

Supporting Teachers from the Beginning by Preparing the Whole Educator: Pre-Service Teacher Social and Emotional Learning, Mindfulness, and Efficacy

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Abstract

This multiple methods study examined the impact of brief, intentional instruction in the areas of mindfulness and social and emotional learning (SEL) on teacher self-efficacy, teacher mindfulness, and the use of mindfulness practices. The SEL content and strategies were taught to pre-service educators during their student teaching seminars. Teacher efficacy includes the beliefs that a teacher holds about their ability to lead learning and includes beliefs about classroom management, instructional practices, and student engagement. Social and emotional learning, as defined by The Collaborative for Academic, Social, and Emotional Learning (CASEL), includes five components: self-awareness, self-management, other awareness, relationship skills, and responsible decision-making. These components encompass skills essential to effective teaching. Mindfulness has been defined as present moment awareness without judgment and is linked to well-being. We hypothesized that teacher efficacy and mindfulness would be improved significantly from pre- to post-intervention. Eighteen of 35 potential participants completed quantitative measures of efficacy (Teacher Self Efficacy Scale) and mindfulness (Teacher Mindfulness Scale). Thirty-four participants completed qualitative session reflections. Seven participants completed journal responses. Increases in mindfulness and teacher efficacy were found; however, within the quantitative measures, only increases in teacher efficacy were significant. Within the qualitative findings from the Self-Assessing Social and Emotional Instruction and Competencies scale, self-awareness was identified as participants' greatest strength while self-management

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of emotions was identified as their greatest opportunity for improvement. In addition, most participants noted current or future plans to use mindfulness or SEL strategies. Findings are consistent with previous work indicating that short-term training in mindfulness and SEL should be included in educator preparation programs as a mechanism to support teacher well-being and potentially reduce teacher burnout.

Keywords: teacher preparation, social emotional competency, teacher efficacy, teacher mindfulness

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Supporting Teachers from the Beginning by Preparing the Whole Educator: Pre-Service Teacher Social and Emotional Learning, Mindfulness, and Efficacy

Even before the pandemic, changes were called for in teacher preparation to address the absence of instruction in social and emotional competencies (Schonert-Reichl, 2017), to integrate what has been learned through the science of learning and development (SoLD) (Darling-Hammond et al., 2022), and to address teacher well-being. In fact, teacher preparation established firmly in the Mind, Brain, and Education Sciences (MBES) is just what has been called for by the Organisation for Economic Co-operation and Development (OECD) (Ansari et al., 2017) to transform education and promote a high quality, equitable education for all. SoLD principles suggest that education should be focused on the whole child, which consists of academic, cognitive, ethical, physical, psychological, and social-emotional elements (Darling Hammond et al., 2020). Accordingly, educators should be learning to foster holistic development which consists of cognitive, affective, and social and emotional competencies (Cantor et al., 2018).

Yet, teacher preparation largely focuses on the cognitive, while neglecting the affective dimension, including social and emotional competencies (Schonert-Reichl, 2017) which are critical to the development of healthy classroom climates, positive student social and emotional and academic outcomes, and teacher well-being (Jennings & Greenberg, 2009). While much has been learned regarding the influences between the brain, psychology, and learning, the role of the learning sciences within the field of teacher preparation remains elusive (Tokuhama-Espinosa, 2018). MBES can support educators more holistically in their preparation by intentionally connecting the learned content knowledge of teacher preparation to the affective dimensions of teaching and learning (Tokuhama-Espino, 2018). Others have long suggested that effective teaching consists of knowledge in three areas: content, pedagogical, and emotional. Thus, all of these areas should be addressed in preparation. The problem, however, is to do so would require a major shift in

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educator preparation, not to mention substantial resources at a time when higher education is facing declining enrollments and the ill effects of teacher stress which are at an all-time high (NooNoo, 2022).

While such a dramatic shift in teacher preparation might not be immediately feasible, there are some simpler, more cost-effective changes and additions that teacher preparation programs can begin to implement to help deepen the MBES classroom connection and ensure more holistic preparation while also addressing teacher well-being. The Collaborative for Academic, Social, and Emotional Learning (CASEL, 2024) has been a strong voice in the field, promoting the importance of mindfulness and SEL in educational contexts. Based on the work of CASEL and Greenberg (2016), Lawlor (2016) created a model for K-12 settings that integrates mindfulness practices that promote the five SEL components (self-awareness, self-management, other awareness, relationship skills, and responsible decision-making). These models or frameworks include pieces of MBES, which acknowledge the role of emotions in teaching and learning and can be more easily embedded in existing training than a complete overhaul of preparation programs.

Using an adapted version of Lawlor's (2016) model for teacher preparation, we surmised that teacher preparation programs could support the development of teacher social and emotional competencies (SEC) and thereby, teacher efficacy. Accordingly, teachers' preparation would equip them with the necessary SEC to create the optimal climates for learning and healthy student outcomes while also reciprocally reinforcing personal well-being, as outlined in Jennings and Greenberg's (2009) prosocial model. The current study seeks to confirm previous findings from Cochran and Parker Peters (2023) indicating that brief training for pre-service teachers in mindfulness and SEL can significantly improve teacher efficacy and potential well-being.

The purpose of the present study was to determine whether intentionally integrating mindfulness and social and emotional learning strategies within the final semester of teacher

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training leads to higher levels of teacher efficacy and teacher mindfulness. Further, we aimed to determine whether and how pre-service teachers use the strategies taught in their own student teaching placements.

Literature Review

Teacher Stress, Burnout, and Attrition

As the field of education continues to experience teacher shortages, early attrition and burnout have been cited as the number one problem facing teachers today (NooNoo, 2022). Teacher stress has been cited as a reason for teachers leaving the classroom prematurely (Harmsen et al., 2018; Madigan & Kim, 2021). Burnout often occurs as a result of extreme emotional exhaustion due to stress over time (Madigan & Kim, 2021). In part, as a result of burnout, there are fewer teachers to fill classrooms. It is evident that the cost of attrition to districts is well beyond financial; student achievement and well-being are also negatively impacted (Madigan & Kim, 2021). Those educators with unmitigated chronic stress or emotional exhaustion who remain in the classroom may be less cognitively and emotionally equipped to support student learning (Seiz et al., 2015). Further, early-career teacher stress has been negatively associated with the use of effective teaching strategies (Harmsen et al., 2018).

At the same time, mindfulness has been negatively associated with all dimensions of burnout: emotional exhaustion, depersonalization, and low accomplishment; it has been positively associated with positive affect (Abonavali et al., 2013). Others have also found dispositional mindfulness (Hwang et al., 2019) and self-compassion were associated with less stress and teacher well-being (Hwang et al., 2019; Moe & Katz, 2020). Accordingly, brief instruction in mindfulness and SEL during teacher preparation may be a cost-effective and efficient way to promote resilience and well-being in future teachers, better equipping them with strategies for coping with stress related to the classroom.

Teacher Preparation

The cost of chronic teacher stress is not limited to districts.

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The significant time and resources required to attain teacher certification, whether through traditional or alternate routes, can feel wasted when teachers leave the classroom well before they intended. While some factors contributing to teacher stress are out of a teacher's ability to control (e.g., licensure requirements, policies, school organization, school resources, job demands), others are not (e.g., social and emotional competencies) (Greenberg et al., 2017).

Teacher preparation programs are responsible for preparing effective teachers. This includes ensuring teachers are ready for all aspects of the classroom, including navigating the emotional context and managing stress. Teacher preparation programs have a responsibility to ensure that teachers have the skill sets needed to remain in the classroom. Beyond the important constructs of academic content and pedagogy, holistic readiness includes social-emotional competencies, which are malleable (Ferreira et al., 2021; Kasler et al., 2013; Main, 2018; Martinsone et al., 2020) and, thus, teachable (Borba, 2018). A comprehensive teacher preparation program should include content, pedagogy, and emotional knowledge instruction, such as SEL, which includes strategies for coping with both personal stress and the stressors present in an emotion-laden classroom.

Teaching and learning are both emphasized in preparation programs and are intertwined, as are the cognitive and emotional competencies necessary to grow in each construct. Teaching and learning are highly emotional. As Immordino-Yang (2016) documented, "Learning is dynamic, social, and context dependent because emotions are, and emotions form a critical piece of how, what, when, and why people think, remember and learn" (p. 17). Thus, emotions present in the classroom, whether the teacher's or a student's, impact whether and what learning will take place. "Learning begins with emotion—and cannot happen without it" (Wilson & Conyers, 2020, p. 94); thus, it is imperative that pre-service teachers understand the role of their own and their students' emotions in the classroom. Positive emotions promote learning, while negative emotions hinder learning (Darling-Hammond et al., 2020; Harmsen et al., 2018; Jennings & Greenberg, 2009). Positive

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emotions promote attention (Moe et al., 2021) essential for teaching and learning, while negative emotional arousal can be detrimental (Bandura, 1997).

The all-too common problem of teacher emotional exhaustion may render a teacher unable to draw on their cognitive resources (Seiz et al., 2015), rendering such resources less effective in the classroom. Noting that awareness was a particularly powerful component, Abenavoli et al. (2014) promoted the construct of mindfulness as a protector from teacher burn-out and a predictor of teacher self-efficacy. Teacher efficacy is associated with effective teaching, use of effective coping strategies, and positive learning outcomes. It follows that identifying and implementing cost effective ways for promoting excellent teaching and supporting teacher emotional well-being are imperative, especially in an era where teacher shortages and attrition continue to leave districts and more importantly, students, without qualified teachers in the classroom (Madigan & Kim, 2021).

Mindfulness and Teacher Training

Mindfulness has been defined as present moment awareness, without judgment (Jennings, 2015). Shapiro et al. (2018) have suggested mindfulness is a “universal capacity that transcends culture and religion” and is “a state of awareness accessible to all” (para. 4). Further, mindfulness involves intention, attention, and attitude. Accordingly, mindfulness is “the awareness that arises through intentionally attending in an open, caring, and discerning way” (Shapiro & Carlson, 2017, as cited in Shapiro et al., 2018, para. 4).

Mindfulness practices, such as Mindfulness Based Stress Reduction (MBSR), have been used to promote well-being and reduce stress or pain within the field of medicine (Williams & Penman, 2011). Accordingly, in the context of education, Chang (2009) and Jennings and Greenberg (2009) stressed the potential usefulness of mindfulness and emotional knowledge training in promoting teacher well-being and positive student outcomes. In the decade since, many studies have been conducted examining mindfulness training in teacher professional

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development (Ansley et al., 2021; Dave et al., 2020; Fabbro et al., 2020; Flook et al., 2013; Jennings et al., 2013; Jennings et al., 2014; Reiser et al., 2018; Reiser & McCarthy, 2018; Sharpe & Jennings, 2016; Zarate et al., 2019) and in pre-service teacher training (Cochran & Parker Peters, 2022, 2023; Dewhirst & Goldman, 2020; Garner et al., 2018; Hirschberg et al., 2020; Poulin et al., 2008; Solar, 2019) and have found positive effects, even with brief training. Garner et al. (2018) specifically emphasized the importance of mindfulness-based practices coupled with SEL training for pre-service educators for developing teacher professional identities, equipping teachers for the emotional dynamics of the classroom, and promoting resiliency. Others have also suggested such training in pre-service teaching as necessary to equip future teachers to cope with stress and the emotional demands of the classroom (Birchinall et al., 2019; Csaszar et al., 2018; Hadar et al., 2020; Katz et al., 2020; Prilleltensky et al., 2016; Sulis et al., 2021). Both formal and informal use of mindfulness practices have proven effective (Jennings, 2015; Williams & Penman, 2011).

Mind Brain Education Science (MBES)

MBES is the intersection of psychology, neuroscience, and education. As noted previously, calls have been made to integrate MBES in education, in K-12 settings, and in teacher preparation. Kelleher & Whitman (2018) suggested that “MBE is a discipline with considerable promise to help close gaps in school and teacher quality and student achievement” (p. 4). Yet, little movement has been made to do so. Some have suggested that the gap between MBES and classroom integration is too wide. Tokuhama-Espinosa (2018) has called for educators to bridge the gap between theory and practice by helping to make what is known in mind-brain theory accessible to scholar-practitioners. Nouri et al. (2023) suggested that translational communicators--teachers well versed in research--are the answer to this gap. They have noted, however, that currently “few teachers research well, and few researchers teach well.” (p. 64). This aim could be accomplished through intentional instruction in the critical consumption of scholarship during

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pre-service education, including: identifying, accessing, understanding, and engaging with MBES research and neuromyths (e.g., learning styles) (Tukohama-Espinosa, 2018). Similarly, Wilson and Conyers (2020) have suggested that teachers should be “adaptive experts and lifelong learners,” who are “continually reexamining their professional beliefs and practices in the context of current research and the evolving needs of their students” (p. 161) as the “Gold Standard for Educational Professionals.” Among their suggestions, Wilson and Conyers promote five ideas from MBES research for inclusion in teacher preparation and thereby the classroom, that could ultimately transform teaching and learning: neural plasticity, human potential, intelligence, the brain-body connection, and metacognition. They also suggest that recognizing neuromyths is essential. A neuromyth has been described as “a misconception generated by a misunderstanding, a misreading, or a misquoting of facts scientifically established (by brain research) to make a case for the use of brain research in education and other contexts” (OECD, 2002, as cited by Torrijos-Muelas et al., 2021, p. 2). Tukohama-Espinosa (2018) and Nouri et al. (2023) also suggest intentional instruction regarding the six principles and 21 tenets of MBES, identified through a Delphi panel of experts and verified at three points (2008, 2017, 2020), as a good place to begin.

Models for the integration of MBES in K-12 schools do exist (Kelleher & Whitman, 2018), but they require substantial resources, specifically time, educator buy-in, and commitment. In the absence of these resources, there are measures that can be taken immediately to begin to integrate aspects of MBES and to facilitate some of the promise MBES holds. Howard-Jones et al. (2020) conducted a study of the effectiveness of a 1.5-hour professional development session on SoLD. They found significant differences in participants valuing SoLD scientific concepts regarding teaching and learning, which actually promote learning, over performative tasks, tasks that seem to indicate teaching externally but may not promote learning, from pre- to post-instruction. These findings, though somewhat diminished, were maintained in follow-up testing weeks later. This pilot study holds promise that even brief,

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intentional training can change teacher beliefs about teaching and learning.

Purpose of the Study

Our earlier studies suggest that training in mindfulness and social and emotional learning embedded in seminars could be a cost effective and practical way to integrate some of the affective aspects of the MBES learning sciences in teacher preparation, while also addressing teacher well-being (Cochran & Parker Peters, 2022, 2023). The present study is a continuation of that earlier work whereby we connected to Jennings and Greenberg's (2009) prosocial classroom model by extending backwards into teacher preparation and providing brief mindfulness and social and emotional learning training embedded within the student teaching seminar.

Jennings and Greenberg (2009) utilized facets of MBES in their prosocial classroom model. In this model, educators' social-emotional competencies are connected to classroom and learning outcomes. Classroom learning environments that support psychological well-being positively relate to students' academic and behavioral outcomes. Building on Greenberg's 2014 work, Lawlor (2016) developed a model for integrating mindfulness to promote SEC in K-12 settings. By adapting Lawlor's model for pre-service teachers, our aim was to increase pre-service teachers' SEC, namely self-awareness, as evidenced in teacher efficacy and teacher mindfulness measures. As with our previous work (Cochran & Parker Peters, 2022, 2023) this study incorporated brief training on the anatomy of the brain, emotions and the role of emotions in the classroom, stress and the role of stress in teaching and learning, and introduced mindfulness strategies that could be used to promote the student teachers' own well-being as well as that of their students. Building on this, within the present study, we introduced the CHECK model (Cochran et al., 2022). An acronym for Control vs. No Control, Hear What You are Saying to Yourself, Emotional Awareness, Challenge Your Thoughts, and Know a Plan, CHECK was developed as a low-resource, easy-to-use tool to support teachers' social-emotional learning. By moving

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through the steps of CHECK, educators can address their immediate SEL needs and also experience deeper reflection after the school day ends. The CHECK model provides prompts for considering what facets are under a teacher's control and what cannot be controlled in addition to naming and taming emotions with the goal of greater emotional management.

Importantly, mindfulness has been negatively related to burnout and predictive of teacher self-efficacy (Abenavoli et al., 2013; Abenavoli et al., 2014). Further, those with higher efficacy are more likely to draw on coping strategies when encountering stress (Bandura, 1997). Thus, we hypothesized that brief mindfulness and SEL training would improve teacher efficacy and teacher mindfulness, both interpersonal and intrapersonal.

Methods

Research Design

This multiple methods research study used a pre-experimental group to self-comparison design to address the research questions: 1) How does intentional integration of SEL and mindfulness training impact pre-service teacher self-efficacy? and 2) How does intentional integration of SEL and mindfulness training impact pre-service teacher mindfulness? Quantitative data gathered using the Teacher Self-Efficacy Scale (Tschannon-Moran & Woolfolk Hoy, 2001) and the Teacher Mindfulness Scale (Frank et al., 2017) were used to measure changes in self-efficacy and mindfulness from pre- to post-training. Qualitative data, gathered from student teaching journals and discussion prompts, were used to provide evidence of the strategies learned and used within the student teaching seminars to cope with stressors encountered within student teaching placements. While not without limitations due to the absence of a control group for comparisons, the pre-experimental design was selected to determine changes in participants' self-efficacy and mindfulness prior to and following the training. We hypothesized that the integration of the SEL and mindfulness training would be a contributing factor to quantitative changes observed in teacher efficacy and mindfulness. The qualitative data connect any observed quantitative

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effects to the training and provided insights into whether and how the strategies were being used.

Participants

Participants included 35 teacher candidates who were enrolled in student teaching seminars within a College of Education during the Fall 2022 and Spring 2023 semesters. Thirty-two candidates were female, and three were male. Twenty-six candidates identified as White, two identified as Hispanic/Latino, one identified as American Indian, one identified as Asian, one identified as two or more races, and one identified as race/ethnicity unknown. Eleven candidates were 21 years of age, 11 were 22 years of age, and nine were 23 years of age. One candidate was 26, one was 27, one was 29, and one was 31 years of age.

Procedures

Potential participants were invited to join the study during the initial student teaching seminars (fall and spring). Following an oral presentation and an opportunity to ask questions, willing participants accessed the informed consent form through REDCap, an electronic data capture system, and completed the questionnaire consisting of the Teacher Self Efficacy Scale (TSES; Tschannen-Moran & Woolfolk Hoy, 2001), and the Mindfulness in Teaching Scale (MTS; Frank et al., 2016). Participants created their own personal identifying information code, which they were instructed to retain for the post data collection. This allowed pre- and post-data to be matched while maintaining participant confidentiality and anonymity in participant responses. There were no incentives for participation aside from any potential benefits gained through the instruction received and the strategies used. Prior to the study, Institutional Research Board (IRB) approval was obtained from the university.

Throughout each semester, during three 60–90-minute sessions, candidates were provided with SEL content instruction and were introduced to and practiced mindfulness strategies (see Table 1). Participants were also introduced to CHECK, an

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acronym-guided process designed to help educators check on their own well-being and manage stress (Cochran et al., 2022). SEL and mindfulness strategies were introduced which explicitly connected to CHECK. Participants created a self-care plan at the end of the initial session and were asked to refer to the self-care plan regularly and identify one to two mindfulness strategies to implement in times of stress; however, use of strategies outside of the seminars was not monitored. Participants also completed session reflections during the seminars. These reflections contributed to the qualitative findings. Additionally, as part of their student teaching journal, pre-service teachers were asked to reflect on their placement and any instances of stress as well as any strategies used to mitigate the stress when encountered. This reflection was completed at two points, once following each student teaching placement. These reflections also contributed to the qualitative findings.

TABLE 1
SEL Strategies and Mindfulness Practices by Session

<i>Session</i>	<i>Timeframe</i>	<i>Content</i>	<i>SEL Strategies and Mindfulness Practices</i>
1	90 minutes	Introduction to Study Data Collection Mindfulness, SEL, and Self-Care	CHECK Self-care assessment Nurturing Activities Assessment Self-care plan Focused attention Three breaths Setting an intention
2	60 minutes	Stress and Emotions Emotion Regulation Emotions in the Classroom	Mood meter and emotion wheel Three breaths Sighing Yawning Emotion journal Exploring an emotion meditation
3	90 minutes	Self-Care and Compassion	Lovingkindness practice Self-assessment Mindful classroom CHECK
4	30 minutes	Data Collection	

Note: Content and strategies included were informed by Brackett (2019), Cochran et al. (2022), Jennings (2015), and Yoder (2014).

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Measures

Quantitative data were collected during the initial and final seminar sessions and consisted of five demographic questions, the Teacher Self Efficacy Scale (Tschannen-Moran & Woolfolk Hoy, 2001), and the Mindfulness in Teaching Scale (Frank et al., 2016). Qualitative data were collected through session reflections completed within the semester as well as the two student teaching journal prompts previously referenced.

Quantitative Data

Teacher Efficacy. To address Research Question 1, efficacy data were collected using Tschannen-Moran and Woolfolk Hoy's (2001) TSES. For this study, participants completed the long form which consists of 24 Likert-type items rated on a scale of *none at all* (1) to *a great deal* (9). Higher levels of efficacy are indicated by higher scores. Because the participants in this study were pre-service teachers, only the whole scale efficacy score has been used, as suggested by Fives and Buehl (2012) and the instrument authors (Tschannen-Moran & Woolfolk Hoy, 2001).

Teacher Mindfulness. To address Research Question 2, teacher mindfulness data were collected using the MTS (Frank et al., 2016). The MTS measures teacher mindfulness in two domains, intrapersonal (9 items) and interpersonal (5 items) and consists of 14 Likert-type items on a scale of *never true* (1) to *always true* (5). Higher scores indicate higher levels of mindfulness.

Qualitative Data

Qualitative data consisted of written session reflections and journal entries completed during the student teaching semester. These data were used to gain an understanding of whether and how the strategies were being used during the student teaching placements and to determine the role the received training may have played in informing teacher efficacy and mindfulness. Awareness is necessary for both efficacy and mindfulness. Further, the training included content related to identifying emotions, causes of emotions, and selecting appropriate coping strategies when encountering stress. In this sense, the qualitative data inform both efficacy and mindfulness, thus

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research questions one and two. During the third session participants completed the “Self-Assessing Social and Emotional Instruction and Competencies” tool designed to self-assess SEC and instructional practices (Yoder, 2014) and were asked to share their greatest strength and opportunity for improvement. Participants were asked to reflect on any opportunities or missed opportunities to implement the strategies learned in the session during their student teaching experience. They were also asked to consider their potential use of SEL and mindfulness strategies in their future classrooms, which contributed to our understanding of whether participants were internalizing strategies and their potential uses. Journal entries, previously described, were also collected at two points, one following each student teaching placement. All reflections and journal entries were voluntarily submitted through Google Forms.

Data Analysis

Researcher Positionality

Both authors are white females who have completed doctoral degrees in the field of Education. We have both been employed in P-12 settings. To address these potential biases, both authors coded the data separately and then compared interpretations and analyses.

Elements of Trustworthiness

To ensure trustworthiness of the qualitative data, Lincoln and Guba’s (1986) four criteria (credibility, dependability, confirmability and transferability) were reviewed and employed. To establish credibility, the researchers confirmed their knowledge and skills to analyze the qualitative responses. Dependability of the data was reviewed because the participating students were mostly white females between the ages of 21 and 31, and the researchers would not infer that exact findings would be found with a more generalized sample of student teachers. However, the researchers measured coding accuracy and inter-rater reliability and created an audit trail to ensure the qualitative findings would be replicable with a similar group of student teachers. The qualitative data are compared and analyzed in conjunction with the quantitative data to support

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confirmability. In addition, though the sample may not support broad transferability, the researchers did employ purposive sampling for the context of the study. The researchers independently coded the qualitative response data using open coding to identify segments of meaning and emergent patterns with the data. Following open coding, axial coding was used to identify themes. Following independent coding, the researchers met to compare patterns and themes for consensus among the researchers.

Results

Of the 35 participants invited to participate during the 2022-23 academic year, 18 completed both the pre- and post-questionnaire and were able to be matched for the quantitative analyses. Of those matched, all but two (89%) identified as female. Participant ages ranged from 21 to 31 with 13 candidates (72%) reporting ages 21-22 years. All participants reported some form of Christianity as their religion. All but five participants (72%) reported no formal training in contemplative practices. Of the five who had, three reported they had received training in prayer, one reported training in meditation, and one reported training in yoga. Contemplative practices have been associated with a variety of religious traditions and are used to cultivate self-awareness, personal well-being, and flourishing. Mindfulness is among the contemplative practices and has been associated with religion; however, mindfulness practices, in the context of the present study, are strategies that can be used to promote present moment, non-judgmental awareness for the purpose of reducing stress and managing oneself and promoting well-being. These practices are not associated with a particular religion; they would be most similar to those used in medicine, such as mindfulness-based stress reduction.

From the initial seminar to the post seminar, participants showed an increase in efficacy and mindfulness, overall and in each domain (intrapersonal and interpersonal mindfulness), with efficacy showing the greatest increase. Table 2 shows the descriptive statistics and reliability estimates for each variable.

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TABLE 2
Teacher Self-Efficacy and Teacher Mindfulness Descriptive Statistics

Variable	n	Pre			Post		
		M	SD	a	M	SD	a
Overall TSES	18	6.71	1.09	.94	7.52	0.09	.96
Overall Teacher Mindfulness		3.8	0.54	.87	3.99	0.45	.81
Intrapersonal		3.6	0.59	.81	3.78	.54	.76
Interpersonal		4.16	0.59	.77	4.37	.42	.61

Note: All values rounded to the nearest hundredth.

In answering Research Question 1, a repeated measures t test was used to determine whether any significant changes in teacher efficacy had occurred during the intervention period. Results of the repeated measures t test indicate significant growth ($\alpha = .05$) in teacher efficacy from the initial to final assessment: $t(17) = 3.66, p < .00$, Cohen's $d = .81$, Power = .93.

Repeated measures t tests were also used to address Research Question 2 regarding changes in teacher mindfulness during the intervention period. Results indicate no significant changes ($\alpha = .05$) in mindfulness overall: $t(17) = 2.08, p = .053$, Cohen's $d = .38$, Power = .5; however, those changes were approaching significance for the two-tailed test. There were no significant changes in the mindfulness subcomponents, intrapersonal mindfulness ($t[17] = 1.71, p = .11$, Cohen's $d = .32$, Power = .37) or interpersonal mindfulness ($t[17] = 1.6, p = .13$, Cohen's $d = .41$, Power = .33) from pre- to post-assessment. It is notable that participants reported levels of mindfulness on the higher end, given a five-point scale, and in particular intrapersonal mindfulness, at the outset of the study which might indicate these participants already have high intrapersonal teacher mindfulness.

All analyses were completed using JMP software. Power analyses ($n = 18$) were completed post hoc by calculating the mean difference and comparing that mean difference to a hypothesized difference of zero.

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Qualitative Findings

Session Reflection and Journal Responses

Session Reflections. Thirty-four participants submitted session reflection data during the third session. The first part of the reflection required participants to complete Part B of Yoder's (2014) "Self-Assessing Social and Emotional Instruction and Competencies" tool in paper and pencil format. Yoder's tool allows teachers to reflect on the components of SEC and SEL specific to teaching. The five components of SEC (self-awareness, self-management, other awareness, relationship skills, responsible decision-making) are included in this assessment. For our purposes, we aimed to improve teachers' SEC, namely awareness as it is considered requisite to all other SECs. Awareness has been identified as of particular importance to self-efficacy and is the foundation of mindfulness. Further, awareness is essential in order for one to draw on coping strategies if needed. In this way, completion of this measure informed our understanding of Research Questions 1 and 2. While participants completed all items, they were only asked to self-report their greatest strength and their greatest opportunity pertaining to their own social and emotional instruction and competencies. Self-awareness was identified by the majority as their greatest strength while self-management/emotions was identified as their greatest opportunity for professional

TABLE 3

Social and Emotional Competency Self-Assessment Strength and Opportunities Frequencies

SEC	Strength		Opportunity	
	f	%	f	%
Self-Awareness	22	64.7	1	2.9
Self-Management/Emotion Regulation	3	8.8	21	61.8
Social Awareness	4	11.8	6	17.6
Relationship Skills	11	32.4	2	5.9
Responsible Decision Making	2	5.9	9	26.5

Note: n=34; Six participants listed more than one strength and/or opportunity.

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development. This indicates that while the majority of these pre-service teachers reported self-awareness, they did not perceive their ability to manage self and regulate their own emotions as a strength. These findings were consistent with our previous work (Cochran & Parker Peters, 2022). Frequencies and percentages for responses are shown in Table 3.

For the second part of the reflection, participants read the article “CHECKing in on Educator Well-being” (Cochran et al., 2022) and were asked to consider the relevance of any of the strategies to their own practice or personal life. Participants were also asked to consider how they might strengthen their opportunities. Additionally, participants reflected on any opportunities within their student teaching experiences to use mindfulness and SEC strategies and the result and/or to consider any missed opportunities and how those might be addressed differently if encountered again in the future. Following this discussion, participants were asked to respond to the prompt regarding their current or future use of mindfulness and SEL strategies via a Google Form. Within these data, the following themes were identified: Mindfulness and SEL Strategies and Emotions/Emotion Regulation.

Of the 34 participants, 32 indicated they are currently using or intend to use mindfulness and SEL strategies personally and/or in the classroom, with many of them specifically noting the benefits for self and/or students. For example, one participant stated, “I see myself using mindfulness/SEL everyday [*sic*] for my sake and the students [*sic*] sake.” Participants connected mindfulness and SEL strategies as useful for creating a welcoming environment, promoting learning, and managing behavior. For example, one participant wrote, “I will absolutely use SEL to make the students feel welcomed and heard and promote relationships. Give them a place to be welcomed and to know that they can be themselves even when that included [*sic*] the bad days.” Another shared:

SEL helps students to see that they are more than students, they are a human in society. When I use mindfulness or SEL, students will see that I care for them and am aware that it [*sic*] is more than academic learning but life skill.

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It is evident in these responses that these pre-service teachers connect SEL and mindfulness as essential tools for creating a sense of belonging.

The most frequently identified mindfulness strategy among participants was breathing. This strategy was often connected with calming oneself or students down. For example, one participant shared, “I was angry and frustrated. But instead of yelling, I took a deep breath... (Seriously, I did. I actually took a deep breath before speaking).” This strategy was often connected with managing self and the classroom. Among SEL strategies, participants identified the use of morning meetings, check-ins, and components of CHECK as strategies they intended to use in the classroom.

A second theme was Emotions/Emotion Regulation. While there is some overlap among this theme and the previous, 13 participants explicitly stated the importance of emotions, recognizing them and knowing how to regulate them. As with the previous, Emotions and Emotion Regulation was seen as important for self and student. One participant wrote,

I think when I’m teaching I can get down because I don’t know how to get students to do the work that they just don’t want to do. This can cause me stress because I start to doubt my abilities as their teacher. I think that I am very self-aware of my emotions which is helpful, but I need to use effective strategies of mindfulness in order to better manage myself and the students. I need to create plans and focus on what I can control, not what I can’t.

This participant quote highlights an awareness of the importance of understanding emotions and how to regulate them for self and students. Additionally, the quote is particularly illustrative of the inner workings of pre-service teachers, namely stress and self-doubt often associated with classroom management and the awareness of effective coping strategies to mitigate and manage that stress and self-doubt. Knowing a plan and recognizing what one can and cannot control are two components of CHECK, a SEL tool introduced in the seminars. Knowing a plan and recognizing what is within one’s control

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along with reflection were noted by several participants in their responses. Participants also identified morning meetings and check-in as useful for growing in identifying and expressing emotions.

Journal Responses. Only seven participants contributed to the journal response data; however, those who responded described actively using strategies to mitigate the stressors encountered. This is important, as in our initial work (Cochran & Parker Peters, 2023), the self-care plan and in-the-moment coping strategies were introduced later in the seminar. In that work, we found that pre-service teachers were not using coping strategies to mitigate stress in the first placement, namely with the primary source of identified stress, the edTPA licensure exam. In the present study, edTPA was only mentioned as a source of stress by three participants. Previously, this had been an unexpected and dominant theme. In the second placement, participants continued to use the strategies introduced; however, there was a shift from a reactive use to a preventative approach. This suggests that these pre-service teachers have grown in their awareness not only of active ways to cope with stress, but also in ways to mitigate or prevent the personal stresses related to teaching.

Also captured within these data were the range of stressors and emotionally demanding situations pre-service teachers encounter. These participants identified typical stressors related to planning and the execution of lessons, behavior management, and coping with suicide and the death of students. In reflecting, one participant noted, “This incident made me realize how much you need to pay attention to the students, not just academically.” Further, this participant wrote:

I have experienced a lot of stressors, but I have been more mindful of how I am going to take care of myself...I think SEL has become very important in my life as a new teacher for the needs of my students and my own.

This participant response perfectly encapsulates the importance of equipping pre-service teachers with more than content knowledge and pedagogy.

Discussion

Through this study, the researchers aimed to further our previous work (Cochran & Parker Peters, 2022, 2023) and determine the effects of brief mindfulness and SEL instruction embedded within the context of student teaching seminars on pre-service teacher efficacy and mindfulness. Within the present study, CHECK, a tool for in-the-moment teacher self-evaluation was incorporated into the session content. It was our hope that this tool would help pre-service teachers recall some of the strategies they had been introduced to in the session and to reappraise their thinking in-the-moment. The ability to reassess perspective has been shown to be an effective practice for coping with stress. Through the training, it was our intent to increase pre-service teacher awareness, through intentional instruction regarding the brain, its functioning, and the role of emotions in teaching and learning. Another goal was to equip pre-service teachers with practical mindfulness and SEL strategies to promote their own well-being.

Consistent with our hypothesis, quantitative findings indicate significant increases in teacher efficacy from the initial to final measure during the single semester student teaching seminar. This finding is consistent with our previous work (Cochran & Parker Peters, 2022, 2023) and that of others who also have found significant increases in efficacy with brief mindfulness instruction embedded in the final semester (Solar, 2019). Qualitative findings demonstrate that the pre-service teachers within this study viewed SEL and mindfulness strategies as important for managing their personal well-being and that of their students and classrooms. Further, teachers identified self-awareness as their greatest strength when assessing their own social and emotional competencies. Self-awareness is an essential component of teacher efficacy and is important when choosing appropriate coping strategies for addressing stress.

As Bandura (1997) noted, teachers with higher levels of efficacy are more likely to draw on positive coping strategies when encountering stress. The pre-service teachers in our study identified the need to understand their own emotions as well as those of their students. Further, they identified the need to

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access the strategies they were provided during times of stress, to promote relationships, and a positive climate for learning. This suggests that these teachers are entering the classroom with a clearer understanding of the emotional dynamics of the classroom, how those dynamics impact learning and the classroom environment, and how to effectively manage themselves and their students during times of elevated stress. This is extremely important considering the highly emotional and stressful context of teaching. Further, Wilson and Conyers (2020) identified the brain-body system and learning as one of the Big Five ideas for connecting MBES to classroom practice and several of the tenants of MBES address the role of emotions, stress, and other aspects of affective dimensions as essential teacher knowledge (Tokuhamma-Espinosa, 2018). Our work shows that even with brief instruction, elements of MBES can be connected to the classroom, similar to the findings of Howard-Jones et al. (2020) who showed brief instruction in SoLD was effective in changing teacher thinking about teaching practices. The pre-service teachers in the present study provided examples of how they were currently using or intended to use mindfulness and SEL strategies personally and in practice.

In contrast with our hypothesis, no significant changes were observed in teacher mindfulness, though slight increases did occur in the intrapersonal and interpersonal components. This lack of significance, in part, could be due to the elevated reported mindfulness observed at the initial assessment, perhaps leaving little room for any significant increases to occur particularly given the small sample size. The context of this study is a faith-based university that intentionally emphasizes contemplative practices such as prayer and reflection throughout all instruction. Further, most of the participants in this study identified with the Christian faith in which prayer, a contemplative practice, is a part. As a result, it is possible that this content impacted the level of mindfulness these pre-service teachers initially expressed.

Limitations

Though our study reveals the relative importance of teacher

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mindfulness and SEC, the findings are only representative from a sample of student teachers within the context of a faith-based, liberal arts educator preparation program. This faith-based orientation may limit the generalizability of the findings in that participants may have a predilection for prayer, meditation, or other faith-based contemplative practices and may differ substantially from others who might not have such a disposition. While participants were asked about their previous participation in contemplative practices, only five of the 35 participants in the quantitative portion of the study indicated previous training in contemplative practices of any kind. These were not used as exclusionary criteria within the present study due in part to the small sample size and because the previous training was identified as in areas such as yoga, meditation, and prayer.

Our findings are not generalizable to diverse populations since the current sample is limited by ethnicity, gender, and age representation. Most of our participants were White females in their early twenties. Findings should also be interpreted considering the response rate; specifically, only 20% of participants submitted their journal responses, which limits generalizability.

Though we were able to come to consensus when coding and defining qualitative themes, there is a level of subjectivity inherent in qualitative research that may have been influenced by our individual biases. The journal and reflection data provided by open-ended responses were also impacted by personal biases and interpretations of the participants. Further, as with all self-report data, there is the possibility that social desirability bias influenced participant responses, particularly on the teacher efficacy and teacher mindfulness measures. The use of mindfulness and SEL strategies was not monitored outside of the seminar sessions by the researchers, though participant responses indicate their use. Finally, the study did not include a control group. We cannot be certain the increase in teacher efficacy was due to the training versus the normal improvement that is observed at the end of the student teaching semester.

Recommendations for Research and Practice

Though the classroom will continue to provide a heightened

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level of stressors, educator preparation programs can better support new teachers by equipping them with social-emotional competencies that will support their personal and classroom well-being and continued success. As noted, the field of education continues to experience shortages, with early attrition and burnout cited as the top problem facing teachers today (NooNoo, 2022). Knowing that burnout often occurs as a result of extreme emotional exhaustion (Madigan & Kim, 2021), it is important and promising to see positive findings among student teachers who participated in a limited amount of SEL training. In our results, we found that student teachers who were equipped with SEL strategies were able to share how they were implementing learned strategies for self and students in the context of classroom stressors. From the first to the final seminar session, participating student teachers showed an increase in efficacy and mindfulness (though not significant for mindfulness), with efficacy showing the greatest increase. In their final student teaching placements, we observed a theme of student teachers reporting their proactive, preventative use of SEL strategies. With a small investment of seminar time dedicated to supporting SEL and mindfulness among student teachers, impactful content and practices were evident in participant responses. Educator preparation programs will not cease implementing new changes due to policy or research; as a part of continuous improvement and outcomes for candidates, preparation programs are challenged to make room for essential SEL content and strategies that will support new teachers and their students to thrive academically and beyond.

With a continued emphasis on the importance of preparing the whole child, perhaps it will be less of a leap to also consider preparing the whole educator. Student teacher participants noted personal growth opportunities in the areas of self-management and emotional regulation. After engaging in sessions to learn strategies to support personal SEL, student teachers recognized emotional regulation and self-management as areas that could be improved. For certain, these are important competencies for classroom leaders who naturally encounter countless stressors, frustrations, and emotions on a daily basis

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by the nature of forming relationships with others, setting high expectations, and managing student behavior and learning—the tasks of the job. When educators enter the classroom, prepared to manage the inevitable stressors that present daily, they are also entering with the tools to support retention. When teachers remain in the profession of their training because they have the academic and social-emotional competencies to do so, they are ready to support the students who are also in need of social-emotional competencies to promote their learning and growth.

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