understand to what extent mindfulness-based interventions designed for the school setting aided in the development of middle school teachers' perceptions of self-management skills and what impact MBIs had on participants' perceptions of enhanced mindfulness, well-being, and stress. Additionally, the study reported on the indirect impact participation in the mindfulness program had on teachers' perceptions of classroom management, climate, and relationships with students.

### **Methodology**

The researcher grounded this action research study in an improvement science framework that explored the impact of mindfulness-based interventions on educator perceptions of self-management, enhanced mindfulness, well-being, and stress. Action research is appropriate when the researcher seeks solutions to everyday problems within a system while at the same time attempting to change the problem (Martella et al., 2013). The researcher is a full partner in both the research processes and in generating solutions to the problem of practice (Elden & Chisholm,

1993; Martella et al., 2013). Elias (2019) identified action research as highly pragmatic, allowing the researcher to test the impact of an intervention in one's own setting.

Five characteristics of action research provided a framework for the research methodology: purposes and value choice, contextual focus, change-based data and sense making, participation in the research process, and knowledge diffusion (Elden & Chisholm, 1993; Martella et al., 2013). Action research is justified when the researcher seeks to solve real-life problems, has a stake in the research outcomes, and considers values when conducting research. Martella et al. (2013) described purposes and value choice as the first of the five characteristics of action research. In this study, both a systems and root cause analysis revealed that the problem of practice was authentic within the context of multiple systems, and the researcher is vested in supporting the district's long-range goals for SEL programming.

The second characteristic of action research, contextual focus, lent itself to this study. A hallmark of action research and improvement science change theory is the evaluation of systems and contexts in which a problem resides (Martella et al., 2013; Perry et al., 2020). Additionally, understanding these contexts within both the methodology and change theory model required input from multiple stakeholders. In the case of this study, end-users helped to define the problem of practice and shape the intervention as agents within the existing context (Martella et al., 2013).

The data collection procedures met the characteristics of change-based and sense-making as identified within action research. Data methods were logical and followed accepted procedures for data collection (Martella, et al., 2013). Additionally, the data collection methods were appropriate to answer the proposed research questions and sub-questions.

One of the defining features of action research is the involvement of the researcher as an active participant in the process (Martella et al., 2013). The researcher is a Westly Public Schools employee and colleague of the participants. The researcher is trained in mindfulness and has created the MBI program to be studied.

Lastly, the final characteristic of action research, knowledge diffusion, requires the researcher to share knowledge gleaned from the study (Martella et al., 2013). Because this study will inform the next steps for the district as systemic programming evolves, the results will be essential as the researcher and leader colleagues develop a model for districtwide implementation. Based upon the above, the researcher determined that action research provided a methodology most appropriate for this study.

### **Research Design**

This study employed mixed-methods, explanatory-sequential design. In an explanatory-sequential research design, the researcher collects data sequentially and systematically. Quantitative data collected pre- and post-intervention as well as during the intervention informed the collection of qualitative data after the conclusion of the intervention phase. In this study, these qualitative substantiated the quantitative data (Creswell & Plano Clark, 2018).

Justification for mixed-methods design in a study occurs when researchers want to understand more than what numbers alone can tell them and is often utilized when conducting action-research (Creswell & Plano Clark, 2018). Lakes et al. (2019) proposed that mixed-methods design is a good fit when developing and evaluating new programs as qualitative data can provide a rich description and may substantiate quantitative data. Additionally, when discussing best practices for merging qualitative and quantitative data in mixed-methods design,

Driscoll et al. (2007) suggested that employing mixed-methods is appropriate when researchers seek to understand the strength of relationships between variables through statistical analysis and a deeper understanding of the what and why behind the relationship.

Because this researcher collected quantitative data that served as evidence of intervention impact while also lending participants' voice to garner perceptions of the strengths and weaknesses of the program, a mixed-methods explanatory-sequential design answered the proposed research questions and could inform program adjustment and expansion. This study's design enabled the researcher to answer both what and why.

### **Theoretical Lens**

While ISDiPs are unique in that they are not grounded in a specific theoretical framework, identifying primary drivers for program improvement encourages a theoretical lens (Perry et al., 2020). Durlak et al. (2015) identified many potential levers of change to employ when considering SEL programming. This study's design addressed one teacher SEL competency, self-management, and examined the impact of a research-based intervention for self-management on teacher perceptions of stress and well-being. Ultimately, this researcher recognized the impact of the environment on student outcomes and suggested that addressing teacher well-being would indirectly influence classroom climate and student outcomes (Brackett, 2019). As such, the overarching theoretical lens driving this ISDiP was an ecological systems theory. Formally conceptualized by American psychologist Urie Bronfenbrenner in 1979, ecological systems theory considers the impact of the context or ecology of multiple factors on child development (Bronfenbrenner, 1979, as cited in Darling, 2007). For purposes of this study, the researcher posited that the context in which educators and students spend their time

influences student outcomes. Addressing climate is critical when developing and implementing SEL programming (Durlak et al., 2015).

### **Target Population and Participants**

The target population for this study included all middle school certified teachers who were currently employed and actively teaching for Westly Public Schools. All participants met inclusion criteria and worked as a teacher at the middle school level for Westly Public Schools for the duration of the study. The researcher chose this target population based on data, convenience, and accessibility. As this was a pilot study developed to inform program expansion across the district, the data collected from these teachers will inform the improvement of teacher SE competencies, as next steps are determined.

### **Sampling**

The study employed identical samples, as the same individuals participated in the pre- and post-test intervention measures and in both phases of the study. These samples enabled the researcher to compare change in response to intervention for the same group of participants. The sampling method employed was non-probabilistic convenience sampling (Creswell & Plano-Clark, 2018). The study was not open to teachers from other schools across the district. The researcher selected this sampling method based on convenience and accessibility. Additionally, as the researcher hoped to understand the indirect impact that MBIs might have on classroom management, the sample included only certified teachers and not administrators, related service providers, or support staff.

The primary method of sampling involved sending an email invitation to all middle school teachers actively employed by Westly Public Schools. The email invitation included all

necessary information to provide informed consent (Appendix B). The invitation requested teachers who were interested in participating to send an email reply to the researcher. Because WPS employs the researcher as a Department Supervisor, included in the consent form was assurance that if potential participants declined to participate, their decision would not affect their teaching position in any way.

To foster participation in the study, participants received a mindfulness kit as a thank-you incentive. Grant funds awarded to the researcher by The Foundation for Westly Public Schools funded these kits. The total grant awarded was \$400 and each kit price was approximately thirteen dollars.

## **Participants**

The participants in this voluntary study represented a heterogeneous sampling when considering building assignment, age, and years of experience. Table 10 provides participant demographic information for the sample population and Table 11 summarizes the demographics of the sample and target populations disaggregated by gender and race/ethnicity.

**Table 10***Descriptive Information of Participants*

Demographic characteristic	Study sample/Cohort sample ( <i>N/n</i> )	Percentage of sample represented
Number of certified teachers	20	--
Building assignment		
Smith Middle School	8	40%
Prince Middle School	8	40%
Bonny Middle School	4	20%
Identified gender		
Female	20	100%
Male	--	--
Identified race/ethnicity		
White	19	95%
Black/African American	1	5%
Participant age range		
21-25 years-old	2	10%
26-35 years-old	5	25%
36-45 years-old	6	30%
46-55 years-old	2	10%
55 or older	5	25%
Years of teaching		
0-5 years	5	25%
6-10 years	2	10%
11-15 years	4	20%
15+ years	9	45%
Level of education		
Bachelor's degree	3	15%
Master's degree	14	70%
Educational specialist (sixth year) degree	3	15%
Classroom type		
Special education	12	60%
General education	6	30%
Connections (unified arts)	1	5%
Interventionist	1	5%

**Table 11***Demographic Information of Target Population*

Demographic	Study sample %	Target population % educators at the middle school level	District % educators
Female	100%	73.9%	79.6%
Male	0%	26.1%	20.4%
White	95%	87.3%	90.6%
Asian	0%	3.5%	2.2%
Black/African American	5%	2.7%	2.8%
Hispanic or Latino of any race	0%	6.6%	4.3%
Native Hawaiian or other Pacific Islander	0%	0%	0%
American Indian or Alaskan Native	0%	0%	.1%
Two or more races	0%	0%	0%

The demographic information disaggregated by race/ethnicity for the 2019-2020 school year was the most recent data available from the state department of education (CSDE, 2020). As presented in Tables 10 and 11, when considering classroom type there was a higher prevalence of special education teachers in the study population (60%) as compared to the target population: Special education teachers at Bonny middle school represented 11.6% of the target population, at Smith 12.2% and at Prince 12.6% (CSDE, 2020). Additionally, the study sample did not include gender diversity and significantly limited racial/ethnic diversity. When comparing the study sample to the target population, 95% of participants identified as White and 87.3% of the target population identified as White and 100% of the participants were female (CSDE, 2020). These discrepancies limited the generalizability of the study.



### ***Consent***

All participants provided informed consent and teachers who agreed to participate in the focus group signed an additional consent form (Appendices C and D). The researcher sent the study invitation, containing all information necessary to give informed consent, and the consent forms (for the full study and for participants selected for the focus group) via WPS secure email, to all middle school teachers' WPS email addresses.

### ***Protection of Participants***

The researcher protected participant confidentiality to the fullest extent of the law. Participants assigned themselves a self-generated identification code to use at pre- and post-test. The researcher did not include participant names or other identifying information in the transcribed responses from the focus group. The researcher kept a list of study participants' names and informed consents on a password-protected computer in the researcher's locked office. Participants completed the online, web-based survey before attending the first training session in Phase 1 and at the completion of the study. Additional quantitative measures were web-based.

The researcher stored all data on a password-protected computer. The focus group facilitator instructed the participants on confidentiality and asked that participants not discuss responses outside of the focus group. The researcher disseminated results in the aggregate for the doctoral dissertation, defense, and any presentations or future publications. Due to the timing of the scope and sequence of this study, the researcher conducted all training modules and focus group interviews in compliance with current state and Center for Disease Control (CDC) COVID-19 recommendations and best practice guidelines.

### ***Location of Study***

The researcher completed this pilot study in Westly Public Schools at all three middle school locations. Participants accessed training modules via an online Google Meets platform, approved by WPS. During the intervention phase, participants practiced their MBIs and tracked their progress within their school setting. Participants completed the pre- and post-intervention survey battery, surveys following professional learning modules, and daily data collection via an on-line platform. The facilitator conducted the focus group via Google Meets.

### **Procedures**

Sacred Heart University's Institutional Review Board approved all intervention and data collection procedures. The Westly superintendent of schools provided written permission for approval to conduct this study prior to study initiation (Appendix A). The researcher recruited participants in September 2021 via an email sent to all middle school teachers. One week after the email invitation, the researcher held an information session to introduce interested teachers to the study and to the basic tenants of mindfulness. After teachers provided consent, participants completed the pre-intervention survey battery via a web-based platform.

### **Treatment Intervention**

The mindfulness program designed for this study was grounded in a modified Mindfulness-Based Stress Reduction program, conceptualized by Kabat-Zinn (1994) and adapted specifically for use in the school setting. For purposes of this study, mindfulness was defined as “paying attention in a particular way: on purpose, in the present moment, and non-judgmentally” (Kabat-Zinn, 1994, p. 4). The three formal practices that constitute MBSR were embedded in the MBIs selected for the scope of this project: mindful movement (including yoga asana), body

awareness (including the body scan), and mindful meditation (including mindful breathing) (Cullen, 2011). The researcher, who is a licensed occupational therapist and registered yoga teacher trained in mindfulness-based interventions, adapted this modified MBSR program for the school setting.

Oberle et al. (2016) warned that SEL initiatives themselves might add to teacher stress if program developers do not carefully consider the design of teacher trainings, including the time and effort required for teachers to receive intervention benefits. To combat potential leanness of the time commitment this plan required, the researcher provided participants with options for asynchronous learning, templates, and quick data-collection tools. Additionally, all resources were organized and accessible throughout the intervention phase, via a shared drive.

### ***Phase 1: Training Phase***

Phase 1 consisted of a 6-week training phase with weekly modules taught synchronously and recorded so that teachers could access trainings as a resource throughout both phases. Each training included the three components necessary for high-quality professional learning as identified by Durlak et al. (2015): content, skills, and active participation. The researcher collected survey data following each module to support understanding of training effectiveness, via a web-based survey platform (Appendix H).

A middle school self-care needs assessment completed in spring of 2021 revealed that for workplace stress-management strategies to work, they must be something that educators could do on their own time without needing to collaborate (40%), the strategies must be simple and accessible (33.3%), and the tools taught must be brief (21.7%). Additionally, when asked what primary barriers exist that prevent participation in workplace stress-management, 51.7% of

respondents identified time, 28% shared difficulty sticking with a daily plan, and 12.7% said lack of knowledge of specific strategies designed for work. Research supports that training in MBIs can be done in a relatively short amount of time (Thompson & Gauntlett-Gilbert, 2008).

The training phase preceded the intervention phase so that participants had a menu of learned MBIs to self-select from in Phase 2. Providing autonomy to participants as they decided what strategies worked for them may have fostered buy-in (Greenberg et al., 2016) (see Appendix E for module calendar, topics, and date sequence).

### ***Phase 2: Intervention Phase***

The second phase of the study involved a 6-week intervention phase. Using a template, participants developed a weekly action plan (Appendix F). The researcher archived all trainings and required resources from Phase 1 on a shared Google Drive©. When developing their plan, participants self-selected their MBIs to encourage personalization. The researcher designed a flexible plan to allow participants to modify as the intervention phase progressed so that teachers could adjust their selections based on their experiences. Erdman et al. (2020) suggested that teachers create a mindfulness action plan to ensure that participants do not neglect self-care as other priorities surface throughout the workday. Participants had the opportunity to reflect on the effectiveness of each MBI throughout the intervention phase as described under data collection.

Lastly, throughout the intervention phase, participants received a daily email that included a reminder for practice and an inspirational mindfulness quote. The researcher invited participants to an optional weekly check-in to support the use of learned strategies in authentic contexts.

## **Fidelity Check**

The researcher recorded all training sessions via Google Meets so participants could reference the professional learning as needed. The researcher archived attendance as one measure of training fidelity. Additionally, the researcher provided participants with a daily reflection sheet, which served as a fidelity checklist (Appendix G). The researcher asked participants to fill out the reflection sheet after completing each MBI to mark which strategy was selected and the perceived response to intervention. This allowed the researcher to track the frequency of practice and perceived effectiveness of each MBI during the training phase.

## **Research Questions and Data Measures**

Three research questions guided this ISDip. The researcher organized these questions to align with the order of the mindfulness program. The researcher answered some of the questions using quantitative data, some with qualitative data, and some with a combination of both. The researcher organized the following section by research questions and corresponding data instruments, as visualized in Table 12.

**Table 12***Alignment of Research Questions, Data Measures, and Data Analysis*

Research question	Sub-questions	Data measure	Data analysis
<b>RQ1</b> To what extent were the mindfulness training modules, designed for a school setting, perceived as effective by participants and why?	What training components were most effective and why?	Quantitative: Survey slip for professional learning module and	Descriptive statistics
	What training components were least effective and why	Qualitative: Focus group questions	Theme analysis
	What suggestions do participants have for future trainings?	Qualitative: Focus group questions	Theme analysis
<b>RQ2</b> To what extent did participants enact the mindfulness-base interventions designed for a school setting and why?	What MBIs were used most frequently?	Quantitative: Daily refection data sheet	Descriptive statistics
	What MBIs were perceived as most effective and why?	Quantitative: Daily refection data sheet and	Descriptive statistics
	What MBIs were perceived as least effective and why?	Qualitative: Focus group questions	Theme analysis
	To what extent did the frequency of engagement in interventions impact perceptions of self-management skills, enhanced mindfulness, well-being, and stress levels?	Quantitative: Daily refection data sheet and post-survey results	Descriptive statistics Inferential statistics
<b>RQ3</b> To what extent did a mindfulness-based program, designed for a school setting, aid in the development of middle school teachers' perceptions of self-management skills?	To what extent did participation in MBIs impact perceptions of enhanced mindfulness?	Quantitative: Pre- and post-intervention survey battery	Inferential statistics
	To what extent did participation in MBIs impact perceptions of well-being and stress?	Quantitative: Pre and post-intervention survey battery	Inferential statistics
	To what extent did participants report impact on classroom management, climate, and relationships with students?	Qualitative: Focus group questions	Theme analysis

## RQ1

To what extent were the mindfulness training modules, designed for a school setting, perceived as effective by participants and why?

### *Sub-Questions*

1. What training components were most effective and why?
2. What training components were least effective and why?
3. What suggestions do participants have for future trainings?

**Quantitative Measures.** During the training phase, the researcher asked participants to reflect on the effectiveness of each training module through a web-based survey, using a 3-point Likert scale. The researcher designed the questions to understand how participants perceived training content, skills instruction, and practice, and whether or not participants felt confident about incorporating the strategy into their intervention plan (see appendix H for survey slips for professional learning modules). The researcher provided the survey slip for each professional learning module via a link at the end of each training. The survey responses helped support the researcher's understanding of program effectiveness and may inform future trainings if the leadership team expands the MBI program.

**Qualitative Measures.** Based upon analysis of quantitative data, the researcher invited selected participants to a structured focus group. The qualitative data collected informed a deeper understanding of the quantitative data (Creswell and Plano-Clark, 2018). The researcher selected participants with varied experiences in the study to drive a robust understanding of both phases of the mindfulness program. A member of the EDC facilitated the structured focus group, via Google Meets.

To garner a deeper understanding of the training phase, questions designed for the focus group included probes to assess what components the participants perceived as most effective and least effective, and why. The facilitator also asked participants to reflect on anything from the training that was unexpected. Finally, the facilitator asked participants to consider what components of the training they found essential and for suggestions to inform training adjustments (see appendix J for the focus group protocol). Participant voice will be a critical component in understanding what adjustments district leaders need to be make as they identify next steps in teacher SEL programming.

## **RQ2**

To what extent did participants enact the mindfulness-based interventions designed for a school setting and why?

### ***Sub-Questions***

1. What MBIs were used most frequently?
2. What MBIs were perceived as most effective and why?
3. What MBIs were perceived as least effective and why?
4. To what extent did the frequency of engagement in interventions impact perceptions of self-management skills, enhanced mindfulness, well-being, and stress levels?

**Quantitative Measures.** Throughout Phase 2, participants monitored their use of MBIs and their response to intervention on a daily reflection data sheet. Participants tracked the frequency of intervention use, which strategy they used, and how the intervention selected impacted their stress level (1= *no change at all*; 5= *significant reduction in stress*) (see Appendix G for daily reflection sheet). These data enabled the researcher to tally the frequency of intervention use and



analyze which strategies the participants perceived as most effective. Additionally, the researcher analyzed how frequency in engagement of strategies affected perceptions of enhanced mindfulness, well-being, self-management, and stress.

**Qualitative Measures.** To foster a deeper understanding of the intervention phase, questions designed for the focus group included probes to assess what components participants perceived as most effective and least effective, and why. The facilitator also asked participants to reflect on anything unexpected during MBI and which components they considered essential (morning mindfulness email, template for daily plan, daily reflection sheet, and optional weekly check-ins). Finally, the facilitator inquired as to what suggestions participants would offer for future interventions (see appendix J for the focus group protocol).

### **RQ3**

To what extent did a mindfulness-based program, designed for a school setting, aid in the development of middle school teachers' perceptions of self-management skills?

#### ***Sub-Questions***

1. To what extent did participation in MBIs impact perceptions of enhanced mindfulness?
2. To what extent did participation in MBIs impact perceptions of well-being and stress?
3. To what extent did participants report impact on classroom management, climate, and relationships with students?

**Quantitative Measures.** Numerous studies designed to explore the impact of school-based mindfulness on teacher well-being relied on participant rating scales to determine response to intervention (Beshai et al., 2016; Emerson et al., 2017; Frank et al., 2015; Jennings et al., 2013, 2017, 2019). To address the third research question, the researcher collected quantitative data via

a comprehensive self-report survey battery administered pre- and post-intervention (see Appendix I for survey battery). Mertler (2017) suggested that surveys serve as effective tools for gathering data concerning attitudes and perceptions, and scholars can efficiently score them while maintaining respondent anonymity.

The survey battery comprised established measures including the CASEL TOOL for Personal Assessment and Reflection: Self-Management (CASEL, 2017), the Five Facets Mindfulness Questionnaire (Baer et al., 2006, 2008), the Panorama Teacher Well-Being Survey (Panorama, 2021), and the Perceived Stress Scale (Cohen, 1994; Cohen et al., 1983). The survey battery included a section requesting optional demographic information and took participants approximately 20 minutes to complete (Appendix I). All four of the instruments included in the survey battery were available online for use by educators, free of charge, as long as there was no intention to profit from use.

The Collaborative for Academic, Social, and Emotional Learning developed the TOOL: Personal Assessment and Reflection-SEL Competencies for School Leaders, Staff, and Adults. CASEL designed the measure for self-reflection, not for evaluative purposes. CASEL suggests that educators use results from the tool during SE professional learning (CASEL, 2017). The survey includes a section for each of the five CASEL SE competencies: self-awareness, self-management, social awareness, relationship skills, and responsible decision-making. For this study, the researcher included the self-management survey in the pre- and post-intervention battery. The CASEL TOOL for Personal Assessment and Reflection: Self-Management is comprised of eight items, organized under: self-control, setting and achieving goals, adaptability, and organizational skills. On each item, participants are asked to answer by selecting: 1= *rarely*;

2 = sometimes; 3= *often* (e.g., “I stay calm, clear-headed, and unflappable under high stress and during a crisis”) (see Appendix I for survey battery).

To report information about this assessment tool the researcher reached out directly to CASEL. According to CASEL, the developers aligned the tool with the CASEL framework, and adapted the measure from an earlier version created by Devaney et al. (2006). CASEL initially developed the survey based on the work of Goleman et al. (2002). Given the informal nature of its purpose, CASEL has not assessed the tool for reliability or validity (personal communication, December 23, 2020).

When selecting survey scales for a study, Pallant (2016) suggests that researchers must first ensure that the scales are reliable. One frequently used indicator of internal consistency, or the degree to which scale items measure the same underlying construct, is to determine the item’s Cronbach alpha coefficient. As suggested, a Cronbach alpha coefficient should fall between .7 (adequate/acceptable) but is preferred at above .8 (Pallant, 2016). While CASEL has not assessed the tool for reliability or validity, in this current study the Cronbach alpha coefficient for the CASEL TOOL for Personal Assessment and Reflection: Self-Management was .85 indicating excellent internal consistency.

While multiple tools are available, when measuring mindfulness researchers use the Five Facet Mindfulness Questionnaire (Baer et al., 2006) in both seminal and recent school-based studies (Emerson et al., 2017; Frank et al., 2015; Jennings et al., 2013, 2017, 2019). The Five Facet Mindfulness Questionnaire (Baer et al., 2006, 2008) includes 39 items designed to assess multiple dimensions of mindfulness via five subscales. Each item is rated on a 5-point rating scale (1=*never or very rarely true*; 5=*very often or always true*). The five subscales include: *observing* (e.g., “I pay attention to how my emotions affect my thoughts and behavior”),

*describing* (e.g., “I’m good at finding words to describe my feelings”), *acting with awareness* (e.g., reverse item: “I find myself doing things without paying attention”), *nonjudgment* (e.g., reverse item: “I make judgments about whether my thoughts are good or bad”), and *nonreactive* (e.g., “When I have distressing thoughts or images, I feel calm soon after”) (see Appendix I for survey battery).

Baer et al. (2006) reported coefficient alphas for the five subscales of the FFMQ as follows: *observing* = .83; *describing* = .91; *acting with awareness* = .87; *nonjudgment* = .87; and *nonreactive* = .75 (Baer et al., 2006). In this study, the Cronbach alpha coefficients for the five subscales were as follows: *observing* = .77; *describing* = .79; *acting with awareness* = .89; *nonjudgment* = .95; and *nonreactive* = .61, indicating in all but one subtest adequate-excellent internal consistency. Some literature suggests that for the subscale *nonreactive*, researchers report a lower Cronbach alpha as compared to the other subscales (Baer et al., 2006; Jennings et al., 2013, 2017).

Jennings et al. (2013, 2017, 2019) utilized the FFMQ to demonstrate long-lasting improvements in mindfulness following school-based interventions. When exploring the effectiveness of an adapted MBSR program on educator stress and well-being, Frank et al. (2015) included the FFMQ in their pre- and post-test battery. The authors concluded that teachers in the MBI group made significantly greater gains in mindfulness-related traits than the control group. Emerson et al. (2017) reported that in eight of the 13 studies reviewed to understand the effects of MBIs on teacher stress, emotional regulation, and efficacy researchers measured mindfulness using either the FFMQ or the Kentucky Inventory of Mindfulness Skills, a similar self-report measure also created by Baer et al. (2004).

The architects of the Panorama Teacher Well-Being Survey (Panorama, 2021) designed the survey to garner teacher perceptions of their professional well-being. The survey includes a series of scales, or sets of questions related to a specific topic. Panorama developed the survey to enable customization with survey administrators selecting from the 23 potential topics. The well-being section of the survey consists of 14 questions and collects participants' perceptions of their own professional well-being (e.g., "During the past week, how often did you feel engaged at work?"). Participants rate the first 10 items on a 5-point rating scale (1=*almost never*; 5=*almost always*) to questions like "During the past week, how often did you feel \_\_\_\_\_ at work." Responders rate the last four items on a five-point scale with a different focus area for each item: job effectiveness, how much work matters to the participant, job meaning, and job satisfaction. Each of these four items has a different rating scale (e.g. 1=*not at all effective*; 5=*extremely effective*) (see Appendix I for survey battery).

Panorama developed the survey to align with the SEL framework from CASEL. Panorama reported that the survey tool is reliable, with an average Cronbach alpha coefficient of .78 and minimum of .68. The reliability and validity report (Panorama, 2021) includes a statement that Panorama's SEL measures exhibit the psychometric properties of good instruments: reliability and validity. In this study, the Cronbach alpha coefficient for the Panorama Teacher Well-Being Survey portion of the survey was .92, indicating excellent internal consistency.

When conducting research on mindfulness, perceived stress level is often a dependent variable included as an indicator of intervention effectiveness. Multiple studies on school-based MBIs utilized the Perceived Stress Scale, the most widely used psychological instrument for

measuring the perception of stress (Cohen, 1994; Cohen et al., 1983; DiCarlo et al., 2019; Sharp-Donahoo et al., 2018).

The perceived stress scale is a self-report measure of perceived stress developed by Cohen et al. (1983). The PSS is a 4-item scale that assesses how responders managed difficult stressors over the past month (e.g. “In the last month, how often have you found that you could not cope with all the things that you had to do?”). Participants rate their response on a 5-point Likert scale (0=*never*; 4=*very often*). Researchers summarize scores to determine a perceived stress score. High range: 27-40, moderate stress: 14-26; and low stress: 0-13 (see Appendix I for survey battery).

Cohen et al. (1983) cited the reliability for the PSS as .84, .85, and .86 for each of their study samples. In this study, the Cronbach alpha coefficient for the PSS was .88, indicating good internal consistency. The literature references the PSS frequently. Sharp-Donahoo et al. (2018) reported lower scores on the PSS for participants with high frequency of mindfulness use to support their conclusions. Similarly, DiCarlo et al. (2019) used the PSS to link lower perceived stress to an increase in positive classroom climate. Often, researchers included both the FFMQ and PSS when studying the impacts of MBIs on teacher well-being. In their study of middle school teachers’ response to MBI, Harris et al. (2015) administered pre- and post-intervention self-report assessments that included both measures. Similarly, Beshai et al. (2016) utilized a battery of assessments, including the FFMQ and PSS.

Examples from the literature support use of the FFMQ and the PSS together when measuring the impact of mindfulness (Beshai et al., 2016; Harris et al., 2015). Despite ample evidence that supports the use of both measures when studying school-based MBIs, limitations arise with self-report measures (Beshai et al., 2016; Frank et al., 2015).

**Qualitative Measures.** The researcher included a question in the focus group protocol that asked participants to reflect on how the mindfulness program affected perceptions of classroom management, climate, and relationships with students (see appendix J for the focus group protocol). Evidence from the literature suggests that participation in mindfulness can positively influence discipline responses, even though mindfulness programs do not explicitly focus on classroom management skills (Jennings et al., 2017). Studies also indicate a connection between teachers' enhanced mindfulness and improved positive student relationships, increased efficacy modeling and teaching SE competencies, and an improved classroom climate (Jones et al., 2013; Roesser et al., 2012; Wong, 2017). While the impact on classrooms and students is based upon self-reporting, the implications for future programming that includes a more direct measure of student outcomes, is significant.

## **Hypotheses**

### **Hypothesized Outcomes**

The researcher hypothesized the following outcomes as a result of the implementation of this ISDiP. The quantitative portion of this study explored the impact of MBIs on teacher perceptions of self-management competency, enhanced mindfulness, well-being, and stress.

#### ***H1<sub>0</sub>***

There is no statistically significant difference in teacher perceptions of self-management after participating in mindfulness-based interventions.

***H1<sub>1</sub>***

There is a statistically significant difference in teacher perceptions of self-management after participating in mindfulness-based interventions.

***H2<sub>0</sub>***

There is no statistically significant difference in teacher perceptions of enhanced mindfulness after participating in mindfulness-based interventions.

***H2<sub>1</sub>***

There is a statistically significant difference in teacher perceptions of enhanced mindfulness after participating in mindfulness-based interventions.

***H3<sub>0</sub>***

There is no statistically significant difference in teacher perceptions of well-being after participating in mindfulness-based interventions.

***H3<sub>1</sub>***

There is a statistically significant difference in teacher perceptions of well-being after participating in mindfulness-based interventions.

***H4<sub>0</sub>***

There is no statistically significant difference in teacher perceptions of stress after participating in mindfulness-based interventions.



***H4<sub>1</sub>***

There is a statistically significant difference in teacher perceptions of stress after participating in mindfulness-based interventions.

For each hypothesis presented, if the researcher determined no statistically significant results at the end of the intervention phase, the researcher will report the null-effect for that hypothesis, and the participants would have received training in MBIs that caused them no harm. Alternatively, for each hypothesis presented, if participants experienced a significant difference in their perceptions of self-management, enhanced mindfulness, well-being, or stress as a result of their participation in the study, then the researcher will reject the null hypothesis and accept the alternative hypothesis. The researcher and colleagues could then use this study as a model for future implementation.

## **Data Analysis**

### **Quantitative Analysis**

The researcher analyzed quantitative data using IBM version 26 SPSS statistics software to determine if relationships existed between the dependent and independent variables and if so, the strength of the relationships. The dependent variables identified included perceptions of self-management, mindfulness, well-being, and stress. The independent variable was participation in mindfulness-based programming designed for the school setting. To test the hypotheses presented, the researcher derived all quantitative data from the same group of participants; thus, the researcher used a paired-samples *t*-test. A *t*-test is a type of inferential statistic used to test hypotheses, to determine if there is a statistically significant difference between the means (averages) of data collected on two different occasions: in this study the pre-test and post-test

scores (Pallant, 2016). The post-intervention scores served as the parameter for comparison. Additionally, the researcher utilized inferential statistics to understand whether differences in response to intervention existed when comparing frequency of daily MBI use, using independent-samples *t*-tests that compared a group of participants who practiced MBI on average zero to two times per day to a group who practiced on average, three times per day.

The researcher used descriptive statistics to report on the frequency of intervention use and the perceived effectiveness of training and intervention strategies. Researchers use descriptive statistics to describe central tendency: mean (average), median (the point above and below which half the scores fall), and mode (the most frequently occurring score) (Martella et al., 2013). Once analyzed, these quantitative data informed the processes for qualitative data collection during a structured focus group, including the selection of participants (Creswell & Plano-Clark, 2018).

### **Qualitative Analysis**

The purpose of the qualitative analysis was to understand the “why” of the quantitative outcomes. The researcher developed a structured focus group protocol (Appendix J) that a facilitator from the EDC administered to participants in the final phase of data collection. The facilitator recorded the focus group and the researcher transcribed responses and coded responses by hand for theme analysis. These qualitative data were analyzed through content analysis and first- and second-level coding for themes in data. The researcher member-checked results and analyzed how these qualitative data substantiated the quantitative data collected from the pre- and post-intervention surveys, the survey slips from trainings, and the daily reflection sheet.

### **Threats to Validity**

Scholars must consider validity when planning research so that the data collected within the study represent only the features the researcher has set out to understand (Creswell & Plano-Clark, 2018). Validity refers specifically to whether the measurement device selected indicates what it purports to measure (Martella et al., 2013). In mixed-methods research, threats to validity vary depending on the design of the study planned; this study employed an explanatory-sequential design.

The planned design considered three validity threats: failing to identify important quantitative results to explain; not explaining surprising, contradictory quantitative results with qualitative data; and not connecting the initial quantitative results with the qualitative follow-up (Creswell & Plano-Clark, 2018). The researcher can minimize these threats by considering all possibilities for an explanation of the results; by designing qualitative questions to probe into surprising or contradictory results; and when the quantitative data drive the selection of participants for the qualitative components of the study (Creswell & Plano-Clark, 2018). These precautions enabled the researcher to draw accurate conclusions from the data.

Measures to address these threats in this study included focus group questions that asked participants to reflect on their experience; determining the participants for the focus group after analyzing the quantitative data; triangulation of data; and member checking. Mertler (2017) suggested that triangulation is a critical component of mixed-methods research. To understand program effectiveness, this study included data collection from professional learning surveys, the daily reflection data sheet, the pre- and post-intervention battery, and participants' responses during the focus group.

Three out of four survey instruments included in the survey battery have published measures of established validity and reliability. CASEL has not vetted their TOOL for Personal Assessment and Reflection for reliability and validity (CASEL, 2017). Additionally, the researcher-designed professional learning survey and daily reflection are not established measures. To address this limitation, leader colleagues have reviewed each measure and triangulation ensured that the researcher based conclusions upon analysis of multiple data measures, not a stand-alone measure. Finally, the focus group provided an additional opportunity to substantiate the data collected via the three quantitative measures. Triangulation employs multiple methods of data collection to draw conclusions (Mertler, 2017).

The researcher used member checking following the coding of all qualitative data gathered from the focus group. The researcher checked-in with participants prior to using any direct quotations to verify that the quote was accurate. Additionally, the researcher checked in with the participants from the focus group to confirm the credibility of the conclusions made based upon the responses. The process of member checking improved the accuracy, credibility, and validity of the study (Martella et al., 2013).

### **Summary**

Studies warrant action research when the researcher is an active participant in identifying and studying real-world problems and potential solutions (Martella et al., 2013). Through extensive analysis of literature, district, and practice data, the researcher identified an authentic problem in the district of study. An explanatory-sequential research design was appropriate, as the researcher understood the extent of impact that MBIs have on participants' perceptions of self-management, mindfulness, well-being, and stress. Quantitative data collected via a variety of measures informed the qualitative phase of this study, which allowed the researcher to

understand the why of the quantitative outcomes and to explore how addressing teacher SEL may affect classrooms and students. Ultimately, the outcomes of the study will inform next steps within the district.

## **Chapter IV: Results**

The researcher implemented the present study to understand to what extent mindfulness-based interventions designed for the school setting aided in the development of middle school teachers' perceptions of self-management skills and what impact MBIs had on participants' perceptions of enhanced mindfulness, well-being, and stress. Additionally, the study assessed the indirect impact participation in the mindfulness program had on teachers' perceptions of classroom management, climate, and relationships with students.

### **Sample Characteristics**

The study sample ( $N = 20$ ) included regular and special education teachers from all three of Westly's middle schools (Tables 10 and 11 for participant demographics). At post-test, three participants did not provide data, bringing the analytic sample to 17. The pre-test survey return rate was 100% ( $n = 20$ ) and the post-test return rate was 85% ( $n = 17$ ).

The focus group consisted of five participants, with heterogeneous representation when considering building assignment (BMS  $n = 2$ , PMS  $n = 2$ , and SMS  $n = 1$ ), years of teaching experience (15+ years  $n = 2$ , 11-15 years  $n = 1$ , 6-10 years  $n = 1$ , and 0-5 years  $n = 1$ ), and subject area (regular educator  $n = 2$  or special educator  $n = 3$ ).

### **Results**

The researcher organized the following section to report study results as aligned to each respective research question. The researcher utilized quantitative data, qualitative data, and/or a combination of both to answer the research questions and sub-questions. The researcher has presented the questions in an order aligned with the two-phase program implementation.

### **Research Question 1: Training Effectiveness**

The researcher designed Research Question 1 to determine to what extent the participants perceived the mindfulness training modules as effective and why. Data analysis involved descriptive statistics to understand responses on the survey slip for professional learning modules (Appendix H). Additionally, the researcher identified themes based upon first- and second-level coding of participant responses during the focused group (Appendix J).

#### ***What Training Components Were Most Effective/Least Effective?***

**Quantitative Results.** Phase 1 of the study provided participants with six training modules over a 6-week period aimed to teach MBIs designed for a school setting. The researcher provided both synchronous and asynchronous learning opportunities and developed the MBI for this study on the three formal practices that constitute MBSR: mindful movement (including yoga asana), body awareness (including the body scan), and mindful meditation (including mindful breathing) (Cullen, 2011). Following each training module, the researcher asked participants to complete the survey slip for professional learning modules (Appendix H). The survey slip provided participants with an immediate opportunity to reflect on training effectiveness and to share what components of the training were most helpful for building understanding of MBIs. The average rate of survey completion following each training module was 70%.

To understand training effectiveness, the researcher analyzed participants' responses to questions on the survey slip for professional learning modules (Appendix H). Figure 7 summarizes participants' responses when asked about their perceptions of overall understanding of mindfulness as a result of each training.

**Figure 7**

*Participant Response to Training: Did Training Impact Understanding?*

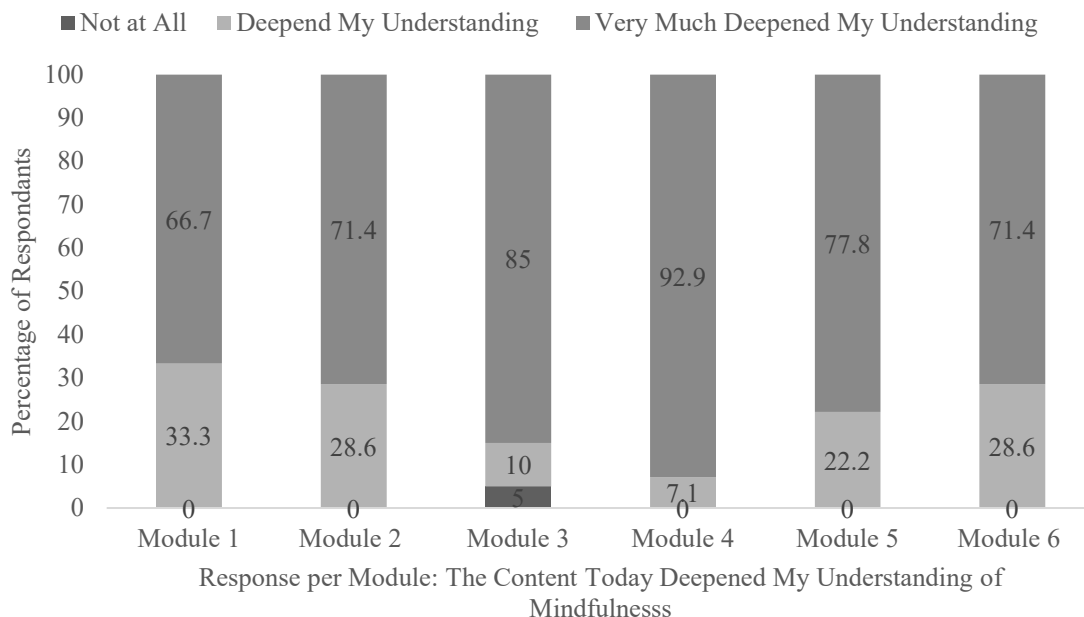


Figure 7 provides evidence that participants perceived each of the six training modules as effective for deepening their understanding of mindfulness. For each module except for module three, all participants reported that the training either deepened or very much deepened their understanding of mindfulness. On average, 77.5% of participants reported that the trainings very much deepened their understanding of mindfulness. In module three, 5% of participants reported that the training did not deepen their understanding of mindfulness. Module 3 focused on seated meditation via guided imagery (see Appendix E for module calendar, sequence, and topics).

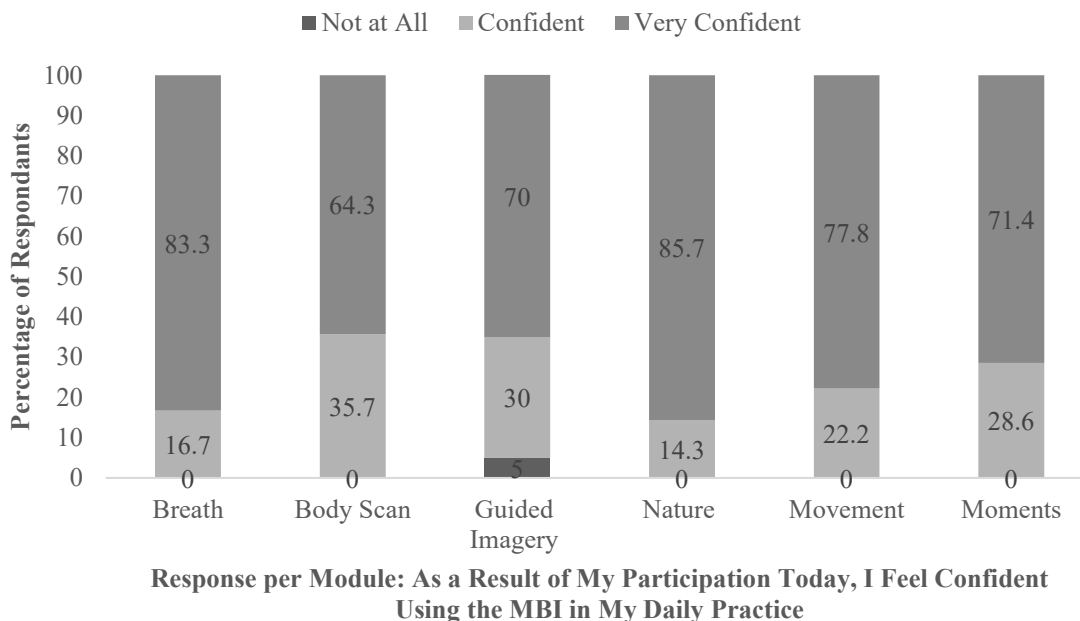
The researcher provided training in MBIs to inform daily practice in a school setting. One measure of training effectiveness focused on participants' perceived confidence with their ability



to apply what they learned in each training in an authentic context. Figure 8 provides a summary of participants' perceived confidence levels with each introduced MBI following all six modules.

**Figure 8**

*Participant Response to Training: Did Training Impact Confidence?*



*Note.* MBI = mindfulness-based intervention.

As evidenced in Figure 8, following all but one module, all participants reported that they felt either confident or very confident in using the learned MBI in their daily practice. On average, 76.25% of participants reported that they would feel very confident using the MBI strategy taught while 5% of participants reported that they were not at all confident following module three, guided imagery.

Finally, the researcher asked participants how likely they were to incorporate the MBI taught in each module into their daily action plan. The researcher designed the mindfulness program to first teach MBI strategies so that during Phase 2 participants could self-select

interventions to use in their daily plan to provide autonomy and flexibility. Analysis of the responses helped the researcher understand whether participants perceived the training to be effective as they planned for their daily use of MBI (Figure 9).

**Figure 9**

*Participant Response to Training: Incorporating MBIs*

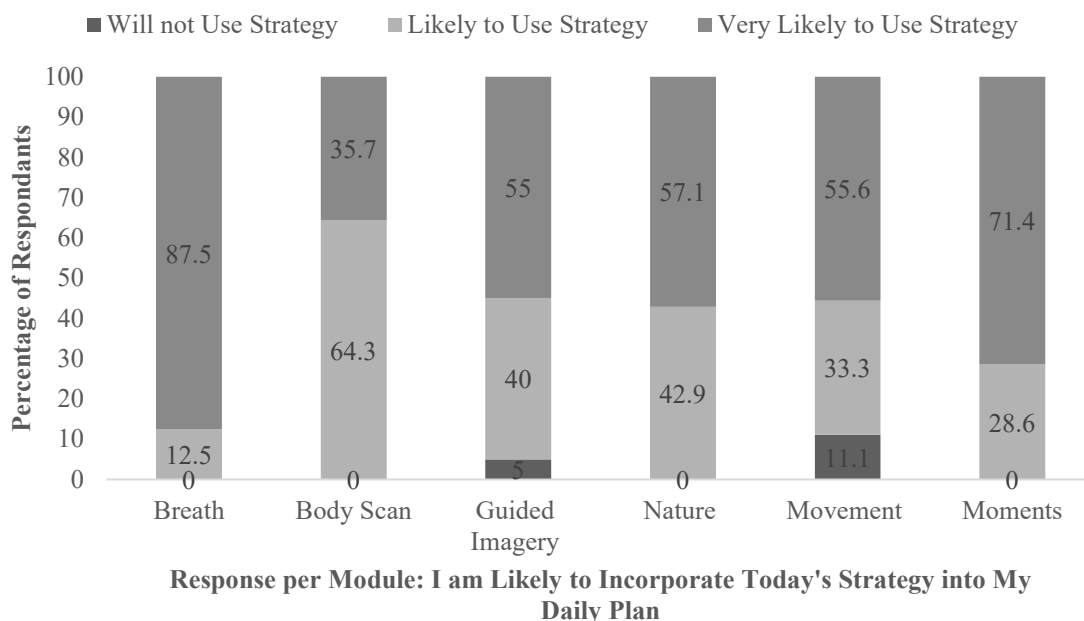


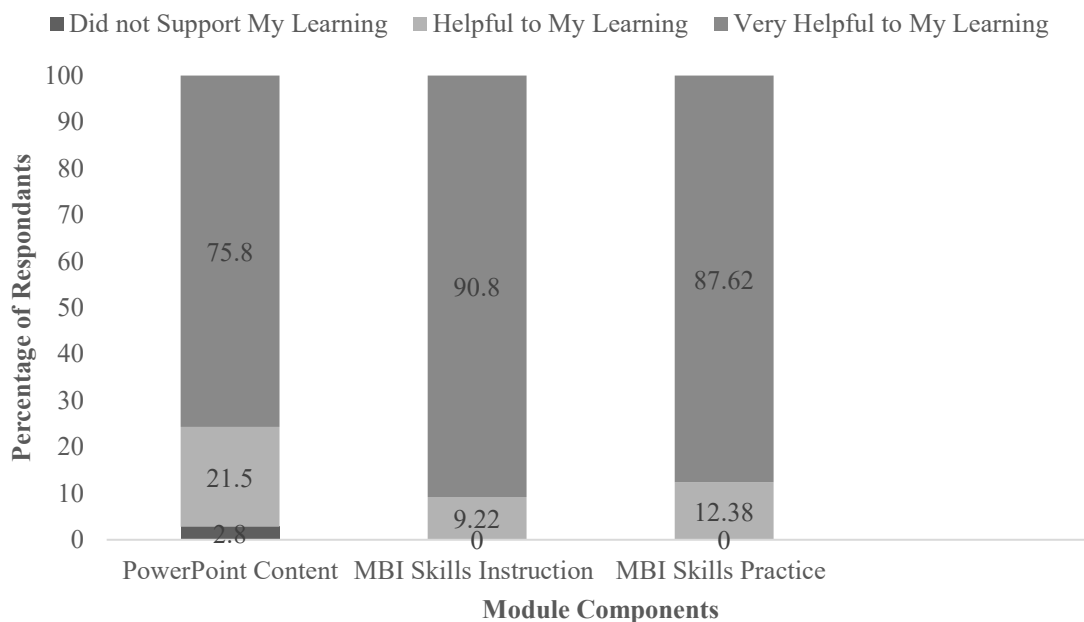
Figure 9 suggests that following each training module participants were likely to incorporate the module's MBI into their daily action plan in Phase 2. On average, 60.38% reported that they were very likely to include the module strategy into their daily plan while 5% reported that they would not be using the strategy taught in module three (seated meditation via guided imagery). Based upon the results summarized in both Figures 8 and 9, participants reported that they would be most likely to use intentional breath (taught in module one) when implementing their daily plan. Eighty-three percent reported that they felt very confident using

the new strategy after the training and 87.5% of participants shared that they would be very likely to use intentional breath in their practice.

When designing the training modules, the researcher incorporated what Durlak et al. (2015) identified as essential components of high quality, effective professional learning. Components include opportunities for adult learners to develop content knowledge and learn explicit skills, and the trainer provides opportunities for active participation and practice with the skill taught. To help the researcher answer what components of the training were most effective, the professional learning survey included probes to assess participants' perceptions of the effectiveness of module content, and the mechanisms for delivery of that content (Figure 10).

**Figure 10**

*Participant Perceptions on the Effectiveness of Training Components for All Modules*



*Note.* MBI = mindfulness-based intervention.

As indicated in Figure 10, on average participants perceived the skills instruction and MBI practice opportunities embedded in each training module as most effective for learning new MBIs. For both skills instruction and practice, 100% of responding participants reported that the components were helpful or very helpful for their learning. While 2.8% of participants perceived the PowerPoint content as not supporting their learning, responses indicate that participants perceived all three components of the modules as being effective tools for learning mindfulness interventions, with 84.74% reporting that all three components were very helpful to their learning.

***What Training Components Were Most Effective/Least Effective and Why? Suggestions for Future Trainings?***

**Qualitative Results.** The researcher designed Research Question 1 and its sub-questions to understand *why* participants perceived trainings as effective or not effective. While descriptive analysis lent information about perceptions of effectiveness, the numbers alone convey limited information. As the goal of this pilot study is to inform future programing, the researcher also included qualitative data measures collected via a structured focus group to lend context to these quantitative data.

During the focus group, a facilitator led participants in a discussion that the researcher recorded and transcribed verbatim. The facilitator asked focus group questions to foster conversation and to drive a deeper understanding of participants' experiences with both phases of the mindfulness program. To address Research Question 1 the following questions were included regarding training (Appendix J):

- What components of the training phase were most/least effective and why?
- Was anything about the training unexpected?
- If we were to expand this program to other teachers, what components of the training would you consider essential?
- What suggestions would you offer for future trainings?

Upon first- and second-level coding of these qualitative data derived during the structured focus groups, the following themes and sub-themes emerged to substantiate the quantitative data (Table 13).

**Table 13**

*Participant Voice: MBI Trainings*

Theme	Subtheme	Supporting quote
Flexibility	Accessibility	<p>“I found several of the components effective. For example, I thought the videos and our flexibility with being able to watch them when it was convenient for us was super helpful and put me in the right frame of mind to be ready for new learning.”</p> <p>“I like how it was recorded because on days I couldn’t be there in the training I could watch and I could go back and watch and jog my memory.”</p>
	Synchronous and asynchronous sessions	
Active engagement	Modeling	<p>“Like all good teaching the modeling and active engagement were essential to my learning.”</p> <p>“I liked how every different technique was explained and then we all worked on it together I felt very well-equipped and was given great info.”</p>
	Participation	
Simplicity	Length of intervention	<p>“I really thought the simplicity of the videos and of the strategies was both reasonable for teachers as well as a reflection on the realities of their jobs.”</p>

Table 13 lends participant voice to the quantitative data. As evidenced by the themes and sub-themes that emerged, participants reflected positively on the training and found that the

modules were effective for learning MBI strategies; these data substantiate the quantitative data. When asked what components were least effective and why only one focus group participant offered a suggestion. One participant shared, “This is minor but maybe making the training resources in the Google Drive© more aesthetically pleasing, perhaps an image of nature and not just a link.” Both quantitative and qualitative results support the conclusion that participants perceived the training modules designed for a school setting as effective.

### **Research Question 2: Intervention Fidelity and Effectiveness**

The researcher designed Research Question 2 to determine to what extent participants enacted the MBIs designed for a school setting and why. The researcher employed a combination of descriptive and inferential statistics to analyze the quantitative data derived from the daily reflection data sheet (Appendix G) and the post-survey results (Appendix I). Additionally, upon analysis of the qualitative data derived from the focus group (Appendix J), the researcher identified themes and sub-themes based upon first- and second-level coding of participant responses to answer Research Question 2 and its sub-questions.

#### ***What MBIs Were Used Most Frequently?***

**Quantitative Results.** The researcher provided participants with a daily reflection sheet, which served as both a fidelity checklist and an opportunity for participants to reflect on their response to intervention (Appendix G). Participants filled out the reflection sheet after completing each MBI. This allowed the researcher to track the frequency of practice and perceived effectiveness of each MBI during the intervention phase. To understand trends in data and to check for data collection fatigue, the researcher recorded the daily completion rate as indicated in Figure 11.

**Figure 11**

*Daily Completion Tally: Daily Reflection Data Sheet*

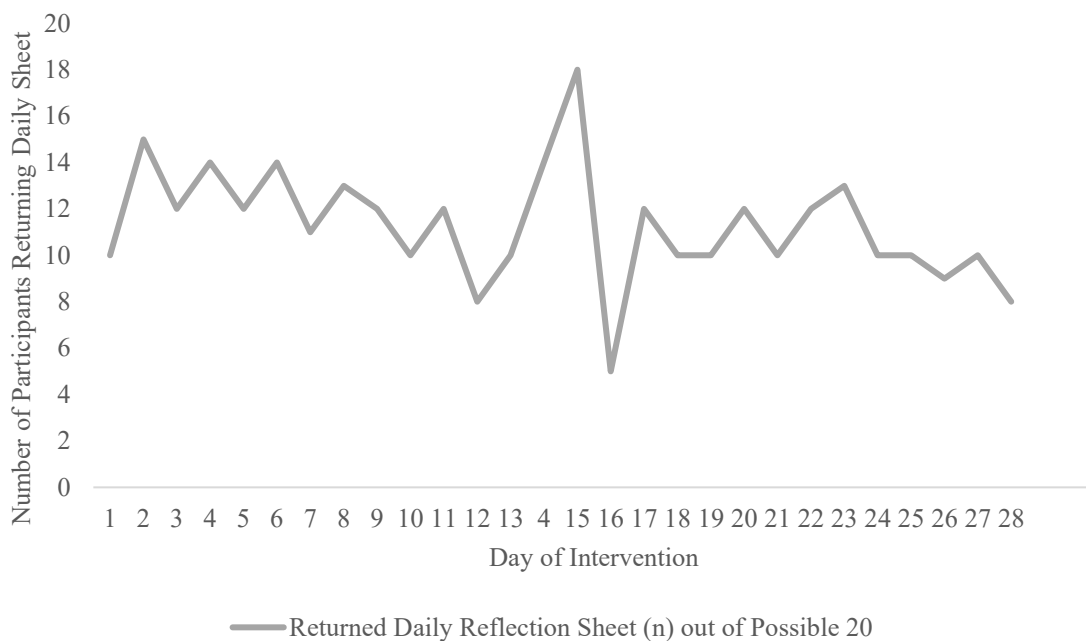


Figure 11 provides evidence that the daily completion rate remained relatively consistent with a mean return rate of 11.29 surveys per day, out of a possible 20, or 59.5% average daily return rate. The range of return rate showed a maximum value of 18 on day 15 of the intervention phase and a minimum value of five on day 16. It is important to note that on day 16 of the intervention Westly public schools suffered a student tragedy in one of their middle schools. The 6-week intervention phase comprised 28 total practice days. The week of the Thanksgiving holiday was the only short week during the intervention phase, with three possible days for in-school practice. The researcher included these data as evidence of the absence of data collection fatigue and to connect to qualitative data that revealed themes linked to accountability measures.

The researcher then analyzed participant responses on the daily reflection sheet to understand which of the MBIs participants used most frequently throughout the 6-week intervention phase. Table 14 summarizes the mean daily selection rates selected over the 28-day intervention cycle.

**Table 14**

*Daily Use: Which MBIs Were Used Most Frequently?*

Mindfulness-Based Intervention	Mean Daily Selection Rate
Intentional Breath	51.6%
Mindful Movement	14.3%
Connecting with Nature	12.5%
Individual Mindful Moment	10.8%
Body Scan	6%
Guided Imagery	4.7%

The data in Table 14 indicate that out of the six MBIs incorporated into the school-based program, participants were most likely to select intentional breath, with a mean daily selection rate of 51.6% over the 28 opportunities presented during the intervention phase. Mindful movement was the second most likely MBI participants utilized during daily practice with a mean of 14.3%. The third most frequently used strategy was connecting with nature with a mean of 12.5%, and the fourth strategy participants most likely used was individual mindful moments with a mean of 10.8%. Finally, body scan (mean of 6%) and guided imagery (mean of 4.7%) were the least likely to be selected by participants throughout the 6-week intervention phase.



### ***Which MBIs Were Perceived as Most Effective/Least Effective?***

**Quantitative Results.** To garner an understanding of which strategies participants perceived as most effective or least effective, the researcher surveyed participants at the end of Phase 2. The survey prompt asked participants which mindfulness strategy they perceived as most effective for reducing stress levels and improving well-being. Of the six learned strategies in the MBI program participants perceived using the intentional breath as most effective at improving well-being and reducing stress when incorporated into their daily practice. Of the 15 participants who completed the survey, 13 (86.7%) perceived intentional breath as the most effective strategy and two (13.3%) perceived individual mindful moments as most effective. No participants selected the remaining four strategies (body scan, guided imagery, connecting with nature, and mindful movement) as being perceived as most effective.

The same survey included a question that asked participants to share which strategy they perceived as least effective for improving their well-being and reducing stress. Seven (46.7%) of the 15 respondents identified the body scan. Five respondents (33.3%) reported that guided imagery was the least effective, and for strategies connecting with nature, mindful movement, and individual mindful moment, one (6.7%) respondent for each strategy perceived it as least effective. No participants reported intentional breath as least effective.

### ***Which MBIs Were Perceived as Most Effective/Least Effective and Why?***

**Qualitative Results.** The researcher designed Research Question 2 and its sub-questions to understand *why* participants perceived certain MBIs as effective or not effective. When surveying participants at the end of the intervention phase, the researcher included a corresponding open-ended prompt for each drop-down response: *In a few words try and capture*

*why the strategy you selected has been most/least effective.* Table 15 provides relevant quotes from the survey that lend context to the quantitative data summarized above.

**Table 15**

*Participant Voice: Most Effective/Least Effective MBI and Why?*

Most effective strategy	Example quotes: Why?
Intentional breath	<p>“Intentional breathing is the most effective for me because it is the most feasible during a school day. It is quick and forces me to take a break from whatever is stressing me in that moment. It often allows me to pause and gain new perspective.”</p> <p>“It is easy to remember. It requires no forethought and can even be done in combination with something else if necessary.”</p> <p>“I felt very relaxed when I did intentional breathing. I also stayed very relaxed after breathing. The intentional breathing was also very manageable to do between classes.”</p> <p>“It is easy to do and can be done anywhere. No one even knows I am doing it!”</p> <p>“It is the most time efficient. I think others would work better, but I sometimes don’t even have a chance to catch my breath, let alone practice mindfulness for more than a minute. My to-do list and list of responsibilities grows too much on a daily basis.”</p>
Individual mindful moment	<p>“I like that I can choose a different one each time, keeping it fresh helps my brain in the middle of the day. Plus, some are so quick, I can cater to what fits.”</p>
Least effective strategy	Example quotes: Why?
Body Scan	<p>“I would say the body scan, but only because I never chose to practice that method. I think I didn’t choose it because I just felt like it was too difficult to do at school.”</p> <p>“I never seem to have the focus or time during the school day for a body scan.”</p>
Guided Imagery	<p>“Guided imagery is not always feasible and not something that can easily be done in the moment. I do not have as much success with this strategy, even when time is available.”</p> <p>“Meditating on something on my screen did not bring me a lot of peace or relaxation.”</p> <p>“It is hard for me to take my mind elsewhere when there is so much on my mind about what I have to do. I really need to be in a different setting to do the guided imagery.”</p>

The responses shared in Table 15 suggest that participants perceived MBIs as effective when they were feasible within the school day; simple to learn and practice; accessible for ease of practice; and did not require a lot of time. Additionally, the researcher included questions about perceptions of the MBI plan effectiveness in the focus group protocol, which will allow the researcher and district leaders to adjust the MBI program for future implementation. To address Research Question 2 the following questions were included regarding the intervention phase (Appendix J):

- What components of the plan were most effective/least effective and why?
- Were there any components of participating in the MBI practice that were unexpected?
- What components of the MBI plan would you consider essential if we were to expand this program to other teachers?
- What suggestions would you offer for future interventions?

Upon first- and second-level coding of these qualitative data derived during the structured focus group, the following themes and sub-themes emerged to substantiate the quantitative data (Table 16).

**Table 16***Participant Perceptions: Effectiveness of Intervention*

Theme	Subtheme	Supporting quote
Accessibility	Tools that were easy to find, easy to access, and always available.	“Having a shared folder with all the resources clearly organized by strategy and module was essential for me.”
Time	Interventions cannot take a lot of time.	“I utilized the breathing so much because it was so quick, so subtle, and so easy to do. I just needed something quick that could bring me down in that moment.”
Accountability	Without accountability measures, they may not have participated.	<p>“Without the Google Form you never would have heard from me.”</p> <p>“I liked having the optional meet up time every Monday. It gave me accountability, I am a hands-on learner and I loved the ability to have that time, it was great.”</p> <p>“The daily email every morning reminded me to set an expectation for the day.”</p> <p>“The daily email helped set the tone and truthfully the expectation for mindfulness. In addition to being a little nugget of wisdom and motivation.”</p> <p>“The daily reflection sheet was essential for me to enforce my accountability even on days when I wasn’t making time for mindfulness.”</p>
Reward/Buy-in	When it works, you keep at it.	<p>“I was not expecting to enjoy the mindful moments as much as I did. I loved looking at the list every day and seeing if it was a good fit for me. I know it made me happy.”</p> <p>“Looking back at my daily data I was like, yeah this is really working. Honestly, in the beginning I was not sure it would really work and looking back and realizing it did made a huge difference.”</p>

Table 16 reveals that participants valued the accountability measures in place and that monitoring their progress fostered buy-in. Intentional breathing surfaced as a repeated theme when analyzing which strategies participants received well during training (Figures 8 and 9) and which interventions participants used most frequently and perceived as most effective.

Participants cited time and accessibility as reasons linked to the use of a specific strategy. For

example, one participant shared her experience with breath work stating that it was “subtle” and that she could “practice it anywhere.”

The researcher adjusted the plan at the start of Phase 2 regarding collection of the daily reflection sheet. Originally, the researcher created a private folder in a shared Google Drive© for each participant and asked each teacher to go to her folder every day, open the appropriately labeled sheet, and enter practice data. When considering the reality of a teacher’s day, the researcher adjusted this after day one and, for the remainder of the intervention phase, the researcher emailed each participant the daily data sheet to serve as a reminder to monitor progress. Comments from participants indicated that this change was well received. For example, one participant shared the following:

I liked having the daily forms emailed to us. I felt overwhelmed when I saw the original plan, that we would each have a folder to access daily, having the form sent each day was a reminder to do it. I do not know if I would have remembered on my own.

When asked what suggestions participants had for future interventions, one participant shared that linking a direct moment for practice within the daily morning email may serve as an additional reminder. She proposed, “For example, if the quote is about nature then have a live link to a nature walk video right in the email.” The same participant also suggested, “People could cut and paste the email templates and share it with someone else,” an act of mindfulness in and of itself.

When asked if any components of the intervention phase were not effective or unexpected, one participant shared that the connecting with nature strategy was not conducive to the school day and that “trying to experience nature by watching it on a screen was just not

effective.” This substantiates the quantitative data around frequency of use for each individual intervention. A different participant shared that she found the moments she allowed herself to briefly step outside actually “counterproductive due to heightened anxiety about being away from students,” despite leaving them with supervision.

Lastly, when asked about essential program components to drive program expansion, one participant stated that “this really needs to be volunteer-based and with tremendous choice.” A different participant shared that the optional together time for practice each week was “central to her success” and a third participant felt that accountability measures were “essential for buy-in.”

The final sub question for Research Question 2 explored the connection between frequency of daily practice and response to intervention. The researcher designed this study to understand the effectiveness of intervention and to inform program expansion. An understanding of the connection between use and effectiveness could drive program criteria moving forward.

***To What Extent Did the Frequency of Engagement in Interventions Impact Perceptions of Self-Management Skills, Enhanced Mindfulness, Well-Being, and Stress Levels?***

**Quantitative Results.** To understand how the frequency of participants’ daily practice impacted perceptions of self-management skills, enhanced mindfulness, well-being, and stress levels, the researcher first analyzed daily usage as collected on the daily reflection sheet (see Appendix L for frequency tracking by day). The researcher employed descriptive analysis to determine the mean percent of participants who practiced zero times per day (5.49%), once per day (19.53%), twice per day (35.83%), three times per day (37.22%), four times per day (1.6%), and five times per day (.32%).

Before employing inferential statistics to determine the significance of difference when analyzing frequency of daily practice and response to intervention, the researcher assigned participants to one of two groups, based upon their response to section one, question nine on the post-intervention survey battery ( $N = 17$ ) (Appendix I). Group A participants reported that on average they practiced MBI zero to two times per day and Group B reported practicing MBI three times per day. The final size for each group: Group A ( $n=11$ ) or 64.7% of participants and Group B ( $n=6$ ) or 35.3% of participants. Participants self-report aligns closely with what the researcher tracked daily, as reported in Appendix L.

Once the researcher assigned participants to a frequency of use group, the researcher used IBM version 26 SPSS statistics software to analyze participants' response to intervention when disaggregated by average daily use of MBI (Group A compared to group B) on each of the survey measures. Table 17 summarizes the independent-samples  $t$ -tests from all four instruments included in the survey battery. The researcher specified significance at .05 ( $p < .05$ ) for all  $t$ -tests in the study.

**Table 17***Independent-Samples t-Tests: Frequency and Perceived Effectiveness*

Measures	<i>M</i>		<i>SD</i>		<i>t</i> (13.25)	<i>p</i>
	Group A ( <i>n</i> =11)	Group B ( <i>n</i> =6)	Group A ( <i>n</i> =11)	Group B ( <i>n</i> =6)		
CASEL TOOL	21.64	23.67	2.580	.816	-2.399	.032

Measures	<i>M</i>		<i>SD</i>		<i>t</i> (15)	<i>p</i>
	Group A ( <i>n</i> =11)	Group B ( <i>n</i> =6)	Group A ( <i>n</i> =11)	Group B ( <i>n</i> =6)		
Total FFMQ	139.73	145.33	17.28	24.21	-.56	.586
Observing	27.73	32.00	4.45	4.05	-1.95	.07
Describing	31.91	33.17	3.51	5.04	-.61	.553
Acting with awareness	27.73	27.67	5.71	6.89	.02	.985
Nonjudgment	29.82	27.50	6.85	9.05	.60	.56
Nonreactive	22.55	25.00	3.11	2.83	-1.60	.13
Panorama	43.55	52.67	10.60	5.16	-1.96	.069
PSS	18.27	14.83	7.85	3.55	1.01	.33

*Note.* *N* = 17. CASEL = Collaborative for Academic, Social, and Emotional Learning TOOL for Personal Assessment and Reflection: Self-Management; FFMQ = Five Facets Mindfulness Questionnaire; Panorama = Teacher Well-Being Survey; PSS = Perceived Stress Scale. On the CASEL analysis equal variances were not assumed as the Sig. value for Levine's test was smaller than .05 ( $p = .001$ ). For all other independent-samples *t*-tests the Sig. value for Levine's was larger than .05; thus for the remaining analyses in this section, equal variances were assumed.

As indicated in Table 17, following the intervention phase participants in Group B demonstrated higher levels of perceived self-management skills, enhanced mindfulness, and



well-being on all measures with the exception of two subscales of the FFMQ (for *acting with awareness* and *nonjudgment* participants in Group B had a lower mean than participants in Group A). Additionally, participants in Group B had lower perceived stress as measured by the PSS, following the intervention phase. The PSS is the only measure from the survey where a lower score indicates improved well-being (as a lower score indicates lower stress). These scores indicate that the participants who practiced three times a day perceived the intervention as more effective for improving self-management skills, enhancing mindfulness, and reducing stress when compared to participants who practiced MBI twice a day.

The researcher utilized the independent-samples *t*-tests to understand the significance of the difference between the two groups. The researcher specified significance at .05 ( $p < .05$ ) for all *t*-tests in the study. The researcher conducted the first independent-samples *t*-test to compare the CASEL scores for Group A and Group B. On the CASEL there was a statistically significant difference in scores for Group A ( $M = 21.64$ ,  $SD = 2.580$ ) and Group B ( $M = 23.67$ ,  $SD = .816$ ;  $t(13.125) = -2.399$ ,  $p = .032$ , two-tailed). The CASEL is a three-point scale and a higher score indicates higher self-management skills, thus a higher mean for Group B indicates higher perceived self-management.

The researcher conducted the second independent-samples *t*-test to compare the FFMQ scores (and each subscale of the FFMQ) for Group A and Group B. While participants in Group B perceived greater enhanced mindfulness overall and on multiple subscales (*observing*, *describing*, and *nonreactive*), there was no statistically significant difference on any measures of the FFMQ. Additionally, on the subscales *acting with awareness* and *non-judgment*, Group A reported a slightly higher mean than Group B.

The researcher conducted the third independent-samples *t*-test to compare the Panorama scores for Group A and Group B. On the measure of well-being there was no statistically significant difference when comparing Group A ( $M = 43.55$ ,  $SD = 10.605$ ) to Group B ( $M = 52.67$ ,  $SD = 5.164$ ;  $t(15) = -1.962$ ,  $p = .07$ , two-tailed). Despite lack of statistically significant difference, there could be practical implications to consider as a  $p$  value of .07 indicates that there is a 93% chance that the difference between groups is not due to chance. This might have implications as the district considers program design moving forward.

The researcher conducted the final independent-samples *t*-test to compare the PSS scores for Group A and Group B. There was no statistically significant difference on the PSS when comparing Group A ( $M = 18.27$ ,  $SD = 7.85$ ) to Group B ( $M = 14.83$ ,  $SD = 3.545$ ;  $t(15) = 1.007$ ,  $p = .33$ , two-tailed). However, participants in Group B did report lower perceived stress at the end of the intervention.

These data revealed a statistically significant difference between Group A and Group B only on the CASEL measure of self-management. However, the data do suggest that participants who practiced on average three times per day perceived higher levels of enhanced mindfulness overall, improved well-being, and reduced stress as compared to their peers who practiced on average zero to two times per day. These data could inform recommendations for daily practice in future school-based MBI programming.

### **Research Question 3: Development of Self-Management as a Result of MBI Participation**

The researcher developed the third research question to understand to what extent participation in the MBI program designed for a school setting impacted perceptions of self-management skills. Additional sub-questions explored the impact of participation on perceptions

of enhanced mindfulness, well-being, and stress. Analysis of these quantitative data enabled the researcher to test the proposed hypotheses.

At post-test, three participants did not provide data, bringing the analytic sample to 17. The pre-test survey return rate was 100% ( $N=20$ ) and the post-test return rate was 85% ( $N=17$ ). The researcher removed the three participants who did not complete the post-survey from the baseline survey so that the pre- and post-test data represent equivalent samples. In addition to these quantitative data, the researcher analyzed qualitative data derived from the structured focus group to explore teachers' perceptions of the impact of their participation in mindfulness on classroom management, climate, and relationships with their students (Appendix J).

***To What Extent Did Participation in MBIs Impact Perceptions of Self-Management, Enhanced Mindfulness, Well-Being, and Stress?***

**Quantitative Results.** To understand the impact of the mindfulness program designed for a school setting, the researcher collected pre- and post-survey data from the same group of participants ( $N=17$ ) and employed inferential statistics to conduct paired-samples  $t$ -tests to analyze the differences between these data collected on two different occasions (before and after intervention). The paired-samples  $t$ -tests examined differences between the groups on pre- and post-test scores on the CASEL TOOL for Personal Assessment and Reflection: Self-Management, the Five Facets Mindfulness Questionnaire, The Panorama Teacher Well-Being Survey, and the Perceived Stress Scale. Table 18 summarizes the paired-samples  $t$ -tests from all four instruments included in the survey battery. The researcher specified significance at .05 ( $p < .05$ ) for all  $t$ -tests in the study.

**Table 18***Paired-Samples t-Test for Pre- and Post-Test*

	Measure	Mean	SD	<i>t</i> (16)	<i>p</i>
Self-Management	Test 1 CASEL	19.18	3.17	-3.72	.002
	Test 2 CASEL	22.35	2.32		
Mindfulness	Test 1 Total FFMQ	124.24	20.87	-3.47	.003
	Test 2 Total FFMQ	141.71	19.42		
	Test1 FFMQ Observing	25.29	5.87	-3.70	.002
	Test 2 FFMQ Observing	29.24	4.68		
	Test 1 FFMQ Describing	29.29	4.62	-2.69	.016
	Test 2 FFMQ Describing	32.35	4.00		
	Test 1 FFMQ Acting w Awareness	24.06	7.15	-2.09	.053
	Test 2 FFMQ Acting w Awareness	27.71	5.94		
	Test 1 FFMQ Non-judgment	25.71	10.72	-1.55	.140
	Test 2 FFMQ Non-judgment	29.00	7.50		
	Test 1 FFMQ Nonreactive	19.88	3.76	-3.55	.003
	Test 2 FFMQ Nonreactive	23.41	3.16		
Well-Being	Test 1 Panorama	46.06	8.18	-.32	.755
	Test 2 Panorama	46.76	9.94		
Stress	Test 1 PSS	21.29	7.13	2.75	.014
	Test 2 PSS	17.06	6.73		

*Note.* *N* = 17. CASEL = Collaborative for Academic, Social, and Emotional Learning TOOL for

Personal Assessment and Reflection Self-Management; FFMQ = Five Facets Mindfulness

Questionnaire; Panorama = Teacher Well-Being Survey; PSS = Perceived Stress Scale.

Table 18 displays the paired-samples *t*-test conducted to evaluate the impact of the intervention when measuring participants' scores on all four survey measures. On the CASEL TOOL: Self-management, there was a statistically significant increase on the CASEL scores from Time 1 ( $M = 19.18$ ,  $SD = 3.17$ ) to Time 2 ( $M = 22.35$ ,  $SD = 2.32$ ),  $t(16) = -3.72$ ,  $p = .002$  (two-tailed). The mean increase on CASEL scores was 3.18 with a 95% confidence interval ranging from -4.99 to -1.37. Possible scores on the CASEL range from 8-24; a higher score reflects higher perceived levels of self-management. These data strongly suggest that the improvement participants perceived in their self-management skills as a result of the MBI was

not due to chance. These results could have significant implications as leaders seek effective tools for teachers to self-manage emotions throughout the school day.

Results of the paired-samples *t*-test conducted to evaluate the impact of the intervention when measuring participants' scores on the FFMQ and its subscales showed a statistically significant increase on the total FFMQ scores from Time 1 ( $M = 124.24$ ,  $SD = 20.87$ ) to Time 2 ( $M = 141.71$ ,  $SD = 19.42$ ),  $t(16) = -3.47$ ,  $p = .003$  (two-tailed). The mean increase on FFMQ scores was 17.47 with a 95% confidence interval ranging from -28.13 to -6.81. These results indicate that the two-phase school-based mindfulness program was effective at teaching and enhancing overall mindfulness. A higher score on the total FFMQ and any of the five subscales included in the battery reflect higher levels of enhanced mindfulness with a possible total score range of 39-195.

When comparing scores on the subscale *observing*, there was a statistically significant increase on the FFMQ *observing* score from Time 1 ( $M = 25.29$ ,  $SD = 5.87$ ) to Time 2 ( $M = 29.24$ ,  $SD = 4.68$ ),  $t(16) = -3.70$ ,  $p = .002$  (two-tailed). The mean increase on FFMQ *observing* was 3.94 with a 95% confidence interval ranging from -6.20 to -1.68.

There was also a statistically significant increase on the FFMQ *describing* score from Time 1 ( $M = 29.29$ ,  $SD = 4.62$ ) to Time 2 ( $M = 32.35$ ,  $SD = 4.00$ ),  $t(16) = -2.69$ ,  $p = .016$  (two-tailed). The mean increase on FFMQ *describing* was 3.06 with a 95% confidence interval ranging from -5.47 to -.65.

For the subscale *acting with awareness*, there was not a statistically significant increase on scores when comparing Time 1 ( $M = 24.06$ ,  $SD = 7.15$ ) to Time 2 ( $M = 27.71$ ,  $SD = 5.94$ ),  $t$

(16) = -2.09,  $p = .053$  (two-tailed). The mean increase on the FFMQ *acting with awareness* was 3.65 with a 95% confidence interval ranging from -7.35 to .06.

Additionally, there was not a statistically significant increase on the FFMQ *non-judgment* score when comparing Time 1 ( $M = 25.71$ ,  $SD = 10.72$ ) to Time 2 ( $M = 29.00$ ,  $SD = 7.50$ ),  $t(16) = -1.55$ ,  $p = .140$  (two-tailed). The mean increase on the FFMQ *non-judgment* was 3.29 with a 95% confidence interval ranging from -7.79 to 1.20.

On the final subscale of the FFMQ *nonreactive*, there was a statistically significant increase on scores when comparing Time 1 ( $M = 19.88$ ,  $SD = 3.76$ ) to Time 2 ( $M = 23.41$ ,  $SD = 3.16$ ),  $t(16) = -3.55$ ,  $p = .003$  (two-tailed). The mean increase on the FFMQ *nonreactive* was 3.53 with a 95% confidence interval from -5.64 to -1.42.

To understand how the mindfulness programming impacted participants' perceptions of their well-being and stress levels, the researcher conducted paired-samples  $t$ -tests comparing scores on the Panorama Teacher Well-Being Survey and the Perceived Stress Scale. There was not a statistically significant increase on the Panorama scores from Time 1 ( $M = 46.06$ ,  $SD = 8.18$ ) to Time 2 ( $M = 46.76$ ,  $SD = 9.94$ ),  $t(16) = -.32$ ,  $p = .755$  (two-tailed). The mean increase on Panorama scores was .71 with a 95% confidence interval ranging from -5.41 to 4.00. Higher scores on the Panorama measure indicate higher levels of perceived well-being with a possible score range between 14 and 70.

Lastly, there was a statistically significant decrease on the PSS from Time 1 ( $M = 21.29$ ,  $SD = 7.13$ ) to Time 2 ( $M = 17.06$ ,  $SD = 6.73$ ),  $t(16) = 2.75$ ,  $p = .014$  (two-tailed). The mean decrease on the PSS scores was -4.24 with a 95% confidence interval ranging from .98 to 7.50. On this one measure, the PSS, a decrease is considered an improvement as the measure reports

perceived stress, a decrease in overall score indicates reduced stress levels when comparing pre- to post-intervention scores. Scores between 0-13 on the PSS indicate low stress, 14-26 moderate stress, and 27-40 indicate high stress (Cohen, 1994).

In summary, these data reveal improvements in perceptions of self-management, enhanced mindfulness, well-being, and decreases in stress when comparing pre- and post-test results. A statistically significant increase was found when comparing scores on the CASEL tool for self-management ( $p = .002$ ), the total FFMQ ( $p = .003$ ), the *observing* subscale of the FFMQ ( $p = .002$ ), the *describing* subscale of the FFMQ ( $p = .016$ ) and the *non-reactive* subscale of the FFMQ ( $p = .003$ ). Additionally, there was a statistically significant decrease in perceived stress levels on the PSS ( $p = .014$ ). There was not a statistically significant difference when looking at increases on the FFMQ *acting with awareness* ( $p = .053$ ), the FFMQ *non-judgment* ( $p = .140$ ), and the Panorama teacher Well-Being Survey ( $p = .755$ ).

### **Statement of Hypotheses: Conclusion**

Based upon a set significance of  $p < .05$ , the researcher determines the following: the researcher rejects the null hypotheses presented for self-management, total enhanced mindfulness, and stress. For these measures, the researcher accepts the alternative hypotheses that there was a statistically significant increase for self-management and enhanced mindfulness and a statistically significant reduction in stress. For the hypothesis proposed for well-being, the researcher failed to reject the null hypothesis that there was not a statistically significant difference in perceived well-being. Additionally, results revealed a statistically significant improvement for three out of five subscales (*observing*, *describing*, and *nonreactive*) of the FFMQ. The researcher concludes that it is highly likely that these observed differences were not due to chance.

While the data did not support statistical significance on all measures, it is important to consider the practical implications. On the FFMQ subscale *acting with awareness* the *p* value was .053, indicating almost 95% confidence that the impact of intervention was not due to chance. Additionally, for the FFMQ subscale *non-judgment* and on the Panorama measure for well-being, the difference in means (although slight on the Panorama at a difference of only .70), still reflected perceived improvements.

***To What Extent Did Participants Report Impact on Classroom Management, Climate, and Relationships With Students?***

**Qualitative Results.** The researcher designed the final sub question of Research Question 3 to explore the indirect impact that teachers use of MBIs might have on classroom management, climate, and relationships with students. To answer this question, the focus group protocol included the question: *How did your participation in this study impact your classroom management, climate, and relationships with students?* (Appendix J). Upon first- and second-level coding of these qualitative data derived during the structured focus group, the following themes and sub-themes emerged to shed insight into connections between teachers' use of MBIs and potential impact on students (Table 19).



**Table 19***Exploring Connections: How Teacher Mindfulness Might Impact Students*

Theme	Subtheme	Example quote
Feedback Loop	Participants noted that how they felt impacted how their students felt.	<p>“As much as I was doing it for myself, I noticed changes in the feel of the room.”</p> <p>“December is a really stressful month. When I was more stressed I felt like my kids were more stressed, when I centered myself I felt the edge in the room come down.”</p>
Integration	When participants experienced success with a mindfulness strategy, they shared it with their students.	<p>“I even integrated strategies into my class a few times and it calmed the whole class down.”</p> <p>“Once I felt confident I started teaching the three-part breath to my students. I was afraid of eye rolling and honestly, they loved it. Some even have experience with mindful practice.”</p>
Interactions	Participants noted more positive interactions with students: patience, positivity, calm.	<p>“I would say it effected the overall climate because when I would stop and do something that made me happy, there's no doubt that my following interactions would have more positivity.”</p> <p>“Just being able to manage my stress really helped. A lot of the strategies were quick and they brought me back to handle ... engage with my students in a more positive way.”</p> <p>“I know it made me more balanced, more pleasant, more even-keeled. It was so interesting, after the holiday break the first few days were chaotic and I started to get stressed and I was like wait I was not doing my MBI so I went back to doing it and since then I can definitely notice a difference again in my ability to manage my students.”</p> <p>“There were moments when my stress was high and this forced me to stop and take a break. I also focused a lot on the breathing and it was so manageable in the moment and it was so helpful for when those kiddos get me a little tense—or certain meetings and I would just take a few deep breaths and it definitely made a difference.”</p>

When considering the themes in Table 19, it is evident that participants' experiences with mindfulness may have affected their students. Participants were candid and their responses were positive. Emerging evidence from their comments suggest that while this study did not target

student outcomes, teacher well-being links with student well-being. One participant summarized her experiences with this theory of emotional contagion well when she stated:

Well, when I am stressed I am not patient, I react, I am sharper with the kids, and I feel horrible about it, which just increases my stress. Using my strategies changed all of this for me; I just have to be religious about using them.

These qualitative data suggest that a connection exists between teacher well-being and student well-being, supporting the theory of emotional contagion proposed in the literature (Brackett, 2019; Jennings & Greenberg, 2009; Jennings et al., 2017; Zakrzewski, 2013). The responses from participants during the focus group will inform next steps as the district continues to leverage teacher SEL to drive equitable student outcomes.

### **Summary**

The data analyzed in this chapter provide evidence that because of their participation in school-based mindfulness, participants learned effective strategies for self-management that resulted in perceived improvements in enhanced mindfulness, well-being, and decreased stress. For many of the measures, these changes were statistically significant. Quantitative data collected to understand the effectiveness of both the training and intervention phases suggest that the professional learning modules incorporated components that were effective for teaching MBI and that the daily practice opportunities led to improved ability to self-manage stress throughout the day. Participant voice provided context to these data, with participants highlighting program components that they perceived as critical for their positive experiences with intervention effectiveness. Lastly, qualitative data collected also suggest that when teachers learn and routinely practice MBI during their workday, their students also benefit.

## Chapter V: Discussion and Implications

Because of mounting evidence that teaching is a highly stressful profession and that teacher stress has negative impacts on student outcomes, including classroom management and climate, the literature calls for research that focuses on how to address adult SEL to improve teacher well-being and reduce stress (Jennings et al., 2017; Jones et al., 2017). Mindfulness-based interventions modified for the school setting are gaining traction as effective tools for improving emotion management, reducing stress, and improving classroom management skills (Abenavoli et al., 2013; Chesak et al., 2019; Gold et al., 2010; Taylor et al., 2016). This study responded to this need by exploring the impact of a school-based mindfulness program on middle school teachers' perceptions of self-management, enhanced mindfulness, well-being, and stress while also exploring how participation may have affected relationships with students and classroom climate.

### Discussion

This study showed that MBIs designed for a school setting were associated with statistically significant perceived improvements in self-management skills; enhanced mindfulness, including total score and subscales *observing*, *describing*, and *nonreactive*; and statistically significant decreases in perceived stress when comparing pre- and post-intervention scores for 17 middle school teachers ( $N = 17$  for analytic sample). Although not statistically significant, participants perceived growth on all remaining measures when comparing pre- and post-test scores on subscales of the FFMQ *acting with awareness* and *non-judgment* and on the Panorama Teacher Well-Being Survey.

Additionally, teachers reported that their interactions with their students improved because of their participation and that their lower stress levels seemed to positively affect the

climate in their classrooms. As evidenced in both the quantitative and qualitative data analyzed, teacher participants in this study perceived the training phase and intervention phase as effective at supporting their understanding and use of explicit strategies targeting well-being and stress. These results have significant implications as leaders develop programs that include a focus on adult SEL.

### **Practical Importance of Study Impacts**

The researcher organized the below section to summarize the potential implications of the study for teachers and students. Additionally, the researcher presents data to suggest essentials when considering program expansion. While limitations within the study do exist, they should not deter Westly school leaders from exploring how an expanded program could benefit educators within the system. Education stakeholders within the larger context of public education may also find the results interesting. Furthermore, the researcher includes how this study relates to previous research on mindfulness in the school setting.

#### ***Impact on Teachers***

This study comes at a critical time for teachers in the public school system. As discussed, teaching is one of the most stressful professions (Greenberg et al., 2016; Schonert-Reichl, 2017; Taxer et al., 2018). Set in the context of a global pandemic compounded by national and local systems that tap teachers' reserves for managing emotions, this study provided tools to leverage in the moment as teachers managed stress throughout their day, often in front of their active audience of learners. Despite a district focus on student SEL through an equity lens, a review of district data revealed a need to include adult SEL in long-term plans for comprehensive programming. Focusing on the connection between adult SEL and student SEL could bolster

Westly's efforts to clear paths for all students. Without their own SE competencies, teachers in Westly may not be able to effectively teach SEL to students and unaddressed teacher stress could further compound disparate outcomes for students (Brackett, 2019; Jones et al., 2013; Oberle & Schonert-Reichl, 2016).

Because of their participation in the mindfulness program, teachers reported statistically significant improvements in their perceived self-management skills as measured by the CASEL TOOL for Personal Assessment and Reflection: Self-Management (CASEL, 2017). These results suggest that the mindfulness program modified for a school setting had significant positive effects on teachers' perceived ability to manage their emotions throughout the day. Additionally, these results support the conclusion that both the training and intervention phases of the school-based program were feasible and effective. Researchers reported similar results for feasibility and effectiveness when studying modified MBSR programs in school settings (Frank et al., 2015; Meiklejohn et al., 2012; Harris et al., 2015). This study and the literature lend evidence that school-based MBI programs provide an effective vehicle for explicit instruction in strategies for teacher self-management.

Regarding measures for enhanced mindfulness, participants showed statistically significant improvements on their total score as measured by the FFMQ. The FFMQ includes five subscales (Baer et al., 2006). In this study, participants demonstrated statistically significant improvements when reporting on their *observing* skills, on the subscale *describing*, and for pre- and post-test *nonreactive* scores. Although not statistically significant, teachers reported improved mindfulness on the remaining two subscales of the FFMQ, *acting with awareness* and *non-judgment*. These results replicate previous research that has shown that school-based

mindfulness programs can effectively improve mindfulness (Beshai et al., 2016; Jennings et al., 2013, 2017, 2019; Malarkey et al., 2013).

Teacher well-being and stress levels have been linked to job satisfaction, teaching efficacy, and positive student outcomes (Arens et al., 2016; Greenberg et al., 2016; Harris et al., 2015; Herman et al., 2018). Results of this study indicate that school-based mindfulness programs may help improve well-being and reduce stress. Although not statistically significant, participants reported improvement in perceived well-being as measured by the Panorama Teacher Well-Being Survey (Panorama, 2021) when comparing pre- and post-intervention self-reports. When considering the impact of MBI on perceived stress, participants reported a statistically significant reduction in stress levels as measured by the PSS (Cohen et al., 1983). These results confirm previous research connecting school-based mindfulness programming with positive teacher outcomes that included improved well-being and reduced stress (Abenavoli et al., 2013; Beshai et al., 2016; Chesak et al., Gold et al., 2010).

When considering the results of this study and the potential impact for teachers, mindfulness interventions have significant implications for managing teacher stress and addressing teacher well-being. This study contributes to the growing body of knowledge finding modified mindfulness programs designed for school settings effective and feasible within the school day and that these programs can significantly influence positive teacher outcomes. Considering the research completed that explores the connection between teacher well-being and student outcomes, an understanding of how results in this study could be used to positively impact student outcomes is also important.

### ***Impact on Students***

Previous research provides strong evidence of the connection between teacher well-being and student outcomes (Greenberg et al., 2016; Oberle & Schonert-Reichl, 2016). This study explored the indirect impact that mindfulness programming for teachers might have on students, specifically regarding teacher perceptions of the impact of MBIs on their classroom management, climate, and relationships with students.

Studies often cite student behavior and inadequate classroom management as primary antecedents to teacher stress (Klopfer et al., 2019; Greenberg et al., 2016; Haydon et al., 2018; Schonert-Reichl, 2017 ). Westly's educators report similar stressors within their middle schools (Table 6). The significant response to MBIs as evidenced in the quantitative data reported in this study suggest that changes in teacher well-being and stress could allow for more effective classroom management and positively impact student learning and development.

The qualitative data collected substantiate this claim. Participants shared that they noticed positive changes in the feel of their classrooms because of their daily practice; that they felt confident teaching MBIs to their students; that they experienced more positive student interactions when they practiced MBI; and that they perceived a definite difference in their ability to manage students. While this study did not collect data linked directly to student outcomes, previous studies suggest a strong connection between teachers' mindfulness and improved classroom management skills and climate (DiCarlo et al., 2019; Jennings et al., 2017; Taylor et al., 2016).

As evidenced in the district's vision for equity and anti-racism, Westly's leaders and educators are committed to improving district practices to dismantle systemic racism and

historical inequities (whps.org). Despite this vision, discipline data from Westly's middle schools mirror national trends: When teachers react to student behavior and remove students from the instructional setting, data reveal disproportionate trends for students from historically marginalized groups (Figure 3). This problem is not unique to Westly; a review of the literature confirms that inequities in removal practices that may compound the achievement gap prevail at the national level (Elias, 2019; Gregory & Fergus, 2017; Gubi & Bocanegra, 2015).

This study suggests an indirect connection between improved teacher mindfulness and positive student outcomes. In line with prior research, emotional contagion can exist in either a positive or a negative feedback loop (Jennings & Greenberg, 2009; Zakrzewski, 2013). Future research could explore the success implications of this mindfulness program for teachers to contribute to the growing body of evidence supporting the link between teacher and student SEL. This study proposes that mindfulness programming could be one strategy that fosters a positive feedback loop for teachers and their students.

### ***Program Implications/Next Steps***

The researcher designed this pilot study to inform next steps in the Westly school district as both educator and student SEL are leveraged for equitable outcomes. As such, the researcher collected data to understand what components of both phases, training and intervention, participants perceived as most effective or least effective and why. The quantitative and qualitative data collected led to the conclusion that the program was a success; this next section sheds light on what worked and what did not. Westly leaders could use these results to springboard next steps as stakeholders explore program expansion.



**Training Must Include Opportunities for Active Practice.** A corner stone of the plan for this study included high-quality professional learning that incorporated content knowledge, instruction in explicit skills, and active participation (Durlak et al., 2015). Like what Martinez (2016) suggested, the participants in this study reported that their competence with each new strategy required the practice opportunity embedded within each training module. Similarly, for those who selected to participate in the optional weekly practice throughout the intervention phase, this additional time for the researcher to model specific MBI through guided practice proved critical for some learners. For example, one participant stated that these times together were “essential for her success.”

**Frequency of Practice May Impact Intervention Effectiveness.** To inform future program development, the researcher analyzed the difference in effect for participants who practiced MBIs on average zero to two times per day as compared to those who practiced on average three times per day. Interestingly, on all measures except for two subscales of the FFMQ (*acting with awareness* and *non-judgment*), participants who practiced three times per day reported higher levels of perceived self-management, total enhanced mindfulness (including on subscales *observing*, *describing*, and *nonreactive*), and well-being, and reported lower levels of stress following the intervention phase. These results indicate that practicing more MBI per day may have had greater impact on positive outcomes.

When comparing frequency of daily use on the measure for self-management (CASEL), participants practicing an average of three times per day had a statistically significant difference in their higher perceptions of self-management as compared to their peers who practiced on average twice per day. Based upon the study it is not possible to understand whether increasing the frequency of daily practice would continue to positively impact perceptions of effectiveness

as all participants practiced on average zero to two times per day or three times per day. In this study, the researcher could not establish a ceiling of impact; however, exploring how frequency of practice effects outcomes may be an implication for future research. Future researchers would also need to consider the feasibility of practicing more than three times during the workday.

**Accountability Measures are Critical.** The researcher had concerns about daily data collection and worried that participants might experience collection fatigue as the program progressed. As prior researchers have cautioned, if SEL plans are cumbersome for teachers an unintended consequence may manifest to increase stress rather than mitigate it (Elias 2019; Oberle et al., 2016). To monitor this effect the researcher checked the completion rate for the daily reflection data sheet throughout the study. The rate stayed relatively consistent on all 28 days of collection. This stable return rate combined with what participants had to say about accountability measures indicates that the daily reflection sheet was a critical component of the intervention phase.

In line with what the literature suggests, accountability measures emerged as an essential component of the study program (Erdman et al., 2020; Lesh, 2020). When responding to prompts in the focus group, participants identified that the daily emails, the weekly optional meetings, and the daily data reflection sheet helped keep them on track with their mindful intentions. One participant stated that without the daily reminder and data form, “you never would have heard from me,” and another participant stated that accountability measures were “essential for buy-in.”

These qualitative data, when combined with the successful return rate and participation rates, would suggest that MBI programs designed for school settings should consider accountability measures so that participants can track progress and maintain buy-in. These

results align with recommendations from prior research on use of mindfulness in schools.

Erdman et al. (2020) and Lesh et al. (2020) suggest that such accountability measures ensure that participants do not place their self-care on the back burner as the pressures of the workday mount.

**Plan Feasibility, Efficiency, and Flexibility.** Teacher voice was a critical component in the development of the mindfulness program designed for this study. The researcher reviewed district data and conducted empathy interviews to inform program development. When asked, middle school educators shared that any self-management tools would need to be something that they could use on their own time, that they must be simple and accessible, and that they could not take a lot of time. In line with these suggestions, themes that emerged during the focus group included that participants valued flexibility and autonomy in their plan, and that having access to resources was essential. With these plan components in place, this study provides evidence that school-based mindfulness programs are effective and feasible within the scope of the school day, replicating previous study results on school-based mindfulness (Beshai et al., 2016; Flook et al., 2013; Frank et al., 2015; Meiklejohn et al., 2012).

Additionally, the researcher designed data collection tools to understand which MBI strategies were most effective and why. A large majority of participants identified intentional breathing as their go-to strategy during the intervention phase. The next most frequently selected strategy was mindful movement (Table 14).

The frequency of use data aligns with training data. Following the module 1 training on intentional breath, a large majority of participants reported that they felt very confident using intentional breath and shared that they would be very likely to use intentional breath in their practice (Figures 8 and 9). When discussing intentional breathing's effectiveness, participants

shared that the strategy was easy to use, took very little time, could be practiced anywhere (even in front of students), and unlike some other strategies, required no equipment and was immediately accessible (for example connecting with nature might require a participant to watch an awe walk on their computer).

When the researcher asked participants to identify which MBIs were least effective and to explain why, participants identified the body scan and shared that the strategy took too much time to be feasible; confirming that time required for practice is a consistent predictor of strategy use and effectiveness. Previous research completed by Zins and Elias (2007) summarized a similar conclusion: that participants often identify time as a barrier to program implementation. These data replicate previous conclusions that even short duration mindfulness practices can have significant effect, can be practiced anywhere, and are feasible within the school day (Erdman et al., 2020; Larrivee, 2018; Meiklejohn et al., 2012).

### **Study Strengths**

This study contributes to a growing body of research on the evaluation of MBIs for teachers. While researchers have studied stress for years, the literature reveals a knowledge gap in studies that look specifically toward school-based mindfulness programs designed to support teacher SE competency (Hwang et al., 2017; Jennings et al., 2017; Wong, 2017). This study showed effects on teacher self-report that participants substantiated with their comments during the focus group.

The presented data provide evidence of the feasibility and effectiveness of a modified mindfulness program specifically designed to meet the needs of teachers. The study results support the conclusion that participation in MBIs designed for a school setting can result in

significant improvements in multiple measures of teacher well-being. Additionally, the study sheds light on critical components essential to the development and implementation of a two-pronged mindfulness program, with implications for both training and intervention phases.

Unlike previous studies designed to understand the effects of packaged mindfulness programs that include MBSR strategies, the researcher designed this study to understand more about which specific MBIs participants perceived as most effective and why, a need cited in the literature (DiCarlo et al., 2019). While this component of the study helps Westly leaders design future programming, a broader target audience could take note of the effectiveness and feasibility of intentional breathing, identified on multiple measures as a preferred and effective strategy for in-the-moment stress-management.

The researcher designed the study to explore the indirect connection between teachers' enhanced mindfulness and impact on student outcomes; the literature calls for more studies that include both direct and indirect measures of the effects of MBI (Hwang et al., 2017). Lastly, despite a small sample size, the researcher determined statistically significant improvements on multiple measures of well-being, suggesting a firm justification for future research with a larger sample of the population.

### **Limitations**

Readers should consider the findings from this study in the context of the following limitations. Although working with an adequate sample size to determine statistical significance for multiple measures, this study's sample size was relatively small and homogeneous in terms of gender and race and was confined to one level (middle school) within a pre-k-12 spectrum (Tables 10 and 11 for participant demographics). While this sample reflects limited racial

diversity, considering that 91.1% of the educators in the district of study are white, the homogeneity may speak to larger issues regarding lack of educator diversity within Westly. Limited diversity reduces the generalizability of the results to the larger district population (gender/teaching level) and to more racially diverse school systems. As suggested by Creswell and Plano-Clark (2018), generalization of results to a larger population is limited when employing non-probabilistic convenience sampling. While the researcher collected demographic information, the size of each cohort was too small to determine an effect or relationship between characteristics such as years of teaching experience and response to intervention. This study did not determine whether participant characteristics influenced the obtained results.

The sample of schools and teachers participated in this study voluntarily. This contributes to limitations with generalizability, as results may be very different with a sample of teachers mandated to participate in daily mindfulness. Teachers who were already interested in, or had a philosophical belief in the effectiveness of MBI, could skew data in a positive direction. While a future study that employed an experimental design with randomized sampling could improve generalizability, forcing people to participate in mindfulness would also present with efficacy challenges.

The study relied entirely on self-report tools for measuring the effectiveness of mindfulness-based interventions on self-management, enhanced mindfulness, well-being, and stress. As such, these first-person reports were vulnerable to subjectivity. However, the researcher included fidelity checks and valid measures with published reliability and validity. Additionally, the researcher employed triangulation to demonstrate consistency among measures: survey slips for professional learning modules (Appendix H), daily reflection sheets (Appendix G), pre- and post-survey results (Appendix I), and open-ended prompts utilized during the

structured focus group that were member-checked to ensure accuracy (Appendix J). Using a variety of instruments and methods to gather data can address the self-report limitation (Mertler, 2017).

Another limitation in this study is that the data collected reflects only pre- and post-test perceptions. The researcher gathered post-test results immediately at the conclusion of the intervention phase, thus it is not possible to know if the impact of the intervention will be maintained over time or in the absence of the program components (for example the accountability measures) that participants identified as being essential to their daily practice.

The researcher designed this study to explore one access point to address the development of teacher SEL competencies as a mechanism to improve teacher well-being. This is one component of the overarching problem Westly faces: optimizing the environment to best prepare for and implement high-quality, sustainable SEL programming that is maintained with fidelity and leveraged for equity. Teacher self-management is one part of the problem that the researcher could feasibly address within the scope of the presented study. Mindfulness will not be for everyone, nor is it the only solution to the multi-faceted challenge of adult SEL.

The involvement of the researcher in this study is a hallmark of action research methodology (Martella et al., 2013). The relationship that exists between the researcher and her participants could have had an impact on study outcomes. Additionally, the Hawthorne effect (Grimshaw, 1993; Jones, 1992, as cited in Martella et al., 2013) could pose a threat to the validity of the data collected throughout the study. Participants in this study were aware that they were being studied and have a relationship with the researcher. This may have affected the reporting of study effectiveness. To address these limitations a member of the EDC facilitated the focus group during the final phase of data collection. Additionally, the researcher asked

colleagues in the Pupil Services Department to review coding of the qualitative data gathered during the focus group interviews and employed member checking to ensure that the conclusions drawn accurately reflected participants' voices.

### **Suggestions for Future Directions**

This study offers encouraging results in the evaluation of MBIs designed for school settings. There is a need to continue research to drive a deeper understanding of how improvements in teacher mindfulness and well-being, may affect classroom and student outcomes. This may involve including data measures such as observations, interviews with students, direct student measures (i.e. discipline data, student surveys), and tools that measure student SE competencies. While this study suggests that decreasing teacher stress and improving well-being may help to improve classroom climates, the researcher is not suggesting that improving teacher well-being is a standalone solution to addressing issues of inequity. Rather, the researcher proposes future work that might include professional learning about bias, data stories that reveal historical inequities, and training in proactive and restorative interventions partnered with explicit strategies that could include mindfulness as a lever for addressing educator stress.

Additional study is warranted to understand how improvements in teacher outcomes affect teachers' ability to address student behavior proactively, equitably, and restoratively to promote the positive feedback loop that research has shown can exist in healthy classroom climates (Frenzel et al., 2009; Jones et al., 2013; Oberle & Schonert-Reichl, 2016; Schonert-Reichl, 2017). The results of the study suggest potential to affect discipline data. Future work in the district might incorporate the data in Figure 3 as a baseline for comparison as leaders expand programming that includes student outcome measures.



The sample in this study was female and predominately white. Interestingly, the literature reveals similar underrepresentation of males in studies employing mindfulness (Bodenlos et al., 2017). Leaders in Westly must consider how to involve male educators and educators of color in stress-management practices. A needs assessment designed to target end-users who did not respond to this study may be a first step in understanding what other stress-management strategies to incorporate in adult SEL programming. Mindfulness will not be for everyone, future work should explore what additional interventions could work for school-based programming.

To gain a comprehensive understanding of the impact of MBI on teacher well-being, future research could include tools to analyze the connection between daily MBI practice frequency and effectiveness, longitudinal measures to understand if participants maintain the benefits of mindfulness over time, and an analysis of how participant demographic characteristics may influence intervention effectiveness. Additionally, to improve generalizability to a wider population of educators, replications could include a larger and more diverse sample size that could include teachers from other grade spans, related service providers, administrators, and support staff.

To garner a more objective set of data in future studies, researchers could incorporate biological indicators to substantiate self-report measures. These objective measures offer biological evidence of a chemical change in the body's stress hormone, cortisol, in response to MBI. For example, Flook et al. (2013) used the FFMQ to measure mindfulness and saliva samples from participants to measure cortisol levels. Using both subjective and objective measures made for a compelling conclusion that mindfulness is an effective tool for stress management. Additionally, Harris et al. (2015) employed all three measures when analyzing middle school teachers' response to mindfulness intervention. The researchers included the PSS

and FFMQ as self-report measures as well as blood pressure monitoring and cortisol analysis. Data from the self-report measures and the physiologic indicators revealed intervention benefits for the brief mindfulness practices exercised by participants. Including biological measures as a dependent variable as researchers seek to understand the effectiveness of MBI contributes convincing evidence that links MBI to reduced stress and improved well-being.

Lastly, leaders in Westly may consider developing a Network Improvement Community (NIC), or a group of stakeholders across the district working to address educator SEL while guided by a deep understanding of the challenges in developing, implementing, and sustaining programming in the current climate and unique systems challenges within the district (Bryk et al., 2015; Hinnant-Crawford, 2020). Using this study as a springboard, the NIC could viably prioritize adult SEL as one critical component of the SEL programming within the district.

### **Conclusion**

In summary, findings from this mixed-methods action research study suggest that a mindfulness program rooted in the basic principles of MBSR and modified for a school setting is feasible and effective in helping middle school teachers learn self-management strategies that reduce stress and improve well-being. Additional work is needed to mitigate limitations and address how teacher mindfulness may affect positive and equitable student outcomes. However, the implications from this study are worthy of program expansion. This study reveals a safe assumption: Teachers are not the only beneficiaries of a school-based mindfulness program. Considering the impact that teacher stress has on personal health, student outcomes, and the potential implications for school districts, investing in teacher wellness holds significant promise for all stakeholders.

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## Appendix A

June 1, 2021

Emily Daigle

D.S. Pupil Services

Westly Public Schools

Dear Emily,

Please accept this letter as written confirmation that the district is in full support of the research project you have described to us. The scope of your plan and area of focus address an identified need for educators in our system and we look forward to reading your completed dissertation.

Sincerely,



T. XXX

Superintendent of Schools (letterhead removed for privacy)

## **Appendix B**

### **Study Invitation Email**

To Middle School Teachers,

I am Emily Daigle, a scholarly practitioner/student researcher and I am inviting you to participate in a pilot study that I am conducting to understand to what extent mindfulness-based interventions (MBIs) designed for the Westly Public School setting aid in the development of middle school teacher self-management skills and what impact this has on your perceptions of stress and well-being. I am a student pursuing a doctoral degree in Educational Leadership with a focus on Social-Emotional and Academic Learning through Sacred Heart University. Additionally, I am a registered and licensed Occupational Therapist and Registered Yoga teacher, who is trained in mindfulness-based interventions. You are receiving this invitation because I have had professional experience working with you and based upon a review of data at the middle school level, you may be interested in a participating in a study designed to address teacher well-being.

#### **What you will be asked to do if you participate:**

If you choose to participate in this study you will be asked to attend six training modules that will introduce you to MBIs. These modules have been developed based upon research-based interventions and are rooted in best practice. Each module will provide content, explicit instruction in skills, and practice in MBIs that have been specifically designed for the school setting. Following each module, you will be asked to reflect on your understanding via a web-based survey link provided at the conclusion of each training module. This survey is designed to further my understanding of training effectiveness.

Following the six-week training phase, you will be asked to participate in a six-week intervention phase that incorporates daily MBI. Optional MBI check-ins will be offered every week via google meet, to help support your understanding and application of learned techniques.

In order to understand the impact of MBIs on your perceptions of enhanced mindfulness, self-management skills, stress, and well-being, you will be asked to complete a pre and post-intervention survey battery immediately before and following the practice phase of the study. All data collected from the survey will be deidentified and will not include any direct or indirect identifying information about you as a participant. All data will be stored on a password protected computer.

Based upon your participation and response to intervention, you may be asked to participate in a structured focus group at the end of the practice phase. This will help me understand what aspects of the training and intervention were most effective, what could be adjusted, and if there were any unexpected outcomes. The focus group will be held over Google Meets. The focus group will take approximately 45-60 minutes to complete and will be in a small group format (10-15 participants). With your permission, the focus group will be recorded to ensure accuracy and will include open-ended questions about your experiences as a study participant. If you prefer, your participation can be audio-recorded only as focus group participants will be allowed to disable their cameras.

### **Voluntary Participation**

Participation in this study is voluntary. If you prefer not to participate, that will have no effect on my relationship with you. As your Department Supervisor, please understand that if you decline to participate that this will not impact your teaching position in any way. I understand that you are busy and this may not be a convenient time for you to participate in this study. You may withdraw from any phase of the study at any time. You may choose to skip any questions on the survey or during the focus group if you are selected and give consent to participate in that phase of the study. There would be no negative feelings if you choose to do so.

### **Eligibility Criteria**

You are eligible to participate in this study if you are currently employed as a middle school teacher by Westly Public Schools.

### **Risk and Benefits**

There are no risks to participating in this study.

**What are the potential risks to me participating?** Participation in this study is not expected to present any risk greater than slight discomfort if you feel discouraged when reflecting on your workplace stress and/or well-being. Furthermore, this study is strictly confidential and the findings reported only in aggregate form, there is no information that could be used to identify you.

**What are the potential benefits to me participating?** Each participant will respond differently to MBI, thus there is no guaranteed benefit to this study. However, I hope that this study may lead to better understanding and use of workplace MBIs that help support your well-being as a

teacher. If you are one of the first 30 participants to sign and return your consent form, you will receive a mindfulness kit as a thank you incentive for your participation.

**Confidentiality**

Your confidentiality will be protected to the fullest extent of the law. You will receive instructions to assign yourself a self-generated identification code. The digital file with the recording of the focus group will be labeled only with your individual code and deleted after transcription. No names or other information that you could identify you or anyone else will be included in the transcribed responses from the focus group. The list of study participants' names and study code numbers will be kept on a password-protected computer in the researcher's locked office. When the study is completed the list will be deleted. Your name will not be used in any report.

**To Thank you for your Time**

The first 30 participants to sign consent to participate will receive a mindfulness kit to thank you for your participation. Kits were provided with grant monies awarded to Emily Daigle by The Foundation for Westly Public Schools.

**Contact Information**

If you have any questions about this research study, you may contact me, Emily Daigle at [daiglee@mail.sacredheart.edu](mailto:daiglee@mail.sacredheart.edu) or 860-990-7292.

**If you are Interested in Participating**

Please reply to this email if you are interested in participating so that I can invite you to a presentation that will include a review of MBI, the research behind MBI, the calendar scope and sequence of this study, and to review all forms including consent to participate.

Sincerely,

Emily Daigle



## **Appendix C**

### **Informed Consent**

Date:

Please read the below form carefully before you decide to participate in this study.

You are invited to participate in a research study that I am conducting to understand to what extent mindfulness-based interventions (MBIs) designed for the Westly Public School setting aid in the development of middle school teacher self-management skills and what impact this has on your perceptions of stress and well-being. The research study is being conducted by Emily Daigle, a student pursuing a doctoral degree in Educational Leadership with a focus on Social-Emotional and Academic Learning through Sacred Heart University. Additionally, Emily Daigle is a registered and licensed Occupational Therapist and Registered Yoga teacher, who is trained in mindfulness-based interventions. Emily Daigle is your Department Supervisor and if you decline to participate, or withdraw from the study at any time, this will have no impact on your teaching position. This pilot study has been designed to inform next-steps as the district seeks to explore interventions targeted towards teachers' Social Emotional Learning (SEL) competencies.

Your participation in the study is voluntary. All data will be deidentified, stored in a password protected computer, and it will not be possible to link any of your survey responses to you. If you are selected to participate in the focus group, all data will be deidentified and your responses will not be linked to you. A separate consent form for the focus group will be provided once participants are identified, following the practice phase of the study. The IP address of your computer will not be included in the data and it will not be possible to link any answers to you.

There are no risks to participating in this study. You may experience minor distress if the questions raise issues related to the stressful aspects of your work. Most likely, the questions are about issues that you are very familiar with and have discussed with friends and colleagues.

If you do decide to participate you may elect to stop participating at any phase of the study and you may skip any of the questions on the survey battery if you do not want to answer. Your decision will have no impact on your teaching position or on our relationship as colleagues.

The first 30 participants to sign consent for this study will receive a mindfulness kit as a thank you for your participation, funded by The Foundation for Westly Public Schools. I hope this study will provide you will effective strategies to support your well-being as a teacher.

Please refer to the study invitation email for the full details of the study.

If you have any questions about this research study, you may contact me, Emily Daigle at [daiglee@mail.sacredheart.edu](mailto:daiglee@mail.sacredheart.edu) or 860-990-7292. If you have any questions about your rights as a participant in a research study, you can contact the Sacred Heart University Institutional Review Board at [alpfl@sacredheart.edu](mailto:alpfl@sacredheart.edu) or 203-396-8241.

Please print, sign, scan, and email return this consent form to me if you agree to participate in this study.

---

Signature of participant

---

Date

## Appendix D

### Informed Consent for Participation in Structured Focus Group (includes consent for video and/or audio-recording)

Date:

You are receiving this additional consent form as you have been identified as a potential participant for the final phase of the MBI study, the structured focus group. This will help me understand what aspects of the training and intervention were most effective, what could be adjusted, and if there were any unexpected outcomes. These focus groups will be held over Google Meets.

The focus group will take approximately 45-60 minutes to complete and will be in a small group format (10-15 participants). With your permission, as documented on this consent form, the focus group will be recorded to ensure accuracy and will include open-ended questions about your experiences as a study participant. If you choose to not be video-recorded, you will be allowed to disable your camera. All responses will be deidentified, stored in a password protected computer, and it will not be possible to link any of your survey responses to you. If you are selected to participate in the focus group, all data will be deidentified and your responses will not be linked to you. The recording will be destroyed after the responses are transcribed.

If you have any questions about this phase of the research study, you may contact me, Emily Daigle at [daiglee@mail.sacredheart.edu](mailto:daiglee@mail.sacredheart.edu) or 860-990-7292. If you have any questions about your rights as a participant in a research study, you can contact the Sacred Heart University Institutional Review Board at [alpfl@sacredheart.edu](mailto:alpfl@sacredheart.edu) or 203-396-8241.

Please print, sign, scan, and email return this consent form to me if you agree to participate in this phase of the study.

### Consent

I have read the description of the study as outlined in the invitation email and consent form and I voluntarily consent to participate.

---

Signature of participant

---

Date

**Video and or Audio-recording Consent:**

I have read the procedure regarding video and audio-recording and storage described above. I consent to allow my focus group participation to be recorded and understand that I may disable my camera if I choose to be audio-recorded only.

---

Signature of participant

---

Date

## Appendix E

### Module Calendar, Sequence, and Topics

Module Number	Module Title	Module Week
0	Introduction to Mindfulness	Prior to start: Included in study orientation
1	Intentional Breath	Week of September 27, 2021
2	Body Scan	Week of October 4, 2021
3	Seated Meditation via Guided Imagery	Week of October 11, 2021
4	Connecting with Nature	Week of October 18, 2021
5	Mindful Movement (includes Yoga Asana)	Week of October 25, 2021
6	Individual Mindful Moments	Week of November 1, 2021

## Appendix F

### Weekly Action Plan Template

To support your mindfulness practice, please fill in the below plan so that you have a roadmap for the week. This is YOUR plan and it can be adjusted as you learn about your own practice. Start by reflecting on your daily schedule throughout the week. What moments within your day elevate your stress? Use your mindfulness breaks strategically and use your daily data sheet to monitor your response to intervention. Remember all of the resources you need are located in the shared MBI drive, organized by module. We suggest selecting **three times** within your day that you can practice your brief mindful breaks, but provided extra space so you can individualize your plan. Idea: print this out at the top of each week and post it somewhere as a reminder to help you stay on track!

**WEEK:** \_\_\_\_\_ **Name:** \_\_\_\_\_

Today I commit to	Mindful moment one:	Mindful moment two:	Mindful moment three:	Mindful moment four:	Mindful moment five:
Monday	What I plan to do:  When I plan to do it:	What I plan to do:  When I plan to do it:	What I plan to do:  When I plan to do it:	What I plan to do:  When I plan to do it:	What I plan to do:  When I plan to do it:
Tuesday	What I plan to do:  When I plan to do it:	What I plan to do:  When I plan to do it:	What I plan to do:  When I plan to do it:	What I plan to do:  When I plan to do it:	What I plan to do:  When I plan to do it:
Wednesday	What I plan to do:  When I plan to do it:	What I plan to do:  When I plan to do it:	What I plan to do:  When I plan to do it:	What I plan to do:  When I plan to do it:	What I plan to do:  When I plan to do it:
Thursday	What I plan to do:  When I plan to do it:	What I plan to do:  When I plan to do it:	What I plan to do:  When I plan to do it:	What I plan to do:  When I plan to do it:	What I plan to do:  When I plan to do it:
Friday	What I plan to do:  When I plan to do it:	What I plan to do:  When I plan to do it:	What I plan to do:  When I plan to do it:	What I plan to do:  When I plan to do it:	What I plan to do:  When I plan to do it:

## Appendix G

### Daily Reflection Data Sheet

As you practice your MBIs take a moment to capture your response to intervention. This will help you adjust your weekly plan and will help us learn more about what components of this program worked and what needs to change! Fill in one row per MBI—if you were not able to participate today please indicate that on your form.

**NAME:** \_\_\_\_\_

**Today's Date:** \_\_\_\_\_ **Total number of MBIs I practiced today:** \_\_\_\_\_

<b>Circle the strategy used:</b>	<b>How I felt afterwards:</b>										
Intentional Breath  Body Scan  Guided Imagery  Connecting with Nature  Mindful Movement  Individual Mindful Moment (please write-in which moment you selected from the mindful moment list: _____)	<p>My participation in this strategy impacted my stress level as follows:</p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="width: 20%;">1</th> <th style="width: 20%;">2</th> <th style="width: 20%;">3</th> <th style="width: 20%;">4</th> <th style="width: 20%;">5</th> </tr> </thead> <tbody> <tr> <td>No change at all</td> <td>Very little reduction in stress level</td> <td>Some reduction in stress level</td> <td>Moderate reduction in stress level</td> <td>Significant reduction in stress level</td> </tr> </tbody> </table> <p>Any unexpected outcomes? _____</p>	1	2	3	4	5	No change at all	Very little reduction in stress level	Some reduction in stress level	Moderate reduction in stress level	Significant reduction in stress level
1	2	3	4	5							
No change at all	Very little reduction in stress level	Some reduction in stress level	Moderate reduction in stress level	Significant reduction in stress level							
Intentional Breath  Body Scan  Guided Imagery  Connecting with Nature  Mindful Movement  Individual Mindful Moment	<p>My participation in this strategy impacted my stress level as follows:</p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="width: 20%;">1</th> <th style="width: 20%;">2</th> <th style="width: 20%;">3</th> <th style="width: 20%;">4</th> <th style="width: 20%;">5</th> </tr> </thead> <tbody> <tr> <td>No change at all</td> <td>Very little reduction in stress level</td> <td>Some reduction in stress level</td> <td>Moderate reduction in stress level</td> <td>Significant reduction in stress level</td> </tr> </tbody> </table> <p>Any unexpected outcomes? _____</p>	1	2	3	4	5	No change at all	Very little reduction in stress level	Some reduction in stress level	Moderate reduction in stress level	Significant reduction in stress level
1	2	3	4	5							
No change at all	Very little reduction in stress level	Some reduction in stress level	Moderate reduction in stress level	Significant reduction in stress level							

Intentional Breath  Body Scan  Guided Imagery  Connecting with Nature  Mindful Movement  Individual Mindful Moment (please write-in which moment you selected from the mindful moment list: _____)	My participation in this strategy impacted my stress level as follows:  <table border="1" data-bbox="516 264 1395 453"> <tr> <th>1</th> <th>2</th> <th>3</th> <th>4</th> <th>5</th> </tr> <tr> <td>No change at all</td> <td>Very little reduction in stress level</td> <td>Some reduction in stress level</td> <td>Moderate reduction in stress level</td> <td>Significant reduction in stress level</td> </tr> </table> Any unexpected outcomes? <hr/>	1	2	3	4	5	No change at all	Very little reduction in stress level	Some reduction in stress level	Moderate reduction in stress level	Significant reduction in stress level
1	2	3	4	5							
No change at all	Very little reduction in stress level	Some reduction in stress level	Moderate reduction in stress level	Significant reduction in stress level							
Intentional Breath  Body Scan  Guided Imagery  Connecting with Nature  Mindful Movement  Individual Mindful Moment (please write-in which moment you selected from the mindful moment list: _____)	My participation in this strategy impacted my stress level as follows:  <table border="1" data-bbox="516 762 1395 951"> <tr> <th>1</th> <th>2</th> <th>3</th> <th>4</th> <th>5</th> </tr> <tr> <td>No change at all</td> <td>Very little reduction in stress level</td> <td>Some reduction in stress level</td> <td>Moderate reduction in stress level</td> <td>Significant reduction in stress level</td> </tr> </table> Any unexpected outcomes? <hr/>	1	2	3	4	5	No change at all	Very little reduction in stress level	Some reduction in stress level	Moderate reduction in stress level	Significant reduction in stress level
1	2	3	4	5							
No change at all	Very little reduction in stress level	Some reduction in stress level	Moderate reduction in stress level	Significant reduction in stress level							
Intentional Breath  Body Scan  Guided Imagery  Connecting with Nature  Mindful Movement  Individual Mindful Moment (please write-in which moment you selected from the mindful moment list: _____)	My participation in this strategy impacted my stress level as follows:  <table border="1" data-bbox="516 1257 1395 1446"> <tr> <th>1</th> <th>2</th> <th>3</th> <th>4</th> <th>5</th> </tr> <tr> <td>No change at all</td> <td>Very little reduction in stress level</td> <td>Some reduction in stress level</td> <td>Moderate reduction in stress level</td> <td>Significant reduction in stress level</td> </tr> </table> Any unexpected outcomes? <hr/>	1	2	3	4	5	No change at all	Very little reduction in stress level	Some reduction in stress level	Moderate reduction in stress level	Significant reduction in stress level
1	2	3	4	5							
No change at all	Very little reduction in stress level	Some reduction in stress level	Moderate reduction in stress level	Significant reduction in stress level							



## Appendix H

### Survey Slip for Professional Learning Modules

Thank you for your participation in today's module! To help support future training please take a moment to respond to each of the questions below. Thank you!

1. The content presented in today's module deepened my understanding of mindfulness

1	2	3
Not at all	Somewhat	Very much so

2. As a result of my participation today, I feel confident about my ability to use these new skills as part of my daily practice:

1	2	3
Not at all	Somewhat	Very much so

3. I am likely to incorporate today's strategy into my daily plan:

1	2	3
I will not use this strategy	I likely will use this new strategy	I am very likely to use this new strategy

4. To help us understand what components of the training were helpful please rate the following:

- a) Content presented in PowerPoint:

1	2	3
This did not support my learning	This somewhat supported my learning	This was very helpful for my learning

- b) Skill demonstration via media modeling

1	2	3
This did not support my learning	This somewhat supported my learning	This was very helpful for my learning

c) Skill practice opportunity:

1	2	3
This did not support my learning	This somewhat supported my learning	This was very helpful for my learning

5. I know where to find the resources from today so that I can access them as needed:

1	2	3
I am not aware of where these resources are	Somewhat aware	I know how to access the resources from our training

Please feel free to answer the last two open-ended questions and add any additional comments:

6. After today's training I am most excited about:

7. Please share any potential barriers you foresee with using this strategy:

## Appendix I

### Pre- and Post-Intervention Survey Battery

Thank you in advance for your participation in this survey to help us better understand your experiences with this study. The demographic information requested in section one is optional and no identifying information will be associated with your responses. Additionally, if there are any survey questions you prefer to skip, please do so. Your honest feedback is appreciated as we look to learn from your experiences. Thank you!

#### Section 1: Demographic information (all demographic responses are optional)

1. My teaching assignment for the 2021-2022 school year:

- a) Smith Middle School
- b) Prince Middle School
- c) Bonny Middle School
- d) I teach in more than one middle school buildings

2. What area do you teach?

- a) Science
- b) ELA
- c) Social Studies
- d) Connections (e.g. art, PE, band, music)
- e) Math
- f) Special Education
- g) World Language
- h) Tiered-Interventionist

3. What grade do you currently teach?

- a) 6<sup>th</sup>
- b) 7<sup>th</sup>
- c) 8<sup>th</sup>
- d) Multiple across 6<sup>th</sup>-8<sup>th</sup>

4. What is your current age:

- a) 21-25
- b) 26-35
- c) 36-45
- d) 46-55
- e) 56+

5. How many years of teaching experience do you have?

- a) 0-5 years
- b) 6-10 years

- c) 11-15 years
  - d) More than 15 years
6. What is your highest level of education?
- a) Bachelor's Degree
  - b) Master's Degree
  - c) Education Specialist Degree and/or Sixth-year Diploma/Certificate
  - d) Doctoral Degree
  - e) Other
7. To which gender identify do you most identify:
- a) Female
  - b) Male
  - c) Non-binary
  - d) Transgender
  - e) Other
8. What is your race/ethnicity?
- a) Black or African American
  - b) Hispanic or Latino
  - c) White
  - d) Asian or Pacific Islander
  - e) Native American
  - f) Two or more ethnicities/races
9. (To be answered only on the post-intervention survey): On most days, I practiced MBIs an average of XX times:
- a) 0-2
  - b) 3
  - c) 4-5

**Section 2:** The Five Facet Mindfulness Questionnaire (FFMQ) was developed by Ruth A. Baer, Ph.D., University of Kentucky (Baer et al., 2006) and consists of 39 items that are rated on a 5-point Likert scale.

Please rate each of the following statements using the scale provided. Select the number that best describes your own opinion of what is generally true for you:

		<b>Never or very rarely true</b>	<b>Rarely true</b>	<b>Sometimes true</b>	<b>Often true</b>	<b>Very often or always true</b>
FFMQ 1	When I'm walking, I deliberately notice the sensations of my body moving.	1	2	3	4	5
FFMQ 2	I'm good at finding words to describe my feelings.	1	2	3	4	5
FFMQ 3	I criticize myself for having irrational or inappropriate emotions.	1	2	3	4	5
FFMQ 4	I perceive my feelings and emotions without having to react to them.	1	2	3	4	5
FFMQ 5	When I do things, my mind wanders off and I'm easily distracted.	1	2	3	4	5
FFMQ 6	When I take a shower or bath, I stay alert to the sensations of water on my body.	1	2	3	4	5
FFMQ 7	I can easily put my beliefs, opinions, and expectations into words.	1	2	3	4	5
FFMQ 8	I don't pay attention to what I'm doing because I'm daydreaming, worrying, or otherwise distracted.	1	2	3	4	5
FFMQ 9	I watch my feelings without getting lost in them.	1	2	3	4	5
FFMQ 10	I tell myself I shouldn't be feeling the way I'm feeling.	1	2	3	4	5

FFMQ 11	I notice how foods and drinks affect my thoughts, bodily sensations, and emotions.	1	2	3	4	5
FFMQ 12	It's hard for me to find the words to describe what I'm thinking.	1	2	3	4	5
FFMQ 13	I am easily distracted.	1	2	3	4	5
FFMQ 14	I believe some of my thoughts are abnormal or bad and I shouldn't think that way.	1	2	3	4	5
FFMQ 15	I pay attention to sensations, such as the wind in my hair or sun on my face.	1	2	3	4	5
FFMQ 16	I have trouble thinking of the right words to express how I feel about things.	1	2	3	4	5
FFMQ 17	I make judgements about whether my thoughts are good or bad.	1	2	3	4	5
FFMQ 18	I find it difficult to stay focused on what's happening in the present.	1	2	3	4	5
FFMQ 19	When I have distressing thoughts or images, I "step back" and am aware of the thought or image without getting taken over by it.	1	2	3	4	5
FFMQ 20	I pay attention to sounds, such as clocks ticking, birds chirping, or cars passing.	1	2	3	4	5
FFMQ 21	In difficult situations, I can pause without immediately reacting.	1	2	3	4	5

FFMQ 22	When I have a sensation in my body, it's difficult for me to describe it because I can't find the right words.	1	2	3	4	5
FFMQ 23	It seems I am "running on automatic" without much awareness of what I'm doing.	1	2	3	4	5
FFMQ 24	When I have distressing thoughts or images, I feel calm soon after.	1	2	3	4	5
FFMQ 25	I tell myself that I shouldn't be thinking the way I'm thinking.	1	2	3	4	5
FFMQ 26	I notice the smells and aromas of things.	1	2	3	4	5
FFMQ 27	Even when I'm feeling terribly upset, I can find a way to put it into words.	1	2	3	4	5
FFMQ 28	I rush through activities without being really attentive to them.	1	2	3	4	5
FFMQ 29	When I have distressing thoughts or images I am able just to notice them without reacting.	1	2	3	4	5
FFMQ 30	I think some of my emotions are bad or inappropriate and I shouldn't feel them.	1	2	3	4	5
FFMQ 31	I notice visual elements in art or nature, such as colors, shapes, textures, or patterns of light and shadow.	1	2	3	4	5
FFMQ 32	My natural tendency is to put my experiences into words.	1	2	3	4	5

FFMQ 33	When I have distressing thoughts or images, I just notice them and let them go.	1	2	3	4	5
FFMQ 34	I do jobs or tasks automatically without being aware of what I am doing.	1	2	3	4	5
FFMQ 35	When I have distressing thoughts or images, I judge myself as good or bad, depending what the thought/image is about.	1	2	3	4	5
FFMQ 36	I pay attention to how my emotions affect my thoughts and behavior.	1	2	3	4	5
FFMQ 37	I can usually describe how I feel at the moment in considerable detail.	1	2	3	4	5
FFMQ 38	I find myself doing things without paying attention.	1	2	3	4	5
FFMQ 39	I disapprove of myself when I have irrational ideas.	1	2	3	4	5

**Section 3:** The Panorama Teacher Well-Being Survey (Panorama, 2021), is one of 23 survey topics included in the Panorama Teacher and Staff Survey created by Panorama Education. The following questions are designed to understand more about perceptions of your well-being.

Please rate each of the following statements using the scale provided. Select the number that best describes your own opinion of what is generally true for you, thank you.



During the past week, how often did you feel _____ at work:	Almost Never 1	Once in awhile 2	Sometimes 3	Frequently 4	Almost always 5
Engaged	1	2	3	4	5
Excited	1	2	3	4	5
Exhausted	1	2	3	4	5
Frustrated	1	2	3	4	5
Happy	1	2	3	4	5
Hopeful	1	2	3	4	5
Overwhelmed	1	2	3	4	5
Safe	1	2	3	4	5
Stressed out	1	2	3	4	5
Worried	1	2	3	4	5
How effective do you feel at your job right now?	Not at all effective 1	Slightly effective 2	Somewhat effective 3	Quite effective 4	Extremely effective 5
How much does your work matter to you?	Does not matter at all 1	Matters a little bit 2	Matters some 3	Matters quite a lot 4	Matters a tremendous amount 5
How meaningful for you is the work that you do?	Not at all meaningful 1	Slightly meaningful 2	Somewhat meaningful 3	Quite meaningful 4	Extremely meaningful 5
Overall how satisfied are you with your job right now?	Not at all satisfied 1	Slightly satisfied 2	Somewhat satisfied 3	Quite satisfied 4	Extremely satisfied 5

**Section 4:** The CASEL TOOL: Personal Assessment and Reflection-SEL Competencies for School Leaders, Staff, and Adults was designed for self-reflection (CASEL, 2017). The questions included here are designed to understand more about perceptions of your self-management competency.

Please read each statement and rate yourself on the statement by marking the appropriate box (rarely, sometimes, often).

Please read each statement and rate yourself on the statement by marking the appropriate box (rarely, sometimes, often).	Rarely 1	Sometimes 2	Often 3
I find ways to manage my emotions and channel them in useful ways without harming anyone.	1	2	3
I stay calm, clear-headed, and unflappable under high stress and during a crisis.	1	2	3
I have high personal standards that motivate me to seek performance improvements for myself and those I lead.	1	2	3
I am pragmatic, setting measureable, challenging, and attainable goals.	1	2	3
I accept new challenges and adjust to change.	1	2	3
I modify my thinking in the face of new information and realities.	1	2	3
I can juggle multiple demands without losing focus or energy.	1	2	3
I balance my work life with personal renewal time.	1	2	3

**Section 5:** The Perceived Stress Scale (PSS) is the most widely used psychological instrument for measuring the perception of stress (Cohen, 1994; Cohen et al., 1983). The questions below ask about feelings and thoughts during the last month.

In each case please indicate how often you experienced the feelings and thoughts in the last month by indicating how often you felt or thought a certain way using the following scale:

	Never 0	Almost Never 1	Sometimes 2	Fairly Often 3	Very Often 4
In the last month, how often have you been upset because of something that happened unexpectedly?	1	2	3	4	5
In the last month, how often have you felt that you were unable to control the important things in your life?	1	2	3	4	5
In the last month, how often have you felt nervous and “stressed”?	1	2	3	4	5
In the last month, how often have you felt confident about your ability to handle your personal problems?	1	2	3	4	5
In the last month, how often have you felt that things were going your way?	1	2	3	4	5
In the last month, how often have you found that you could not cope with all the things you had to do?	1	2	3	4	5
In the last month, how often have you been able to control irritations in your life?	1	2	3	4	5
In the last month, how often have you felt that you were on top of things?	1	2	3	4	5
In the last month, how often have you been angered because of things that were outside of your control?	1	2	3	4	5

In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?	1	2	3	4	5
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## **Appendix J**

### **Protocol for Structured Focus Group**

1. Reflecting back on the training phase of this study:
  - a) What components were most effective and why?
  - b) What components were least effective and why?
  - c) Was anything about the training unexpected?
2. Reflecting back on the intervention phase of this study:
  - a) What components of the plan were most effective and why?
  - b) What components of the plan were least effective and why?
  - c) Were there any components of participating in MBI practice that were unexpected?
3. How did your participation in this study impact your classroom management, climate, and relationships with students?
4. If we were to expand this program to other teachers:
  - a) What components of the training would you consider essential? (content, skills, practice opportunity)
  - b) What components of the MBI plan would you consider essential? (morning mindfulness email, template for daily plan, daily reflection data sheet, optional weekly check-ins)
  - c) What suggestions would you offer for future trainings?
  - d) What suggestions would you offer for future interventions?

## Appendix K

### Practice Consultation Protocol

Participant IDNO  __ __ __ __  Gender: <input type="checkbox"/> Male <input type="checkbox"/> Female Date  __ __ __ __ __ __	
<b>Introduction</b> I am _____Emily Daigle _____ from _Sacred Heart University/Westly Public Schools __	
<div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <ul style="list-style-type: none"> <li>✓ General purpose of the study</li> <li>✓ Aims of the interview and expected duration</li> <li>✓ Who is involved in the process (other participants)</li> <li>✓ Why the participant's cooperation is important</li> </ul> </div> <div style="width: 48%;"> <ul style="list-style-type: none"> <li>✓ What will happen with the collected information and how the participant/target group will benefit</li> <li>✓ Any questions?</li> <li>✓ Consent</li> </ul> </div> </div>	
<b>Warm up [demographic &amp; work history]</b> Can I ask some details about you and your job?  Job Title _____	
Now I am going to ask you some questions about your experiences as an administrator /a teacher in this district/school.	
<b>Domain</b>	<b>Topic and Probes</b>
<b>Student Lens</b>	1. Why does SEL matter? <div style="margin-left: 40px;"> <i>a. From your perspective how does teacher SEL impact student outcomes?</i>  <i>b. Tell me your thoughts on how teacher stress may impact classroom climate and student outcomes</i> </div>
<b>Adult Actions</b>	2. How does your building/district address the development of educator social emotional competency? <div style="margin-left: 40px;"> <i>a. Consider teacher wellbeing: what's the current temperature on teacher stress in your building/district?</i>  <i>b. What is contributing to teacher stress in your building/district?</i>  <i>c. What consequences can be attributed to teacher stress in your building/district? (We discussed impact on students, now</i> </div>

	<p><i>consider impact on: teachers, classroom and school climates, relationships, and systems).</i></p> <p><i>d. What barriers exist when considering the adult SEL needs in your building/district?</i></p>
<b>Strategies</b>	<p>3. What strategies have you employed in your building/district to address teacher stress?</p> <p><i>a. What has worked about this/these strategy/strategies?</i></p> <p><i>b. What has not worked about this/these strategy/strategies?</i></p> <p><i>c. Is there anything you have learned about as a leader that you would love to try with your educators to address their stress, and if so, what is preventing you from doing so?</i></p>
<p><b>Closing</b></p> <p>Is there anything else you can think of that we have not discussed that is relevant to teacher stress and/or the impact of teacher stress on teachers and students?</p>	
<div> <div> ✓ Summarize  ✓ Thank participant </div> <div> ✓ Provide extra information and contacts to participants </div> </div>	

## Appendix L

### Frequency of Daily Practice

Day of practice	(n) Returned survey per day	% Practiced 0/day	% Practiced 1/day	% Practiced 2/day	% Practiced 3/day	% Practiced 4/day	% Practiced 5/day
1	10	0	0	50	50	0	0
2	15	6.7	13.3	47.7	26.7	6.6	0
3	12	0	41.7	25	33.3	0	0
4	14	7.7	15.4	61.5	15.4	0	0
5	12	0	16.7	41.7	33.3	8.3	0
6	14	7.1	14.3	42.9	35.7	0	0
7	11	20	10	0	60	10	0
8	13	0	7.7	53.8	38.5	0	0
9	12	0	18.2	54.5	27.3	0	0
10	10	10	40	30	20	0	0
11	12	10	10	30	40	10	0
12	8	0	0	83.3	16.7	0	0
13	10	0	33.3	33.3	33.3	0	0
14	14	0	46.2	15.4	38.5	0	0
15	18	12.5	12.5	37.5	37.5	0	0
16	5	0	25	25	50	0	0
17	12	9.1	27.3	27.3	27.3	0	9.1
18	10	22.2	33.3	33.3	11.1	0	0
19	10	20	10	30	40	0	0
20	12	8.3	8.3	66.7	16.7	0	0
21	10	10	20	20	50	0	0
22	12	0	10	40	40	10	0
23	13	0	0	54.5	45.5	0	0
24	10	10	30	10	50	0	0
25	10	0	25	12.5	62.5	0	0
26	9	0	25	25	50	0	0
27	10	0	25	25	50	0	0
28	8	0	28.6	28.6	42.9	0	0