Digital Frontiers: Investigating the Impact of Online Teaching Engagement on Thai Teachers' Self-Efficacy and Burnout amid the Covid-19 Pandemic

Nongluck Manowaluilou[1] & Thananun Thanarachataphoom[2]

[1] Department of Vocational Education, Kasetsart University, Bangkok, Thailand

[2] Department of Education, Kasetsart University, Bangkok, Thailand

Correspondence: Nongluck Manowaluilou, Department of Vocational Education, Kasetsart University, Bangkok, Thailand.

Abstract

This study aims to investigate experienced Thai teachers' experiences of burnout during online teaching and learning, and examine how teachers' self-efficacy and burnout levels impact their teaching performance. The research concerns differences in perceptions of emotional exhaustion, depersonalization, personal accomplishment/assessment, teachers' self-efficacy, and online teaching performance among teachers in Thailand. The sample selection was conducted using a stratified random sampling technique. Data collection involved self-reported surveys from 243 elementary, secondary, and vocational schoolteachers in metropolitan areas and Thailand's north, northeast, east, and south regions. MANOVA and correlation analysis were employed to analyze burnout, teachers' self-efficacy, and teaching performance. The results indicated differences in online teaching performance and teachers' self-efficacy between two groups: high-risk and moderate-to-low risk of burnout. Teachers with a low risk of burnout demonstrated higher self-efficacy and better performance during online teaching. The study identified two burnout subscales—emotional exhaustion and depersonalization—originally included in the Maslach's burnout inventory. However, we also incorporated teachers' online teaching performance into the assessment, necessitating modifying the Maslach Burnout Inventory. Regarding implications, we recommend practical applications in policy improvements related to teachers' mental support and reducing burnout causes while enhancing online teaching performance.

Keywords: burnout; COVID-19, online teaching performance, teacher's self-efficacy

1. Introduction

1.1 Teacher Self-Efficacy

Teachers' self-efficacy beliefs about their ability to teach content knowledge can influence positive student results. TSE is essential in achieving teachers' activities (Betoret, 2006). TSE is related to teachers' motivation and teaching performance (Tschannen-Moran et al., 1998). Gibson and Dembo (1984) underscored that highly self-efficacious teachers Teachers with higher expectations regarding their impact on student learning tend to endure for extended periods, emphasize academics more intensely during class, and demonstrate diverse forms of feedback compared to teachers who hold lower expectations in this regard.

Online teaching is a challenging proposition that requires careful consideration. Although several studies indicated that online teaching and learning seemed impossible, other countries could teach effectively and efficiently using distance learning methods (Ma et al., 2021; Gopal et al., 2021; Lizana et al., 2021). Literature indicates that many teachers are experiencing burnout (Chang, 2009) and low SE (Wang et al., 2015) in traditional teaching methods. Antecedent studies aim to associate burnout with low TSE (Skaalvik & Skaalvik, 2010). Teacher burnout is related to efficacy beliefs (Skaalvik & Skaalvik, 2007), perceived fairness at work (Kausto et al., 2005), and influences school climates (Grayson & Alvarez, 2008). Capone, Josh-also, and Park (2019) have shown that burnout affects performance at work, teacher-student relationships, and classroom management and causes health-related issues such as depression.

On the contrary, a teacher's competence to accommodate the requirements of children may be hindered by a lack

of confidence or efficacy. Teachers with low efficacy, for instance, were quick to dismiss their children to student support teams, according to Pas, Bradshaw, Hershfeldt, and Leaf (2010). A key factor in teachers' psychological well-being is critical for chronic stress can result in professional burnout. Burnout is the buildup of an amplified stress reaction from one's professional responsibilities. Maslach et al. (2001) study described burnout as emotional exhaustion that is a response to high job demands and insufficient resources and results in low self-efficacy (Maslach et al., 2001). According to the transactional model of Sapolsky (1998), stress and burnout emerge when an individual's capacity to manage the demands placed upon them is assessed unfavorably. As a result, teachers' burnout, stress, coping, and SE are all likely interconnected and multidirectional. Although teachers are proficient in teaching in traditional classroom settings, some evidence indicates that teachers need to be more equipped with online instructional tools, media, and platforms, which would cause teachers to endure stressful feelings.

1.2 Link Between Teacher Burnout, Teaching Performance, and Online Instruction

Teachers' exhaustion may be the underlying cause of poor teaching performance. Teachers must handle uncertainty and worry with a year's extensive online learning term, making managing stress difficult. The continual stress handling could lead to burnout, which affects long-term physical and mental health.

Teachers are among those who suffer from mental and physical health problems due to work overload and other obligations (Lizana et al., 2021). This study highlights that TSE and burnout would be counter-related due to many adverse effects on teachers and students, such as depression, health deterioration, and clinical depression (Schonfeld, 2001). More importantly, most research studied the cause and effect of teacher burnout and TSE while teaching online. Although the factor associated with TSE is teaching performance, this does not contradictory evidence as being necessary for identifying the cause. This study aims to study the relationship between TSE, teachers' burnout, and teachers' performances when teaching online.

1.3 Teacher's Burnouts

TSE and technology teaching is increasing in literature (Angeli & Valanides, 2009; Ertmer & Ottenbreit-Leftwhich, 2010; Ertmer et al., 2014; Dolighan & Owen, 2021). A study investigated the impact of technology and self-efficacy (Niederhauser & Perkmen, 2010) and found that self-efficacy and outcome expectations are variables for effective teaching with technology. A study by Stajkovic and Luthans (1998) showed that self-efficacy was related to work-related performance. Skaalvik and Skaalvik (2010) used a structural equations model and proved that TSE was negatively related to both dimensions of teacher burnout, namely emotional exhaustion and depersonalization (-.29 and -.41) (p. 1063).

Besides the dimensions of TSE as defined by Skaalvik and Skaalvik (2010), other researchers in the field of education have examined self-efficacy scales in various areas such as literacy (Tschannen-Moran & Johnson, 2011), science (Riggs & Enochs, 1990), inclusive practices (Malinen et al., 2013), technology, discipline (Brouwers et al., 2000). Additionally, some researchers have expanded the concept of TSE to encompass the organizational domain (Friedman & Kass, 2002) or the cultural domain (Siwatu, 2007) independently.

These studies underscored that TSE was evident in specific aspects of the teaching profession. Its intensity could vary across teaching tasks, roles, and students. Understanding TSE, burnout, and teaching performance can provide valuable guidance for educators and policymakers. However, the future of online teaching and learning, as well as the curriculum, may change. Nevertheless, the preparation for online teaching and learning in the future may differ, and the findings can help school administrators, school districts, and other stakeholders comprehend the current situation of TSE and burnout. The research objectives are: 1) to study the teacher's experience of burnout during online teaching and learning and 2) to investigate how teachers' self-efficacy and burnout affect teaching performances.

2. Literature Reviews

2.1 Teacher Self-Efficacy (TSE)

In social cognitive theory, Bandura (1977) included self-efficacy as a fundamental component. Bandura (1977, 1997) defined perceived self-efficacy as subjective assessments of one's ability to plan and carry out actions to achieve specific goals. He tried to measure its level, generality, and strength across activities and situations. SE measures concentrate on performance capabilities rather than personal attributes, such as physical or psychological traits. Self-efficacy beliefs are not a sole disposition but a multifaceted construct that varies depending on the functioning domain. TSE is co-related with teachers' cooperation, adaptation, and instruction.

According to Bandura (1986), teacher efficacy is situational and subject-specific. For example, when teaching physics, a teacher's self-efficacy may be low, while when teaching language arts, it may be vital. People who demonstrate high levels of self-efficacy are likelier to succeed than those with low levels of self-efficacy. TSE has

a considerable effect on student achievement (Hattie, 2003).

The concept of triadic reciprocal causality (Bandura, 1986) suggests that the classroom environment, teachers' behavior, and their thoughts interact with and influence each other. This dynamic relationship emphasizes the importance of critically examining how the quality of classroom processes impacts the connections between TSE, students' academic adjustment, and teachers' well-being. According to Wong et al. (2012), TSE can positively influence teachers' perceptions of the usefulness and ease of use of computers and their overall attitude toward computer use. This positive effect contributes to their increased utilization of technology in the classroom, as demonstrated by research conducted by Rohaan et al. (2012). In addition, the computer self-efficacy of preservice teachers, specifically in terms of basic teaching skills, advanced teaching skills, and technology for pedagogy, was found to be predictive of both traditional and constructivist use of computers and technology.

Preservice teachers' computer self-efficacy along dimensions of basic teaching skills, advanced teaching skills, and technology for pedagogy revealed that TSE for teaching skills and technology for pedagogy served as predictors of traditional and constructivist use of computers and technology (Wong et al., 2012). In the upper elementary and secondary grades, TSE in computer use, whether general or specific, can have a positive impact on teachers' attitudes toward technology, their attitudes toward web-based instruction, and their motivation to engage in web-based professional development, as noted by Rohaan et al. (2012) and Lee & Tsai (2010) respectively. However, two studies by Mueller et al. (2008) and Vannatta & Fordham (2004) could not establish a clear positive relationship between TSE and classroom technology use. Furthermore, Ahmad et al. (2010) found that faculty members' computer self-efficacy, directly and indirectly, influenced their use of computer technology, highlighting the importance of computer self-efficacy in determining technology integration in teaching. Consequently, regarding technology and computer use in the classroom, teachers perceive themselves as self-efficacious, particularly regarding technological integration.

2.2 Burnout

Burnout is a psychological condition characterized by emotional exhaustion, depersonalization, and diminished personal achievement that may manifest in individuals engaged in various forms of interpersonal work (Maslach & Jackson, 1986). Teachers' psychological health can impact teaching performance and personal health (Capone et al., 2019) on teaching durations (Hassan & Ibourk, 2001).

Teacher burnout has been associated with teacher turnover intentions, job absenteeism, agitation, and underperformance (Belcastro & Gold, 1983). (Huberman, Grounauer, & Marti 1993). Emotional exhaustion, depersonalization, and low self-efficacy are three components of burnout related to applying classroom techniques (Maslach et al., 1996). Emotional exhaustion, defined as "tired and fatigued feelings that develop as emotional energies are drained" (Maslach et al., 1996, p. 28), could sabotage a teacher's efforts to implement effective instructional practices and teaching performances and may influence the development of negative attitudes towards students and poor interactions with students (Lamude et al., 1992).

2.3 Teaching Performance

Teacher efficacy may be culturally oriented, and its application to teachers in different countries should be scrutinized (Akiroglu et al., 2005). The degree to which instructors perceive themselves to be effective in their teaching differs between cultures (Gorrell & Hwang, 1995; Lin & Gorrell, 1998; Yeung & Watkins, 2000). Instructors with a strong feeling of effectiveness are likelier to employ open-ended, inquiry-based, student-directed teaching techniques. In contrast, teachers with a low feeling of efficacy are more likely to employ teacher-directed teaching techniques like lectures or textbook reading.

Han & Weiss (2005) suggested that a teacher would likely implement effective teaching practices in the future due to high self-efficacy. Teachers who were more confident in their ability to regulate classroom conduct are more likely to deliver successful teaching performances and yield satisfactory learning outcomes. Positive student reactions to good classroom management serve as a positive feedback loop, enhancing self-efficacy.

2.4 TSE and Teaching Performances

Student academic achievement is also related to teacher efficacy. Muijs and Reynolds (2002) showed that a teacher who could perform well was reflected in students' academic achievement and, subsequently, in pupils' academic progression over a school year. In addition, the study showed that teacher self-efficacy and subject knowledge influenced teacher behavior, resulting in an indirect link between student academic achievement and teacher behavior (Muijs & Reynolds, 2002). Self-efficacy is a psychological construct that predicts future conduct. According to self-efficacy theory, if a teacher succeeds at one activity, he or she is more likely to believe that they will succeed at that task again (Tschannen-Moran & Hoy, 2007).

2.5 TSE and Burnout

Teacher self-efficacy, collective teacher efficacy, teacher burnout, teacher work satisfaction, and teachers' opinions that circumstances outside of teaching limit what they can achieve (Skaalvik & Skaalvik, 2007). Self-efficacy is related to classroom management, like teacher burnout and stress (Reinke et al., 2013). Weißenfels, Klopp, and Perels (2022) were interested in attitudes and self-efficacy toward e-Learning was related to changes in burnout and TSE. Based on the cluster-analytic results, preservice teachers' burnout levels were associated with fluctuations in TSE. Decreases in TSE were observed alongside higher levels of burnout, while low and stable levels of burnout were linked to high TSE. Stable and high levels of burnout were characterized by low TSE, and stable and moderate levels of burnout were the result of changing levels of TSE over time. These findings suggest that preservice teachers with higher self-efficacy may exhibit greater resilience against burnout. However, it should be noted that these outcomes may not necessarily extend to their initial teaching years, as Høigaard et al. (2012) indicated.

2.6 Teaching Online Causes Burnout

The study examined the online teaching-related stress, self-efficacy, and occupational commitment of preservice teachers from two culturally Western (Canada and England) and two culturally Eastern (Hong Kong and Thailand) countries. The sample included 1,187 participants, with 379 from Canada, 203 from England, 211 from Hong Kong, and 394 from Thailand. The findings revealed that self-efficacy played a partial mediating role in reducing the impact of stress arising from student behavior and workload on teachers' commitment to their profession in three out of the four cultural contexts. Further analysis with the country as a moderator indicated significant variations in the strength of the mediating effect across the four contexts. These results suggest that TSE influences the relationship between work stress and the commitment to continue teaching. However, the nature of this relationship is influenced by the cultural milieu within each context (Klassen et al., 2013).

Ma, Chutiyami, Zhang, and Nicoll (2021) found that during the COVID-19 school lockdown, Chinese school teachers responded to a survey in which TSE for online instruction did not increase, whereas the use of technology increased drastically. There are few studies related to TSE and teacher burnout related to teaching online, especially in Thailand. We studied the students' satisfaction and performance while attending an online course during the COVID-19 pandemic. The online survey was used to study business or hotel management courses at Indian universities. The result showed that the quality of the instructor, course design, prompt feedback, and expectations of students positively impacted students' satisfaction.
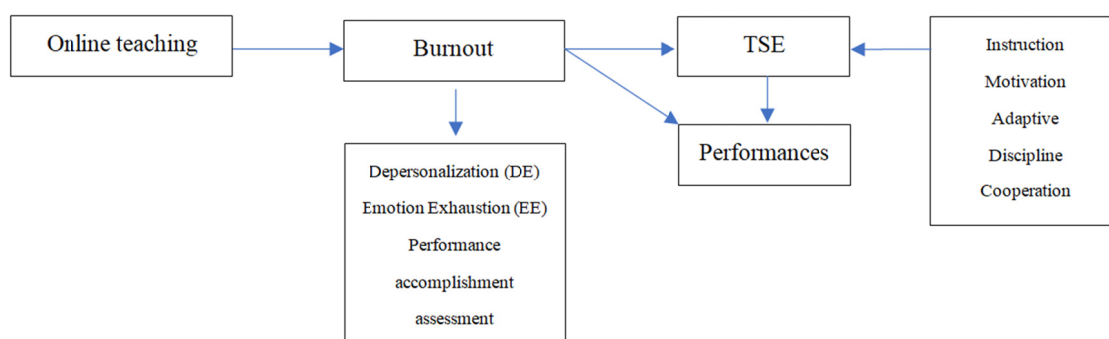

Figure 1. Conceptual framework

We found that self-efficacy partially mediated, attenuating the impact of stress stemming from student behavior and workload on occupational commitment in three of the four contexts under examination. When we conducted mediation tests while considering the country as a moderator, we uncovered noteworthy differences in the strength of this mediating effect across the four contexts. These findings suggest that Teacher Self-Efficacy (TSE) alters how work-related stress influences the commitment to pursue a teaching career. However, it is essential to note that the cultural environment also significantly influences the nature of this relationship, with variations observed depending on the specific context (Klassen et al., 2013).

In a different study conducted by Ma, Chutiyami, Zhang, and Nicoll (2021), it was observed that during the COVID-19 school lockdown, Chinese school teachers responded to a survey in which Teacher Self-Efficacy for online instruction did not witness a notable increase, despite a substantial uptick in the utilization of technology for

remote teaching. Our research focused on assessing student satisfaction and performance during their participation in online courses amid the COVID-19 pandemic. The study employed an online survey method and targeted students in business or hotel management courses at Indian universities.

The results of our study indicated that several factors, including the quality of the instructor, course design, timely feedback, and student expectations, positively influenced student satisfaction. Notably, there needs to be more research on the relationship between Teacher Self-Efficacy and teacher burnout in online teaching, particularly within the Thai educational context.

3. Method

This study aims to measure TSE during online instruction during the COVID-19 pandemic when all schools in Thailand are on lockdown, and all courses are delivered online. Measurements were conducted to collect TSE, teaching performances, and burnout information.

The Tschannen-Moran et al. (1998) model asserts that TSE is best evaluated in three components: instruction, classroom management, and student engagement. In online teaching, the context is different. Therefore, we added other components: instruction, adapting instruction to individual needs, motivating students, maintaining discipline, cooperating with colleagues and parents, and coping with change to correspond to online teaching. For this aspect of teaching online, we use the Teachers' Sense of Efficacy Teaching Scale (Tschannen-Moran & Hoy, 2001) and modify it to fit the Thai context. The teacher's well-being aspect is measured using Maslach's Burnout Inventory (MBI), which suggests two subscales: emotional exhaustion and depersonalization.

3.1 Research Design

Tschannen-Moran et al.'s (1998) model asserts that teacher self-efficacy is best evaluated in three components: instruction, classroom management, and student engagement. In online teaching, the context is different. Therefore, we added other components: instruction, adapting instruction to individual needs, motivating students, maintaining discipline, cooperating with colleagues and parents, and coping with change to correspond to online teaching. For this aspect of teaching online, we use the Teachers' Sense of Efficacy Teaching Scale (Tschannen-Moran & Hoy, 2001) and modify it to fit the Thai context. A teacher's well-being was measured using the Maslach Burnout Inventory, which suggests two subscales: emotional exhaustion and depersonalization.

3.2 Participant

The population of this study was elementary and secondary teachers. The emails were sent to teachers' networks for the analysis. One hundred and forty-two samples were from teachers who volunteered to respond to the online questionnaire. The mean age of the teachers was 34.88 years of age. The participants' teaching experience ranged from 1 to 41 years (average mean of 9.74), and 74.1 percent of them were females, males (23 percent), transgender people (2.1 percent), and not identified (0.8 percent). Most participants held a bachelor's degree (63 percent) or master's degree (35.9 percent), with the mean teaching experience being 9.74 years. Science teachers made up most teachers (42.5 percent). They were mainly from Thailand's central region (58.5 percent).

3.3 Instruments

Although this study initially employed the TSE questionnaire developed by Skaalvik and Skaalvik (2010), which was translated into Thai and verified for vocabulary and correctness with input from teachers and professors, we adapted the questionnaire to encompass a broader range of factors relevant to online learning and teaching performances during the COVID-19 pandemic, factors that could potentially contribute to teacher burnout and TSE. The modified questionnaire consisted of 24 items assessing TSE in areas such as instructional techniques, adapting instruction to individual needs, student motivation, classroom management, collaboration with colleagues and parents, and adaptability in coping with change. A Maslach Burnout Inventory (MBI) developed by Maslach and Jackson (1981) was used. We adopted a scale from six-point scales to five-point scales. It contained 22 items and used a 5-point response scale with 1 = never to 5 = every day (e.g., I feel emotionally exhausted because of my work). Researchers validated the burnout factors among Thai secondary teachers: emotional exhaustion, depersonalization, and personal accomplishment assessment.

A five-point scale assessed 20 items (four categories) of online teaching performance, including technology use, student interaction, online classroom management, and classroom assessment. The internal reliability of the scale for online teaching performances is very high (.962).

We used the well-established MBI by Maslach and Jackson (1986) to assess TSE and BMI in their multidimensionality. The MBI uses three subscales to measure burnout: "emotional exhaustion, depersonalization, and lack of personal accomplishment" (Maslach et al., 1996, p. 4). The nine-item Emotional Exhaustion subscale

was utilized in this study. Respondents answer on a 5-point Likert-type scale from 0 (never) to 5 (every day). Scores on each scale were considered separately.

Two Ph.D. researchers who could write and speak English and Thai fluently translated the Thai version, reviewed the two versions of the translated scale, and finalized it for back-translation. Linguistics only used the most important aspects of emotional burnout and depersonalization (Schaufeli et al., 2002). The participants evaluated 14 items related to burnout subscales: emotional exhaustion, such as: "I feel emotionally drained by my work," and, secondly, depersonalization, such as: "I have become more insensitive to people since I have this job." The measurement scale was of the Likert type (1–5), which varied from "completely false" to "completely true." The instruments were piloted with 30 in-service teachers and showed reliability scores of TSE of .954 and burnout of .879, indicating the instrument's high reliability.

3.4 Data Collection

Teachers and teacher networks from each region of Thailand were invited personally to complete the questionnaires during the COVID-19 pandemic in the 2021 academic year. The questionnaires were generated using an online survey form and distributed to elementary, secondary, and vocational teachers via personal invitation emails and social media platforms. Teachers who filled in the survey were voluntary and were informed that the results would not refer back to them. The three follow-ups were sent to teachers as reminders.

3.5 Data Analysis

Two methods were used to analyze the data. To begin with, the researchers utilized MANOVA and correlation analysis to analyze teachers' burnout, TSE, and teaching performance. According to Maslach's burnout degrees, the overall score for burnout is divided into three categories: high, moderate, and low. However, we reduced the subscales from three to two by categorizing burnout into high and moderate-to-low risks.

4. Results

4.1 Preliminary Analyses

To assess teachers' experience of burnout during online teaching and learning, we conducted the study using Maslach & Jackson (1986) framework for assessing burnout during online teaching and evaluating TSE. MANOVA and Pearson product-moment correlation coefficient analyses were conducted. The descriptive data indicated that in-service teachers with home obligations and other related responsibilities did affect their online teaching performances (72.9 percent). Therefore, further analysis was conducted to analyze the risks of burnout, TSE levels, and online teaching performances.

4.2 Pearson Product-Moment Correlation Coefficient

The higher the TSE, the higher the online teaching performance. Therefore, TSE could predict online teaching performances. However, TSE, years of teaching experience, and burnout (emotional exhaustion, depersonalization (loss of empathy), personal accomplishment, and assessment) could all be indicators of TSE risks. The high TSE group has a lower number of burnout subscales. In addition, in-service teachers who have high online teaching performance have a chance to have lower burnout.

In-service teachers' years of experience could predict burnout. The study showed that teaching experience was not negatively correlated with teaching effectiveness. Surprisingly, experienced in-service teachers were reported to have poor teaching performance. TSE and burnout were found to be related to online teaching performance at .05.

In-service teachers with moderate-to-low risk could have higher TSE and perform better during online teaching. Low TSE could not provide enough evidence to determine whether it would impact burnout and online teaching performance. We could only conclude, as we hypothesized, that TSE, online teaching, and burnout were correlated.

Table 1. Correlation matrix

Effect	TSE	Teaching Performance	Burnout
TSE			
Teaching Performance	.557**		
Burnout	-.321**	-.269**	

**p<.001 (2-tailed).

4.3 MANOVA

A multivariate analysis of variance (MANOVA) was used to compare two groups of teachers with high and moderate-to-low risks of burnout on two dependent measures: TSE and online teaching performances. There was a statistically significant difference between the teachers with a high risk of burnout who would result in online teaching performances and teachers' self-efficacy (TSE), F (1, 241) = 10.574, p < .0005; Wilk's Λ = 0.919. Two groups of high and moderate-to-low risks of burnout indicated the differences in online teaching performances and TSE.

Table 2. Summary of MANOVA results across burnout levels

Effect	Wilk's Lambda	F	Hypothesis df	Error df	p-value
Intercept	.016	7202.173	2.000	240.000	.000*
Burnout level	.919	10.574	2.000	240.000	.000*

*p < .05.

Table 3. Box's Test of equality of covariance matrices

Box's M	4.43
F	1.46
df1	3.00
df2	217363.40
Sig.	0.22

As shown in Table 3, results of evaluation assumptions of normality, homogeneity of variance-covariance matrices, The Box's M of 4.43 indicates that the homogeneity of covariance matrices across groups is assumed *(F(3, 217363.40) = 1.46, p = 0.22.*

Table 4. Levene's test of equality of error variances

	F	df1	df2	Sig.
Performance total score	1.14	1	241	.29
Teacher's efficacy	.13	1	241	.72

Levene's test showed that the error variance of the online teaching performances is equal across groups, *F(1,241) = 1.14, p =.29.* And the error variance of the teachers' self-efficacy is equal across groups, *F(1,241)= 0.13, p = .72.* The Box's M and Levene's tests results show that there is no statistically significant difference between the covariance matrices, and the matrices are equal. As a result, the assumption of homogeneity is met. The Wilk's Lambda test is appropriate.

Table 5. Summary of MANOVA results across burnout levels

Source	Dependent Variables	Type III Sum of Squares	df	Mean Square	F	p
Corrected Model	Performance	652.40	1	652.40	6.87	0.01
	TSE	5072.21	1	5072.21	21.21	0.00
Intercept	Performance	1351663.12	1	1351663.12	14229.91	0.00
	TSE	1424681.76	1	1424681.76	5957.04	0.00
Burnout	Performance	652.40	1	652.40	6.87	0.01
	TSE	5072.21	1	5072.21	21.21	0.00
Error	Performance	22891.98	241	94.99		
	TSE	57637.43	241	239.16		
Total	Performance	1840088.00	243			
	TSE	2047966.00	243			
Corrected Total	Performance	23544.38	242			
	TSE	62709.64	242			

Table 5 indicates the test of the significant difference between the risks of burnout across the two dependent variables. The p-values indicate that there is a significant difference between the level of burnout regarding online teaching performances ($F(1,241)=6.87, p=0.01$) and TSE ($F(1,241)=21.21, p <0.01$) in statistics. The results mean that the risks of burnout have a significant influence on online teaching performances and TSE.

5. Discussion

Online teaching is being used to replace traditional face-to-face teaching and learning. It has prompted us to question whether this incident could be a paradigm or modality shift. In the networked age, learning is the interconnectedness of complex knowledge, and learners use multiple tools to access content from websites. Learners also create new content through individual and collaborative efforts. However, these were an integration of online and face-to-face communication.

Since the pandemic started, teaching and learning have changed drastically. The impact on education has changed how teachers teach. Learners have multiple ways to access content using computer technology, and teachers have used different instructional methods: entirely online, blended, hybrid, and hyflex. Online teaching and learning created complexity and complicated phenomena that made it difficult to depict the learning outcomes and students' learning progression.

TSE and online teaching performance were conducted to investigate changes in burnout. However, Weißenfels, Klopp, and Perels (2022) have researched burnout and TSE employing LCRM in a sample of in-service teachers. We shared a common concern that stemmed from the profound impact of the COVID-19 pandemic, particularly in the context of education. Our shared concern revolved around the intricate relationship between the mental health aspects induced by the pandemic and their consequential influence on teaching performances. The pandemic brought about unprecedented challenges, such as abrupt shifts to online learning, the need for heightened adaptability, and the continuous strain of uncertainty. These challenges have had a substantial impact on the mental well-being of educators. The mental health factors, including stress, burnout, and anxiety, interplayed with teaching performances was essential. By delving into this complex dynamic, we aimed to shed light on the multifaceted aspects of teaching during a crisis and contribute valuable insights to the broader discourse on education and mental health. This study held significant relevance and critical implications for the well-being of in-service teachers. It served as a crucial source of evidence to underscore the interconnectedness between TSE and teaching performances. Our findings provided policymakers with substantial evidence to support the concept that the mental well-being of teachers is intricately linked to their effectiveness in the classroom. Furthermore, our study highlighted the imperative need to equip teachers with the necessary mental health support and the tools and resources required for effective teaching. This holistic approach to teacher support is vital for ensuring the educators' well-being and the overall quality of education delivery.

In light of the results obtained in our study, which indicate a loss of teaching motivation among educators, it becomes evident that circumstances beyond the realm of teaching exert a considerable influence on in-service teachers' self-efficacy and burnout, aligning with the findings of Skaalvik and Skaalvik (2007). Furthermore, our investigation into factors contributing to depersonalization and emotional exhaustion during online teaching revealed a consistent trend of lower online teaching performance reported by in-service teachers. Over time, these educators tended to distance themselves from their students, experiencing chronic stress that adversely impacted their mental well-being, consistent with Capone, Joshanloo, and Park's (2019) observations. Our research delved deeper into these issues, uncovering challenges related to teaching preparation and classroom techniques. While previous research, such as Klassen et al. (2013), had indicated the potential for teacher burnout in online teaching, our study underscored the role of the COVID-19 pandemic in accelerating teachers' burnout.

Central to our discussion is the critical role of TSE in shaping teaching performance, be it in traditional face-to-face or online teaching settings. The demands inherent in online teaching, involving juggling numerous tasks simultaneously, triggered heightened anxiety and stress among in-service teachers, potentially leading to burnout and, consequently, lower teaching performance. While teachers may seek to curtail excessive online teaching, this could lead to diminished TSE and a decline in teaching performance. Providing mental health support for teachers is essential, addressing burnout and bolstering TSE. This proposition aligns with the insights of Muijs and Reynolds (2002), who emphasized the profound impact of teachers on students' academic achievement and growth, particularly when educators possess a high level of TSE and proficiency in utilizing online teaching tools.

Our findings strongly suggest that online teaching performance is closely intertwined with teachers' stress levels, which, as corroborated by Klassen et al. (2013), can significantly influence teachers' decisions to leave the profession. Our study underscores the importance of offering comprehensive support and services tailored to their

needs. However, the quality of teaching performances is notably affected when TSE is lower, manifesting as cynicism and detachment from students. Thus, a critical interplay emerges between low levels of teacher burnout (comprising emotional exhaustion, depersonalization, personal accomplishment, and assessment) and high levels of TSE, both of which have implications for the quality of online teaching performance. It is worth noting that emotional exhaustion, rather than an overload of tasks per se, may result from excessive emotional workload, as proposed by Weißenfels, Klopp, and Perels (2022). Teachers may adopt depersonalization as a coping mechanism to manage the demands of their profession.

6. Conclusion

TSE and burnout, and online teaching performances are related. Teachers' burnout and TSE levels are bifactors that could influence online teaching performances. Teachers with moderate-to-low levels of TSE could potentially have high risks of burnout. The higher the teacher's TSE, the lower the number of burnout aspects. The higher the teacher's online teaching performance, the lower the likelihood of the number of burnout aspects. MANOVA correlated with online teaching performances, which differed from the two risk groups with different TSEs, the number of areas at risk of burnout. Teaching performances were affected by home obligations and other related responsibilities, burnout, and low levels of TSE.

7. Limitations

Our limitation is limited to the number of in-service teachers participating in this study. Our sampling method was voluntary from in-service teachers working across Thailand, and the majority were females (72%), which could be due to gender bias. Female teachers experienced more burnout and had lower online teacher performance. The generalizability of the result could be limited due to volunteer teachers who may experience burnout.

We conducted this study in 2020, when Thailand's pandemic peaked. We anticipate that the extended time spent online teaching and learning will result in chronic strain and may reduce some teachers' teaching performance. We would investigate whether the TSE and burnout could result in other subscales of teachers' performances.

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