

Teacher Self-Efficacy, Stress, and Stress Coping Strategies in Early Childhood Educators

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Abstract

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The University of Washington's Early Childhood Education (ECE) teacher well-being hybrid and online courses for both pre-service and in-service teachers uses stress coping strategies to foster resilience, self-value, and confidence in ECE teachers. The present study employed a mixed-method research approach to investigate three questions pertaining the Fall 2022 iteration of this course as follows: 1) What were the changes, if any, in participants' perceived stress, self-efficacy, and stress coping strategies from the beginning to the end of the course? 2) Which predictors, including pretest scores, class type (online and hybrid class modalities), and years of experience, were uniquely associated with the changes in participants' perceived stress, self-efficacy, and stress coping strategies from this course? 3) In what ways, if any, did participants perceive stress-coping strategies learned during the course as effective or beneficial, based on their experience implementing the strategies? To answer these questions, I analyzed data from $N = 21$ participants enrolled in the Fall 2022 ECE teacher well-being course. Overall, the results found that 1) there were statistically significant improvements in teachers' self-efficacy in their capacity to engage students due to participants' value of commitment and maintaining cognitive functioning when managing children's behavior; 2) the increased use of the emotional-focused coping

strategy may be due to the benefits experienced when using that particular strategy; 3) participants who had less teaching experience were more likely to use emotional-focused coping because they are more likely to seek emotional support and build relationship when coping stress; 4) participants, on average, reported a high intention of implementing stress coping strategies from the course in the future due to effectively resolving stress with minimal effort in the implementing the coping strategies.

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Chapter 1 Introduction

As a resource of maintaining and promoting teaching quality, the well-being of teachers plays a significant role (Gray et al., 2017; Hascher & Waber, 2021; Sisask et al., 2014). ECE teachers' good mental health impacts how they provide children with emotional support and positive behavioral management (Jennings & Greenberg, 2009; Price et al., 2012). However, teachers' mental health is threatened by certain risk factors embedded in the teaching profession that increase teacher stress (Agyapong et al., 2022; Richards, 2012). Research indicates that workloads, classroom behavior problems, and classroom support are related to ECE teachers' stress (Brophy-Herb et al., 2022; Clayback & Williford, 2022; Sandilos et al., 2023). Teacher burnout, which forms from unresolved stress in a long-term, can have a significant negative impact on teacher attrition (Madigan & Kim, 2021).

Many states in the United States found negative influence from COVID-19 on adults' mental health in different degrees (Daly et al., 2021; Hwang et al., 2017; Wang et al., 2021). One of the main stressors was the safety protocols that prevent infection or disease. The quarantine and isolation limited people's daily activities and interactions. Studies have shown that the limitations have a negative impact on people's mental health and lead to negative effects, such as stress and depression (Chatterjee & Chauhan, 2020; de Lima et al., 2020; Hossain et al., 2020).

During the pandemic, ECE teachers were required to follow policies of quarantine. Many teachers had to adjust to online class and interact with children remotely. However, virtual instruction was found less effective on student learning than in-person and hybrid teaching (Pressley, 2021). Furthermore, an increased workload resulted from the adjustment from in-person to virtual teaching, which could increase teacher stress (Carr, 2020; Federkeil et al., 2020; Nagasawa & Tarrant, 2020). Other stressors arose from the deteriorating financial status schools faced. The cost of protective equipment and health materials added to the schools' financial burden (Delap & McGee, 2020). Because of remote teaching, teachers also reported lower self-efficacy in instruction and student engagement than before, when schools were open (Pressley, 2021).

Besides in-service teachers, COVID-19 may have a long-term negative influence on education among pre-service teachers or beginning teachers. Regarding teachers' professional phases, the early stages of professional development are critical as they can significantly contribute to the development of teacher self-efficacy (Bernadowski et al., 2013). This is mainly because self-efficacy is more easily developed during the early stages of learning (Bandura, 1986). However, one of the challenges during the COVID-19 pandemic was that school closures disrupted the availability of student teaching placements (la Velle et al., 2020; Varela & Desiderio, 2021). Studies indicated a lower level of teacher self-efficacy due to the lack of authentic experience of working with children and in-classroom teaching experiences during COVID-19 (Symes et al., 2023; VanLone et al., 2022).

In the state of Washington, the Early Achiever program was developed to ensure the continuous improvement of ECE teaching quality. This program supports children's education in various dimensions, including child outcomes, curriculum, learning environment and support, professional development, and family engagement and support (Department of Children, Youth & Families, 2020). Based on the 2016 Early Achiever report (Soderberg et al., 2016), teachers and directors in the field of ECE are more likely to experience stress and depressive symptoms than the general population. The report identifies common stressors that ECE teachers and directors face, including workplace stressors, financial constraints, job expectations, and lack of sleep. In the context of the ECE environment in Washington State, the report showed that the COVID-19 pandemic increased ECE providers' stress and symptoms of depression (Joseph, 2020). In a 2020 report, 67% of the 4,400 teachers admitted that COVID-19 had negatively impacted their mental health and the quality of working with children (Joseph, 2020).

To facilitate ECE teachers' ability to resolve work-related stress, which was increased during pandemic, there is a need to examine the effectiveness of interventions on teachers' stress and self-efficacy for both in-service and pre-service teachers in the post-pandemic time. While there are extensive studies exploring teachers' stress and self-efficacy (Aloe et al., 2014; Iancu et al., 2018; Kim et al., 2019; Montgomery & Rupp, 2005; Shin et al., 2014), limited research has focused on ECE teachers. To address this gap, I conducted mixed-method research to explore and explain the changes of ECE teachers' (pre-

service and in-service) perceived stress, teacher self-efficacy and stress coping strategies while enrolled in a one-quarter teacher well-being course.

Chapter 2 Literature Review

Teacher Stress and Impacts

The negative impacts of teacher stress, such as burnout, exhaustion, and reduced job satisfaction, (Chang, 2009; Madigan & Kim, 2021; Woods et al., 2023) reveal the importance of addressing this problem to maintain teacher resilience and improve teacher quality. For early childhood education (ECE) teachers, high levels of stress and burnout lead to reduced job satisfaction and poor work engagement (Ferguson et al., 2012; Hakanen et al., 2006). Research also suggests that ECE teachers' mental health influences their behaviors in classroom management and child outcomes in social-emotional learning (Durlak et al., 2015).

Specifically, when kindergarten teachers experience high levels of stress, children's development in executive function skills is impeded (Neuenschwander et al., 2017). Positive relationships and empathetic interactions are also difficult to form between children and stressed ECE teachers (Li Grining et al., 2010). Moreover, teachers who are in "burnout cascade," which results from continuing to work in a deteriorated classroom climate, are more likely to have negative interactions with students (Jennings & Greenberg, 2009). Therefore, interventions to effectively help teachers with stress coping are crucial for the well-being of both teachers and children.

Teacher Stress and Influencing Factors in Early Childhood Education

Teacher stress was defined as an imbalance between risk and protective variables (Prilleltensky et al., 2016). One notable risk factor contributing to teachers' increased stress is managing students' challenging behavior (Kokkinos, 2007). Among K-12 teachers, the increase of problematic behavior from students indicates lower classroom management efficacy from teachers (Klassen & Chiu, 2010). From social relationship aspects, teachers who lack networking are at risk of isolation, which creates more obstacles for beginning teachers as they adapt to their working environment (Prilleltensky et al., 2016).

Contrary to risk factors, protective factors support teachers to cope with stress. According to Herman (2018), "teacher burnout, stress, coping, and self-efficacy are likely interrelated and

multidirectional” (p. 91). Teacher self-efficacy has positive effects in reducing stress from both in-service and pre-service ECE teachers (Beltman et al., 2011; Mansfield et al., 2016). When teachers negatively appraise their ability to meet workplace demands, they may experience stress. Increasing teacher self-efficacy had proven to alleviate burnout for teachers from preschool to secondary levels (Aloe et al., 2014; Collie et al., 2012; Klassen & Chiu, 2011). Therefore, improving teachers’ self-efficacy is important for protecting teachers from stress and burnout in the teaching profession.

Beginning Teacher Stress

Katz’s (1972) *The Developmental Stages of Preschool Teachers* suggests that each stage of a teacher’s career has a particular focus as they progress toward professional maturity. Teachers within their first year are in the survival stage of their careers, during which they need guidance on specific on-site teaching strategies and encouragement to persist in their efforts. For secondary school teachers, empathic relationships with mutual support can empower beginning teacher to confront challenges (Doney, 2013). For elementary school teachers, a study suggests that beginning teachers’ resilience increases when teachers feel accepted by the school community (Morettini et al., 2020). For ECE teachers, mindfulness techniques have been shown to help beginning ECE teachers achieve a sense of calm and relieve stress (Bernay, 2014; Hartigan, 2017). More research is needed to explore teacher well-being interventions that can support beginning teachers with stress coping techniques in the ECE context.

Teacher Self-Efficacy and Impacts

According to Bandura (1982), self-efficacy is “judgments of how well one can execute courses of action required to deal with prospective situations” (p. 122). Four sources contribute to self-efficacy: performance accomplishments, vicarious experience, verbal persuasion, and emotional arousal (Bandura, 1977). When applied to the teaching profession, the teacher self-efficacy primarily encompasses two conceptual strands (Tschannen-Moran et al., 1998). “One strand of research grounded in Rotter’s social learning theory developed, a second strand emerged, growing out of Bandura’s social cognitive theory and his construct of self-efficacy” (Tschannen-Moran et al., 1998, p. 787). Tschannen-Moran and

colleagues integrated the two strands to develop a new model. Within this model, teacher self-efficacy is defined as “the teacher’s belief in his or her capability to organize and execute courses of action required to accomplish a specific teaching task in a particular context” (Tschannen-Moran et al., 1998, p. 233). In 2001, Tschannen-Moran and Hoy stated three dimensions that account for teacher self-efficacy: efficacy in instructional strategies, efficacy in student engagement, and efficacy in classroom management.

Klassen and Chiu (2010) showed that K-12 teachers who have more classroom management efficacy and more instructional strategies efficacy have higher rates of job satisfaction. In research across five countries (Klassen et al., 2009), similar positive relationships between teacher self-efficacy and job satisfaction were revealed among elementary and secondary teachers from Canada, Cyprus, Korea, Singapore, and the United States. According to Zee and Koomen’s review (2016), teachers’ self-efficacy has “reciprocal influence” (p. 985) on teachers’ well-being and personal accomplishment. When teachers have higher self-efficacy, they are more able to increase the classroom quality which in turn, contributes teachers’ well-being and personal accomplishment. For example, a study found that a higher level of children’s vocabulary gains was related to higher teacher self-efficacy (Guo et al., 2010).

Teacher Self-Efficacy and Influencing Factors in Early Childhood Education

A large body of studies addressed that ECE teachers’ self-efficacy has a significant relation with teachers’ gender, nationalities, and experience of teaching (Gerde et al., 2018; Guo et al., 2010; Jeffery et al., 2018; Lawrence et al., 2020; Klassen & Chiu, 2010; Kunemund et al., 2010). In this study, the two malleable factors, ECE teachers’ emotional regulation and teaching experience were discussed to interpret or analyze changes in teachers’ self-efficacy after intervention.

Having appropriate emotional regulation skills like reappraisal was associated with higher teacher self-efficacy especially when managing challenging behavior (Sutton et al., 2009). In early childhood, children’s challenging behavior is associated with long-term negative developmental outcomes (Feil et al., 2021; Poulou 2015). Escalating teaching quality to ensure good children outcomes is the primary goal advanced by the Early Achiever program. In this way, it is imperative to equip ECE teachers with stress coping strategies to improve their emotional regulation and being able to manage children’s behavior in

positive and supportive approaches. Therefore, emotion regulation is a key factor in interpreting changes in teacher self-efficacy in this program. Teachers' experience is the second factor that influences teachers' self-efficacy. As described by Katz (1972) teachers who are in their first year of teaching are in the stage of survival for adapting to the unfamiliar environment and encountering insecure situations during work. At the beginning of the career, teachers' initial motivation and sense of commitment are key factors in promoting teacher resilience and later support the formation of professional identity (Gu & Day, 2007; Morettini, 2020). Studies proved that beginning teachers exhibit certain tendencies of using stress coping strategies. For example, they are more effective in using social support from personal life to maintain resilience, compared to using social support from school colleagues (Morgan, 2011). For pre-service teachers, support from peer students for coping with stress from academic tasks and maintaining motivation increases senses of autonomy, competence, and relatedness toward school (Kassis et al., 2019). Therefore, it is important to include teachers' years of experience in analysis to understand how teachers from different stages of their careers implement coping strategies.

Emotional regulation. One of the main factors impacting ECE teacher self-efficacy is teachers' emotional regulation skills. ECE teachers' reappraisal of emotional regulation skills, investigated through questionnaires developed by Gross and John (2003), was found to have a positive relationship with increasing teacher efficacy in student engagement and classroom management (Sutton et al., 2009). A higher level of children's engagement indicates more ECE teacher self-efficacy (Guo et al., 2011). When children exhibit more challenging behavior (and presumably less engagement), the teacher shows less self-efficacy in behavior management (Suchodoletz et al., 2018). Therefore, having emotional regulation skills enables teachers with more confidence to regulate their negative emotions, maintain cognitive function, and focus on teaching children when encountering children's challenging behavior.

Experience. Inconsistent results were found in the relationships between ECE teachers' years of teaching experience and teacher self-efficacy. Some studies suggest that accumulated teaching experience of an average 11 to 14 years is related to more teacher self-efficacy (Reyhing & Perren, 2021; Suchodoletz et al., 2018). In another study, an average of 15 years of teaching experience was negatively

correlated with teacher self-efficacy (Guo et al., 2010). Klassen and Chiu (2010) discovered a nonmonotonic relationship between years of experience and K-12 teacher self-efficacy with a negative correlation after 23 years of teaching. However, the nonmonotonic relationship was not found to be tested in ECE only context. Therefore, no result showed how ECE teacher self-efficacy changed with increased teaching experience. Thus, this study attempts to examine the teaching experience effect on ECE teacher's self-efficacy.

Understand Stress Coping Strategies Through the Transaction Model

Lazarus and Folkman's (1987) transactional theory of coping provides a perspective for analyzing how stress and self-efficacy are associated with stress coping strategies. The transactional theory highlights two forms of appraisal which are primary appraisal and secondary appraisal (Folkman, 2010). The primary appraisal determines what things happened, and to what extent things are significant to the individual. Folkman (2010) stated that stress raised from "a situation that the individual appraises as personally significant and as having demands that exceed the person's resources for coping" (pp. 901-902).

Secondary appraisal determines how to cope with things based on internal resources and external conditions. Folkman (1984) identified self-efficacy as part of the secondary appraisal. Higher level of self-efficacy indicates more motivation of tackling challenges. For example, when people have high general self-efficacy, (e.g., "I got this!"), they will be more likely to interpret stress as a challenge instead of threatening, and people with low self-efficacy are more likely to be affected by failure (Jerusalem & Schwarzer, 1992). In educational contexts, primary and secondary teachers who have higher coping self-efficacy tend to use problem-focused coping strategies. Teachers who have lower coping self-efficacy rely more on emotional-focused coping (Chwalisz et al., 1992).

Finally, the efforts of behavior or cognitive attempts to manage stressful situations are defined as coping, which includes preventing harm, reducing distress, and managing demands that are appraised as challenges (Carver & Connor-Smith, 2010; Folkman & Moskowitz, 2004; Folkman, 2010; Lazarus & Folkman 1984).

Critics of transaction theory are concerned about the model not being able to draw conclusions because personal appraisals are variations among individuals and events (Coyne & Gottlieb, 1996; Coyne & Racioppo, 2000). Appraisals vary individually and person-environment interaction is not a static process. However, Parker and his colleagues (2012) pointed out that certain psychological factors and processes are activated in the teaching context, which may form stable coping mechanisms within the teacher community. In other words, the theory leads the direction of understanding teacher stress to explore and interpret the interactive activity of teachers in their working environment.

Teacher Stress, Self-Efficacy, Teaching Experience and Types of Coping

Based on Lazarus and Folkman's transactional theory (1987), two kinds of coping are: 1) problem-focused coping, which manages the person-environment relation through problem-solving skills, and 2) emotional-focused coping, which changes views and takes control over distress (Folkman, 1984). The choice of coping depends on changeability. When a stressor is changeable, individuals tend to use problem-focused coping. Otherwise, individuals tend to use emotional-focused coping to regulate negative emotions (Folkman, 2010; Lazarus & Folkman 1987). For example, one unchangeable stressor for older adults is aging. Aging, as a fact, cannot be solved or terminated with any solutions. Therefore, problem-focused coping strategies are ineffective for this kind of stressor (Allen & Leary, 2010).

In teaching context, Griffith's team (1999) found that primary and secondary school teachers experienced increased stress levels when they were more prone to use disengagement behaviors. Moreover, studies indicate a relationship between high teacher stress in primary and secondary schools and increased emotional responses (Montgomery & Rupp, 2005). Avoidant coping strategies have been linked to adverse outcomes, such as stress, anxiety, anger, sadness, and loneliness (MacIntyre et al., 2020). On the contrary, approach coping is associated with positive outcomes like well-being, resilience, and growth during trauma (MacIntyre et al., 2020). Seeking social support was shown to have positive impact on reducing primary and secondary school teacher stress (Griffith et al., 1999). Yet, the effectiveness of social support depends on its quality and teachers' perceptions of it (Griffith, 1999).

For teacher self-efficacy, active coping strategies positively correlate with efficacy in instruction and management of primary and secondary school teachers (Betoret & Artiga, 2010), and emotional-related coping strategies like self-blame have been linked to challenges in classroom management for secondary school teachers (Salkovsky et al., 2015). Currently, limited studies focused on ECE teachers' stress coping and how it was related to teachers' stress and self-efficacy. Among pre-kindergarten to 12th grade teachers, higher levels of coping strength can reduce the impact of stress on job satisfaction (Woods et al., 2023). In the case of ECE teachers, problem-focused coping has been associated with less perceived stress (Wagner et al., 2013). A positive mindset correlates with less stress and emotional exhaustion (Brophy-Herb et al., 2022).

Regarding years of experience, one study showed that experienced teachers in primary schools exhibited avoidance and confrontation when managing stress (Carton & Fruchart, 2014). Meanwhile, less experienced teachers resort to social support to cope with stress. Different results were shown in another study conducted in primary schools. Experienced teachers are more likely to employ problem-solving skills and rely on inner strength. Novice teachers sought help by asking for advice, resources and materials when encountering work stress (Chaaban & Du, 2017). In the K-12 context, experienced teachers tend to employ direct-action problem-solving strategies, while novices, both young and more mature, often used avoidant strategies (Sharplin et al., 2011).

ECE Teacher Well-Being Interventions

As it discussed in the preceding sections, studies showed positive relationships among more use of problem-solving skills, emotional regulation skills, increased teacher self-efficacy and less teacher stress. Given the critical impact of these factors, it is important to explore solutions for improving teachers' self-efficacy and increasing problem-focused coping skills to improve the well-being of ECE teachers. Further reviews of studies from the past decade (2013-2023) focused on evidence-based practices aimed at enhancing the well-being of ECE teachers in the United States (Table 1). Considering limited studies discussed ECE teachers' years of experience, this review also attempts to find if teaching experience affected the results of interventions.

Three Well-Being Interventions

Mindfulness-based social-emotional learning (SEL) program: In this intervention (Garner et al., 2018), 87 pre-service teachers were recruited to participate in six weekly sessions. Each session lasted two hours. In addition to these sessions, participants were also required to engage in 15-minute mindfulness meditation practices. Participants were randomly assigned to intervention and control groups for the pretest and posttest study. The content of the sessions was comprehensive, covering a variety of key areas including an introduction to “mindfulness and the practice of mindfulness meditation, understanding and regulating emotions, the use of emotions for children’s learning and development, the role of emotions in relationship-building and coping with students’ challenging classroom behavior, and promoting an awareness of SEL for fostering their own and students’ resilience” (Garner et al., 2018, p. 380). The same mindfulness meditation practices, which were breathing awareness meditations, were also received by control group participants. However, the control group participants did not have instructions in SEL. Therefore, the experiment could not indicate whether the mindful-based practices had an impact on preservice teachers’ mindfulness.

Cultivating Awareness and Resilience in Education (CARE): The CARE program was examined in three distinct studies conducted between 2013 and 2019. The participant samples varied across the studies. The initial experiment (Jennings et al., 2013) engaged 53 teachers from diverse classroom levels and subjects, whereas the second study (Jennings et al., 2017) focused on 224 K-5 elementary teachers. The third study (Jennings et al., 2019) extended the second experiment to assess the sustained impact of the CARE program. In all three studies, participants were randomly assigned to intervention and control groups for the pretest and posttest study. The intervention component of the CARE program can be categorized into three core aspects: emotion skills, mindfulness awareness, and compassion practices of caring and listening. The CARE program intervention incorporated in-person sessions, home practice materials, and personalized coaching calls.

Teachers assigned to the intervention group were required to attend five in-person training sessions, each lasting six hours. In addition to the structured sessions, these teachers were also provided

with materials for practicing at home, further reinforcing the learned skills. As part of the support mechanism, teachers received coaching calls from program coaches between each session. The coaching call intended to guide them through the process and address any potential challenges encountered during their practice.

Table 1*Reviewed Studies Summary*

Author (year)	Sample	<i>N</i> (Total)	<i>N</i> (ECE)	Intervention	Study design	Include teaching experience	Teacher well-being variables	Outcomes
Mindfulness-based SEL programming								
1 (Garner et al., 2018)	Preservice	87	43 (Preschool)	In-person	Pretest-posttest control group	Yes	1. Mindfulness	increase
							2. Emotional competence	increase
Cultivating Awareness and Resilience in Education (CARE)								
2 (Jennings et al., 2013)	K–12	53	3 (Preschool)	In-person	Pretest-posttest control group	No	1. Positive and negative affect	none
							2. Emotion regulation— reappraisal	Increase
							3. Depression	None
							4. The daily physical symptoms	Decrease
							5. Teacher efficacy	Increase
							6. General hurry	Decrease
							7. Mindfulness	Increase

Table 1. Continued

Cultivating Awareness and Resilience in Education (CARE)

3 (Jennings et al., 2017)	K-5	224	39 (Kindergarten)	In-person	Pretest-posttest control group	No	1. Adaptive emotion regulation	Increase
							2. Teaching efficacy	None
							3. Mindfulness	Increase
							4. Psychological distress	Decrease
							5. Time urgency	Decrease
							6. Physical distress	None
4 (Jennings et al., 2019)	K-5	224	39 (Kindergarten)	In-person	Pretest-posttest control group	No	1. Psychological distress	Decrease
							2. Ache-related physical distress	Decrease
							3. Emotion regulation	Increase
							4. Efficacy	None

Table 1. Continued

Social Emotional Learning for Teachers (SELF-T)

5 (Lang et al., 2020)	Preschool	63	63 (Preschool)	Online	Pretest-posttest	No	1. Understanding of stress and consequences	Increase
							2. Knowledge of stress-reduction techniques	Increase
							3. Use of stress-reduction strategies	Increase
							4. Reappraisal emotion regulation	Increase
							5. Personal perceived stress	Increase

Social Emotional Learning for Teachers (SELF-T): The SELF-T intervention (Lang et al., 2020) aimed to test if a low-dose online course of social emotional well-being intervention can improve ECE teachers' stress coping strategies. This study hypothesized that ECE teachers would benefit more from an online intervention, which provides a more convenient and cost-effective strategy compared to traditional approaches (Jayawardene et al., 2017). In this intervention, five lessons focus on stress reduction techniques and emotional regulation for ECE teachers. The entire course took three hours to complete with emphasis on practical implementation. Participants were allowed to complete the course based on their pace. No instructors or support were involved in completing the course. In this study, 63 preschool teachers were enrolled for a pretest and posttest research.

Intervention Impact on Teacher Stress

Across the five studies, all intervention programs incorporated both emotional skills and mindfulness-based practices. In the mindfulness-based social-emotional learning (SEL) program, the breathing awareness meditation, when infused with social-emotional learning, contributed to an increase in mindfulness and emotional competence among teachers, especially those with previous teaching experience.

In the series of studies examining the CARE program, distinct outcomes were observed regarding emotional regulation and stress management. The 2013 investigation of the CARE program did not yield substantial results related to depression. However, it revealed a statistically significant result on promoting cognitive reappraisal, a subscale of emotional regulation, while also decreasing feelings of time pressure experienced by teachers.

Subsequent research conducted in 2017 expanded on these findings, revealing significant impacts on time urgency and adaptive emotion regulation. Furthermore, the CARE program in 2017 demonstrated significant reductions in teachers' psychological distress. This included alleviating symptoms of depression, anxiety, negative affect, sleep disturbances, emotional exhaustion, and perceived stress (Jennings et al., 2017). The CARE study in 2019 provided evidence of continued decreases in psychological distress. These stress-reducing effects of CARE persisted in the long term.

The online SELF-T intervention found increase of ECE teachers' stress after intervention. The increase of teachers' stress was assumed to result from increased competence of identifying perceived stress (Lang et al., 2020). On the other hand, ECE teachers' stress reduction technique and emotional regulation skills are promoted after the intervention.

Overall, these findings suggest that both in-person and online teacher well-being interventions that include combinations of mindfulness-based practice and emotional skill instructions contributed to equip teachers with the skills to effectively manage stress and emotion over time. Only the CARE program found reduction of teacher stress after intervention.

Intervention Impact on Teacher Self-Efficacy

The mindfulness-based SEL program and the SELF-T intervention did not assess participants' self-efficacy. However, the study of mindfulness-based SEL program indicated that improved emotional competence could increase teachers' self-efficacy in managing classroom behavior and dealing with stressful situations. The importance of emotional competence in relation to teaching self-efficacy is highlighted in the work of Burić and Macuka (2017), who state that “emotional competence also plays an important role in well-being, work engagement, and teaching self-efficacy” (p. 384).

The 2013 CARE program demonstrated a significant positive impact on teacher self-efficacy. Specifically, the teachers involved in the CARE program showed improvement in the total score of the Teacher Self-Efficacy Scale (TSES) compared to the control group. The intervention had significant effects on the instructional strategies and student engagement subscales of the TSES. This improvement is hypothesized to arise from helping teachers better recognize and regulate their emotional reactivity, which can in turn prevent degradation to cognitive functioning that is provoked by the stress response (McEwen & Sapolsky, 1995).

The 2017 CARE program did not display a statistically significant impact on teachers' self-efficacy. Although previous research on CARE has found noticeable differences in teaching efficacy, these more recent findings do not support the same conclusion. This finding may not suggest an inherent ineffectiveness of the CARE program in boosting teaching efficacy. Instead, it could be attributed to the

notably high baseline scores on teaching efficacy of the teachers involved in the study. These scores were approximately one standard deviation higher than those of teachers in a previous study where CARE did significantly enhance teaching efficacy. As a result, a ceiling effect might have been a limitation to detect substantial intervention effects in this study. This means that the scores were already so high initially that it became difficult to observe any significant improvement or difference between the groups after the intervention.

The 2019 CARE (Cultivating Awareness and Resilience in Education) program did not demonstrate a significant impact on teachers' self-efficacy in this study. One potential reason could be the high mean-level scores for the teaching efficacy measure at baseline. In fact, the follow-up scores for both the treatment and control groups were even higher than baseline scores, suggesting a possible ceiling effect.

In conclusion, CARE studies from 2013 to 2019 reveal inconsistent outcomes in terms of the effects on ECE teachers' self-efficacy. This result calls upon more research focusing on the effect from teacher well-being intervention on teacher self-efficacy in ECE context.

Literature Review Conclusion

As revealed by searching on teacher well-being interventions, limited studies have focused on in-person and online ECE teachers' well-being interventions. Only one study examined the effect from teaching experience on participants' change after intervention. There are inconsistencies in the impact from ECE teachers' well-being interventions on teachers' stress level and self-efficacy. Due to the limited number of studies and inconsistencies in results, further research is required to investigate the ECE teachers' changes on stress and efficacy and effect from teaching experience on their changes in in-person and online well-being interventions. It was also shown from the literature review that there is a significant association between teachers' stress, self-efficacy, and stress coping strategies. However, most studies have focused on teachers from primary and secondary schools. Little research has focused on ECE teachers in examining the relations of teacher self-efficacy, stress, and stress coping strategies. To address this gap, I conducted a mixed-method study to investigate a college classroom-based well-being

intervention in perceived stress, teacher self-efficacy, and stress-coping strategies among ECE teachers.

The study aims to answer the following research questions: (1) What were the changes in the ECE teacher well-being course on participants' perceived stress, teacher self-efficacy and stress coping strategies? (2) How did the predictors including pretest scores, class types and years of experience associated with the changes on participants from this course? (3) How do participants perceive stress coping strategies from this course as effective based on their experience of implementation?

Chapter 3 Methods

Research Design

This study used a convergent mixed-methods one-group, pretest-posttest research design (Creswell & Plano Clark, 2018). As described in the literature review, a limited number of previous studies have focused on exploring the effects of well-being interventions for early childhood education (ECE) teachers. The present study implemented a novel web-based program combining in-person instructions for pre-service ECE teacher well-being intervention within a large public university setting. Meanwhile, it was also adapted as an online course for in-service ECE teachers. The purpose of the present study was to investigate whether and how the course (as an intervention) impacted ECE teachers' stress, self-efficacy, and stress-coping strategies. I, the first author of this study, have an educational background in early childhood education research and teaching and was one of the graduate teaching assistants for the course in the fall of 2021. I did not serve as an instructor or teaching assistant for the fall 2022 course, and had no personal relationships with the student participants when the data was collected. The course instructor provided support for the study by introducing it to the class via email and course online announcements, but assured students that their participation was voluntary and would have no impact on their grade. Figure 1 illustrates study procedures (adapted from the procedural diagram shown in Fetters [2020]).

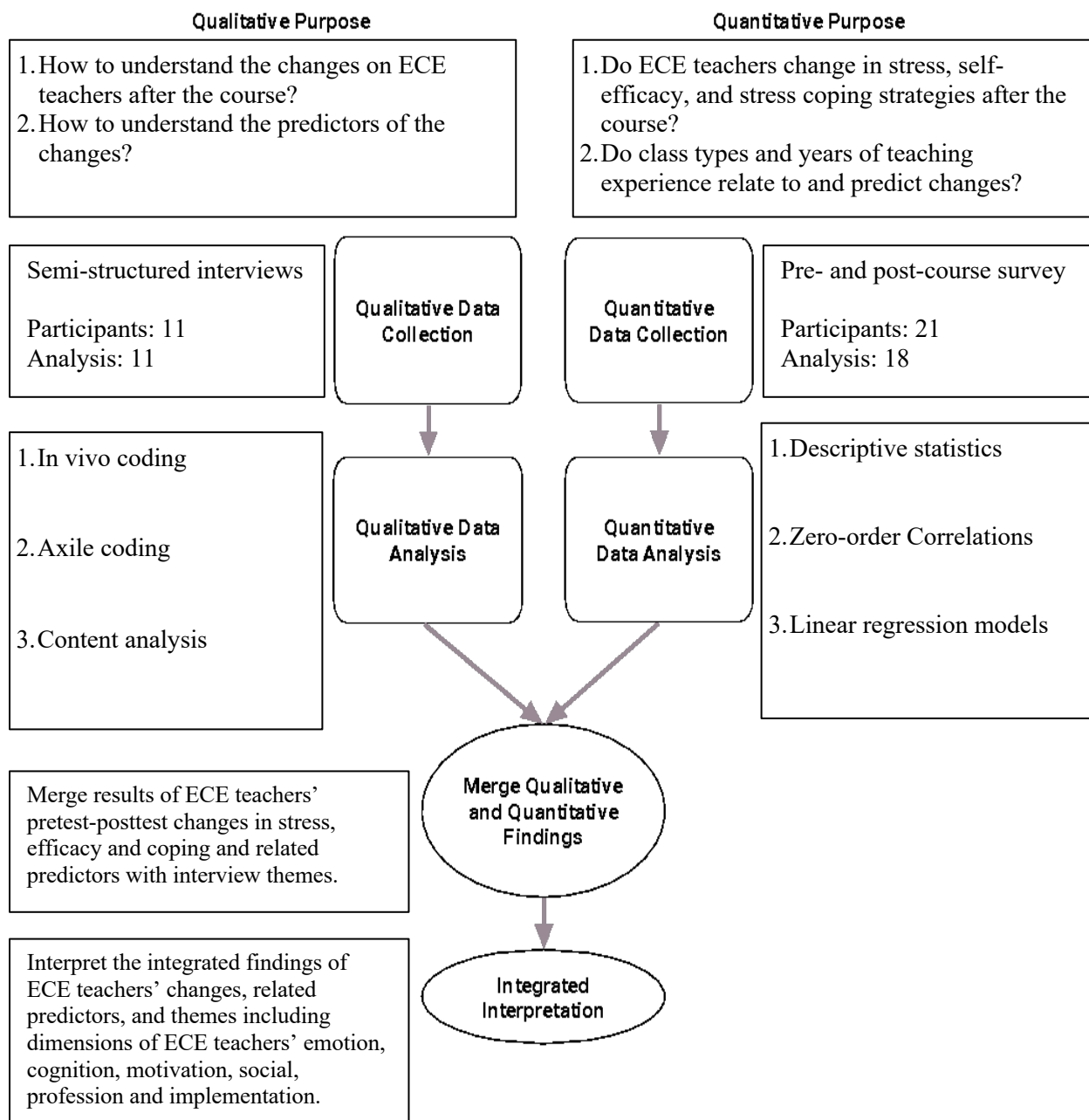
Sample

Full sample. Online pretest surveys were constructed in Qualtrics and emailed to all 146 students enrolled in Early Childhood and Family Studies (ECFS) 311 called "Teaching from the Inside Out: Resilience and Wellness for Educators" on October 4, 2022 (day of the first class), with a \$25 incentive for participation in the survey portion of the study. The class was held one day per week, with two sections: one that was a hybrid of in-person and online instruction ($N = 99$) and one that was an online-only ($N = 47$). The survey was left open for one week and closed October 11, 2022. Of the students

enrolled, $N = 24$ consented to participate but only $N = 21$ completed the pretest survey ($n = 18$ from the hybrid section and $n = 3$ from the online section).

Figure 1

The Procedural Diagram of Convergent Design Mixed Method



Online posttest surveys were distributed on December 12, 2022, the day after class ended (during the final week of that academic quarter). The posttest survey was left open for four weeks through the

final week of the school quarter. Of the 21 participants who completed the pretest survey, $N = 18$ participants completed the posttest survey (two did not respond and one did not complete demographic information; all three were from the larger hybrid section). Because statistical analyses employed teacher experience (a demographic) as a key predictor, and for consistency in results reporting, only data for the $N = 18$ participants who completed both pretest and posttest, including demographic data, were retained for analyses ($ns = 15$ and 3 from the hybrid and online sections). This said, there were no substantive differences in basic pretest-posttest analysis results when including the participants who did not complete demographics.

Interview sample. All students who consented to participate and who had filled out a pretest were emailed an invitation to participate in interviews about their experiences; of the 21 participants emailed, $N = 11$ agreed to participate in interviews ($n = 9$ from the hybrid section and 2 from the online section). Interviews took place between December 2 and 20, 2022.

Sample Characteristics

As can be seen from Table 2, all participants identified as female. Approximately half ($n = 10$) self-identified as Asian and that English was their primary language ($n = 13$). About two-thirds of participants were already working as educators in childcare settings – only five participants were not already working with children.

Table 2*Demographic Characteristics*

Characteristic	Online Class <i>n</i> = 3		Hybrid Class <i>n</i> = 15		Total <i>n</i> = 18	
	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%
<i>Gender</i>						
Female	3	100%	14	93%	17	94%
<i>Race</i>						
Asian	1	33%	9	60%	10	56%
White	2	67%	4	27%	6	33%
Latine	0	0%	1	7%	1	6%
<i>Primary Language</i>						
English	3	100%	10	67%	13	72%
Mandarin	0	0%	3	20%	3	17%
Korean	0	0%	1	7%	1	6%
<i>Education Level</i>						
Associate's degree	2	67%	3	20%	5	28%
High school diploma	0	0%	11	73%	11	61%
Bachelor's degree	1	33%	0	0%	1	6%
<i>Program</i>						
Childcare Center	2	67%	4	27%	6	33%
Head Start	1	33%	1	7%	2	11%
Elementary School	0	0%	2	13%	2	11%
After School Care	0	0%	1	7%	1	6%
Church Youth Group	0	0%	1	7%	1	6%
None	0	0%	5	33%	5	28%

Intervention

As alluded to earlier, the early childhood teacher wellness course was a web-based learning curricula delivered in hybrid (online and in-person) and online course modalities. Enrolled students of both classes logged into Canvas (Instructure, Inc., 2022), an online platform for delivering, tracking, and managing learning to complete weekly assignments including watching video lecture, taking online tests, reading, and discussing in forums (see Figure 2).

Figure 2

A Screenshot of Fall 2022 ECE Teacher Well-Being Course on Canvas

W canvas

ECFS 311 A

Autumn 2022

ECFS 311 A Au 22: Teaching From The Inside Out: Being A Resilient Educator

[Start Here](#) [Resources](#) [Study Hall Café](#) [Instructor](#)

WEEK 01, A WEEK 01, B WEEK 02 WEEK 03 WEEK 04 WEEK 5, A

WEEK 5, B WEEK 06 WEEK 7 WEEK 8, A WEEK 8, B WEEK 9, A

WEEK 9, B WEEK 10 FINAL

[View Course Stream](#)
[View Course Calendar](#)
[View Course Notifications](#)

To Do
Nothing for now

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Compared to the online class, hybrid class students attended four in-person classes—the first, third, sixth and final classes. Additionally, in-person class students did weekly gratitude posts on Canvas to identify five things they were grateful for. There were 10 sessions for 10 weeks including an opening class and thirteen training themes which were: 1) What is Stress; 2) Connecting with Others in Meaningful Ways; 3) Values Clarification and Commitment; 4) Choose Your Attention; 5) Mindfulness-Based Practices; 6) Gratitude; 7) Identifying Unhelpful Thoughts; 8) Managing Negative Emotions; 9) Cultivating Positive Emotions; 10) Establishing a Healthy Body for Resilience; 11) Therapeutic Lifestyle Choices (TLCs); 12) When You Need a Helping Hand and 13) Being a Resilient Educator. The content of the course combined comprehensive learning content including knowledge of stress, emotional regulation skills, mindfulness practices, body health, relationship building and teacher commitment. The course also supported ECE teachers to promote their self-value and confidence based on the theoretical framework of positive psychology. The detailed course descriptions of hybrid and online classes were attached separately in Appendix D and Appendix E.

The content for the course was adapted from the ACHIEVER Resilience Curriculum (ARC) which was primarily tested among secondary school teachers (Cook et al., 2017). Results from this previous study showed that teachers had reduced stress, increased teacher self-efficacy and strong intention in implementation after the intervention. These results are meaningful for shedding light on facilitating teachers' developing strategies and habits of coping with stress. The stance of the ARC is that teacher resilience is the precondition of job satisfaction and children's outcome. Therefore, the ARC supports teachers' resilience through promoting their values-directed behaviors. Two meta-practices composed the foundation of the intervention: "(1) values clarification and commitment, and (2) awareness and empowerment through mindfulness-based practices" (Cook et al., 2017, p. 19).

Survey Measures

Pretest and posttest surveys included the same three focal measurements: perceived stress, teacher self-efficacy, and stress-coping strategies. At pretest, demographics were also collected, and at posttest,

teachers' future intention to implement stress-coping strategies was also included. Below I describe each scale as well as sample-based reliabilities, which were computed as Cronbach's alpha.

Perceived Stress. The *Perceived Stress Scale* (PSS: Cohen et al., 1983) includes 10 items and was reported by the developers to have an internal consistency of .82. It assesses people's general stressful experiences in life. Questions include "In the last month, how often have you felt nervous and stressed?" and "In the last month, how often have you felt that you were on top of things?" Each item is rated on a 5-point scale from 0 = never to 4 = very often. In this study, internal consistency reliability coefficient for participants were .87 at pretest and .89 at posttest.

Self-Efficacy. The *Teacher Self-efficacy* scale (Tschannen-Moran & Hoy, 2001) includes 12 items and was reported by the developers to have an internal consistency of .90. This instrument assesses teachers' confidence in the teaching profession from three dimensions. They are teaching, classroom management, and engaging student capability. Questions include "How much can you do to control disruptive behavior in the classroom?" "How much can you use a variety of assessment strategies?" Each item is rated on a 9-point scale from 1 = nothing to 9 = a great deal. In this study, the internal consistency reliability coefficient for participants was .77 at both pretest and posttest.

Stress-Coping Strategies. The *Brief-Coping Orientation to Problems Experienced* (COPE: Carver, 1997) includes 28 items of 14 subscales and was reported by the developers to have following results of internal consistency: active coping ($\alpha = .68$), planning ($\alpha = .73$), positive reframing ($\alpha = .64$), acceptance ($\alpha = .57$), humor ($\alpha = .73$), religion ($\alpha = .82$), using emotional support ($\alpha = .71$), using instrumental support ($\alpha = .64$), self-distraction ($\alpha = .71$), denial ($\alpha = .54$), venting ($\alpha = .50$), substance use ($\alpha = .90$), behavioral disengagement ($\alpha = .65$) and self-blame ($\alpha = .69$). The questions covered "acknowledging the reality of what happened and learning to live with it," "using alcohol or other drugs to feel better," and "making jokes about it/making fun of the situation." Each item is rated on a 5-point scale from 0 = I haven't been doing this at all to 4 = I've been doing this a lot. In this study, internal consistency reliabilities (across all items) were .79 and .75 at pretest and posttest, respectively.

Intention to Implement Stress-Coping Strategies. The *Intention to Implement* scale was measured at posttest only and includes three items. Questions were modified from the original questionnaire of studies to test the behavior intentions based on the theory of planned behavior (Ajzen, 2002; Korteisto et al., 2010). The scale measures teachers' intention to implement coping strategies from the course in two settings: the early childhood education setting, and a general setting. Questions included "I intend to use stress coping strategies from the course in the next three months." "To what extent do the following factors prevent or facilitate your use of stress coping strategies?" Each item is rated on a 7-point scale from 1 = Strongly disagree to 7 = Strongly agree. Sample reliability was .78 at posttest.

Interviews

The instrument (Appendix A) used in qualitative research was the interview protocol which includes three sections: interview instruction, questions, and interviewer reflection. To interpret the underlying reasons for the participants' changes and predictors' influences from quantitative results, the interview focused on participants' positive experiences of using coping strategies to understand the effects of using coping strategies and why the effects are valid for participants. The main question asked that "in all the stress coping strategies you gained from this course, which are effective and why?" Six prompt questions were provided for understanding the internal change, external change, and motivations of perceived effective coping. A slide deck (see Appendix B) was used to guide the procedure during interviews. One slide listed stress coping strategies from the well-being course, which served as a reference tool for participants, allowing them to recall course content. To prevent leading answers that did not represent participants' learning experience, this list of stress coping strategies was not presented to participants unless specifically requested.

Data Analysis Plan

Quantitative Analyses. Linear regression models were used to model pretest-posttest change in perceived stress, self-efficacy, and stress-coping strategies; the same models were also used to evaluate the difference in intention to use stress-coping strategies in different settings compared to a null of 3

points on the 7-point scale. Sequential predictor entry was used to evaluate the research questions, beginning with a pretest, then class type (i.e., online vs. hybrid), and finally, years of teaching experience. For ease of results interpretation (especially to keep the intercept meaningful as pretest-posttest change), the pretest and teaching experience were standardized into *z*-scores and class type was effect coded (1 = online, -1 = hybrid). All analyses were conducted in *R* and squared semi-partial correlation coefficients are reported as effect sizes for each predictor's unique contribution in predicting outcomes.

Qualitative Analyses. Qualitative data analysis was divided into three stages. The first stage used in vivo coding with Atlas.ti8 (Miles, 2020) to code the effects of stress coping strategies with participants' language. In the coding process, I checked the code iteratively for patterns to surface, which transferred to the second phase. In the second phase, I conducted axial coding to group in vivo codes (Merriam & Tisdell, 2015) with the same theme together. The iterative process of comparing the meaning of in vivo codes involved changing and adding themes based on in vivo codes. In the third stage, themes were organized within dimensions which were created deductively to align with the frameworks of Mansfield and colleagues' (2012) "four dimensional framework of teacher resilience" which were emotional dimension, motivational dimension, social dimension and profession-related dimension and Kumpfer's (1999) internal self-resiliency factors, which included emotional stability, physical well-being, cognitive competency, behavioral/social skills, and spirituality. Content analysis was adopted to present numbers of participants who shared the same perceptions on effectiveness of coping strategies. Finally, the merged quantitative results and qualitative findings were presented to explain the significant pretest and posttest changes and the effects from class types and years of experience.

Researcher Positionality. I acknowledge my standpoint as a beginning teacher in early childhood education (ECE) and an international student in the higher educational institution of the United States. I have one year of experience in ECE settings. I identify myself as Asian and female whose primary language is Chinese and foreign language as English. I attached a detailed self-reflection and positionality in the Appendix C of this paper.

Chapter 4 Results

Descriptive Statistics

Means and standard deviations for pretest, posttest, and difference scores for both the online and hybrid sections of the class are provided in Table 3. Across measures, online participants gained most on student engagement self-efficacy and decreased most on perceived stress. The hybrid class section had the greatest growth in instructional strategies self-efficacy and had the largest decrease on perceived stress. At posttest, both sections had higher scores on intention to implement stress coping strategies in ECE settings compared to general settings.

Correlations

Table 4 displays zero-order correlations for variables used in statistical analyses. It shows a significant positive association between class type and years of teaching experience, and a significant negative significant correlation with pretest-posttest change in self-efficacy in instructional strategies. In other words, the online class (coded 1) had significantly more experience, but significantly lower change in instructional strategies self-efficacy than the hybrid class (coded -1). Given this, it was not surprising that there was a significant negative correlation between years of teaching experience and change in instructional strategies self-efficacy, suggesting that more experienced teachers (who were more likely to be in the online section of the class) had less room to grow. In terms of correlations among different measures, changes in perceived stress were positively correlated with the use of avoidance and emotional stress-coping strategies, and increased intention to implement stress-coping strategies in general settings was positively associated with increased intention to implement stress-coping strategies in ECE settings.

Table 3*Sample Descriptive Statistics*

Measure	Online Class (<i>n</i> = 3)			Hybrid Class (<i>n</i> = 15)			Total Sample (<i>n</i> = 18)		
	Pretest	Posttest	Change	Pretest	Posttest	Change	Pretest	Posttest	Change
	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)
Age (Years)	27.33 (9.50)	--	--	20.21 (1.19)	--	--	21.47 (4.50)	--	--
Teaching Exp (Years)	11.06 (10.58)	--	--	1.48 (1.60)	--	--	3.08 (5.36)	--	--
<i>Perceived Stress (0-40 points)</i>	25.67 (8.51)	25.00 (9.17)	-0.67 (1.53)	19.67 (5.85)	17.93 (5.84)	-1.73 (4.62)	20.67 (6.48)	19.11 (6.73)	-1.56 (4.25)
<i>Teacher SE (1-5 points)</i>									
Student Engagement SE	3.67 (0.63)	4.08 (0.14)	0.42 (0.63)	3.83 (0.54)	3.92 (0.40)	0.08 (0.43)	3.81 (0.54)	3.94 (0.37)	0.14 (0.46)
Instructional Strategies SE	4.50 (0.87)	4.17 (0.88)	-0.33 (0.38)	3.53 (0.54)	3.83 (0.51)	0.30 (0.33)	3.69 (0.68)	3.89 (0.57)	0.19 (0.41)
Classroom Management SE	3.50 (0.50)	3.58 (0.38)	0.08 (0.14)	3.65 (0.49)	3.82 (0.53)	0.17 (0.36)	3.63 (0.48)	3.78 (0.51)	0.15 (0.33)
<i>Stress Coping (1-4 points)</i>									
Problem-Focused Strategy	3.38 (0.70)	3.54 (0.44)	0.17 (0.29)	2.91 (0.50)	3.03 (0.44)	0.12 (0.51)	2.99 (0.54)	3.11 (0.47)	0.13 (0.47)
Emotion-Focused Strategy	2.86 (0.81)	2.97 (1.00)	0.11 (0.24)	2.49 (0.39)	2.51 (0.30)	0.02 (0.23)	2.56 (0.47)	2.59 (0.47)	0.03 (0.23)
Avoidance Strategy	1.71 (0.31)	1.63 (0.22)	-0.08 (0.14)	1.70 (0.35)	1.74 (0.33)	0.04 (0.32)	1.70 (0.34)	1.72 (0.31)	0.02 (0.30)
<i>Intent (1-7 points), diff from 4</i>									
General Settings	--	1.00 (0.00)	--	--	1.00 (1.13)	--	--	1.00 (1.03)	--
ECE Settings	--	1.33 (0.58)	--	--	1.67 (1.05)	--	--	1.61 (0.98)	--

Note. Exp = Experience. SE = Self-Efficacy. Intention = Implementation Intention. ECE = Early Childhood Education.

Table 4*Zero-Order Correlations Among Variables Used in Analyses*

Variables	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
1. Class (Online = 1, Hybrid = -1)	--										
2. Teaching Exp (Years)	.69	--									
3. Change in Perceived Stress (0-40 points) Teacher SE (1-5 points)	.10	.05	--								
4. Change in Student Engagement SE	.28	-.11	.03	--							
5. Change in Instructional Strategies SE	-.60	-.50	-.02	.26	--						
6. Change in Classroom Management SE Stress Coping (1-4 points)	-.10	-.07	.35	.45	.42	--					
7. Change in Problem-Focused Strategy	.04	.01	.03	.31	.36	.36	--				
8. Change in Emotion-Focused Strategy	.16	-.15	.28	-.28	-.17	-.25	.12	--			
9. Change in Avoidance Strategy Implementation Intention (1-7 points), diff from 4	-.16	-.12	.65	-.29	.06	.02	.13	.47	--		
10. Posttest General Settings	.00	.01	.08	-.09	.11	-.26	.02	.00	-.14	--	
11. Posttest ECE Settings Implementation	-.13	-.12	-.11	.03	.35	-.12	.43	-.05	.06	.64	--

Note. Exp = Experience. SE = Self-Efficacy. ECE = Early Childhood Education. Correlations significant at the .05 level (2-tailed) are boldfaced.

Multiple Linear Regression Model Results

Intercepts (Average Differences)

Results from multiple linear regression models are provided in Tables 5 and 6. Because there were no substantive differences in predictor effects among the models, I focused on Model 3 results (last set of columns, with all predictors incorporated). Table 5 shows significant changes to the mean between pretest and posttest across all student teachers for two of the measures: student engagement self-efficacy (an increase of 0.27 points) and use of emotional-focused stress-coping strategies (an increase of 0.18 points). Table 6 shows a significant difference between the conditional mean intent to implement coping strategies in both ECE and general settings and the neutral point of 3 on the 7-point rating scale. For a better perspective on the relative differences across outcomes, I transformed the model-based means into percentages and plotted them from least to greatest in Figure 3.

Figure 3

Model-Based Mean Difference Scores Across Outcomes, in Percentages

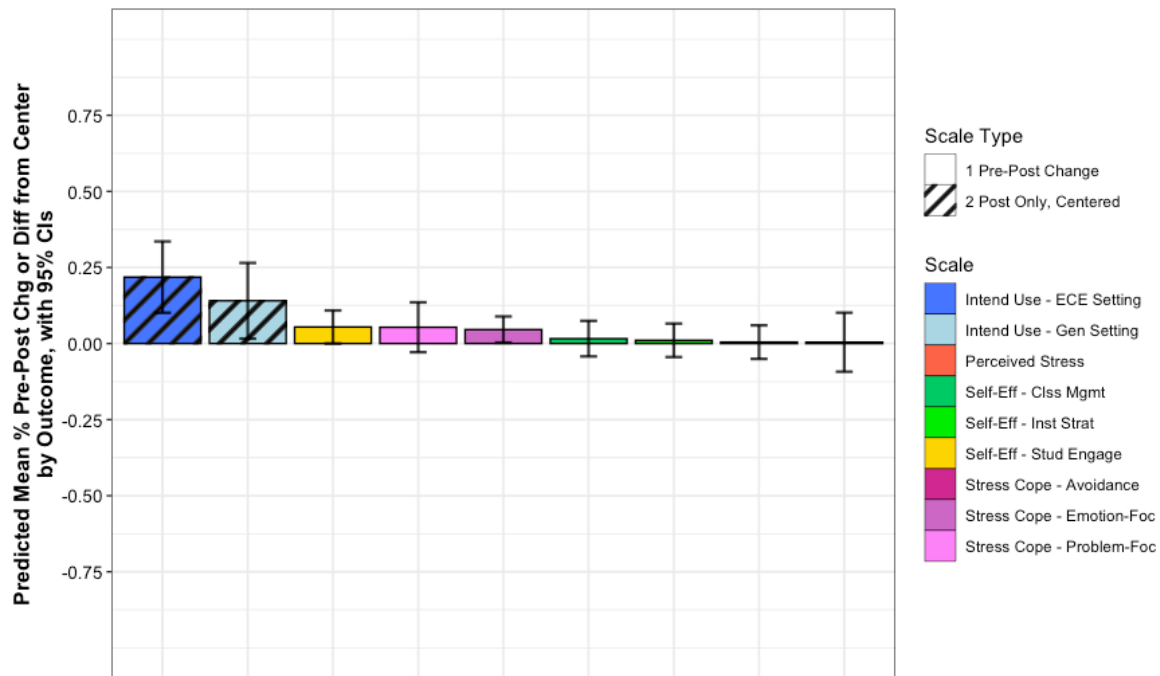


Table 5*Regression Results Predicting Pretest-Posttest Change in Perceived Stress, Self-Efficacy, and Stress-Coping Strategies*

Coefficient	Model 1				Model 2					Model 3				
	<i>Est</i>	<i>(SE)</i>	<i>t</i>	<i>P</i>	<i>Est</i>	<i>(SE)</i>	<i>T</i>	<i>p</i>	<i>sr</i> ²	<i>Est</i>	<i>(SE)</i>	<i>t</i>	<i>p</i>	<i>sr</i> ²
<i>Perceived Stress</i>														
Intercept (Mean)	-1.56	(0.99)	-1.57	.137	-0.75	(1.39)	-0.54	.598		0.18	(1.81)	0.10	.923	
Pretest Score (Z)	-1.14	(1.02)	-1.11	.282	-1.47	(1.10)	-1.33	.598	.10	-1.94	(1.26)	-1.54	.146	.14
Class (1 = Online)					1.21	(1.44)	0.84	.598	.04	2.60	(2.25)	1.16	.266	.08
Teaching Exp Years (Z)										-1.31	(1.61)	-0.81	.431	.04
<i>Student Engagement SE</i>														
Intercept (Mean)	0.14	(0.08)	1.83	.086	0.22	(0.10)	2.13	.050		0.27	(0.13)	2.15	.050	
Pretest Score (Z)	-0.34	(0.08)	-4.38	<.001	-0.33	(0.08)	-4.26	.001	.51	-0.31	(0.09)	-3.53	.003	.36
Class (1 = Online)					0.12	(0.10)	1.14	.274	.04	0.20	(0.15)	1.32	.209	.05
Teaching Exp Years (Z)										-0.09	(0.12)	-0.76	.461	.02
<i>Instructional Strat SE</i>														
Intercept (Mean)	0.19	(0.08)	2.36	.031	0.05	(0.11)	0.41	.690		0.05	(0.13)	0.42	.684	
Pretest Score (Z)	-0.23	(0.08)	-2.66	.017	-0.13	(0.09)	-1.40	.181	.07	-0.13	(0.10)	-1.21	.246	.06
Class (1 = Online)					-0.22	(0.12)	-1.81	.090	.12	-0.21	(0.15)	-1.40	.183	.08
Teaching Exp Years (Z)										-0.02	(0.12)	-0.14	.891	.00
<i>Classroom Mgmt SE</i>														
Intercept (Mean)	0.15	(0.08)	1.95	.068	0.12	(0.11)	1.07	.301		0.08	(0.14)	0.59	.564	
Pretest Score (Z)	-0.09	(0.08)	-1.10	.289	-0.09	(0.08)	-1.13	.278	.08	-0.11	(0.09)	-1.18	.258	.09
Class (1 = Online)					-0.06	(0.11)	-0.52	.610	.02	-0.11	(0.16)	-0.67	.516	.03
Teaching Exp Years (Z)										0.06	(0.13)	0.44	.667	.01

(Continued Next Page)

Table 5, Continued

Coefficient	Model 1				Model 2					Model 3				
	<i>Est</i>	<i>(SE)</i>	<i>t</i>	<i>p</i>	<i>Est</i>	<i>(SE)</i>	<i>t</i>	<i>p</i>	<i>sr</i> ²	<i>Est</i>	<i>(SE)</i>	<i>t</i>	<i>p</i>	<i>sr</i> ²
<i>Problem-Focused Strat</i>														
Intercept (Mean)	0.13	(0.09)	1.33	.202	0.23	(0.13)	1.82	.089		0.21	(0.15)	1.40	.183	
Pretest Score (Z)	-0.27	(0.10)	-2.83	.012	-0.31	(0.10)	-3.12	.007	.39	-0.32	(0.10)	-3.02	.009	.39
Class (1 = Online)					0.16	(0.13)	1.22	.243	.06	0.13	(0.18)	0.75	.468	.02
Teaching Exp Years (Z)										0.03	(0.14)	0.23	.822	.00
<i>Emotion-Focused Strat</i>														
Intercept (Mean)	0.03	(0.05)	0.61	.552	0.08	(0.07)	1.12	.281		0.18	(0.08)	2.29	.038	
Pretest Score (Z)	-0.05	(0.05)	-0.93	.364	-0.07	(0.06)	-1.19	.254	.08	-0.11	(0.05)	-1.95	.071	.18
Class (1 = Online)					0.07	(0.08)	0.99	.340	.06	0.23	(0.10)	2.35	.034	.26
Teaching Exp Years (Z)										-0.16	(0.07)	-2.19	.046	.23
<i>Avoidance Strat</i>														
Intercept (Mean)	0.02	(0.06)	0.34	.742	-0.02	(0.08)	-0.23	.820		0.02	(0.10)	0.18	.857	
Pretest Score (Z)	-0.15	(0.06)	-2.40	.029	-0.15	(0.06)	-2.35	.033	.26	-0.17	(0.07)	-2.41	.030	.29
Class (1 = Online)					-0.06	(0.08)	-0.72	.485	.02	0.00	(0.12)	-0.03	.980	.00
Teaching Exp Years (Z)										-0.06	(0.09)	-0.69	.505	.02

Note. SE = Self-Efficacy. Mgmt = Management. Strat = Strategy. Class was effect coded as 1 = Online and -1 = Hybrid. All models estimated in base R as linear models with OLS. Significant coefficients with alpha = .05, 2-tailed boldfaced.

Table 6*Regression Results Predicting Differences From Neutral in Intent to Use Stress-Coping Strategies*

Coefficient	Model 1				Model 2					Model 3				
	<i>Est</i>	<i>(SE)</i>	<i>T</i>	<i>p</i>	<i>Est</i>	<i>(SE)</i>	<i>T</i>	<i>P</i>	<i>sr</i> ²	<i>Est</i>	<i>(SE)</i>	<i>t</i>	<i>p</i>	<i>sr</i> ²
<i>General Settings</i>														
Intercept (Mean)	1.00	(0.24)	4.12	.001	1.00	(0.34)	2.98	.009		0.98	(0.41)	2.41	.029	
Class (1 = Online)					0.00	(0.34)	0.00	1.000	.00	-0.02	(0.48)	-0.05	.959	.00
Teaching Exp Years (Z)										0.03	(0.36)	0.08	.941	.00
<i>ECE Settings</i>														
Intercept (Mean)	1.61	(0.23)	6.99	<.001	1.50	(0.32)	4.74	<.001		1.53	(0.39)	3.97	.001	
Class (1 = Online)					-0.17	(0.32)	-0.53	.605	.02	-0.12	(0.45)	-0.28	.785	.01
Teaching Exp Years (Z)										-0.05	(0.34)	-0.14	.892	.00

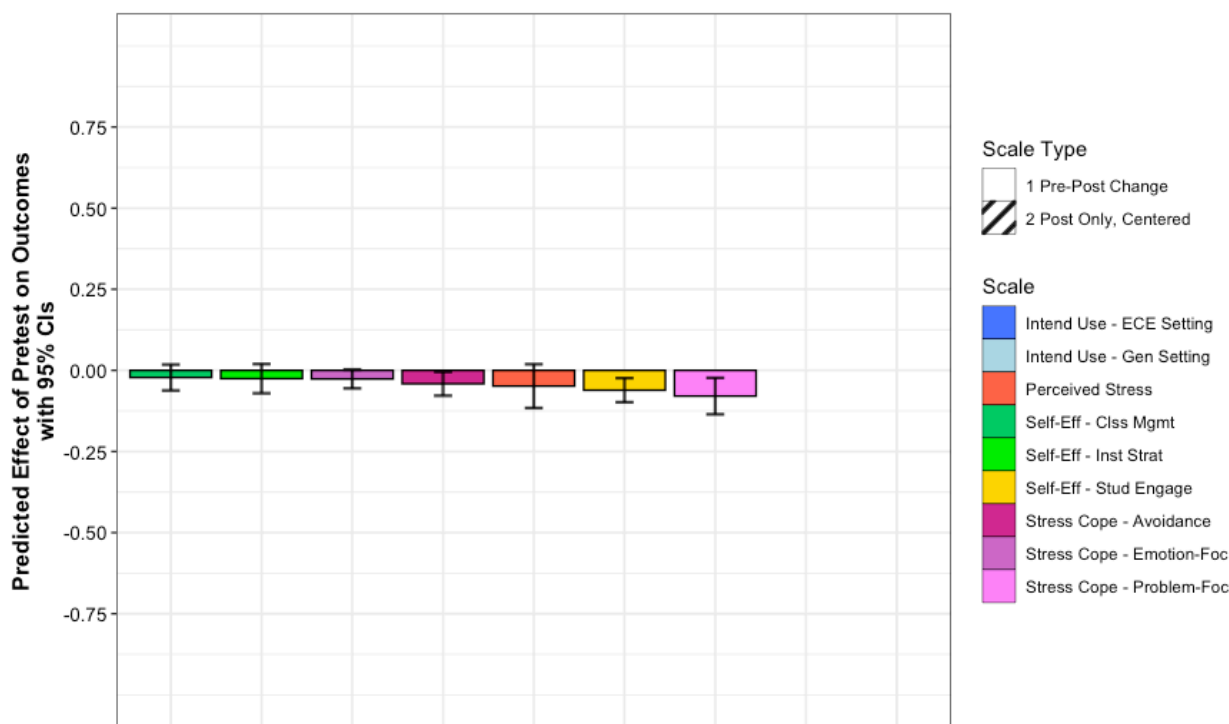
Note. Class was effect coded as 1 = Online and -1 = Hybrid. All models estimated in base R as linear models with OLS. Significant coefficients with alpha = .05, 2-tailed boldfaced.

Pretest Effects on Differences

As can also be seen in Table 5, pretests were significantly negatively predictive of change in three of the outcomes. Holding all else constant, for every standard deviation increase in pretest, efficacy in student engagement was predicted to decrease by 0.31 points (36% of variance in change uniquely explained), problem-focused stress coping was predicted to decrease by 0.32 points (39% variance explained), and avoidance coping was predicted to decrease by 0.17 points (29% variance explained). Although pretest results did not show significant effects on the other outcomes, it was notable that the pattern was in the same direction. In short, teachers who started out with higher scores had less change, on average, than those who started out lower. For ease of comparison, Figure 4 illustrates the pretest effects across outcomes.

Figure 4

Model-Based Pretest Effects Across Outcomes, in Percentages

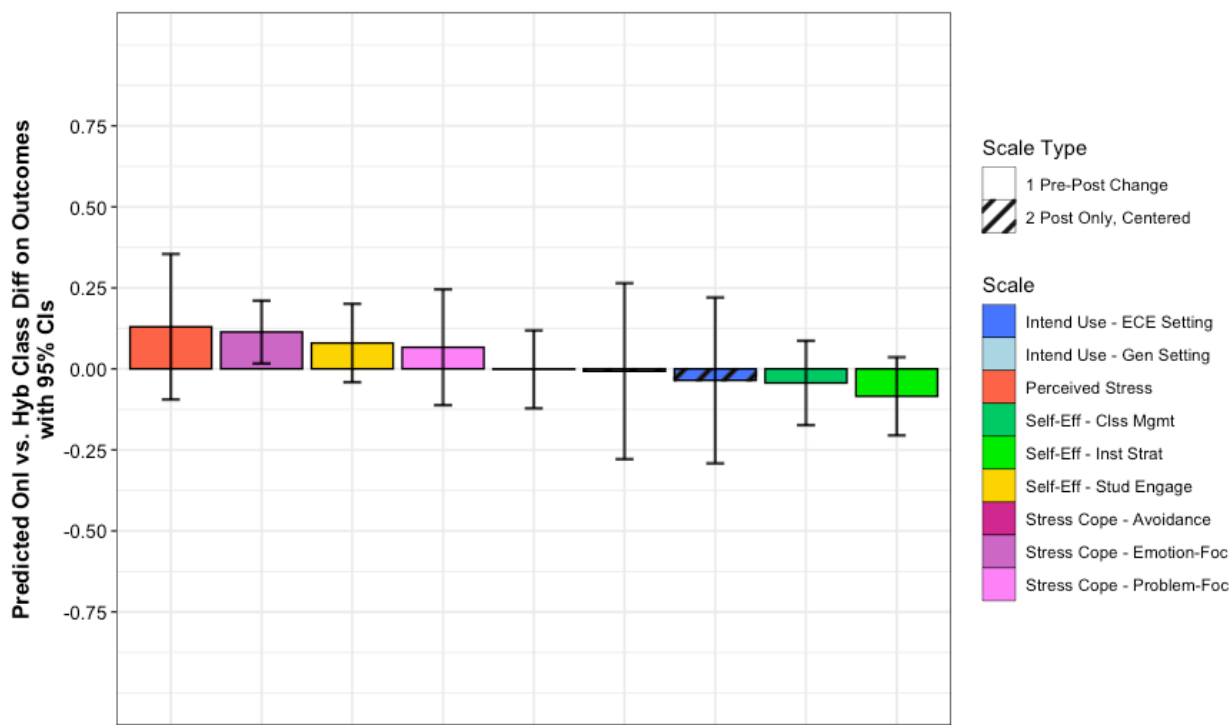


Class Section Effects on Differences

With respect to unique class section effects on outcomes, the only significant difference found was on pretest-posttest change in the use of emotion-focused stress-coping strategies. Holding all else constant, the online class exhibited 0.23 points greater pretest-posttest change than average, and 0.46 points greater change than the hybrid class, uniquely explaining 26% variance in change. Again, for ease of comparison, I plotted the model-based online vs. hybrid class section differences in percentages (see Figure 5).

Figure 5

Model-Based Class Section Effects Across Outcomes, in Percentage



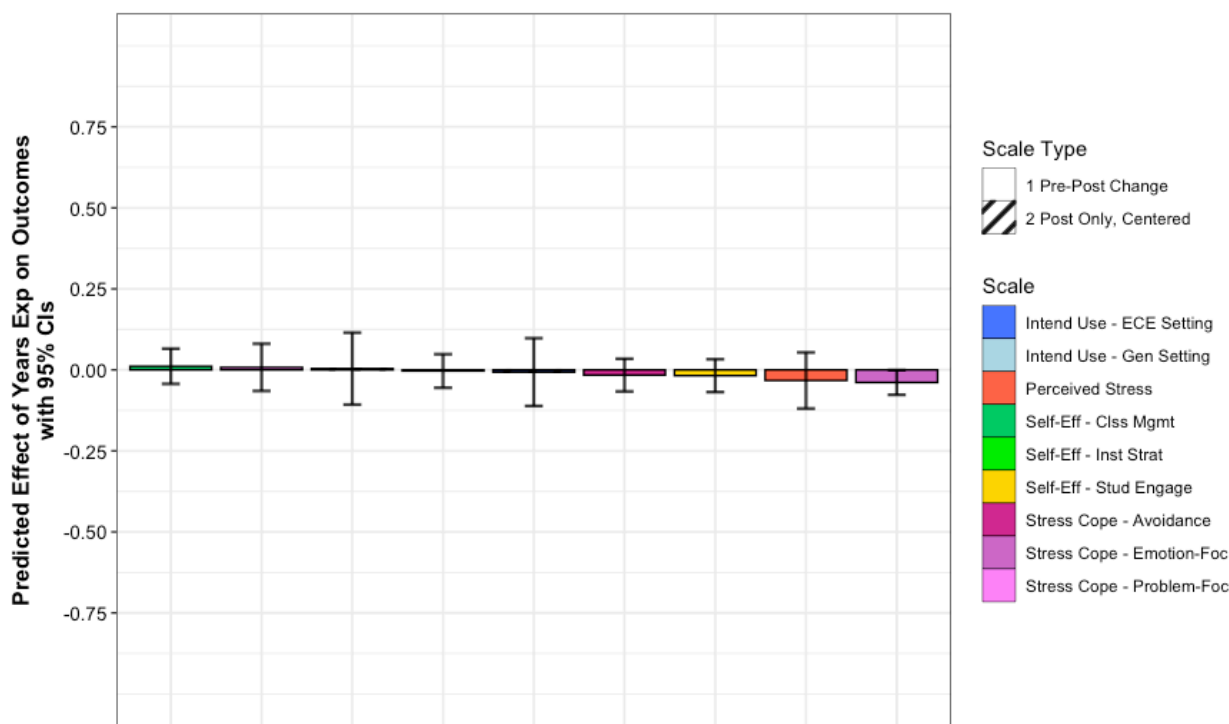
Teaching Experience Effects on Outcomes

With respect to unique teaching experience effects on outcomes, the only significant finding was the change in the use of emotion-focused stress-coping strategies from pretest to posttest. Holding all else constant, student teachers who were 1 standard deviation higher than average in their teaching experience were predicted to have 0.16 points lower-than-average change from pretest to posttest, uniquely

explaining 23% variance in change. Again, for ease of comparison, I plotted the effects across all measures in percentages (see Figure 6). In short, teaching experience, controlling for pretest and class section, had little effect on the changes.

Figure 6

Model-Based Teaching Experience Effects Across Outcomes, in Percentages



Qualitative Results

Themes related to ECE teachers' effective stress coping experience by implementing coping strategies from the course surfaced from interview data. For understanding results from quantitative analysis, this study selected themes and dimensions that were relevant to quantitative findings. The main themes from interviews in terms of coping strategies included: 1) commitment to children, maintain calmness and positive mindset for behavior management in the professional dimension, 2) mind organization in the cognitive dimension, 3) benefits with emotional-focused coping strategies, 4) good outcomes with minimal effort in the implementation dimension, 5) effective coping in emotional

dimension from different class types, and 6) emphasized relationship and emotional support from less experienced teachers in social dimension.

Committed and Positive Behavior Management for Children in Profession Dimension

Participants talked about useful stress coping strategies they adopted from the course when working with children. A pattern surfaced in interviews which showed that 64% of participants think effective coping enable them to be better committed to children (see Table 7 below). For example, one participant was able to stabilize her own emotions, she felt more capable of engaging children in a positive and meaningful interactions. Lisa said:

I've noticed that if I engage in those routines, I'm better prepared to go into the classroom and engage in meaningful ways and things that come up in the classroom wouldn't quite bother me as much because I'm already in a place of mindfulness and calmness before I even step foot in the classroom (Lisa, interview, December 8, 2022).

Two themes (Table 7) focused on behavior management for children which were maintaining calmness for behavior management and positive mindset for behavior management. Participants pointed out that stress coping strategies supported them to reframe challenging situations and think positively rather than concerning themselves about negativities. For example, the same participant said:

I think the one that's set out to me was reframing the negative experiences for the positive thoughts. And because I think in the classroom there will always be disruptive behaviors or things that don't go according to plan. So, learning how to kind of reframe that to make a positive situation out of it. I think that's the most helpful for me (Lisa, interview, December 8, 2022).

Table 7*Themes on Effectiveness of Stress Coping Strategies in the Profession Dimension*

Perceived effectiveness of stress coping strategies			N = 11	
Dimension	Themes	Meaning	n	%
Profession	1 Committed to children	Focus on children instead of selves	7	64%
	2 Maintain calmness for behavior management	Teacher can stay calm when manage class and child behavior	3	27%
	3 Teacher-child relationship	Promote teacher-child relationship	3	27%
	4 Classroom climate	Maintain a positive classroom climate	2	18%
	5 Teaching skill	Strengthen teaching skills	2	18%
	6 Learning subject	Transfer coping strategies into class learning subjects	2	18%
	7 Positive mindset for behavior management	Teacher stays positive when manage class and child behavior	2	18%
	8 Preparation	Be prepared for working in classroom environment	1	9%
	9 Teaching moment	Be able to control emotion and thoughts so as to seize teaching moment	1	9%
	10 Work with family	Be able to control emotion and thoughts so as to work well with families	1	9%
	11 Workplace relationship	Improve relationship in workplace	1	9%

Maintain Cognitive Function for Problem-Solving in Cognitive Dimension

Patterns revealed that 55% of participants (see Table 8 below) are coping with stress by calmly evaluating a situation and thinking clearly for decision making. In the interviews, participants value the effect of coping strategies which can organize their mind to regulate their emotion. For example:

I like writing things down, or my journal is writing things down in planning as well. So, I think that is what kind of gets my mind organized (Cindy, interview, December 2, 2022).

In stressful situations, participants need to maintain calmness and cognitive function. They perceive emotional regulation as an effective coping strategy to stabilize their emotions to concentrate on problem-solving. One participant said she uses emotional regulation “just to balance myself out so that I

can get back to like stage 0 and go back off to that foundation. So, it helps me with processing things that are happening as well, because when so many things are so hectic, I can't really think. It just really helps me with balancing what I'm thinking and allowing me to see things clearly instead of through a super foggy emotional lens" (Cara, interview, December 9, 2022).

Table 8

Themes on Effectiveness of Stress Coping Strategies in the Cognitive Dimension

Perceived effectiveness of stress coping strategies			N = 11	
Dimension	Themes	Meaning	n	%
Cognition	1 Positive mindset	Intentionally think about or remember positive things.	7	64%
	2 Mind organization	Have clear mind to think.	6	55%
	3 Thinking approaches	Solving problems through analysis, evaluation, planning and reflection	4	36%
	4 Control unhelpful thoughts	Prevent negative and unhelpful thinking.	2	18%
	5 Objective	Be able to maintain objective of thinking	1	9%

Benefits From Emotional-Focused Coping Strategies

When asked about effective coping strategies they learned in this course, three participants with one from hybrid class and two from online class mentioned meditation and prayer (Table 9), which is a type of emotional-focused coping strategies in the COPE scale (Carver et al., 1989). With meditation, relaxation was easier to achieve and improve sleep quality which was one of common stressors among ECE teachers (Soderberg et al., 2016).

Table 9*ECE Teachers' Reported Effective Stress Coping Strategies From the Course*

Strategy	N = 11	
	n	%
Mindful breathing	5	45%
Gratitude practice	5	45%
Meditation and praying	3	27%
Distraction	3	27%
Mindful daily routines	2	18%
Personal time	2	18%
Strengthening network	2	18%
Emotion evaluation	1	9%
Mindful stop	1	9%
Physical health	1	9%
Positive self-talk	1	9%
WOOP	1	9%
Reframing thoughts	1	9%

One of the participants said:

I never tried it before I took this class, and then after I took this class, because it was class assignment to write this experience, then I think it can help me fall asleep faster because they focus on their own sense is their own five senses. And then I think it will be faster to let my brain become a blank and then easier to fall asleep (Kate, interview, December 7, 2022).

Praying also promotes participants' concentration by eliminating unhelpful thinking. As it was described, a participant made mindful breathing through praying, which lowers the chance of distraction.

I think another strategy is probably meditation and prayer. I don't really meditate often, but I found that by praying, it does help, because it built my faith. But also it lets me work on my breathing and lets me think about my thoughts more clearly and let all the distractions go away (Amy, interview, December 6, 2022).

Good Outcomes with Minimal Effort in Implementation Dimension

Aligning with the quantitative results, a recurring pattern surfaced in the dimension of implementation. Nearly three-fourths of participants (73%) (Table 10) responded that a good outcome was the strongest motivation to use coping strategies in general situations. Learning coping strategies

provided participants a method that lowered their stress by easing their feeling of difficulty when they face challenging situations. For example, one participant said:

I think it motivates me because I do see positive outcomes from taking that time to work through my stress, rather than just kind of like setting it aside and ignoring it. And I think it just like ultimately, kind of comes to my mind when I'm making those efforts (Cindy, interview, December 2, 2022).

One participant benefited from the weekly gratitude journal. She stated that as she continued with the practice of thinking about grateful things, the positive moments were highlighted and diminishing negative emotions in general situations.

To be honest for me to do the gratitude journal is because of the assignment for the course, but I found out that doing the gratitude journal will help me find more things happened during a period. When I put them together and that is when I'm doing the journal. And I found out that there are a lot of things that are positive, and that is more than the negative emotion I have, or negative things I have. I think the gratitude journal can be helpful for ignoring something bad (Laura, interview, December 20, 2022).

Good outcomes were also achieved when a participant brought gratitude practice in a ECE setting. She chose to apply gratitude practice because it allowed her to see through a positive lens and promoted satisfaction for her work:

It's really helpful, in a way, to get myself actively thinking about things I was grateful for, even in the moment. A kid at work— I'll be playing a game with them, and they just like laugh, and they're just having the time of their life, and you're just inside. You just feel it like emitting everything bad that happens because you just feel like those little moments (Cara, interview, December 9, 2022).

Most participants (73%) implemented coping strategies that took minimal effort of using or learning those strategies. From their perspective, when strategies “were easy to adopt,” they were more likely to form ingrained habits. When encountering stressful situations, participants could rely on the

ingrained coping mechanism to effectively relieve their stress without causing more feelings of burden in mastering an unfamiliar strategy:

They were easy to adopt into my life. Since they were easy to adopt, they stuck the most, whereas with some other strategies, I had to be a lot more conscious about making them stick. And so I just feel like those have been the most successful for me so far, because I've had the most practice with them (Hanna, interview, December 14, 2022).

Table 10

Themes on Effectiveness of Stress Coping Strategies in the Implementation Dimension

Perceived effectiveness of stress coping strategies			N = 11	
Dimension	Themes	Meaning	n	%
Implement- ation	1 Effectiveness	good outcomes	8	73%
	2 Less effort	naturally adopt and requires less time and effort on learning and practice the strategy	8	73%
	3 Enjoyable	enjoy the process when using the strategy	4	36%
	4 Strategy combination	use multiple strategies	3	27%
	5 Assignment	practice a coping strategy for doing assignment	3	27%
	6 Immediate effect	have immediate effect at the moment of stress	2	18%
	7 Proactive approach	use as a routine in daily life	2	18%
	8 Align with personality	a strategy is aligned with personality	1	9%
	9 Multiple use	a strategy can be applied in multiple situation	1	9%
	10 Practical	a strategy is practical to apply when feel stress	1	9%

Effective Coping in Emotional Dimension From Different Class Types

As shown on Table 11 and Table 12, most participants from both classes mentioned calmness when describing effective coping strategies. From their perspective, maintaining calmness was important to the initial problem-solving process and receiving the expected outcome to resolve stress. A participant

found when she regained calmness, she was able to take feasible actions and lessen the likelihood of remaining in the stressful situation. She stated:

I remember I was really stressed about a grade coming back from one of my midterms. So, I did kind of the combination of the distraction and the grounding techniques. So, I tried one, and when it didn't work, I moved on to the next, and I was able to calm myself down a bit and refocus on something else that was more productive (Linda, interview, December 1, 2022).

In ECE settings, participants applied coping strategies to maintain calmness when children showed challenging behavior. As it was interpreted from the interview, stabilizing teachers' own emotions was important for providing meaningful and positive intervention. Effective coping strategies helped teachers alleviate stress to prevent deteriorating the teacher-child relationship and classroom climate while managing children's challenging behaviors.

When children are not following your direction, yelling, or bullying others, and you're trying to stop them but they just don't listen to your order. That is the time I really need to take a deep breath and like the mindfulness breathing (Laura, interview, December 20, 2022).

In addition, both online and hybrid class had the same themes of perceived effective coping, including dissociate to stress, minimize stress, emotional skill, and positive emotion. However, only two teachers from the online class participated in the interviews. Patterns of differences between the two classes were not obvious based on the frequency of themes.

Table 11

Themes of Online Class Participants in Describing Coping Strategies' Effectiveness in the Emotional Dimension

Themes	N = 2	
	n	%
Calmness	2	100%
Positive emotion	1	50%
Dissociate to stress	1	50%
Minimize stress	1	50%
Emotional regulation	0	0%
Emotional skill	1	50%
Empathy	0	0%

Table 12

Themes of Hybrid Class Participants in Describing Coping Strategies' Effectiveness in the Emotional Dimension

Themes	N = 9	
	n	%
Calmness	8	89%
Positive emotion	7	78%
Dissociate to stress	6	67%
Minimize stress	6	67%
Emotional regulation	6	67%
Emotional skill	2	22%
Empathy	1	11%

Emphasized Relationship and Emotional Support from Less Experienced Teachers in Social

Dimension

Interview themes of 11 participants were organized into two groups of less experienced and experienced teachers. From the social dimension (Table 13), differences between two groups of participants became apparent. All the less experienced participants took strengthening relationship as an important effect of coping strategies. Sixty percent of them value the emotional support from peers and families. For experienced participants, no theme of the social dimension was found in more than half of

participants interviews. Experienced participants thought more about being a good influence and took the role of offering support. On the other hand, less experienced participants highlighted the bond with others and trustful relationships that buffer negative emotion. For example, a participant with no more than one year of experience said:

I love my coworkers, and, like all of us, [they] are a very good support system for one another. So, I noticed that all of us, whenever we get really stressed out together, we tend to laugh it off now, and just say like, 'oh, my gosh! I'm so thankful for all of you.' At least like that I don't know if that counts, but showing gratitude for each other has been like very common, especially lately, because it's gotten more stressful with finals coming up (Helen, interview, December 5, 2022).

Table 13

Themes in Describing Coping Strategies' Effectiveness From Different Teaching Experiences in the Social Dimension

Perceived effectiveness of stress coping strategies			Lower Experience (Years of Experience ≤ 1) $N = 5$		Higher Experience (Years of Experience > 1) $N = 6$	
Dimension	Theme	Meaning	<i>n</i>	%	<i>n</i>	%
Social	1 Strengthening Relationship	build, bond and improve relationship	5	100%	2	33%
	2 Seek for support	Seek for emotional support and advice	3	60%	1	17%
	3 Positive impression	making positive rather than stressful impression in social activities	2	40%	0	0%
	4 Trust in relationship	cultivate trustfulness in relationships	1	20%	0	0%
	5 Good influence	be enjoyable or make social activities enjoyable	0	0%	2	33%
	6 Communication subject	transfer coping strategies to communication subjects	0	0%	2	33%
	7 Be supportive	Provide support and advice for people who need help	0	0%	1	17%
	8 Focus on others	avoid distractions and focus on other people in social activities	0	0%	1	17%

Chapter 5 Discussion

This research applied a convergent mixed-method design (Creswell & Plano Clark, 2018) to examine participants' changes in stress, self-efficacy, and coping, as well as predictors that affected the changes. This project was designed to investigate the impact of the ECE teacher well-being course which aimed to cultivate the resilience of ECE teachers at their different career stages through hybrid and online modalities. The ECE teacher well-being course is based on the prosocial classroom framework (Jennings & Greenberg, 2009) which pointed out that teachers' emotional competence and well-being were essential for implementing effective teaching and building teacher-student relationships in supportive and positive manners. Grounded in this framework, interventions on ECE teachers' resilience should enable ECE teachers to address their particular stressors and to develop efficacy and well-being which facilitate them to better manage classroom and guide students' behavior. The ECE teacher well-being course provided ECE teachers with comprehensive learning content including knowledge of stress, emotional skills, mindfulness practices, strategies for body health, and methods of maintaining relationships. Both pre-service and in-service teachers who participated in online and hybrid classes gained significant improvements in teachers' self-efficacy to engage students, especially for those who started with a low level of student engagement efficacy. This result aligned with Jennings's (2013) study of CARE program. The following sections discussed some key findings in the context of the ECE teacher well-being course for promoting teachers' resilience and reducing stress.

Increase of Efficacy in Student Engagement

The 2013 CARE program (Jennings et al., 2013) had similar findings to this study. Participants in 2013 CARE program had increased teacher self-efficacy in student engagement after receiving mindfulness and emotional regulation interventions. In the present study, ECE teachers participated in interviews and reported that stress coping strategies were effective when regulating emotion to remain calm and positive for supporting children with challenging behavior. Furthermore, being able to stabilize emotion allowed ECE teachers to perform their primary role of teaching and firmed their commitment to

children. Consistent with past research, helping teachers with emotional regulation can maintain their cognitive function in stressful situations, thereby improving teacher self-efficacy (McEwen & Sapolsky, 1995). Teachers who have more confidence in the impact of positive emotion show more student engagement efficacy (Sutton et al., 2009). Therefore, increased student engagement efficacy may come from improved emotional stability for teachers to cope with their own stress when they encounter children's unexpected reactions. Compared to the teacher well-being intervention studies in the review (Table 1), the teacher well-being course is the only intervention for ECE teachers with a wide range of teaching experience that found increased teacher self-efficacy in student engagement.

Perceived Stress

Based on the transactional theory of coping (Lazarus & Folkman, 1987), problem-focused coping is negatively associated with stress. However, the result of correlation yields no such association. This study found a significantly positive association between avoidance coping and participants' perceived stress which is consistent with a prior study (MacIntyre et al., 2020). Since no significant reduction was found on either participants' stress level, or avoidance coping, it is likely that participants need more support in reducing the disengagement behaviors to cope with stress. In response to the result of increased preschool teachers' stress after the SELF-T program (Lang et al., 2020), another explanation for why the stress level did not reduce is that ECE teachers may be more aware of the severity of their stress after learning about stress. The third reason may be that participants had an increased level of stress at the time of data collection. Although the descriptive statistics showed a reduction in the change in participants' stress after intervention in both hybrid and online classes, the majority of participants were undergraduate students who reported their posttest stress levels during the final weeks while preparing for exams and paper writing. This may create additional stressors for students to deal with.

Increase of Using Emotional-Focused Coping

This study applied new variables compared to past interventions to investigate the immediate effect from the ECE teacher well-being course through the changes of coping strategies. Quantitative

results showed increased use of emotional-focused coping strategies across all the conditions. The emotional-focused coping strategy scale, as pointed out by Stanton et al. (1994), had confounded coping efforts with some items associate with distress and some items which facilitated stress coping. For example, the subscale of venting (“I’ve been expressing my negative feelings”) was related to negative outcomes including less health, happiness, and satisfaction towards life (MacIntyre et al., 2020; Stoeber & Janssen, 2011). However, the subscale of religion (“I’ve been praying or meditating”) incorporated meditation and relaxation of coping, which was positively associated with reduced stress (Hofmann et al., 2010), and positive affect (Stone et al., 1995).

In the present study, results were also divided into positive and negative outcomes on the increased use of emotional-focused coping. Reflected in the interviews, participants who used meditation and prayer had positive outcomes including relaxation and concentration. On the other hand, a study found that the short-term benefits of emotional-focused coping can be risky in long-term for triggering rumination, which is related to depression and anxiety (Stanton et al., 1994). This explained the significant correlation between increased emotional-focused coping and increased avoidance coping, which was also correlated with increased stress. Whether subscales of emotional-focused coping were associated with distress or not, long-term use of emotional-focused coping indicated negative outcomes of increased avoidance which could lead to increased stress.

High Implementation Intention of Coping Strategies

The study found participants strongly intended to implement coping strategies from this course in both general and ECE settings. The Theory of Planned Behavior (Ajzen, 1988), extended from the Theory of Reasoned Action (Fishbein & Ajzen, 1975), stated that the attitude or the behavioral belief was one of the predictors for the formation of intention (Armitage & Christian, 2003). When people think that they have more likelihood to achieve expected outcomes, people believe in the impact of their behavior which formed behavior intention (Armitage & Christian, 2003). In present study, most ECE teachers stated that they chose to use certain coping strategies instead of others from the course because of the good outcomes from the coping strategies they used. Based on the Theory of Planned Behavior (Ajzen, 1988), the

effectiveness of certain coping strategies indicated the formation of beliefs in alleviating stress through using the strategies, which could lead to strong intention of implementation.

On the other hand, most participants chose certain coping strategies because those strategies required little effort to learn, practice, and execute. According to Triandis (1980), if a certain behavior is performed repeatedly, it becomes a habit and will be performed automatically instead of being controlled by intention. However, the impact of intention on behavior depends on the individuals' self-control over their behavior (Webb & Sheeran, 2006). Participants relied on more ingrained coping mechanisms instead of developing new strategies through self-control and intention. Therefore, the lack of control in developing new coping strategies may prevent significant reductions in participants' perceived stress levels and further improvement in teacher self-efficacy.

Impact of Pretest Scores

Based on the results of quantitative analysis, participants who had lower level of student engagement efficacy and problem-focused stress-coping before the course improved more in those aspects after class than participants who started out with higher level of student engagement efficacy and problem-focused stress-coping. Additionally, participants who had more use of avoidance coping before the course had more decrease in avoidance coping than participants who started out with less use of this type of coping. Therefore, this course may benefit more for ECE teachers who started out with lower level of student engagement efficacy, less use of problem-focused stress-coping and more use of avoidance coping. The findings could provide new perspectives since none of the teacher wellness interventions in the literature review include similar pretest variables in this research.

Impact of Class Modality Types

Results showed that participants in the online class increased the use of emotional-focused coping strategies, when the pretest score and years of experience remained constant. To understand this result, I first compared themes from both class types' interviews, similar patterns of effective coping in emotional dimension focused on calmness, stress management, and emotional regulation. Thus, the qualitative

results did not show that online class participants had higher intense on emotional-focused coping than hybrid class participants. This could be because the two classes had identical learning content. The online class did not contain more practice or class activities than the hybrid class. Last, the research investigated the impacts of intervention within a small sample of the online class. All evidence suggested a Type I error, which may have falsely suggested that the class types significantly influenced changes in the use of emotion-focused coping strategies across the broader population.

Impact of Teaching Experience

Given the results in regression models, teachers' years of teaching experience did not predict the changes in perceived stress, self-efficacy, and problem-focused coping. In this research, teachers from different stages of their career benefited from the course. For changes on coping strategies, the study found that teachers with fewer years of experience had more increase in using emotional-focused coping. Based on the qualitative results, more teachers who had less than and equal to one year-experience chose to seek emotional support than teachers with more than one year-experience when coping with stress. In the first year of teaching, teachers experience a survival stage that requires more guidance and encouragement before they transfer to the next career stage (Katz, 1972). Baker and Berenbaum (2007) pointed out that emotional support may guide individuals to gather the requisite information for decision-making. Seeking emotional support was examined to be a proactive strategy rather than a passive strategy for ECE teachers (MacIntyre et al., 2020). Instead of an approach of venting emotion (Carver et al., 1989), the seeking of emotional support was associated with the use of informational support, which indicates an approach to resolve stressors (Salovey et al., 1999). Therefore, the increase of using emotional-focused coping from less experienced teachers was mainly shown in seeking emotional support which could fulfill the needs of maintaining motivation and using informational support to cope with stress.

Limitations

One of the major limitations is the small sample size. Based on the prior analysis of the required sample size through G Power software, a sample size of 253 participants for each group of teachers is required to detect 80% power in a two-tailed and 0.25 effect size analysis. Although the research went through three rounds of recruitment, the sample size is still small, which limits the generalization and external validity of the findings. Another major limitation is that the research did not employ a control group to test the effect of the course. Without a control group to compare results, it is hard to draw the conclusion that any significant effects on participants are caused by the intervention. This study used a convenience sample from students of the course, which can result in selection bias. The lack of relationship between perceived stress and teacher self-efficacy may be attributed to the limitation of the choice of measurement. The third limitation is that the study did not collect participants' time spent on learning and practicing stress coping strategies. Without knowing the intervention dose, the study was unable to provide precise results on the intervention effectiveness of changing participants' self-efficacy and coping strategies. In the stage of recruitment, inclusion criteria did not set for only including participants who would choose ECE teacher as their first preferred job. This may influence the validity of the results. Because participants who did not plan to work in the ECE field may lack of motivation in the learning and practice of the coping strategies in this program. It could be hard for examining the actual effect from this intervention for supporting ECE teachers' resilience. During the study, some of the participants did not work with children during the intervention. Hence the study measured perceived stress instead of measuring teacher stress. Participants' stressors may be generated by varied sources, which may or may not be from teaching. Therefore, participants' perceived stress in life may not be related to their confidence in their teaching capacities. For quantitative analysis, the pretest scores of perceived stress, teacher self-efficacy, and stress coping strategies scales should be included in correlation tests to promote a more comprehensive understanding of how baseline scores may associate with participants changes after the course.

Future Directions

This study provides findings of the positive effects from ECE teachers' well-being intervention on teacher self-efficacy in student engagement. Moreover, ECE teachers from all career stages can benefit from the course. Because ECE is a highly demanding profession on individuals' emotional intelligence and mental health, more resources should be employed on promoting ECE teachers' stress coping strategies, enhancing teacher self-efficacy, and alleviating stress. Therefore, the ECFS 311 Teaching from the Inside Out: Resilience and Wellness course should continue to be applied for ECE teachers' professional development and adapted to help more ECE teachers improve their stress management and emotional regulation skills. One direction is to include feasible coping strategies in ECE classroom environments, particularly facing children's challenging behavior. For this purpose, the course can increase students' vicarious experience (Bandura, 1977) through listening or watching others' successful experiences of stress coping. For instance, inviting experienced teachers to share their experiences can help students understand how to better cope with work-related stress and maintain their motivation in teaching.

It is important to investigate how to measure stress based on people's current states rather than assessing stress that may be aroused by questions, as the outcome of people's perceived stress may be influenced by their awareness of stress level. I should examine whether the questions are overly sensitive and could make people feel more stressed by bringing up unpleasant memories. In order to assess how the intervention affected participants' perceived stress, follow-up research is necessary to explore how participants' stress levels changed following their final week of using coping strategies. In a short-term, the effect of implementing coping strategies may not show.

Believing in the effectiveness of stress coping, participants reported high implementation intention towards stress coping strategies from the course. However, most participants rely on ingrained coping mechanisms, which may lower the likelihood of reducing stress. To motivate ECE teachers who are developing new coping strategies, more interactive activities between participants can be adopted. For

example, participants can provide advice to others with negative thoughts, evaluate their beliefs and ideas, and take different perspectives to alter negative thoughts (Hughes et al., 2011).

Less experienced ECE teachers have sought emotional support more actively. To support beginning teachers adapting to new working environments, more sources of emotional support in and out of the workplace should be provided to this group of teachers. The sources could take in form of communication skills with colleagues and principals, peer coaching methods and trust-building techniques. The results of this study support the positive outcomes of teacher mental well-being intervention. My next question is to what extent will the teachers' positive outcome benefit children's outcome? Will children with teachers who are able to cope stress exhibit better emotional regulation and social skills? I would like to continue exploring the effect of ECE teachers' mental health on their quality of teaching, their relationship with children, and children's social-emotional development in their early childhood.

References

- Agyapong, B., Obuobi-Donkor, G., Burbach, L., & Wei, Y. (2022). Stress, burnout, anxiety and depression among teachers: A scoping review. *International Journal of Environmental Research and Public Health*, 19(17), Article 17. <https://doi.org/10.3390/ijerph191710706>
- Ajzen, I. (2002). Constructing a TPB questionnaire: Conceptual and methodological considerations.
- Ajzen, I. & Fishbein, M. (1975). A Bayesian analysis of attribution processes. *Psychological Bulletin*, 82(2), 261–277. <https://doi.org/10.1037/h0076477>
- Allen, A. B., & Leary, M. R. (2010). Self-Compassion, stress, and coping. *Social and Personality Psychology Compass*, 4(2), 107-118.
- Aloe, A. M., Amo, L. C., & Shanahan, M. E. (2014). Classroom management self-efficacy and burnout: A multivariate meta-analysis. *Educational Psychology Review*, 26(1), 101–126. <https://doi.org/10.1007/s10648-013-9244-0>
- Armitage, C. J. & Christian, J. (2003). From attitudes to behaviour: Basic and applied research on the theory of planned behaviour. *Current Psychology*, 22, 187-195.
- Baker, J. P. & Berenbaum, H. (2007). Emotional approach and problem-focused coping: A comparison of potentially adaptive strategies. *Cognition and Emotion*, 21(1), 95–118. <https://doi.org/10.1080/02699930600562276>
- Bandura, A. (1977). Self-Efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84(2), 191.
- Bandura, A. (1982). Self-efficacy mechanism in human agency. *American Psychologist*, 37(2), 122–147. <https://doi.org/10.1037/0003-066X.37.2.122>
- Bandura, A. (1986). The explanatory and predictive scope of self-efficacy theory. *Journal of Social and Clinical Psychology*, 4(3), 359-373.
- Beltman, S., Mansfield, C., & Price, A. (2011). Thriving not just surviving: A review of research on teacher resilience. *Educational Research Review*, 6(3), 185–207. <https://doi.org/10.1016/j.edurev.2011.09.001>

- Berkovich, I. & Eyal, O. (2018). Principals' emotional support and teachers' emotional reframing: The mediating role of principals' supportive communication strategies. *Psychology in the Schools*, 55(7), 867–879. <https://doi.org/10.1002/pits.22130>
- Bernadowski, C., Perry, R., & Del Greco, R. (2013). Improving preservice teachers' self-efficacy through service learning: Lessons learned. *International Journal of Instruction*, 6(2).
- Bernay, R. (2014). Mindfulness and the beginning teacher. *Australian Journal of Teacher Education (Online)*, 39(7), 58–69. <https://doi.org/10.3316/informit.480460980498552>
- Betoret, F. D. & Artiga, A. G. (2010). Barriers perceived by teachers at work, coping strategies, self-efficacy and burnout. *The Spanish Journal of Psychology*, 13(2), 637–654. <https://doi.org/10.1017/S1138741600002316>
- Britt, T. W., Crane, M., Hodson, S. E., & Adler, A. B. (2016). Effective and ineffective coping strategies in a low-autonomy work environment. *Journal of Occupational Health Psychology*, 21(2), 154–168. <https://doi.org/10.1037/a0039898>
- Brophy-Herb, H. E., Brincks, A., Cook, J. L., Stacks, A., Vallotton, C. D., Frosch, C., Carson, R., Wheeler, R., Perkins, H. A., & Jennings, P. A. (2022). Stress intensity and exhaustion among infant and toddler teachers: Descriptive analysis and associations with sources of stress and coping strategy use. *Early Education and Development*, 0(0), 1–20. <https://doi.org/10.1080/10409289.2022.2151399>
- Burić, I. & Macuka, I. (2018). Self-Efficacy, emotions and work engagement among teachers: A two wave cross-lagged analysis. *Journal of Happiness Studies*, 19(7), 1917–1933. <https://doi.org/10.1007/s10902-017-9903-9>
- Carr, R. C. (2020). *The North Carolina pre-kindergarten program and remote learning services during the COVID-19 pandemic*. 32.
- Carton, A. & Fruchart, E. (2014). Sources of stress, coping strategies, emotional experience: Effects of the level of experience in primary school teachers in France. *Educational Review*, 66(2), 245-262.

- Carver, C. S. (1997). You want to measure coping but your protocol's too long: Consider the brief cope. *International journal of behavioral medicine*, 4(1), 92-100.
https://doi.org/10.1207/s15327558ijbm0401_6
- Carver, C. S. & Connor-Smith, J. (2010). Personality and coping. *Annual Review of Psychology*, 61(1), 679–704. <https://doi.org/10.1146/annurev.psych.093008.100352>
- Carver, C. S., Scheier, M. F., & Weintraub, J. K. (1989). Assessing coping strategies: A theoretically based approach. *Journal of Personality and Social Psychology*, 56(2), 267–283.
<https://doi.org/10.1037/0022-3514.56.2.267>
- Chaaban, Y. & Du, X. (2017). Novice teachers' job satisfaction and coping strategies: Overcoming contextual challenges at Qatari government schools. *Teaching and Teacher Education*, 67, 340-350.
- Chang, M.-L. (2009). An appraisal perspective of teacher burnout: Examining the emotional work of teachers. *Educational Psychology Review*, 21(3), 193–218. <https://doi.org/10.1007/s10648-009-9106-y>
- Chatterjee, K. & Chauhan, V. S. (2020). Epidemics, quarantine and mental health. *Medical Journal, Armed Forces India*, 76(2), 125–127. <https://doi.org/10.1016/j.mjafi.2020.03.017>
- Chwalisz, K., Altmaier, E. M., & Russell, D. W. (1992). Causal attributions, Self-Efficacy cognitions, and coping with stress. *Journal of Social and Clinical Psychology*, 11(4), 377–400.
<https://doi.org/10.1521/jsep.1992.11.4.377>
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Erlbaum.
- Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A global measure of perceived stress. *Journal of Health and Social Behavior*, 385-396.
- Collie, R. J., Shapka, J. D., & Perry, N. E. (2012). School climate and social–emotional learning: Predicting teacher stress, job satisfaction, and teaching efficacy. *Journal of Educational Psychology*, 104(4), 1189–1204. <https://doi.org/10.1037/a0029356>

- Connell, R. (2009). Good teachers on dangerous ground: Towards a new view of teacher quality and professionalism. *Critical Studies in Education*, 50(3), 213–229.
<https://doi.org/10.1080/17508480902998421>
- Cook, C. R., Miller, F. G., Fiat, A., Renshaw, T., Frye, M., Joseph, G., & Decano, P. (2017). Promoting Secondary Teachers' Well-Being and Intentions to Implement Evidence-Based Practices: Randomized Evaluation of the Achiever Resilience Curriculum. *Psychology in the Schools*, 54(1), 13–28. <https://doi.org/10.1002/pits.21980>
- Coyne, J. C. & Gottlieb, B. H. (1996). The mismeasure of coping by checklist. *Journal of Personality*, 64(4), 959-991.
- Coyne, J. C. & Racioppo, M. W. (2000). Never the Twain shall meet? Closing the gap between coping research and clinical intervention research. *American Psychologist*, 55(6), 655.
- Creswell, J. W. & Plano Clark, V. L. (2018). *Designing and conducting mixed methods research* (3rd ed.). Sage.
- Daly, M., Sutin, A. R., & Robinson, E. (2021). Depression reported by US adults in 2017–2018 and March and April 2020. *Journal of Affective Disorders*, 278, 131–135.
<https://doi.org/10.1016/j.jad.2020.09.065>
- de Lima, C. V. C., Cândido, E. L., da Silva, J. A., Albuquerque, L. V., Soares, L. de M., do Nascimento, M. M., de Oliveira, S. A., & Neto, M. L. R. (2020). Effects of quarantine on mental health of populations affected by Covid-19. *Journal of Affective Disorders*, 275, 253–254.
<https://doi.org/10.1016/j.jad.2020.06.063>
- Delap, S. & McGee, A. B. (n.d.). *Impact of COVID-19 on early childhood care and education providers*, 4.
 Department of Children, Youth & Families. (2020). DCYF, from <https://www.dcyf.wa.gov>
- Dixon, W. J. (1960). Simplified estimation from censored normal samples. *The Annals of Mathematical Statistics*, 385-391.

- Doney, P. A. (2013). Fostering resilience: A necessary skill for teacher retention. *Journal of Science Teacher Education, 24*(4), 645–664.
- Durlak, J. A., Domitrovich, C. E., Weissberg, R. P., & Gullotta, T. P. (2015). *Handbook of social and emotional learning: Research and practice*. The Guilford Press.
- Egyed, C. J. & Short, R. J. (2006). Teacher self-efficacy, burnout, experience and decision to refer a disruptive student. *School Psychology International, 27*(4), 462–474.
<https://doi.org/10.1177/0143034306070432>
- Federkeil, L., Heinschke, F., Jungmann, T., & Klapproth, F. (2020). Teachers' experiences of stress and their coping strategies during COVID - 19 induced distance teaching. *Journal of Pedagogical Research, 4*(4), 444–452. <https://doi.org/10.33902/JPR.2020062805>
- Feil, E. G., Walker, H. M., Frey, A. J., Seeley, J., Small, J. W., Golly, A., ... & Forness, S. R. (2021). Efficacy validation of the revised first step program: A randomized controlled trial. *Exceptional Children, 87*(2), 183-198.
- Ferguson, K., Frost, L., & Hall, D. (2012). Predicting teacher anxiety, depression, and job satisfaction. *Journal of Teaching and Learning, 8*(1), Article 1. <https://doi.org/10.22329/jtl.v8i1.2896>
- Fetters, M.D. (2019). *The mixed methods research workbook*. Sage
- Folkman, S. (1984). Personal control and stress and coping processes: A theoretical analysis. *Journal of Personality and Social Psychology, 46*(4), 839–852. <https://doi.org/10.1037//0022-3514.46.4.839>
- Folkman, S. (2010). Stress, coping, and hope. *Psycho-Oncology, 19*(9), 901–908.
<https://doi.org/10.1002/pon.1836>
- Folkman, S. & Moskowitz, J. T. (2004). Coping: pitfalls and promise. *Annual Review of Psychology, 55*(1), 745–774. <https://doi.org/10.1146/annurev.psych.55.090902.141456>
- Garner, P. W., Bender, S. L., & Fedor, M. (2018). Mindfulness-based SEL programming to increase preservice teachers' mindfulness and emotional competence. *Psychology in the Schools, 55*(4), 377-390.

- Gerde, H. K., Pierce, S. J., Lee, K., & Van Egeren, L. A. (2018). Early Childhood Educators' Self-Efficacy in Science, Math, and Literacy Instruction and Science Practice in the Classroom. *Early Education and Development, 29*(1), 70–90.
- Gray, C., Wilcox, G., & Nordstokke, D. (2017). Teacher mental health, school climate, inclusive education and student learning: A review. *Canadian Psychology/psychologie canadienne, 58*(3), 203.
- Griffith, J., Steptoe, A., & Cropley, M. (1999). An investigation of coping strategies associated with job stress in teachers. *British Journal of Educational Psychology, 69*(4), 517-531.
- Gross, J. J. & John, O. P. (2003). Individual differences in two emotion regulation processes: Implications for affect, relationships, and well-being. *Journal of Personality and Social Psychology, 85*, 348–362.
- Gu, Q., & Day, C. (2007). Teachers resilience: A necessary condition for effectiveness. *Teaching and Teacher Education, 23*(8), 1302–1316. <https://doi.org/10.1016/j.tate.2006.06.006>
- Guo, Y., Justice, L. M., Sawyer, B., & Tompkins, V. (2011). Exploring factors related to preschool teachers' self-efficacy. *Teaching and Teacher Education, 27*(5), 961–968.
- Guo, Y., Piasta, S. B., Justice, L. M., & Kaderavek, J. N. (2010). Relations among preschool teachers' self-efficacy, classroom quality, and children's language and literacy gains. *Teaching and Teacher Education, 26*(4), 1094–1103. <https://doi.org/10.1016/j.tate.2009.11.005>
- Hakanen, J. J., Bakker, A. B., & Schaufeli, W. B. (2006). Burnout and work engagement among teachers. *Journal of School Psychology, 43*(6), 495–513. <https://doi.org/10.1016/j.jsp.2005.11.001>
- Hartigan, B. F. (2017). Mindfulness in teacher education: A constructivist approach to stress reduction for teacher candidates and their students. *Childhood Education, 93*(2), 153–158. <https://doi.org/10.1080/00094056.2017.1300494>
- Hascher, T. & Waber, J. (2021). Teacher well-being: A systematic review of the research literature from the year 2000–2019. *Educational Research Review, 34*, 100411 –. <https://doi.org/10.1016/j.edurev.2021.100411>

- Helms-Lorenz, M. & Maulana, R. (2016). Influencing the psychological well-being of beginning teachers across three years of teaching: Self-efficacy, stress causes, job tension and job discontent. *Educational Psychology*, 36(3), 569–594. <https://doi.org/10.1080/01443410.2015.1008403>
- Helms-Lorenz, M., Slof, B., Vermue, Carlien. E., & Canrinus, Esther. T. (2012). Beginning teachers' self-efficacy and stress and the supposed effects of induction arrangements. *Educational Studies*, 38(2), 189–207. <https://doi.org/10.1080/03055698.2011.598679>
- Herman, K. C., Hickmon-Rosa, J., & Reinke, W. M. (2018). Empirically derived profiles of teacher stress, burnout, self-efficacy, and coping and associated student outcomes. *Journal of Positive Behavior Interventions*, 20(2), 90–100. <https://doi.org/10.1177/1098300717732066>
- Hofmann, S. G., Sawyer, A. T., Witt, A. A., & Oh, D. (2010). The effect of mindfulness-based therapy on anxiety and depression: A meta-analytic review. *Journal of Consulting and Clinical Psychology*, 78(2), 169.
- Hossain, M. M., Sultana, A., & Purohit, N. (2020). Mental health outcomes of quarantine and isolation for infection prevention: A systematic umbrella review of the global evidence. *Epidemiology and Health*, 42, e2020038. <https://doi.org/10.4178/epih.e2020038>
- Hughes, J. S., Gourley, M. K., Madson, L., & Blanc, K. L. (2011). Stress and coping activity: Reframing negative thoughts. *Teaching of Psychology*, 38(1), 36–39. <https://doi.org/10.1177/0098628310390852>
- Hwang, Y.-S., Bartlett, B., Greben, M., & Hand, K. (2017). A systematic review of mindfulness interventions for in-service teachers: A tool to enhance teacher wellbeing and performance. *Teaching and Teacher Education*, 64, 26–42. <https://doi.org/10.1016/j.tate.2017.01.015>
- Iancu, A. E., Rusu, A., Măroiu, C., Păcurar, R., & Maricuțoiu, L. P. (2018). The effectiveness of interventions aimed at reducing teacher burnout: A meta-analysis. *Educational Psychology Review*, 30(2), 373–396. <https://doi.org/10.1007/s10648-017-9420-8>
- Instructure, Inc. (2022). *Canvas* [Online learning platform]. Retrieved from <https://www.instructure.com/canvas>

- Jayawardene, W. P., Lohrmann, D. K., Erbe, R. G., & Torabi, M. R. (2017). Effects of preventive online mindfulness interventions on stress and mindfulness: A meta-analysis of randomized controlled trials. *Preventive Medicine Reports*, 5, 150-159.
- Jeffery, T. D., Hobson, L. D., Conoyer, S. J., Miller, K. E., & Leach, L. F. (2018). Examining EC-6 Pre-Service Teachers' Perceptions of Self-Efficacy in Teaching Mathematics. *Issues in the Undergraduate Mathematics Preparation of School Teachers*, 5.
<http://offcampus.lib.washington.edu/login?url=https://search.ebscohost.com/login.aspx?direct=true&db=eric&AN=EJ1189604&site=ehost-live>
- Jennings, P. A. & Greenberg, M. T. (2009). The prosocial classroom: Teacher social and emotional competence in relation to student and classroom outcomes. *Review of Educational Research*, 79(1), 491–525. <https://doi.org/10.3102/0034654308325693>
- Jennings, P. A., Brown, J. L., Frank, J. L., Doyle, S., Oh, Y., Davis, R., Rasheed, D., DeWeese, A., DeMauro, A. A., Cham, H., & Greenberg, M. T. (2017). Impacts of the CARE for Teachers program on teachers' social and emotional competence and classroom interactions. *Journal of Educational Psychology*, 109(7), 1010–1028. <https://psycnet.apa.org/doi/10.1037/edu0000187>
- Jennings, P. A., Doyle, S., Oh, Y., Rasheed, D., Frank, J. L., & Brown, J. L. (2019). Long-term impacts of the CARE program on teachers' self-reported social and emotional competence and well-being. *Journal of School Psychology*, 76, 186-202.
- Jennings, P. A., Frank, J. L., Snowberg, K. E., Coccia, M. A., & Greenberg, M. T. (2013). Improving classroom learning environments by Cultivating Awareness and Resilience in Education (CARE): results of a randomized controlled trial. *School Psychology Quarterly*, 28(4), 374.
- Jerusalem, M. & Schwarzer, R. (1992). Self-efficacy as a resource factor in stress appraisal processes. In R. Schwarzer (Ed.) *Self-efficacy: Thought control of action* (pp. 195–213). Hemisphere Publishing Corp.
- Jex, S. M., Bliese, P. D., Buzzell, S., & Primeau, J. (2001). The impact of self-efficacy on stressor–strain relations: Coping style as an explanatory mechanism. *Journal of Applied Psychology*, 86(3), 401.

- Kassis, W., Graf, U., Keller, R., Ding, K., & Rohlfs, C. (2019). The Role of Received Social Support and Self-Efficacy for the Satisfaction of Basic Psychological Needs in Teacher Education. *European Journal of Teacher Education*, 42(3), 391–409.
- Katz, L. G. (1972). Developmental stages of preschool teachers. *The Elementary School Journal*, 73(1), 50–54.
- Kim, L. E., Jörg, V., & Klassen, R. M. (2019). A meta-analysis of the effects of teacher personality on teacher effectiveness and burnout. *Educational Psychology Review*, 31(1), 163–195.
<https://doi.org/10.1007/s10648-018-9458-2>
- Kirk, J. & Wall, C. (2010). Resilience and loss in work identities: A narrative analysis of some retired teachers' work-life histories. *British Educational Research Journal*, 36(4), 627–641.
<https://doi.org/10.1080/01411920903018216>
- Klassen, R. M. & Chiu, M. M. (2010). Effects on teachers' self-efficacy and job satisfaction: Teacher gender, years of experience, and job stress. *Journal of Educational Psychology*, 102(3), 741–756.
<https://doi.org/10.1037/a0019237>
- Klassen, R. M. & Chiu, M. M. (2011). The occupational commitment and intention to quit of practicing and pre-service teachers: Influence of self-efficacy, job stress, and teaching context. *Contemporary Educational Psychology*, 36(2), 114–129.
<https://doi.org/10.1016/j.cedpsych.2011.01.002>
- Klassen, R. M., Bong, M., Usher, E. L., Chong, W. H., Huan, V. S., Wong, I. Y. F., & Georgiou, T. (2009). Exploring the validity of a teachers' self-efficacy scale in five countries. *Contemporary Educational Psychology*, 34(1), 67–76. <https://doi.org/10.1016/j.cedpsych.2008.08.001>
- Kokkinos, C. M. (2007). Job stressors, personality and burnout in primary school teachers. *British Journal of Educational Psychology*, 77(1), 229–243. <https://doi.org/10.1348/000709905X90344>
- Kortteisto, T., Kaila, M., Komulainen, J., Mäntyranta, T., & Rissanen, P. (2010). Healthcare professionals' intentions to use clinical guidelines: A survey using the theory of planned behaviour. *Implementation Science*, 5(1), 51. <https://doi.org/10.1186/1748-5908-5-51>

- Kumpfer, K. L. (1999). Factors and processes contributing to resilience: The resilience framework. In Resilience and Development (pp. 179–224). Springer US. https://doi.org/10.1007/0-306-47167-1_9
- Kunemund, R. L., McCullough, S. N., Williams, C. D., Miller, C. C., Sutherland, K. S., Conroy, M. A., & Granger, K. (2020). The mediating role of teacher self-efficacy in the relation between teacher–child race mismatch and conflict. *Psychology in the Schools*, 57(11), 1757–1770. <https://doi.org/10.1002/pits.22419>
- la Velle, L., Newman, S., Montgomery, C., & Hyatt, D. (2020). Initial teacher education in England and the Covid-19 pandemic: Challenges and opportunities. *Journal of Education for Teaching*, 46(4), 596–608. <https://doi.org/10.1080/02607476.2020.1803051>
- Lang, S. N., Jeon, L., Sproat, E. B., Brothers, B. E., & Buettner, C. K. (2020). Social emotional learning for teachers (SELF-T): A short-term, online intervention to increase early childhood educators’ resilience. *Early Education and Development*, 31(7), 1112–1132.
- Lawrence, R. C., Bulotsky-Shearer, R. J., Bichay-Awadalla, K., Futterer, J. N., & Bailey, J. (2020). Validation of the Early Childhood Teacher Experiences Scale in Head Start. *Psychology in the Schools*, 57(7), 1132–1154. <https://doi.org/10.1002/pits.22385>
- Lazarus, R. S. & Folkman, S. (1987). Transactional theory and research on emotions and coping. *European Journal of Personality*, 1(3), 141–169. <https://doi.org/10.1002/per.2410010304>
- Lew, B., Huen, J., Yu, P., Yuan, L., Wang, D.-F., Ping, F., Talib, M. A., Lester, D., & Jia, C.-X. (2019). Associations between depression, anxiety, stress, hopelessness, subjective well-being, coping styles and suicide in Chinese university students. *PLoS ONE*, 14(7), e0217372–e0217372. <https://doi.org/10.1371/journal.pone.0217372>
- Li Grining, C., Raver, C. C., Champion, K., Sardin, L., Metzger, M., & Jones, S. M. (2010). Understanding and improving classroom emotional climate and behavior management in the “real world”: The role of Head Start teachers’ psychosocial stressors. *Early Education & Development*, 21(1), 65–94. <https://doi.org/10.1080/10409280902783509>

- Liston, D., Whitcomb, J., & Borko, H. (2006). Too little or too much: Teacher preparation and the first years of teaching. *Journal of Teacher Education*, 57(4), 351–358.
<https://doi.org/10.1177/0022487106291976>
- Luthar, S. S., Cicchetti, D., & Becker, B. (2000). The construct of resilience: A critical evaluation and guidelines for future work. *Child Development*, 71(3), 543–562. <https://doi.org/10.1111/1467-8624.00164>
- MacIntyre, P. D., Gregersen, T., & Mercer, S. (2020). Language teachers' coping strategies during the Covid-19 conversion to online teaching: Correlations with stress, wellbeing and negative emotions. *System*, 94, 102352. <https://doi.org/10.1016/j.system.2020.102352>
- Madigan, D. J. & Kim, L. E. (2021). Towards an understanding of teacher attrition: A meta-analysis of burnout, job satisfaction, and teachers' intentions to quit. *Teaching and Teacher Education*, 105, 103425. <https://doi.org/10.1016/j.tate.2021.103425>
- Mansfield, C. F., Beltman, S., Broadley, T., & Weatherby-Fell, N. (2016). Building resilience in teacher education: An evidenced informed framework. *Teaching and Teacher Education*, 54, 77–87.
<https://doi.org/10.1016/j.tate.2015.11.016>
- Mansfield, C. F., Beltman, S., Price, A., & McConney, A. (2012). “Don’t sweat the small stuff:” Understanding teacher resilience at the chalkface. *Teaching and Teacher Education*, 28(3), 357–367. <https://doi.org/10.1016/j.tate.2011.11.001>
- Masten, A. S. (2001). Ordinary magic: Resilience processes in development. *American Psychologist*, 56(3), 227–238. <https://doi.org/10.1037/0003-066X.56.3.227>
- McEwen, B. S. & Sapolsky, R. M. (1995). Stress and cognitive function. *Current Opinion in Neurobiology*, 5(2), 205-216.
- Merriam, S. B. & Tisdell, E. J. (2015). *Qualitative research: A guide to design and implementation*. John Wiley & Sons, Incorporated.
<http://ebookcentral.proquest.com/lib/washington/detail.action?docID=2089475>
- Miles, M. B. (2020). *Qualitative data analysis: A methods sourcebook* (4th ed.). Sage.

- Montgomery, C. & Rupp, A. A. (2005). A meta-analysis for exploring the diverse causes and effects of stress in teachers. *Canadian Journal of Education / Revue Canadienne de l'éducation*, 28(3), 458–486. <https://doi.org/10.2307/4126479>
- Morettini, B., Luet, K., & Vernon-Dotson, L. (2020). Building beginning teacher resilience: Exploring the relationship between mentoring and contextual acceptance. *Educational Forum*, 84(1), 48–62.
- Morgan, M. (2011). Resilience and recurring adverse events: Testing an assets-based model of beginning teachers' experiences. *The Irish Journal of Psychology*, 32(3–4), 92–104.
<https://doi.org/10.1080/03033910.2011.613189>
- Nagasawa, M. & Tarrant, K. (2020). Who will care for the early care and education workforce? Covid-19 and the need to support early childhood educators' emotional well-being. *Straus Center for Young Children & Families*. <https://educate.bankstreet.edu/sc/1>
- Neuenschwander, R., Friedman-Krauss, A., Raver, C., & Blair, C. (2017). Teacher stress predicts child executive function: Moderation by school poverty. *Early Education and Development*, 28(7), 880–900. <https://doi.org/10.1080/10409289.2017.1287993>
- Nielsen, M. B. & Knardahl, S. (2014). Coping strategies: A prospective study of patterns, stability, and relationships with psychological distress. *Scandinavian Journal of Psychology*, 55(2), 142–150.
<https://doi.org/10.1111/sjop.12103>
- Parker, P. D., Martin, A. J., Colmar, S., & Liem, G. A. (2012). Teachers' workplace well-being: Exploring a process model of goal orientation, coping behavior, engagement, and burnout. *Teaching and Teacher Education*, 28(4), 503–513. <https://doi.org/10.1016/j.tate.2012.01.001>
- Penley, J. A., Tomaka, J., & Wiebe, J. S. (2002). The association of coping to physical and psychological health outcomes: A meta-analytic review. *Journal of Behavioral Medicine*, 25(6), 551–603.
<https://doi.org/10.1023/A:1020641400589>
- Philipp, A., & Schüpbach, H. (2010). Longitudinal effects of emotional labour on emotional exhaustion and dedication of teachers. *Journal of Occupational Health Psychology*, 15, 494–504.
<https://doi.org/10.1037/a0021046>

- Poulou, M. S. (2015). Emotional and behavioural difficulties in preschool. *Journal of Child and Family Studies*, 24(2), 225–236. <https://doi.org/10.1007/s10826-013-9828-9>
- Pressley, T. (2021). Returning to teaching during Covid-19: An empirical study on elementary teachers' self-efficacy. *Psychology in the Schools*, 58(8), 1611–1623. <https://doi.org/10.1002/pits.22528>
- Price, A., Mansfield, C., & McConney, A. (2012). Considering 'teacher resilience' from critical discourse and labour process theory perspectives. *British Journal of Sociology of Education*, 33(1), 81–95. <https://doi.org/10.1080/01425692.2011.614748>
- Prilleltensky, I., Neff, M., & Bessell, A. (2016). Teacher stress: What it is, why it's important, how it can be alleviated. *Theory Into Practice*, 55(2), 104–111. <https://doi.org/10.1080/00405841.2016.1148986>
- Research Designs. In: M. D. Fetters, *The Mixed Methods Workbook*. Thousand Oaks,
- Reyhing, Y. & Perren, S. (2021). Self-efficacy in early childhood education and care: What predicts patterns of stability and change in educator self-efficacy? *Frontiers in Education*, 6, 634275. <https://doi.org/10.3389/feduc.2021.634275>
- Richards, J. (2012). Teacher stress and coping strategies: A national snapshot. *The Educational Forum*, 76(3), 299–316. <https://doi.org/10.1080/00131725.2012.682837>
- Richter, D., M. Kunter, O. Lüdtke, U. Klusmann, & J. Baumert. (2011). "Soziale Unterstützung beim Berufseinstieg ins Lehramt: Eine empirische Untersuchung zur Bedeutung von Mentoren und Mitreferendaren." *Zeitschrift für Erziehungswissenschaft* 14: 35–59. doi:10.1007/s11618-011-0173-8.
- Roberts, T. G. (2005). Developing a model of cooperating teacher effectiveness. *Proceedings of the 2005 American Association for Agricultural Education National Research Conference*, 32, 297–309.
- Ryan, S. V., von der Embse, N. P., Pendergast, L. L., Saeki, E., Segool, N., & Schwing, S. (2017). Leaving the teaching profession: The role of teacher stress and educational accountability policies on turnover intent. *Teaching and Teacher Education*, 66, 1–11. <https://doi.org/10.1016/j.tate.2017.03.016>

- Salkovsky, M., Romi, S., & Lewis, R. (Rom). (2015). Teachers' coping styles and factors inhibiting teachers' preferred classroom management practice. *Teaching and Teacher Education, 48*, 56–65. <https://doi.org/10.1016/j.tate.2015.01.016>
- Salovey, P., Bedell, B. T., Detweiler, J. B., & Mayer, J. D. (1999). Coping intelligently: Emotional intelligence and the coping process. In C. R. Snyder (Ed.) . *Coping: The psychology of what works*, (pp. 141–164). Oxford Press.
- Selye, H. (1956). *The stress of life*. McGraw-Hill
- Sharplin, E., O'Neill, M., & Chapman, A. (2011). Coping strategies for adaptation to new teacher appointments: Intervention for retention. *Teaching and Teacher Education, 27*(1), 136–146. <https://doi.org/10.1016/j.tate.2010.07.010>
- Shen, Y. E. (2009). Relationships between self-efficacy, social support and stress coping strategies in Chinese primary and secondary school teachers. *Stress & Health: Journal of the International Society for the Investigation of Stress, 25*(2), 129–138. <https://doi.org/10.1002/smi.1229>
- Shin, H., Park, Y. M., Ying, J. Y., Kim, B., Noh, H., & Lee, S. M. (2014). Relationships between coping strategies and burnout symptoms: A meta-analytic approach. *Professional Psychology: Research and Practice, 45*(1), 44–56. <https://doi.org/10.1037/a0035220>
- Sisask, M., Värnik, P., Värnik, A., Apter, A., Balazs, J., Balint, M., Bobes, J., Brunner, R., Corcoran, P., Cosman, D., Feldman, D., Haring, C., Kahn, J., Postuvan, V., Tubiana, A., Sarchiapone, M., Wasserman, C., Carli, V., Hoven, C. W., & Wasserman, D. (2014). Teacher satisfaction with school and psychological well-being affects their readiness to help children with mental health problems. *Health education journal, 73*(4), 382–393. <https://doi.org/10.1177/0017896913485742>
- Soderberg, J., Joseph, G. E., Stull, S., & Hassairi, N, (2016). Early Achievers Standards Validation Study. *University of Washington: Childcare Quality and Early Learning Center for Research & Professional Development*. Retrieved from: https://www.dcyf.wa.gov/sites/default/files/pdf/EarlyAchievers_Validationstudy.pdf

- Sonnentag, S., & Fritz, C. (2015). Recovery from job stress: The stressor-detachment model as an integrative framework. *Journal of Organizational Behavior*, 36(S1), S72–S103.
<https://doi.org/10.1002/job.1924>
- Soodak, L. C., & Podell, D. M. (1997). Efficacy and experience: Perceptions of efficacy among preservice and practicing teachers. *Journal of Research and Development in Education*, 30(4), 214–221.
- Stanton, A. L., Danoff-Burg, S., Cameron, C. L., & Ellis, A. P. (1994). Coping through emotional approach: Problems of conceptualization and confounding. *J. Pers Soc Psychol*, 66(2), 350–62,
<https://doi.org/10.1037//0022-3514.66.2.350>
- Stoeber, J. & Janssen, D. P. (2011). Perfectionism and coping with daily failures: Positive reframing helps achieve satisfaction at the end of the day. *Anxiety, Stress, & Coping*, 24(5), 477–497.
<https://doi.org/10.1080/10615806.2011.562977>
- Stone, A. A., Kennedy-Moore, E., & Neale, J. M. (1995). Association between daily coping and end-of-day mood. *Health psychology*, 14(4), 341.
- Sutton, R. E., Mudrey-Camino, R., & Knight, C. C. (2009). Teachers' emotion regulation and classroom management. *Theory Into Practice*, 48(2), 130–137. <https://doi.org/10.1080/00405840902776418>
- Swan, B., Wolf, K., & Cano, J. (2011). Changes in teacher self-efficacy from the student teaching experience through the third year of teaching. *Journal of Agricultural Education*, 52(2), 128–139.
<https://doi.org/10.5032/jae.2011.02128>
- Symes, W., Lazarides, R., & Hußner, I. (2023). The development of student teachers' teacher self-efficacy before and during the COVID-19 pandemic. *Teaching and Teacher Education*, 122, 103941. <https://doi.org/10.1016/j.tate.2022.103941>
- Triandis, H. C. (1980). Values, attitudes, and interpersonal behavior. In H. E. Howe, Jr. & M. Page (Eds.), *Nebraska symposium of motivation* (Vol. 27, pp. 195–259). University of Nebraska Press.
- Tschannen-Moran, M., & Hoy, A. W. (2001). Teacher efficacy: Capturing an elusive construct. *Teaching and Teacher Education*, 23.

- Tschannen-Moran, M., Hoy, A. W., & Hoy, W. K. (1998). Teacher efficacy: Its meaning and measure. *Review of Educational Research*, 68(2), 202–248. <https://doi.org/10.3102/00346543068002202>
- Valli, L., & Buese, D. (2007). The changing roles of teachers in an era of high-stakes accountability. *American Educational Research Journal*, 44(3), 519–558. <https://doi.org/10.3102/0002831207306859>
- VanLone, J., Pansé-Barone, C., & Long, K. (2022). Teacher preparation and the COVID-19 disruption: Understanding the impact and implications for novice teachers. *International Journal of Educational Research Open*, 3, 100120. <https://doi.org/10.1016/j.ijedro.2021.100120>
- Varela, D. G. & Desiderio, M. F. (2021). Perceptions of COVID-19 pandemic impact on the student teaching experience. *Research in Higher Education Journal*, 39. <https://eric.ed.gov/?id=EJ1293799>
- Von Suchodoletz, A., Jamil, F. M., Larsen, R. A. A. A., & Hamre, B. K. (2018). Personal and contextual factors associated with growth in preschool teachers' self-efficacy beliefs during a longitudinal professional development study. *Teaching and Teacher Education*, 75, 278–289. <https://doi.org/10.1016/j.tate.2018.07.009>
- Wagner, S. L., Forer, B., Cepeda, I. L., Goelman, H., Maggi, S., D'Angiulli, A., Wessel, J., Hertzman, C., & Grunau, R. E. (2013). Perceived Stress and Canadian Early Childcare Educators. *Child & Youth Care Forum*, 42(1), 53–70. <https://doi.org/10.1007/s10566-012-9187-5>
- Wang, Q., Xu, R., & Volkow, N. D. (2021). Increased risk of COVID-19 infection and mortality in people with mental disorders: Analysis from electronic health records in the United States. *World Psychiatry*, 20(1), 124–130. <https://doi.org/10.1002/wps.20806>
- Webb, T. L. & Sheeran, P. (2006). Does changing behavioral intentions engender behavior change? A meta-analysis of the experimental evidence. *Psychological Bulletin*, 132(2), 249–268. <https://doi.org/10.1037/0033-2909.132.2.249>

- Woods, S., Sebastian, J., Herman, K. C., Huang, F. L., Reinke, W. M., & Thompson, A. M. (2023). The relationship between teacher stress and job satisfaction as moderated by coping. *Psychology in the Schools*, 60(7), 2237–56. <https://doi.org/10.1002/pits.22857>
- Woolfolk Hoy, A. E., Burke–Spero, R. (2005). Changes in teacher efficacy during the early years of teaching: A comparison of four measures. *Teaching and Teacher Education*, 21(4) 343–356. <https://doi.org/10.1016/j.tate.2005.01.007>
- Yuh, J. & Choi, S. (2017). Sources of social support, job satisfaction, and quality of life among childcare teachers. *The Social Science Journal*, 54(4), 450–457. <https://doi.org/10.1016/j.soscij.2017.08.002>
- Zee, M. & Koomen, H. M. Y. (2016). Teacher self-efficacy and its effects on classroom processes, student academic adjustment, and teacher well-being: A synthesis of 40 years of research. *Review of Educational Research*, 86(4), 981–1015. <https://doi.org/10.3102/0034654315626801>

Appendix A

ECE Teachers of Well-being Course Interview Protocol

Pre-Session Activity

Prior to the Zoom session, participants must have completed the following steps:

- *Consented via electronic informed consent*
- *Confirmed date of session*

Intro: 5-10 minutes

Hello everyone, my name is *[facilitator's name]* from department of Learning Science and Human Development at the University of Washington. I will be leading our interview today, and will be supported by my colleague, *[facilitator's name]*. Thank you for taking the time to come today to talk about your learning experiences in this course.

Before we get started, I would like to review the process a little bit and establish some ground rules for our interview. The purpose of this interview is to learn more about the stress coping strategies of early childhood education teachers to identify factors of this course that might facilitate or prevent teachers from learning how to positively cope stress. You have been asked to participate because you are in preparation for the profession of early childhood education and participated in the data collection phase. You can offer valuable insight into your experiences and thoughts about the effect of this course.

Everything you say here today will be confidential – when we analyze the data from this interview later, we will replace your names with identification numbers, and will omit any identifying information such as the names of relatives, friends, workplaces, or cities. After the conclusion of the interview, the information we discussed will be categorized into themes and topics before being used to make recommendations to support ECE teachers, or to determine the direction of future studies to learn more about ECE teacher stress coping strategies. Your personal information will not be connected to the results of this interview. Our discussion and your personal information will neither be opened to the instructor of this course nor influence your credits.

So now let's go over a few ground rules for the interview. First, there are no right or wrong answers. We are interested in your opinions and perspectives and the experiences you have had as an early childhood education teacher. Second, you do not have to agree with what you knew and how you learned from this course. We expect people will have different views on these questions, and we want to hear all the different experiences and possibilities. Third, we want you to feel comfortable saying positive things, as well as critical things. We are not here to promote a particular way of thinking. We just want to understand your viewpoints.

This interview will last approximately 50 minutes to 1 hour. As a reminder, we are recording this meeting to review themes and topics of importance. All information that you share will be completely confidential. Only our research team will have access to the recorded file, and we will delete it after the transcription process.

Do you have any questions before we get started with the first question?

(Answer all questions before proceeding)

(Begin interview questions)

Interview: 45 minutes

1. Now I would like to hear a little bit about how you have dealt with stress with strategies from this course: So, my next question is: In all the stress coping strategies you gain from this course, what coping strategies have you found useful to lessen stress levels and why?
(20 minutes)

Prompt:

- a. What is the exact moment or case that you used the strategies and successfully release your stress, manage emotion or feel more confident in teaching context or general situation?
- b. In this case, what motivates or stress you to cope stress with the strategies?
- c. In this case, which personal aspects do the strategies most helpful with, such as your motivation, emotion, confident?
- d. In this case, which external aspects do the strategies most helpful with, such as improve relationships with people surround you?
- e. Do you think that these coping strategies maybe useful for you in the early childhood education working environment?
- f. Do you have other examples except the one you just give?

Exit: 5 minutes

Exit

Thank you for participating in today's ECE teachers' well-being course interview. We appreciate your time and thoughtful feedback. As a reminder, we will be using this information to make recommendations to support ECE teachers, and to determine the direction of future studies to learn more information about ECE teacher stress and coping strategies. Your personal information will not be connected to the results of this interview.

Please do not hesitate to contact us if you have some additional insight, comments, or questions about our project. We appreciate your expertise in the field and your willingness to support our research projects at the University of Washington. We will send you a **\$ 25 gift card** via email in December.

Thank you again for your time and have a great rest of your day!

Appendix B

Slide Deck of ECE Teachers Interview



Introduction and Rules

Introduction

- > Interviewers
- > Purpose
- > Confidentiality

Rules

- > no right or wrong answers
- > do not have to agree with what you knew and how you learned from this course.
- > feel comfortable saying positive things, as well as critical things



Course Coping Strategies

• Strengthening Your Network	• Cognitive Behavioral Therapy
• Doing Good Deeds for Others	• Cognitive Restructuring
• Role Models	• Detective Thinking
• Mentoring	• Thought log
• Value-Directed Behaviors	• Identifying, Labeling and Quantifying
• Bull's Eye	• Relaxation
• Choosing Your Attention	• Distraction
• 3 Ways to Pay Attention to the Positive	• Self-Soothing
• The Three Skills of Mindfulness	• Positive Self Talk
• Mindful Breathing	• Cultivating Positive Emotions
• Mindful STOP	• CDC Recommendations
• Find Yourself and Return	• Three Ways to Support Good Sleep
• Mindful Daily Routines	• Combating Cognitive Hyperactivity
• Gratitude Practice	• Tips for Healthy Eating
* Gratitude Journal	• Spending Time in Nature/Spirituality and Religion/Leisure and Recreation/Relaxation
* Thank you notes	• How Should I Prepare for Help?
* Gratitude letter	
* Gratitude visit	



Resources

> Mentoring Guides for Students

https://grad.uw.edu/for-students-and-post-docs/gsa/mentoring/mentoring-guides-for-students/?mkt_tok=NTI3LUFIUi0yNjUAAAGC9j5eVqP8uldqBDSRNp0vXwqQQxpX0ygekiF6WYqP2K7vDVHPWe4GRxabGm8UQnfP6-LMWkG8L9OKy47VLHaeQFnQZshjipomUPvGBYIoA

> My SSP (24/7)

https://myssp.app/ca/home?mkt_tok=NTI3LUFIUi0yNjUAAAGC9j5eVtQZwwnYb-BUeuY_jpN-ffImC9rhLb7_bnNUgQrom19ZTL9I9LSSIXj9r9qC3Q0s-zcq7-ByiZ_y3dKfmaB88z4-9lxrg_iuDrAEO

> Counseling Referral Service

http://washington.rints.com/?mkt_tok=NTI3LUFIUi0yNjUAAAGC9j5eVtcLVGftSYacsYyYe8YIJWclfVYhvKmqA8mgvQXffXQesILDIL1aFnG67V0yVSAtxkLxjEdPYc1-rVo8-WzG5I2vfq5ZR5j3usfPRw

> The 988 Lifeline (24/7)

https://988lifeline.org/?mkt_tok=NTI3LUFIUi0yNjUAAAGC9j5eVUCleqqvfyoJuX9EOP5RVueGZvgx26QMNmozMNV2mjZ5fUZzdHArjIN9KAW_wF4KU7yYEtiG6EPnBIBoj2SVtj4F0GDlxGzHXWapQw



Appendix C

Self-reflection and positionality

Before I conduct interviews of this study, I acknowledge my standpoint as a beginning teacher in Early Childhood Education (ECE). My year of experience in ECE setting was about one year. As a beginning teacher myself, I was anxious about my inadequate skills for engaging children with appropriate teaching moment. Based on my observation of my workplace, I found that decreasing number of veteran teachers who were expertise in teaching and made good interaction with children were content with working environment. In such environment, I was deeply concerned about how to build a positive environment for children to grow social-emotional competence with beginning teachers who were anxious and veteran's teacher who lacked job satisfaction. I was intrigued by the problem of how both beginning teachers and veteran teachers of ECE could maintain quality of teaching find their path of thriving in their career.

Appendix D

ECFS 311: Teaching from the Inside Out: Resilience and Wellness for Educators, Section B Autumn Qtr 2022

Course Modality: Hybrid

Course Description:

Teaching young children is one of the most rewarding professions, but it can also be one of the most stressful. And, our current context has added many additional stressors. Many early childhood providers lose sight of their love for the profession and engage in less effective practices because they struggle to manage stress and do not intentionally take care of themselves. Conversely, research suggests that individuals who develop and use resilience skills (such as optimistic thinking, relaxation strategies, choosing one's attention, practicing gratitude, and so on) and other positive strategies and routines (for example, good sleep, scheduling in fun, doing what matters most, and so on) are more likely to be effective in their job roles, have strong relationships with others, be physically and mentally healthy, and be satisfied with their lives overall.

The purpose of this course is to provide you with resources and strategies to flourish. Resilience is applying skills and finding resources that help you to weather life's inevitable ups and downs, and to thrive. It is not only about your ability to positively adapt in the face of adverse or challenging circumstances (that is, survive), but it is also about learning the positive skills, strategies, and routines that enable you to live a happy, healthy, and fulfilling life (in other words, thrive). This course will help give you the permission to take care of yourself to optimize your effectiveness as a student and as a current or future early childhood professional. This captures the notion of teaching from the inside out—a phrase that highlights the importance of promoting core resilience skills, strategies, and routines among early childhood professionals. In turn, resilient people are more capable of creating and maintaining nurturing, supportive, and effective learning environments while optimizing their own well-being and love of the profession.

By the end of this course, you will have the knowledge, skills and a list of resources that you can apply in your life now and in the future to be a resilient educator.

Goals:

The overarching goal of this course is to give you permission to take care of yourself and encourage you to be a resilient educator.

A resilient educator is someone who:

- purposely strives to be as mentally and psychically healthy as possible,
- possesses the confidence to effectively cope with and manage stressful situations,
- connects well with and understands the needs of others (such as, young children and their parents),
- demonstrates grit or perseverance even when circumstances seem tedious or difficult, and
- focuses on the positive and fulfilling aspects of life.

Learning Objectives:

When you have completed this course, you will be able to discuss, apply/practice, and teach the knowledge, skills, routines, and daily habits related to becoming a resilient educator.

You will also be able to:

- describe why “teaching from the inside out” is critical to becoming a resilient, effective student and professional.
- explain the benefits of resilience and how the specific skills translate into optimizing social-emotional well-being and function as a more effective educator.
- practice a variety of resilience skills in different aspects of your life, including mindfulness, managing intense emotions, clarifying and committing to your personal values, and identifying and altering unhelpful thoughts.
- describe why practicing resilience skills is critical to develop the fluency necessary to use them when they are needed the most; and

- develop a resilience plan that serves as a roadmap for your future work in teaching young children.

Test your knowledge (10 points each * 6 – 10 points (lowest score) = 50 points, 10%)

At the end of each online session's expert video presentations and eLearning review activities, you will complete a "test your knowledge" quiz. The scope of these knowledge checks is only on the expert video presentations and any open-source video presentations. You may see some repetition from the eLearning review activities and that is acceptable. Remember that the eLearning review activities are not graded.

Only the knowledge checks contribute to your overall course grade; hence it behooves you to complete all video viewings and eLearning review activities.

Notes on number of attempts:

- You are allowed two (2) attempts for a score on each Test Your Knowledge. You can retake quizzes more times, but no further scoring will occur.
- After you complete the quiz, you will be able to review your answers and view feedback.
- Consult your instructor for any retake/re-scoring requests.
- Your lowest score will be dropped.

Weekly "TGIF: The Gratitude I Feel" Reflection Post (10 posts @ 10 points each = 100 points, 20%)

Each Friday, take a moment to pause and reflect. Identify five things you are grateful for this week and post these to the discussion board. You can record a short video, post photos, or simply write these out in text form. Only post what you feel comfortable sharing with others in the class. These are due every Friday by 11:59 PM. Post on class canvas site.

Class Project: Project YOU! OR Bull's Eye, Book Review and Reflection (200 points, 40%).

YOU HAVE A CHOICE! Option 1: You can pursue "Project You!" which involves completing the Bull's Eye Assessment and then creating a plan to focus on your wellbeing in one area. **OR** Option 2: you can complete the Bull's Eye Assessment and then read *one* of the recommended books and complete a reflective essay. Both options will have three parts. Part one will be due 10/25, and Part two will be due 11/8 and Part three will be due 12/6.

See the Class Project handout provided in class and online for details

Appendix E

ECFS 311: Teaching from the Inside Out: Resilience and Wellness for Educators

Section A and C

Autumn Qtr 2022

Course modality: Online

Course Overview:

Teaching young children is one of the most rewarding professions, but it can also be one of the most stressful. And our current context has added many additional stressors. Many early childhood providers lose sight of their passion for the profession and engage in less effective practices because they struggle to manage stress and do not intentionally take care of themselves. Conversely, research suggests that individuals who develop and use resilience skills (such as optimistic thinking, relaxation strategies, choosing one's attention, practicing gratitude, and so on) and other positive strategies and routines (for example, good sleep, scheduling in fun, doing what matters most, and so on) are more likely to be effective in their job roles, have strong relationships with others, be physically and mentally healthy, and be satisfied with their lives overall.

The purpose of this course is to teach you how to be a resilient educator. Resilience is the ability to survive and thrive. It is not only about your ability to positively adapt in the face of adverse or challenging circumstances (that is, survive), but it is also about learning the positive skills, strategies, and routines that enable you to live a happy, fulfilling, and successful life (in other words, thrive). This course invites you to take care of yourself to optimize your effectiveness as an early childhood educator using science-based strategies. This captures the notion of teaching from the inside out—a phrase that highlights the importance of promoting core resilience skills, strategies, and routines among early childhood educators. In turn, resilient educators are more capable of creating and maintaining nurturing, supportive, and effective learning environments while optimizing their own well-being and love of the profession.

By the end of this course, you will have the knowledge and skills that you can apply in your life now and in the future to be a resilient educator.

Goals:

The overarching goal of this course is to provide you with strategies, resources, and support to be a resilient educator.

A resilient educator is someone who:

- purposely strives to be as mentally and physically healthy as possible,
- possesses the confidence to effectively cope with and manage stressful situations,
- connects well with and understands the needs of others (such as, young children and their parents),
- demonstrates perseverance even when circumstances seem tedious or difficult, and
- focuses on the positive and fulfilling aspects of life.

Learning Objectives:

When you have completed this course, you will be able to discuss, apply/practice, and teach the knowledge, skills, routines, and daily habits related to becoming a resilient educator.

You will also be able to:

- describe why “teaching from the inside out” is critical to becoming a resilient, effective educator.
- explain the benefits of resilience and how the specific skills translate into optimizing social-emotional well-being and function as a more effective educator.
- practice a variety of resilience skills in different aspects of your life, including mindfulness, managing intense emotions, clarifying, and committing to your personal values, and identifying and altering unhelpful thoughts.
- describe why practicing resilience skills is critical to develop the fluency necessary to use them when they are needed the most; and

- develop a resilience plan that serves as a roadmap for your future work in teaching young children.

Assignment Expectations

Email the Professor (10-12 points) For this first assignment, review the syllabus and then send me an email @ gjoseph@uw.edu. Put “ECFS 311 A - [your name]” in the subject line. In the body of the email tell me one thing you are excited about for the course, and one thing you are wondering about (e.g., confused, concerned, etc.). For 2 bonus points tell me your best time management or focus tip (e.g., I use a tomato timer for 25 minutes to focus on completing an assignment).

Applied Assignments (50 points each, complete 5). Applied assignments provide practitioner-focused time to make meaning from course readings, videos, and eLearning activities. Assignments vary and may include reflection, action logs, and practice using skills in your daily life.

End-of-Session Test Your Knowledge (10 points each) At the end of each session’s expert video presentations and eLearning review activities, participants must complete a knowledge check. The scope of these knowledge checks is only on the expert video presentations and any open-source video presentations. You may see some repetition from the eLearning review activities and that is acceptable. Remember that the eLearning review activities are not graded. Only the knowledge checks contribute to your overall course grade; hence it behooves you to complete all video viewings and eLearning review activities.

Notes on number of attempts:

- You are allowed two (2) attempts for a score on each Test Your Knowledge. Your highest score will be counted.
- After you complete the quiz, you will be able to review your answers and view feedback.
- Consult your Instructor for any retake/re-scoring requests.

Discussion Board Participation (10 points each, Grading: per rubric) Each student is expected to participate on the weekly discussion board. This represents our in- class discussion. These online discussions allow you and your classmates to discuss the material together and help each other make relevant connections to other ideas and to your practice. Participating in discussion boards not only represents your learning, but actually supports your learning. The objective of the discussion board is to give you the opportunity to take what you have learned in this session and put it into your own words. The ability to do this demonstrates that you have made meaning of the material. You will make your post for up to 6 points by Saturday evenings and respond to two peers’ posts for up to 4 points by Monday evenings.

For the most part, I will not take part in these discussions; however, I will be reading the posts and reserve the right to join in the conversations. In this way, I will participate when further information or clarification is needed.

Mid-Term/ Final Assignment Options (150 points Grading: per assignment rubric).

☛ **YOU HAVE OPTIONS!** You can complete the mid-term and final assignments **OR** you can read *one* of the recommended books and complete a reflective essay.

Option 1: Wellness Wheel Part 1. Becoming a resilient educator is a never-ending journey. Resilience is never ‘accomplished’ but rather is continually strengthened by practicing skills and strategies regularly. The “Wellness Wheel” mid-term assignment gives you an opportunity to assess your wellness across multiple areas of your daily lived experience, to identify an aspect of your wellness that you would like to improve, and then create a plan to increase a desired resilience and wellness practice by creating a WOOP. A WOOP is an evidence-based practice to support goal setting and behavior change. WOOP stands for Wish, Outcome, Obstacle and Plan. You will then collect data (at a minimum weekly) and report on this for the Final.

Or

Option 2: Book review. Read one of the following books:

- *Self Compassion* by Kristin Neff, PhD (ISBN 978-0-06-173352-9), or

- ***Stress-Proof: The Scientific Solution to Protect Your Brain and Body --and Be More Resilient Every Day*** by Mithu Storoni, MD, PhD (ISBN 978-0143130475), or
- ***The Person You Mean to Be: How Good People Fight Bias*** by Dolly Chugh (ISBN - 978-0062692146), or
- ***The Mindful School: Transforming School Culture through Mindfulness and Compassion*** Edited by Patricia A Jennings (ISBN 9781462539987), or
- ***The Upside of Stress: Why Stress Is Good for You, and How to Get Good at It*** by Kelly McGonigal (ISBN 1101982934)

For the midterm, read halfway through the book and write a 2-page maximum (typed, dbl spaced) initial review and reaction to the book. How far are you in the book? What has resonated with you so far? What has not? Does the science seem sound, or do you have critiques of it? Does it seem like it will be helpful to you (at this point) or not? Full credit will be earned for a thoughtful reflection that demonstrates evidence you have read the first half of the book.

Final Assignment Options (150; Grading: per assignment rubric).

Option 1: If you selected option 1 for the midterm you will reflect on any changes you have observed related to your wellness. You will access the instructions from the CANVAS assignments page and will write up a summary of your progress and a reflection on your “Wellness Wheel” and midterm WOOP. .
Or

Option 2: If you selected Option 2 for your midterm, then you will complete your selected book and write a reflective essay.

For this alternative assignment, you will finish your chosen book and write a reflective essay. The essay should include your overall reflections on the book, how the information presented resonates (or does not) with your lived experience, how you can see (or not) the ideas in this book affecting your everyday experience and how you see resilience, healing and self-compassion as affecting life as an educator. Dbl spaced – page limit 3.