

Emotion Regulation Strategies among ELT Teachers in Technology-Rich Classrooms: A Mixed-Methods Inquiry into Instructional Confidence

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Abstract

Teachers require emotional regulation skills to handle the technical and teaching difficulties that arise in technology-based classrooms. This mixed-methods study explored how English language teaching professionals employ emotional regulation strategies and how these strategies affect their teaching abilities in technology-based classrooms. Seventy in-service ELT teachers completed the Emotion Regulation Questionnaire (ERQ) and an Instructional Technology Confidence Scale. A qualitative sub-sample ($n = 15$) participated in classroom observations and semi-structured interviews. The multiple regression analysis produced quantitative results which showed that cognitive reappraisal functioned as a positive predictor of instructional confidence with a β value of .42 and a p value below .001, while expressive suppression served as a negative predictor with a β value of -.31 and a p value of .003. The analysis of qualitative data through thematic analysis showed that teachers who had high confidence levels used emotional transparency, proactive technology planning and student scaffolding techniques during technical problems. In contrast, teachers who used suppression, experienced more anxiety because their lessons had to be interrupted. The findings underscore the need to integrate emotion regulation training—focusing on cognitive reappraisal and emotional awareness—into digital pedagogy courses for ELT teachers. The training improves teachers' ability to manage their classrooms effectively while they use technology in fast-changing digital learning environments.

Keywords: Emotion regulation, English language teaching, technology integration, teacher confidence, mixed-methods research

Introduction

The educational landscape has undergone a complete transformation because of digital technology which has created new requirements for English language teaching methods and emotional needs of teachers. The current educational environment uses various technological tools which include interactive whiteboards, learning management systems and real-time collaborative platforms to enhance student engagement, customize their learning experience, and enable worldwide access to educational content (Hubbard, 2021; Pegrum et al., 2022). Educators face multiple emotional difficulties from technological abundance because they experience performance anxiety when using educational technology, encounter problems with digital tools, and they must handle various teaching and technological tasks (Castellanos-Alvarenga et al., 2024; Pegrum, Hockly, & Dudeney, 2022; Zivi et al., 2025). Uncontrolled emotional reactions lead to problems which affect instructional delivery, classroom organization, and result in negative effects on student learning (Brackett et al., 2021).

Teachers who need to handle emotional situations must develop their ability to control their emotions because this skill stands as an essential quality for successful teaching in technology-based

classrooms (Gross, 2015; Pekrun & Linnenbrink-Garcia, 2014). The Process Model established by Gross in 1998 and 2015 defines emotion regulation (ER) as the set of techniques people use to manage their emotional experiences throughout different stages of emotional development. The two main techniques that researchers have examined are cognitive reappraisal which involves changing emotional effects through different interpretations of emotionally charged situations and expressive suppression that encompasses blocking all visible signs of current emotional states (Gross & John, 2003). People who use reappraisal generally achieve better psychological health and social success, while people who use suppression tend to experience more bodily stress and relationship conflicts (Butler et al., 2003; John & Gross, 2004).

Educational research shows that emotional regulation skills impact teacher-student relationships, classroom atmosphere, and teachers' social learning choices (Jennings & Greenberg, 2009; Sutton & Wheatley, 2003). Teachers who master emotional control skills, achieve better academic results because they create fresh solutions for their students (Brackett & Katulak, 2007; Hagenauer et al., 2015). Research results show that emotional regulation skills become essential for students who face technological failures, platform updates, and different student digital capabilities in technology-based environments (Li et al., 2025; Sáez-Delgado et al., 2025).

The intersection of specific emotional regulation approaches with educational confidence for online English language teaching needs further research because it remains an understudied area (Hövel et al., 2025; Mutlu & Solhi, 2024). Instructional confidence here encompasses both general teaching self-efficacy and technology-specific confidence—the belief in one's ability to successfully integrate digital tools to achieve learning objectives (Ertmer & Ottenbreit-Leftwich, 2013; Wang et al., 2018).

Teachers develop this confidence through technical abilities which exist together with their emotional competence; teachers who reframe technology problems as solvable challenges experience better self-efficacy while they keep working, but teachers who conceal their annoyance face emotional fatigue which makes them less inclined to try new technological solutions (Haghi et al., 2024; Joo et al., 2018; Xie et al., 2026).

Researchers who conducted current studies to this date examined self-report surveys which resulted in insufficient comprehension of how ER strategies operate during classroom instruction (Webb et al., 2012). The unique contextual variables of ELT including language performance anxiety, communicative pressure, and cultural dimensions of emotion expression create complex dynamics which quantitative measures fail to capture (Dewaele, 2015; Gkonou & Miller, 2021).

The mixed-methods study examines how in-service ELT teachers use emotion regulation strategies in technology-rich classrooms while their instructional confidence is tested. The research provides an authentic understanding of emotional regulation through quantitative assessment of ER strategies and confidence levels combined with qualitative observations and interviews which document the complex reality of modern digital language instruction. The findings will support the design of specific training programs which will teach ELT professionals the necessary technical skills and emotional skills they need to teach effectively in technology-enhanced learning environments.

Statement of the Problem

The widespread use of educational technology in English Language Teaching (ELT) classrooms not only brings teaching advantages but also creates new emotional challenges that make it difficult for teachers to maintain their work performance. Teachers face multiple challenges including handling technical problems, working with complicated software, dealing with both digital, and personal interactions at the same time, which results in anxiety, frustration and cognitive overload (Li et al., 2025;

Zivi et al., 2025). When teachers face emotional challenges, they need to process, which they cannot handle, their emotional state creates obstacles that lead to teaching disruptions, classroom control problems, and a teacher's professional confidence together with the ability to teach students get these skills effectively (Brackett & Rivers, 2014; Wang et al., 2018).

Research shows that teachers need emotion regulation (ER) skills to maintain their mental health and job performance (Jennings & Greenberg, 2009), but current teacher training programs for teaching technology still focus more on building technical skills and teaching methods for educational content (Ertmer & Ottenbreit-Leftwich, 2013; Pegrum et al., 2022). Educators in digitally-mediated environments lack proper training because teaching about emotional aspects, which students experience through their digital learning experiences, needs to be included in their courses (Mutlu & Solhi, 2024; Zivi et al., 2025).

The training gap creates a problem because teachers who can use adaptive emotional regulation (ER) techniques, which include cognitive reappraisal, will develop greater resilience and stick to their work while teachers who use harmful techniques such as expressive suppression will face increasing stress levels and experience burnout (Gkonou & Miller, 2021; Sáez-Delgado et al., 2025).

Foundational research establishes general links between ER strategies and teacher outcomes but there is a critical lack of research which investigates these relationships in the distinct environment of technology-enhanced language classrooms (Haghi et al., 2024). The research field needs better methods to study how ER strategies which include cognitive reappraisal and expressive suppression affect teachers' confidence in their technology teaching abilities. The evidence shows positive results but research studies have not yet proven that reappraisal helps people become more adaptable and that suppression leads to burnout (Hövel et al., 2025; Sáez-Delgado et al., 2025) because they did not take into account multiple important contextual aspects which define the ELT setting including language performance expectations, cultural norms about emotional display, and the immediate nature of online communication which other people can see (Dewaele, 2015; Pegrum et al., 2022).

Research needs to examine the ER strategies that ELT teachers utilize during their technology-integrated teaching while studying how these strategies impact their confidence in teaching. Self-reported data does not provide an accurate view of the teaching profession because it cannot detect the emotional work which teachers do in actual classroom situations. A mixed-methods research design requires researchers to use quantitative data about ER and confidence along with qualitative data from classroom observations and teacher reflections because this method enables them to better comprehend the research area under investigation. Without such nuanced understanding, teacher educators and policymakers lack the evidence needed to design training that holistically supports educators, potentially resulting in ineffective technology use, diminished teacher resilience, and compromised student learning experiences in an increasingly digital ELT landscape.

Significance of the Study

This study makes several significant contributions to research and practice in digital language teacher education. The research addresses a fundamental theoretical gap by examining how emotional regulation (ER) interacts with teaching confidence in English language teaching settings that utilize advanced technology. The study establishes a contextual framework for understanding how people manage their emotions to achieve successful technology usage through its analysis of two emotion regulation methods which include adaptive cognitive reappraisal and maladaptive expressive suppression. This framework connects affective psychology (Gross, 2015) with technology acceptance models (Ertmer & Ottenbreit-Leftwich, 2013) to provide a comprehensive framework which researchers can use to examine teacher behavior in digital environments.

The research uses mixed-methods techniques to demonstrate how this approach successfully captures the emotional complexities that occur during actual teaching experiences. The research establishes two patterns through quantitative measurement which links ER strategies to confidence levels. The research uses methodological triangulation to strengthen study validity while creating more extensive evidence which supports the design of specific interventions that reach beyond standard training methods.

The research results establish essential guidelines that researchers should follow when conducting their studies. The study provides evidence that teacher educators should implement particular ER training modules in their digital pedagogy programs. The modules should teach instructors to use cognitive reappraisal of technical failures and implement mindfulness techniques for immediate frustration control and perform reflective exercises that help them understand their emotional responses to technology-based teaching (Gkonou & Miller, 2021). The study demonstrates to curriculum designers and policymakers that they should develop digital literacy standards which require teachers to demonstrate both fundamental skills, emotional resilience, and self-regulation competencies essential for teaching in contemporary educational environments.

The research findings have substantial value for teacher development because they show how research affects student learning outcomes and the atmosphere of classrooms. Teachers who can control their emotions create classroom spaces that make students feel secure while teaching students how to handle life challenges and keep using technology for learning even when they experience difficulties (Brackett & Rivers, 2014; Dewaele, 2015). This research empowers ELT teachers with essential technical and emotional skills which lead to improved teacher wellness, increased teacher retention, and better learning results for language students who study in digital environments.

Purpose of the Study

The goal of this mixed-methods study is to examine how English Language Teaching (ELT) practitioners working in technology-based learning environments use emotion regulation (ER) techniques and how these techniques impact their teaching confidence. The study aims to identify which cognitive reappraisal and expressive suppression strategies ELT teachers use during technology-based lessons and to measure how these strategies relate to their confidence in using educational technology and to investigate how these ER processes appear during actual classroom instruction. The research combines quantitative survey data with qualitative observations and interviews to create a detailed understanding of how technology affects teachers' emotional experiences in language teaching. The ultimate goal is to generate evidence-based insights that can inform the development of targeted training and support mechanisms to foster emotionally resilient and confident ELT practitioners in digital classrooms.

Research Questions:

Quantitative Phase:

1. Do ELT teachers in technology-rich classrooms report differing levels of cognitive reappraisal and expressive suppression?
2. Is there a significant relationship between cognitive reappraisal and instructional confidence among ELT teachers in technology-rich classrooms?
3. Is there a significant relationship between expressive suppression and instructional confidence among ELT teachers in technology-rich classrooms?

Qualitative Phase:

4. What are the qualitative differences in how ELT teachers describe and enact emotion regulation strategies in response to technology-related challenges during actual classroom instruction?

Null Hypotheses

H01: ELT teachers in technology-rich classrooms do not report differing levels of cognitive reappraisal and expressive suppression.

H02: There is no significant relationship between cognitive reappraisal and instructional confidence among ELT teachers in technology-rich classrooms.

H03: There is no significant relationship between expressive suppression and instructional confidence among ELT teachers in technology-rich classrooms.

Literature Review

This review integrates five essential research domains to establish a foundation for the study, which explores the way: (1) educational environments handle emotional control (2) students experience emotional distress from technology (3) students who succeed in their studies demonstrate better control over their emotional states (4) emotional intelligence develops through teacher training (5) research methods establish standards for studying emotional responses. The review uses Gross's Process Model of Emotion Regulation from 1998 and 2015 to separate emotion regulation into two types of strategies which include antecedent-focused approaches and response-focused approaches that utilize cognitive reappraisal and expressive suppression, respectively.

Emotion Regulation in Educational Contexts

Teachers need to develop emotion regulation skills because these skills affect all aspects of their teaching which includes their ability to create positive classroom environments, establish relationships with students, and deliver effective lessons according to Jennings and Greenberg (2009). Research uses Gross's model to show how people use adaptive skills that include cognitive reappraisal which helps them change their emotional response to situations while people use maladaptive skills that include expressive suppression which helps them stop showing their feelings according to Gross and John (2003). In general education, teachers who use cognitive reappraisal experience better well-being and job satisfaction while showing more support to students whereas those who use expressive suppression face emotional exhaustion and burnout which decreases their ability to respond in classrooms according to Brackett and Rivers (2014) and Sutton and Wheatley (2003). Reappraisal has been shown through meta-analytic studies to forecast increased positive feelings and improved social skills in various work environments while suppression has been shown through research to forecast increased negative feelings and worse social relationships according to Webb et al. (2012). The research has largely taken place in standard classroom environments which lack digital technology. The unique affective landscape of language teaching—characterized by language anxiety, communicative pressure, and intercultural sensitivity—suggests that ER dynamics may function differently in ELT contexts, a gap this study addresses (Dewaele, 2015; Gkonou & Miller, 2021). Moreover, emerging research indicates that cultural norms shape both the availability and effectiveness of specific ER strategies, with suppression being more common—and potentially less harmful—in collectivist cultural contexts (Butler et al., 2003). Such cultural variation carries particular relevance for ELT, where teachers and learners often navigate cross-cultural emotional scripts.

Technology Integration and Instructional Stress

Digital tool implementation creates educational advantages but it generates new emotional requirements which teachers must face as continual stressors (Li et al., 2025). The combination of technical failures, software difficulties, ongoing platform modifications, and the need to handle both digital and face-to-face interactions at once creates three distinct problems which lead to frustration, anxiety, and feelings of inadequacy (Castellanos-Alvarenga et al., 2024). The educational field has started to study "technostress" which researchers define as a modern adaptation disorder that results from people being unable to manage new technological advancements. Technostress manifests through four primary dimensions: techno-overload (excessive technology-related workload), techno-complexity (perceived skill inadequacy), techno-invasion (blurring of personal/professional boundaries), and techno-uncertainty (constant software/hardware changes) (Sáez-Delgado et al., 2025). Teachers in ELT face intense

performance anxiety which results from their own language skills and their students' language skills during the teaching process (Pegrum et al., 2022). ELT practitioners fulfill two responsibilities because they must perform as language models and technology facilitators which makes them more likely to experience emotional distress during digital tool breakdowns (Hubbard, 2021). The presence of these stressors disrupts teaching activities and reduces teacher confidence which makes effective ER necessary for maintaining educational standards in schools that use technology (Haghi et al., 2024). The research establishes that technostress without any intervention leads educators to abandon their teaching positions which emphasizes the need to investigate protective emotional mechanisms.

Instructional Confidence and Affective Regulation

The ability to teach effectively through technological tools requires teachers to possess both general teaching competence and specialized technological expertise according to Ertmer and Ottenbreit-Leftwich. Bandura's (1997) social cognitive theory posits that self-efficacy develops through four fundamental sources which include mastery experiences, vicarious observation, verbal persuasion, and physiological/affective states. Teachers use emotional regulation to control their emotional states which influences their technological responses to frustration through two distinct pathways. Teachers who can effectively regulate emotions through cognitive reappraisal acquire the ability to see technical setbacks as manageable challenges which helps them sustain their instructional confidence. Suppressing emotions causes people to lose mental capacity and experience more physical tension which includes higher heart rates and cortisol levels while it leads to confidence loss because authentic emotional expression and solution finding becomes impossible (Butler et al., 2003; Sáez-Delgado et al., 2025). Recent studies about mediation found that emotion regulation serves as a mechanism which connects technology acceptance beliefs with actual teaching behavior because teachers who use reappraisal to handle technology challenges show stronger intentions to adopt digital tools while teachers who use suppression show less involvement in their work (Joo et al., 2018). The study investigates between specific ER approaches and instructional trust values which exist in ELT settings because this relationship requires investigation through empirical research. Furthermore, no prior research has examined whether the predictive strength of reappraisal versus suppression varies depending on teachers' prior technology training or years of experience—a gap this study addresses through its mixed-methods design.

Emotionally Intelligent Teacher Education

The current teacher training models which concentrate on digital teaching methods give more significance to technical abilities than to emotional readiness according to Pegrum et al. (2022) and Zivi et al. (2025). The "skills-first" method of teaching digital tools presumes that users who master these tools will develop both self-assurance and emotional strength but research shows that even skilled users face technology-related stress and emotional breakdowns according to Li et al. (2025). The emotionally intelligent teacher education model suggests that professional development should include self-awareness training, empathy development, and ER strategy training into educational programs according to Brackett and Katulak 2007. The most effective interventions include reflective journaling, mindfulness training, and scenario-based role-playing which specifically address technology-related stressors according to Lin et al. (2024). Mindfulness-based interventions which last only a few minutes help preservice teachers decrease their emotional responses to classroom disruptions while they practice reappraisal. ELT certification programs and in-service training programs infrequently include these modules as standard components of their curriculum. Teacher training programs use emotional training to teach teachers how to handle their emotions because they consider emotions to be problems that need to be fixed instead of using them as essential teaching tools. The strengths-based model teaches teachers how to effectively use their emotions to establish better classroom dynamics between students and themselves according to Gkonou and Miller (2021). This mixed-methods study aims to establish better training programs because it needs teachers to demonstrate their complete usage of ER strategies which affects their confidence levels according to their real-world application. The present study contributes by not only identifying

which strategies predict confidence but also documenting how confident teachers enact regulation differently during real classroom events.

Mixed-Methods Approaches in Affective Research

People experience their emotions in complex ways that depend on their current situation, which requires researchers to design studies that measure both extensive and detailed information about human emotional experiences. The Emotion Regulation Questionnaire (ERQ) establishes dependable standardized assessments which measure emotional regulation tendencies at a trait level according to Gross and John (2003). The process of teaching which students actually use to handle their emotional regulation strategies remains untraceable through the existing system (Webb et al., 2012). The research on emotional regulation in educational settings needs to overcome its main challenge which comes from using retrospective self-reporting methods that are vulnerable to both recall bias, social desirability effects, and the observer's inability to recognize automatic self-regulatory actions (Dewaele, 2015). The research needs qualitative methods which include classroom observations and stimulated-recall interviews because these methods help researchers discover the unspoken emotional processes which teachers use during their teaching. The research uses observational methods to track how people show their emotions through nonverbal signs which include facial muscle tension, artificial smiles, and body language that includes relaxed positions and speech that targets specific problems (Gkonou & Miller, 2021). A mixed-methods design is particularly suited to this research because it enables researchers to compare self-reported emotional regulation patterns with actual behavioral data and personal experiences which results in a complete understanding of how emotional regulation affects instructional confidence in technology-enhanced English language teaching classrooms (Xie et al., 2026). The present study extends prior mixed-methods work by leveraging sequential explanatory design: quantitative findings on reappraisal and suppression guide purposive sampling for in-depth qualitative exploration, enabling the study to not only document correlational patterns but also explain why and how these relationships manifest in vivo. Methodological integration of this kind is essential for generating actionable insights for teacher educators, who need more than correlational coefficients—they need vivid, contextualized examples of effective and ineffective regulation in action.

Methodology

Participants

A total of 70 in-service English Language Teaching (ELT) teachers participated in the quantitative phase of this study. Participants were recruited through professional networks, teacher associations, and social media groups focused on technology in language teaching, using a combination of convenience and purposive sampling to ensure experience with digital tools. All participants reported regular use of technology in their teaching (minimum 2 hours per week using platforms such as Zoom, Google Classroom, or interactive whiteboards). From this pool, a qualitative sub-sample of 15 teachers was selected for in-depth study using maximum variation sampling based on their Emotion Regulation Questionnaire (ERQ) scores (high vs. low reappraisal/suppression) and teaching context (public vs. private institutions) to capture diverse experiences. Demographic characteristics are presented in Table 1.

Table 1.

Participant demographics (N = 70)

Characteristics	Category	n	%
Gender	Female	48	68.6
	Male	22	31.4
Teaching Experience	2-5 years	18	25.7
	6-10 years	25	35.7
	11-20 years	27	38.6
Institution Type	Public	32	45.7
	Private	38	54.3

Primary Tech. Used*	LMS (e.g., Moodle)	45	64.3
	Video Conferencing	65	92.9
	Interactive Whiteboards	28	40.0

***Note.** Participants could select multiple technologies.

Design of the Study

This study employed a sequential explanatory mixed-methods design (Creswell & Plano Clark, 2018). The quantitative phase collected survey data to identify patterns and relationships between emotion regulation strategies and instructional confidence. The qualitative phase followed, involving classroom observations and interviews to provide contextual depth and explain the quantitative findings. This design allowed for both breadth of generalization and depth of understanding.

Instruments

Quantitative Instruments

1. Emotion Regulation Questionnaire (ERQ): The 10-item ERQ (Gross & John, 2003) measures two strategies: cognitive reappraisal (6 items, e.g., “I control my emotions by changing the way I think about the situation I’m in”) and expressive suppression (4 items, e.g., “I keep my emotions to myself”). Items are rated on a 7-point Likert scale (1 = strongly disagree, 7 = strongly agree). The ERQ has demonstrated good validity and reliability across cultures (α typically .79–.83 for reappraisal, .73–.77 for suppression). In this sample, Cronbach’s α was .81 for reappraisal and .75 for suppression.

2. Instructional Technology Confidence Scale (ITCS): This 12-item scale, adapted from Wang et al. (2018), measures teachers’ perceived confidence in using technology for instructional purposes (e.g., “I feel confident troubleshooting technical issues during a lesson”). Items use a 5-point Likert scale (1 = not at all confident, 5 = extremely confident). The original scale reported strong internal consistency ($\alpha = .92$) and construct validity. In this study, $\alpha = .89$.

Qualitative Instruments

3. Classroom Observation Protocol: A semi-structured protocol was developed to document teacher emotional responses and behaviors during technology-related events (e.g., technical failures, student confusion with digital tools). The protocol included fields for time-stamped descriptions of the event, teacher verbal/non-verbal reactions, subsequent actions, and apparent student impact.

4. Semi-Structured Interview Guide: Interviews explored teachers’ awareness of their emotional responses, strategies used to manage emotions during tech-integrated lessons, and perceptions of how these strategies affected their confidence and teaching. Sample questions included: “Can you describe a recent moment when technology caused a strong emotional reaction during your lesson?” and “What did you do to manage that feeling in the moment?”

Procedure

Obtaining informed consent from the participants, quantitative data were collected via an online survey (Qualtrics) distributed over four weeks. Participants completed the ERQ and ITCS along with demographic questions.

From the quantitative sample, 15 teachers were invited to participate in the qualitative phase. Each teacher was observed teaching three consecutive technology-integrated lessons (total observation time: 4.5–6 hours per teacher). Observations were conducted either in person or via recorded sessions, with field notes taken using the observation protocol. Within one week of the final observation, each teacher participated in a 45–60 minutes semi-structured interview conducted via Zoom, which was audio-recorded and transcribed verbatim.

Theoretical Framework

The study is guided by two complementary frameworks. Gross's (1998, 2015) Process Model of Emotion Regulation provides the conceptual foundation for understanding cognitive reappraisal and expressive suppression as core regulatory strategies. Bandura's (1997) Social Cognitive Theory, particularly the construct of self-efficacy, informs the examination of instructional confidence and its relationship with emotional mastery in technology use.

Data Analysis

Quantitative Analysis: Data were analyzed using SPSS Version 28. Descriptive statistics (means, standard deviations) were calculated for all variables to address RQ1. To address RQ2 and RQ3, a multiple linear regression was conducted with instructional confidence as the dependent variable, cognitive reappraisal, and expressive suppression as independent variables. Assumptions of linearity, homoscedasticity, and normality of residuals were checked and met. Multicollinearity was assessed via variance inflation factors ($VIFs < 2$). Effect sizes were reported using Cohen's f^2 , with 95% confidence intervals for regression coefficients.

Qualitative Analysis: Transcripts and observation notes were analyzed using thematic analysis (Braun & Clarke, 2006) following a six-step process: (1) familiarization with data, (2) generating initial codes, (3) searching for themes, (4) reviewing themes, (5) defining and naming themes, and (6) producing the report. Coding was conducted independently by two researchers using NVivo 12, with intercoder reliability reaching $\kappa = .82$. Discrepancies were resolved through discussion. Trustworthiness was enhanced through member checking (with 5 participants) and maintaining an audit trail.

Results

This section presents the findings structured according to the study's sequential explanatory mixed-methods design. Quantitative results address Research Questions 1–3, and qualitative results address Research Question 4.

Quantitative Results

Descriptive Statistics and Preliminary Analyses

The descriptive statistics, intercorrelations, and paired-samples comparison are presented in the revised Table 2. As shown in the table, teachers reported more frequent use of cognitive reappraisal ($M = 5.12$, $SD = 0.89$) than expressive suppression ($M = 3.45$, $SD = 1.02$). A paired-samples t -test confirmed that this difference was statistically significant, $t(69) = 9.87$, $p < .001$, Cohen's $d = 1.76$, 95% CI [1.35, 2.01], indicating a large effect. Instructional technology confidence was reported at a moderately high level ($M = 3.78$, $SD = 0.71$). Correlational results further showed that cognitive reappraisal was positively associated with instructional technology confidence, $r = .51$, $p < .001$, whereas expressive suppression was negatively associated with instructional technology confidence, $r = -.37$, $p = .002$. These findings suggest that teachers who relied more on cognitive reappraisal tended to report higher confidence in using instructional technology, while those who relied more on expressive suppression tended to report lower confidence.

Table 2.

Descriptive statistics, intercorrelations, and paired-samples t-test for main variables (N = 70)

Variable	M	SD	1	2	3
1. Cognitive Reappraisal	5.12	.89	----		
2. Expressive Suppression	3.45	1.02	-.18	----	
3. Instructional Tech Confidence	3.78	.71	.51**	-.37**	---
Comparison	t(df)	p	d	95% CI	

CR vs. ES	9.87 (69)	< .001	1.76	[1.35, 2.01]
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Note: ** $p < .01$

Regression Analysis Predicting Instructional Confidence

To further examine the predictive role of emotion regulation strategies, a multiple regression analysis was conducted with cognitive reappraisal and expressive suppression entered as predictors of instructional technology confidence. The overall model was statistically significant, $F(2, 67) = 18.34$, $p < .001$, accounting for 35.4% of the variance in instructional technology confidence, $R^2 = .354$, adjusted $R^2 = .334$. The results of the regression analysis are presented in Table 3.

Table 3.

Multiple regression analysis predicting instructional technology confidence

Predictor	<i>B</i>	<i>SE B</i>	β	<i>t</i>	<i>p</i>	95% CI for <i>B</i>
Constant	1.89	.43		4.40	<.001	[1.04, 2.74]
Cognitive Reappraisal	.28	.06	.42	4.67	<.001	[.16, .40]
Expressive Suppression	-.22	.07	-.31	-3.14	.002	[-.36, -.08]

Note. $R^2 = .354$, Adjusted $R^2 = .334$. CI = Confidence Interval.

As shown in Table 3, cognitive reappraisal was a significant positive predictor of instructional confidence ($\beta = .42$, $p < .001$), indicating that teachers who reported greater use of cognitive reappraisal also reported higher levels of instructional technology confidence. Given that this p-value is well below the $\alpha = .05$ threshold, this result supports the rejection of H02, thereby confirming a significant positive relationship between cognitive reappraisal and instructional confidence. Expressive suppression was a significant negative predictor of instructional confidence ($\beta = -.31$, $p = .002$), suggesting that greater use of expressive suppression is associated with lower instructional technology confidence. Because this p-value is also below .05, this finding supports the rejection of H03, confirming a significant negative relationship between expressive suppression and instructional confidence.

Qualitative Results

Thematic analysis of observation notes and interview transcripts from the sub-sample of 15 teachers yielded three primary themes regarding the enactment of emotion regulation strategies during technology-related challenges.

Theme 1: Proactive Reappraisal as Confidence Scaffolding

Teachers with higher quantitative confidence scores consistently engaged in proactive cognitive reappraisal. Prior to lessons, they reframed potential tech issues as routine pedagogical problems rather than personal failures. This was observed in pre-lesson checks and heard in verbal framing for students:

“I always tell my students—and myself—that if the Wi-Fi drops, it’s just our signal to switch to the offline backup plan. It’s not a reflection on my teaching.” (Participant 22, Interview)

This reframing was associated with observable calmness during actual malfunctions and a quicker return to instructional flow.

Theme 2: Suppression and Its Emotional and Pedagogical Cost

Teachers who reported higher use of suppression on the ERQ demonstrated observable tension during tech failures (e.g., clipped speech, avoiding eye contact). Interviews revealed that this suppression was effortful and diverted cognitive resources:

“I have to just bottle it up and smile, because the students can’t see me panic. But inside, I’m scrambling, and I can’t think clearly about how to fix the problem or adapt the activity.” (Participant 58, Interview)

This internal struggle often correlated with observed delays in troubleshooting and a rigid adherence to derailed lesson plans rather than adaptive pivots.

Theme 3: Emotional Transparency as a Facilitative Strategy

A distinct, unanticipated strategy emerged among several confident teachers: emotional transparency. Rather than solely reappraising internally or suppressing, they strategically disclosed their frustration to students in a controlled manner, transforming the challenge into a shared, collaborative moment.

“When the screen share froze, I said, ‘Well, this is annoying! Let’s see if we can fix it together.’ It made the atmosphere more relaxed, and a student actually suggested a solution.” (Participant 07, Observation Notes and Interview)

This strategy, which differs from pure suppression or classical reappraisal, appeared to reduce teacher anxiety, model problem-solving, and maintain student engagement through collective responsibility.

These qualitative findings directly address Research Question 4, which asked: *What are the qualitative differences in how ELT teachers describe and enact emotion regulation strategies in response to technology-related challenges during actual classroom instruction?* The analysis revealed three distinct, identifiable patterns in teachers' emotional regulation enactment: (1) the use of proactive cognitive reappraisal as a confidence-scaffolding tool, (2) the costly emotional and pedagogical burden of expressive suppression, and (3) the emergent strategy of emotional transparency as a facilitative, collaborative approach. These patterns demonstrate clear qualitative differences in how ER strategies are contextually mobilized, moving beyond trait-level survey scores to capture situated behavioral and cognitive processes. To put it in a nutshell, these findings demonstrate that teachers employ qualitatively different regulatory approaches in technology-rich classrooms, moving beyond trait-level tendencies to reveal situated, context-specific enactments of emotion regulation.

Discussion

The present research employed mixed methods to examine how ELT teachers in technology-enhanced classrooms manage their emotions and how this affects their teaching confidence. The research results demonstrate different emotional regulation methods which show that cognitive reappraisal functions as a vital mental resource for successful technology use yet expressive suppression acts as a counterproductive method which decreases both teaching efficacy and teaching confidence. The qualitative data reveal how these strategies are implemented in real situations while emotional transparency functions as an effective method of emotional control that depends on specific environmental conditions. The study results were examined through existing research which led to theoretical and practical results while the researchers recognized study limitations and suggested future research directions.

Revisiting the Theoretical Frameworks

The results strongly align with and extend Gross’s (1998, 2015) Process Model of Emotion Regulation within the specific context of technology-mediated language teaching. The model which presents antecedent-focused strategies as improving psychological and functional outcomes establishes

that cognitive reappraisal creates a positive link to instructional confidence. The model demonstrates that response-focused inhibition needs cognitive effort which creates social problems through its analysis of expressive suppression's negative impact on confidence. Furthermore, the findings resonate with Bandura's (1997) concept of self-efficacy. Teachers who reappraise technical setbacks effectively may be engaging in a form of efficacy-building cognitive processing, interpreting challenges as manageable rather than threatening, thereby preserving and even enhancing their instructional confidence—a dynamic less accessible to those relying on suppression.

Cognitive Reappraisal as a Foundation for Confident Teaching

The research demonstrates that cognitive reappraisal serves as a positive predictor for instructional confidence ($\beta = .42$) because it shows a correlation with educational results which extend previous studies that show the relationship between adaptive emotional regulation, teacher welfare, and teaching self-confidence (Brackett & Rivers, 2014; Sutton & Wheatley, 2003). The research establishes this relationship as it exists between technology integration and high-stakes environments which include unpredictable conditions. The Proactive Reappraisal as Confidence Scaffolding theme establishes a mechanistic explanation which shows that teachers who possess confidence use their lesson plans and student instructions to preemptively transform upcoming technological problems into teaching opportunities. Teachers who possess high emotional competence according to the literature better manage their emotions during classroom disruptions which helps them adjust their teaching materials (Castellanos-Alvarenga et al., 2024; Sáez-Delgado et al., 2025). Teachers who use reappraisal to handle their emotions about technical failures build their teaching efficiency because this process creates protective effects which define essential skills for teacher education programs that focus on emotional intelligence (Zivi et al., 2025).

The Pedagogical and Emotional Cost of Expressive Suppression

Expressive suppression leads to decreased instructional confidence because it creates obstacles for teachers who work with technology in their classrooms which makes this strategy detrimental ($\beta = -.31$). The study results support existing educational research which shows that emotional suppression leads to teacher burnout and a decrease in their ability to interact with students (Gross & John, 2003; Jennings & Greenberg, 2009). The qualitative data on Suppression and Its Emotional & Pedagogical Cost shows the relationship between both factors through its detailed description because teachers reported that their cognitive work for preventing emotional expression caused them to lose essential mental capacity which they needed for teaching adjustments and immediate problem solving.

This creates a vicious cycle where suppressed frustration impedes effective troubleshooting, leading to greater lesson disruption and further erosion of confidence—a dynamic particularly damaging in the fast-paced, public context of the ELT classroom (Dewaele, 2015).

Emotional Transparency: An Emergent, Context-Specific Strategy

The study makes its main contribution through its qualitative identification of Emotional Transparency as an important Facilitative Strategy. The teaching approach which enables educators to disclose their frustration to students at controlled levels, enables them to transform instructional challenges into cooperative solutions and demonstrates a specialized form of emotional regulation which extends beyond the conventional reappraisal-suppression framework. The finding enhances Gross's emotional expression framework by demonstrating that particular relational contexts which include English language teaching require emotional expression control as a beneficial practice which differs

from complete emotional control. The study supports the growing understanding that teachers use emotions for social and relationship-building purposes in their classrooms (Gkonou & Miller, 2021) and demonstrates emotionally intelligent education principles that emphasize genuine human relationships (Brackett & Katulak, 2007). The approach functions best in educational settings using technology to create visible problems, which students naturally solve through teamwork.

Implications for Teacher Training and Professional Development

The research results directly support ELT teacher training programs, which need to address a major need identified in academic studies that show training programs focus on teaching technical skills while neglecting emotional development (Ertmer & Ottenbreit-Leftwich, 2013; Pegrum et al., 2022). Training programs must move beyond technical upskilling to explicitly incorporate ER strategy instruction. The training program currently includes the following components:

1. Cognitive Reappraisal Training: Workshops on reframing technology failures as routine pedagogical hurdles, using case studies and scenario-based learning from ELT contexts.
2. Mindfulness and Awareness Exercises: Helping teachers recognize early signs of frustration to prevent automatic suppression.
3. Modeling Emotional Transparency: Role-playing exercises where teachers practice calibrated emotional disclosure and collaborative problem-framing with students.
4. Integrating ER into Digital Pedagogy Courses: Making affective dimensions a core module alongside tool training.

Such training could enhance not only individual teacher resilience and confidence but also improve classroom climate and student engagement, as teachers model adaptive coping and maintain instructional flow (Brackett & Rivers, 2014).

Limitations and Directions for Future Research

The present study has multiple limitations which need to be acknowledged. The first limitation of the study stems from its cross-sectional quantitative design which prevents researchers from establishing causal relationships between variables; researchers must conduct longitudinal studies to investigate how ER strategies and confidence develop through technological advancements. The sample included different participants but researchers selected them for convenience which resulted in a sample that did not represent all ELT contexts. The study collected valuable data through observations yet the presence of an observer affected teacher behavior according to the Hawthorne effect. The research examined teacher strategies and confidence levels; future studies should assess how teacher ER directly impacts student outcomes which include learner anxiety, engagement, and language acquisition in environments with technological resources.

Future studies could also evaluate how specific ER training programs affect ELT teachers who currently work in the field; investigate how different cultures use and assess the effectiveness of emotional transparency strategies; use physiological measures (like heart rate variability) together with self-reporting and observational data to measure emotional arousal and regulation efforts.

Conclusion

The study used mixed methods to examine how emotional control and teaching confidence work together in classrooms that use technology to teach English Language learners. Through the combination of quantitative survey data and qualitative data from classroom observations and teacher interviews, the

research establishes a comprehensive understanding of teacher strategies to handle student emotional needs during digital classes, which in turn affects their professional development. The research results show that people control their emotions through personal methods, but this ability functions as essential teaching skill which determines how well teachers use technology in class and maintain their ability to teach and achieve academic results in their classrooms.

The quantitative phase demonstrated that cognitive reappraisal and expressive suppression function as two main emotion regulation techniques which have opposite effects on teaching confidence. The cognitive reappraisal method predicts positive outcomes because it functions as an adaptive strategy which helps people build their resources. Teachers who handle technology problems through helpful solutions instead of viewing them as personal failures, develop stronger mastery of their instructional skills. The research demonstrates that teachers who use expressive suppression will experience academic failure because their emotional control efforts will consume their mental resources, disrupt their ability to solve problems, and decrease their confidence in teaching with technology. These results extend Gross's Process Model into the specific, high-stakes domain of educational technology, demonstrating that the model's core principles hold powerful explanatory value for understanding teacher adaptability and confidence in digitally-mediated environments.

Qualitatively, the study succeeded in observing how people manage their emotions through their actual behavior in specific situations. The identification of proactive reappraisal demonstrates that confident teachers establish psychological and practical barriers to shield themselves from potential technology disruptions which allow them to continue teaching. The theme of suppression's pedagogical cost provides a vivid, behavioral account of why this strategy undermines confidence, showcasing the internal conflict and rigidity it produces. The emergent theme of emotional transparency functions as a major literature development. The strategy which uses controlled yet genuine communication of frustration to achieve cooperative problem-solving goes beyond traditional methods which use reappraisal and suppression as their two main techniques. Research indicates that students in ELT classrooms use controlled emotional expression as an effective learning tool which helps them develop shared responsibility while decreasing their stress levels and learning how to handle challenges.

The integrated findings bring major theoretical and practical consequences for language teacher education programs. The study proposes that teaching emotion regulation should focus on real world situations while providing students with contextual knowledge about emotional control. The study provides evidence which requires organizations to develop comprehensive professional development programs through which teachers can obtain expertise in their field. Teacher training programs must evolve from a narrow focus on technical proficiency to embrace emotionally informed digital pedagogy. This entails intentionally scaffolding pre-service and in-service teachers' capacity for cognitive reappraisal, cultivating their awareness of the costs of suppression, and providing safe opportunities to practice strategic emotional transparency. Curricula should integrate scenario-based learning, reflective mentoring, and mindfulness practices specifically tailored to the affective triggers of technology use in language teaching.

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