

Research Article

Navigating Emotional Experiences in the EFL Classroom: The Role of Learners' Emotions in the Relationship Between Emotion Regulation Strategies and Communication Outcomes

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ABSTRACT

Emotion regulation strategies, which refer to the processes individuals use to influence their emotional experiences and expressions, have been widely studied in general education. However, their role in foreign language (FL) learning is still under-researched. This study investigates how cognitive reappraisal and expressive suppression, two commonly applied strategies, influence English as a Foreign Language (EFL) learners' experiences of positive and negative emotions in EFL classes and their relationship to FL learning outcomes, specifically, their willingness to communicate (WTC) and their self-perceived communicative competence (SPCC). Data were collected from 234 Iranian EFL learners from private language schools. Using latent variable modelling, cognitive reappraisal was found to positively predict both WTC and SPCC, whereas expressive suppression negatively predicted SPCC and showed no significant direct association with WTC. Mediation analyses further revealed that foreign language enjoyment (FLE) positively mediated the relationships between both regulation strategies and SPCC, as well as between cognitive reappraisal and WTC, while foreign language anxiety (FLA) negatively mediated these relationships. In several cases, strong positive indirect effects via enjoyment counterbalanced or outweighed negative indirect effects via anxiety, highlighting the central role of positive emotions in shaping communicative outcomes. Overall, the findings emphasise the importance of emotion regulation processes in FL learning and suggest that fostering adaptive regulation strategies that enhance enjoyment may be particularly beneficial for learners' communicative confidence.

Keywords: emotion regulation strategies; foreign language enjoyment; foreign language classroom anxiety; self-perceived communication competence; willingness to communicate

INTRODUCTION

Learning another language is an inherently emotional process and learners tend to experience a great variety of emotions in the foreign language (FL) class, ranging from negative emotions, such as foreign language anxiety (FLA; Horwitz et al., 1986), foreign language boredom (Pawlak et al., 2020), and embarrassment (Khajavy et al., 2025), to positive ones, including, among others, foreign language enjoyment (FLE; Dewaele & MacIntyre, 2014, 2016), happiness (Helgesen, 2016), and pride (Khajavy & Lüftenegger, 2024). Previous research has established the beneficial role positive emotions (e.g., FLE) can play in the FL classroom, such as a stronger willingness to communicate (WTC) and increased proficiency in the target language (e.g., Badiei et al., 2025; Botes et al., 2022a; Ghasemi & Azari Noughabi, 2024). In turn, negative emotions (e.g., FLA) are associated with negative outcomes, such as reduced WTC, reduced proficiency, and reduced perceived competence (e.g., Botes et al., 2020; Dewaele, 2010; Elahi Shirvan et al., 2019). Therefore, it is essential for FL learners to regulate their emotions effectively in class so they can reap the benefits of the broadening function of positive emotions and counteract the narrowing function of negative ones (MacIntyre & Gregersen, 2012).

Following Gross (1998), Tugade and Fredrickson (2007) define emotion regulation as “the attempts to influence the types of emotions people experience, when they experience these emotions, and how these emotions are expressed and experienced” (p. 312). Hence, emotion regulation is a pervasive phenomenon, also in educational settings. To put it in Gross’s (2015) words, it “is all around us – even inside of us – everywhere we go” (p. 613). While the role the strategies employed by learners to manage their emotions in class has been researched widely in a variety of educational contexts (see, e.g., Cutuli, 2014; Jamieson et al., 2016; Nadeem et al., 2023a), our understanding of their role in FL learning is still rather limited (Liang & Mao, 2025). Yet, these strategies may influence how students navigate complex emotional landscapes, such as FLE and FLA, and how these emotions relate to key FL learning outcomes. As such, this study sets out to explore the direct and indirect associations

between the two widely studied strategies cognitive reappraisal and expressive suppression (Gross & John, 2003), FL emotions (Botes et al., 2021, 2022b), WTC (Dewaele, 2019), and self-perceived communicative competence (SPCC; McCroskey & McCroskey, 1988) based on data collected from Iranian English as a Foreign Language (EFL) learners. In order to gain a nuanced understanding of how emotion regulation strategies and emotions function and shape learners' emotional and academic experiences, the possible mediating role of FLE and FLA in the relationship between learners' emotion regulation strategies and their WTC and SPCC as outcomes will be explored as well. Thereby, we hope to provide insights that can inform pedagogical approaches aimed at building on the broadening power of positive emotions and helping learners effectively manage their negative ones.

LITERATURE REVIEW

Emotional Regulation

Emotion regulation is commonly understood within Gross's Process Model of Emotion Regulation (Gross, 1998), which differentiates emotion regulation along a timeline of response. Within this model, emotion begins with the triggering of emotion cues that are evaluated by the individual. This evaluation is attended to and triggers a "set of response tendencies" which can be behavioural, physical, or cognitive in nature (Gross & John, 2003, p. 348). These response tendencies can then be modulated by the individual in the form of emotion regulation strategies.

Within the Process Model, Gross (1998) further distinguishes between two types of emotion regulation strategies: Response-focused strategies (where modulation occurs before the full emotional response unfolds) and antecedent-focused strategies (where modulation occurs after the full emotional response has unfolded). Two commonly used examples of these broad types of strategies are cognitive reappraisal and expressive suppression. Cognitive reappraisal is an antecedent-focused strategy that involves the reframing of meaning of an emotion-eliciting event to alter its

emotional impact. In the FL class, cognitive reappraisal can, for example, be a learner reinterpreting a speaking error as useful feedback (“mistakes show what I still need to learn”), viewing evaluative arousal before an oral test as energising rather than threatening, or construing a strict teacher’s corrective feedback as care for progress rather than criticism. In turn, expressive suppression is a response-focused strategy that entails inhibiting the behavioural display of emotion after it has arisen, without necessarily changing the underlying experience or physiological arousal (Gross, 1998; Gross & John, 2003). In the FL class, expressive suppression might involve masking anxiety during a classroom presentation, keeping a neutral face while struggling with listening comprehension, or withholding visible frustration when corrected, even though negative affect remains high.

Cognitive reappraisal and expressive suppression strategies have been extensively studied within educational settings, with differing effectiveness and long-term implications for learning. In a longitudinal study of school well-being, Beaumont et al. (2023) found that cognitive reappraisal strategy use predicted school well-being, with school well-being in turn predicting the use of cognitive reappraisal strategies. Furthermore, neurological studies have shown that cognitive reappraisal strategies can decrease the amygdala and insula responses and decrease ratings of negative responses both in general affective settings (Goldin et al., 2008) as well as for individuals with high levels of maths anxiety (Pizzie et al., 2020). In addition, cognitive reappraisal has also been found to have physiological benefits such as increased cardiac efficiency and cognitive benefits such as decreased attentional bias (Jamieson et al., 2012). However, although the effectiveness of cognitive reappraisal in education settings has been shown, the implementation of cognitive reappraisal is not without drawbacks. Cognitive reappraisal strategies also carry a cognitive burden as the use of these strategies does require cognitive resources (Brockbank & Feldon, 2024) such as working memory (Gan et al., 2017).

In contrast to cognitive reappraisal, expressive suppression has largely been found to be a maladaptive strategy of emotion regulation (see Cutuli, 2014 for review).

Laboratory studies have demonstrated that expressive suppression can elevate subjective arousal (Goldin et al., 2008) and impair cognitive performance such as working memory (Szczygieł & Maruszewski, 2015). In an experimental study where participants were asked to down regulate negative emotions evoked by studying sad images, Yan et al. (2022) found that expressive suppression only produced modest reductions in negative affect but did more strongly disrupt subsequent recognition memory in comparison to cognitive reappraisal. In educational contexts, this may mean that learners who habitually suppress anxiety, frustration, or embarrassment may appear composed but are likely experiencing a double burden where they have a heightened physiological strain and fewer cognitive resources available for encoding new information. Studies of university students confirm this pattern, linking suppression to lower perceived control, higher anxiety, and poorer academic outcomes (Nadeem et al., 2023a; Zhao et al., 2021). However, expressive suppression may have certain situational benefits, as it can provide learners with the means to save face amongst their peers, to avoid classroom conflict, or to preserve self-presentation during high-stakes tasks such as an oral exam.

Although emotion regulation strategies have been extensively studied in general education as well as in domains such as mathematics learning, language learning may hold particular promise as an interesting line of enquiry. Ortigosa et al. (2024) found that cognitive reappraisal strategies were more effective in students functioning in their FL when attempting to reduce negative emotions induced by being exposed to a negative stimulus. Emotion regulation strategies may therefore differ in effectiveness between the first language (L1) and the FL. Of further interest are also the differences between cognitive reappraisal and expressive suppression strategies that have been found in language learning studies. In a study of $n = 1189$ Chinese EFL learners, Liang and Mao (2025) found that cognitive reappraisal positively predicted language learning motivation ($\beta = .419$; $p < .01$), whereas expressive suppression negatively predicted motivation ($\beta = -.336$; $p < .01$). In turn, using a sample of 215 Saudi EFL learners, Alqarni (2024) found that cognitive reappraisal

was positively correlated with EFL proficiency ($r = .185$; $p < .01$), whereas expressive suppression was not significantly related to EFL proficiency ($p > .05$). Furthermore, in a study examining language learning engagement, Zare et al. (2025) found that cognitive reappraisal was significantly correlated with five engagement factors ($.230 \leq r \leq .480$), whereas expressive suppression was only significantly related to behavioural engagement ($r = .129$; $p < .05$) but not significantly correlated with emotional, cognitive, agentic, or social engagement.

Emotions in Foreign Language Learning

Research on emotions in second language acquisition has long been dominated by the study of FLA. Originally conceptualised by Horwitz et al. (1986), FLA was described as a situation-specific form of anxiety characterised by self-perceptions, beliefs, and behaviours that arise in response to the unique challenges of learning and using a new language. For many learners, limited proficiency in the target language disrupts their self-image as competent communicators, leading to apprehension about errors and feelings of inadequacy (Horwitz, 2017). Previous studies have consistently shown that FLA is negatively associated with language learning outcomes, with meta-analyses finding negative correlations between language anxiety and academic achievement (Botes et al., 2020; Teimouri et al., 2019), WTC (Elahi Shirvan et al., 2019), self-perceived proficiency (Bensalem, 2018), and self-perceived communication competence (Dewaele, 2010).

The emergence of positive psychology in applied linguistics shifted attention to the beneficial side of the affective experience (MacIntyre & Gregersen, 2012). Dewaele and MacIntyre (2014) introduced the construct of FLE as a counterpart to FLA. Defined as a multidimensional positive emotion that arises when learners feel challenged yet capable of success, FLE reflects the fulfilment of psychological needs in the FL classroom and the thrill of exceeding one's own expectations (Dewaele & MacIntyre, 2016). Unlike momentary pleasure, FLE is thought to require focused effort and

engagement. Findings across multiple studies indicate that FLE is more closely tied to teacher and classroom dynamics, while FLA is more strongly linked to stable individual characteristics such as personality (Dewaele et al., 2018; Dewaele & MacIntyre, 2019). Furthermore, previous meta-analyses have also found positive associations between FLE and academic achievement, WTC, and self-perceived proficiency (Botes et al., 2022a).

Importantly, FLE and FLA are distinct yet moderately correlated constructs. They are not opposite poles of the same dimension but instead form separate emotional trajectories in the language learning process (Dewaele & MacIntyre, 2016). Learners often experience higher levels of FLE than FLA in classroom contexts, and both emotions contribute differently to outcomes. These differences in relationships with other individual differences variables are also observed in the findings of studies examining emotion regulation strategies as well as FLE and FLA. Previous studies have found significant negative correlations between cognitive reappraisal strategy use and FLA (Jiang et al., 2025; Ng, 2023; Zhao & Lian, 2024), and significant positive correlations between expressive suppression and FLA (Jiang et al., 2025; Ng, 2023). In terms of FLE, previous research has found significant positive relationships between cognitive reappraisal and FLE, as well as non-significant associations between expressive suppression and FLE (Alqarni, 2024; Jiang et al., 2025).

Willingness to Communicate

Originally, WTC was framed by McCroskey and Bear (1985) in L1 settings as the “probability of engaging in communication when free to choose to do so” (MacIntyre et al., 1998, p. 546). In the L1 context it was treated as a relatively stable, trait-like disposition, implying consistent communicative behaviour across partners and situations rather than a context-bound state (MacIntyre, 2020). Yet simply projecting this notion onto L2 use is inadequate as differences in L2 proficiency, intergroup relations, and the socio-political meanings attached to L2 communication create a

qualitatively different landscape for WTC in additional languages (MacIntyre et al., 1998). To address this, MacIntyre et al. (1998) proposed the heuristic pyramid model, recasting WTC as a dynamic, situational variable with both transient and enduring influences and extending its relevance beyond speaking to include writing and the comprehension of spoken and written discourse. Within this model, WTC is defined as “a readiness to enter into discourse at a particular time with a specific person or persons, using a L2” (MacIntyre et al., 1998, p. 547). Enduring influences encompass social and individual context (e.g., intergroup climate and personality), affective–cognitive context (e.g., intergroup attitudes, the immediate social situation, and communicative competence), and motivational propensities such as L2 confidence, intergroup (integrative) motivation, and interpersonal motivation (MacIntyre et al., 1998). WTC has been an enduring outcome variable in FL learning studies for over two decades, with WTC consistently related to FL academic achievement, FL proficiency, FL emotions, motivation, and engagement, amongst other variables (Alemi et al., 2011; Al-Murtadha, 2011; Barrios & Acosta-Manzano, 2025; Botes et al., 2022a; Ebn-Abbasi et al., 2024; Elahi Shirvan et al., 2019; Liu & Park, 2012; Mystkowska-Wiertelak, 2021).

Although WTC has been extensively studied in relation to emotions in FL learning (e.g., Azari Noughabi & Ghasemi, 2024; Botes et al., 2022; Elahi Shirvan et al., 2019; Enferad et al., 2025; Khajavy et al., 2018), very few studies have examined WTC in relation to emotion regulation strategies. Only two studies could be found that directly examined emotion regulation strategies and WTC. Abdullaeva et al. (2024) utilised an experimental design in a study on intelligent computer-assisted language assessment and found that boosting students’ technology literacies and acceptance improved their emotion regulation, resilience, WTC, and enjoyment relative to controls. More notably, in a latent profile analysis of informal digital learners of English, Guo et al. (2025) examined the emotion regulation strategies of cognitive appraisal and expressive suppression in conjunction with WTC. Using data from $n = 829$ participants, the researchers found positive correlations between cognitive reappraisal and WTC in

both digital ($r = .43$; $p < .01$) and non-digital contexts ($r = .34$; $p < .01$), whereas expressive suppression was positively correlated with WTC in digital contexts ($r = .11$; $p < .01$) but was not significantly related to WTC in non-digital contexts ($p > .05$).

Self-Perceived Communication Competence

SPCC can be defined as the “adequate ability to pass along or give information; the ability to make known by talking or writing” (McCroskey, 1984, p. 261) and captures learners’ judgements about how able they are to communicate appropriately in particular situations, including their confidence in both spoken and written modes (Balouchi & Samad, 2021; Lockley, 2013). In FL learning, SPCC is most frequently examined alongside WTC (Croucher et al., 2024; Lockley, 2013). It has also been linked to FL emotions, with SPCC positively associated with positive emotions and negatively associated with negative emotions (Asmali, 2019; Nadeem et al., 2023b; Qinghe, 2024). While no study could be found that directly examined SPCC and emotion regulation strategies, self-perceptions of competence or ability have been linked to emotion regulation strategies. Zhao et al. (2021) found that during the fully remote learning period of the COVID-19 pandemic, cognitive reappraisal was significantly positively related, whilst expressive suppression was significantly negatively related, to perceived academic control over learning. Furthermore, Shirley et al. (2022) examined the relationship between emotion regulation strategies and self-efficacy beliefs regarding university success, with cognitive reappraisal positively related and expressive suppression negatively related to self-efficacy beliefs.

The Current Study

This study aims to examine whether the habitual use of the emotion regulation strategies of cognitive reappraisal and expressive suppression predicts WTC and SPCC in the FL, and whether these relationships are mediated by the enjoyment and anxiety experienced in the FL classroom. A central theoretical issue in modelling the

relationships between emotion regulation, emotions, and communicative outcomes concerns the appropriate directionality of these constructs. Within Gross's Process Model of Emotion Regulation (Gross, 1998), regulation strategies are conceptualised as relatively stable, habitual tendencies that individuals deploy across situations to modulate emotional experiences and expressions. Prior research has therefore treated emotion regulation strategies as antecedents of emotional experiences, both in educational settings (Jamieson et al., 2016) and in foreign language learning contexts (Alqarni, 2024; Zhao & Lian, 2024). Therefore, modelling emotion regulation strategies as predictors of FLE and FLA is consistent with the prior research in educational psychology and applied linguistics that positions regulation strategies as antecedents of emotional experiences. In turn, FLE and FLA have both been found to predict WTC (Dewaele, 2019; Elahi Shirvan et al., 2019; Khajavy et al., 2018) and SPCC (Asmali, 2019; Nadeem et al., 2023b), with direct links also found between cognitive reappraisal and expressive suppression as predictors of WTC (Abdullaeva et al., 2024; Guo et al., 2025). This study therefore aims to examine the habitual use of cognitive reappraisal and expressive suppression as predictors of FLE, FLA, SPCC, and WTC. Furthermore, the relationships between FLE and FLA as predictors of SPCC and WTC will also be modelled as is consistent with previous literature (Asmali, 2019; Elahi Shirvan et al., 2019), and the resultant possible indirect effects of the emotion variables of FLE and FLA as mediators will be explored. The present study answers the call in Resnik et al. (2025) to gain a better understanding of the dynamics of FL learner emotions and to consider the effect of the research context. As such, the following research questions will be examined in this study:

RQ1: Do the habitual use of cognitive reappraisal and expressive suppression of emotions predict the WTC and SPCC of FL learners?

RQ2: Do the habitual use of cognitive reappraisal and expressive suppression of emotions predict the FLE and FLA of FL learners?

RQ3: Do FLE and FLA directly predict the WTC and SPCC of FL learners?

RQ4: Does FLE mediate the relationships between the habitual use of cognitive reappraisal and expressive suppression of emotions as predictors and WTC and SPCC as outcome variables?

RQ5: Does FLA mediate the relationships between the habitual use of cognitive reappraisal and expressive suppression of emotions as predictors and WTC and SPCC as outcome variables?

METHODS

Participants

Participants were recruited from private English language schools in Iran and were assessed in their classrooms. A total of $n = 234$ English as a Foreign Language (EFL) learners participated in the study, with an average age of 21.06 years ($SD = 6.023$; range: 14 - 44). The majority of the sample was female ($n = 160$), with $n = 66$ males and $n = 8$ preferring not to disclose gender. The majority of participants rated their English ability at B2 level ($n = 99$), followed by B1 ($n = 53$), C1 ($n = 36$), A2 ($n = 33$), and C2 ($n = 33$; Council of Europe, 2020).

Instruments

Emotional Regulation Strategies

The habitual use of the two emotion regulation strategies cognitive reappraisal and expressive suppression were measured with the Emotion Regulation Questionnaire (Gross & John, 2003). Cognitive reappraisal was measured with six items (e.g. “When I want to feel less negative emotion, I change the way I’m thinking about the situation”; $\alpha = .847$; $\omega = .848$), whereas expressive suppression was measured with four items (e.g. “I control my emotions by not expressing them”; $\alpha = .828$; $\omega = .834$). All items were measured on a 5-point Likert scale from 1 = “strongly disagree” to 5 = “strongly

agree”, and the scale had an overall acceptable internal consistency ($\alpha = .805$; $\omega = .770$).

Willingness to Communicate

WTC was measured via the 6-item scale of Dewaele (2019). The scale measures WTC using items such as “I can imagine a situation where I am speaking English with foreigners” and as such measures WTC as a general imagined communication event and not necessarily as rooted in specific activities or situations such as in the 54-item WTC scale of MacIntyre et al. (2001). The scale had an excellent internal consistency ($\alpha = .932$; $\omega = .933$). All items were measured on a 5-point Likert scale, ranging from 1 = “strongly disagree” to 5 = “strongly agree”.

Foreign Language Classroom Anxiety

FLA was measured with the eight-item Short-Form Foreign Language Classroom Anxiety Scale (S-FLCAS; Botes et al., 2022b; MacIntyre, 1992), which is a short-form of the original 33-item scale by Horwitz et al. (1986). Respondents evaluated statements such as “I always feel that the other students speak the FL better than I do” on a 5-point Likert scale (1 = “strongly disagree”, 5 = “strongly agree”). Two items were negatively worded and required reverse coding (e.g., “I don’t worry about making mistakes in FL class” and “I feel confident when I speak in FL class”). Reliability analysis indicated good internal consistency ($\alpha = .874$; $\omega = .878$).

Foreign Language Enjoyment

FLE was assessed with the Short-Form Foreign Language Enjoyment Scale (S-FLES; Botes et al., 2021), a recently validated nine-item instrument derived from the 21-item scale originally proposed by Dewaele and MacIntyre (2014). The instrument captures three dimensions of enjoyment: Personal Enjoyment (3 items; $\alpha = .831$; $\omega = .828$; e.g.,

“I enjoy it”), Social Enjoyment (3 items; $\alpha = .716$; $\omega = .730$; e.g., “We laugh a lot”), and Teacher Appreciation (3 items; $\alpha = .856$; $\omega = .863$; e.g., “My teacher is supportive”). Items were measured on a 5-point Likert scale ranging from 1 (“strongly disagree”) to 5 (“strongly agree”). The overall internal consistency of the short-form scale was excellent ($\alpha = .894$; $\omega = .894$).

Self-Perceived Communication Competence

Self-perceived communicative competence (SPCC) was assessed with the 12-item instrument developed by McCroskey and McCroskey (1988). The measure combines four different communicative settings (public speaking, large meetings, small group interaction, and dyadic conversation) with three categories of interlocutors: strangers, acquaintances, and friends. For each context–recipient pairing, learners rated how effectively they thought they could communicate in the foreign language, for instance, “Talk in a small group of strangers.” Ratings were given on a 5-point Likert scale ranging from 1 (“very poor”) to 5 (“very good”). The internal consistency of the full scale was excellent ($\alpha = .918$; $\omega = .919$).

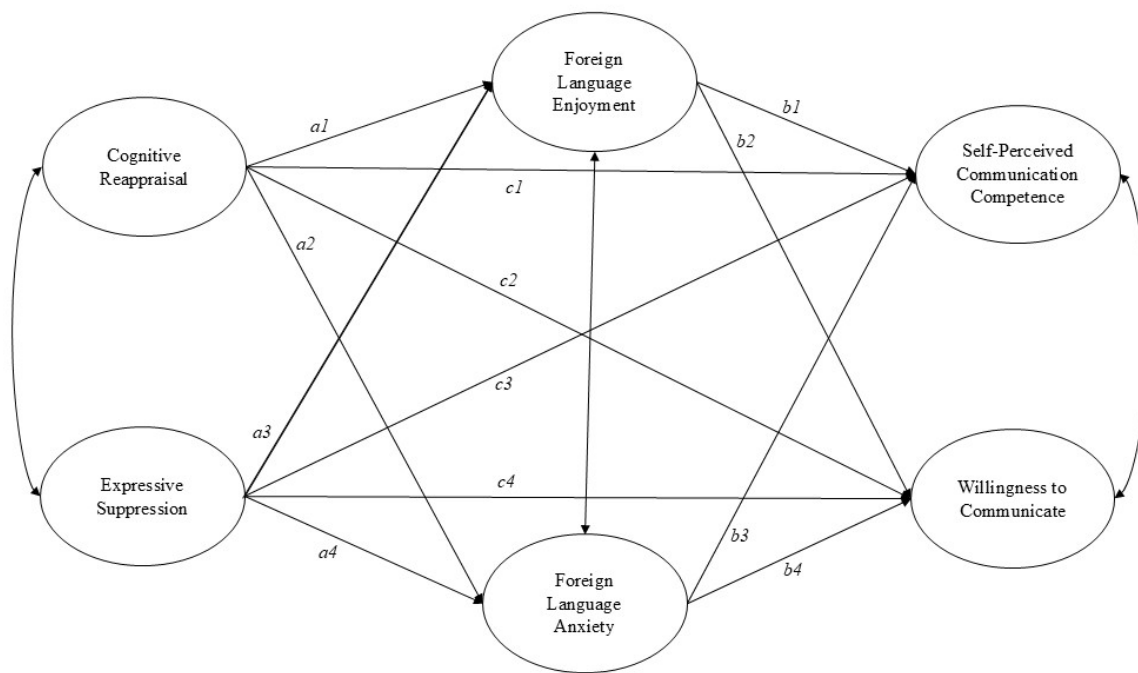
Data Analysis

Data were analysed using JASP (version 0.18.3; JASP Team, 2024). The first three research questions regarding direct effects were explored via a structural equation model, estimated with unweighted least squares (ULS) estimation with standard errors due to the ordinal nature of the data (Li, 2016). The measurement models of each of the latent variables were examined beforehand. A post-hoc power analysis using semPower (Moshagen & Bader, 2024) in RStudio, modelled with ULS and $\alpha = .05$ indicated essentially complete power (power ≈ 1.00) to detect global model misfit. The theoretical model is displayed in Figure 1. Model fit was determined according to the guidelines of Kenny (2020), via the Root Mean Square Error of Approximation (RMSEA; reasonable fit $\leq .08$; close fit $\leq .05$), the Standardised Root Mean Square

Residual (SRMR; reasonable fit $\leq .08$; close fit $\leq .05$), Comparative Fit Index (CFI; reasonable fit $\geq .90$; close fit $\geq .95$), and the Tucker-Lewis Index (TLI; reasonable fit $\geq .90$; close fit $\geq .95$). Effect sizes were interpreted as small (.20), medium (.35) and large (.50; Botes et al., 2025).

Research questions four and five regarding mediation effects of the emotion regulation strategies were examined using a latent mediation model. Mediation was determined based on the guidelines of Kline (2015), via the following steps:

1. The predictors (cognitive reappraisal and expressive suppression) had a statistically significant effect on the outcome variables (SPCC and WTC).
2. The predictors (cognitive reappraisal and expressive suppression) had a statistically significant effect on both mediators (FLE and FLA). Thus, paths a_1 , a_2 , a_3 , and a_4 were not zero.
3. The mediators (FLE and FLA) had a statistically significant effect on the outcome variables (SPCC and WTC). Thus, paths b_1 , b_2 , b_3 , and b_4 were not zero.
4. A full mediation was dependent on if the mediator variables (FLE and FLA) were responsible for all variance explained between the predictors (cognitive reappraisal and expressive suppression) and outcome variables (SPCC and WTC). Thus, paths c_1 , c_2 , c_3 , and c_4 were zero. If paths c_1 , c_2 , c_3 , and c_4 were not zero, a partial mediation was found.
5. Mediation was only confirmed if the 95% confidence interval of the mediation effects did not contain zero.

Figure 1. *Theoretical Structural Equation Model*

RESULTS

Descriptive Statistics and Correlation Coefficients

The descriptive statistics are presented in Table 1; no normality concerns were found. The correlation matrix is presented in Table 2; no multicollinearity concerns were found.

Table 1. Descriptive Statistics

	<i>M</i>	<i>SD</i>	Min	Max	Skewness	Kurtosis
Cognitive Reappraisal	3.566	.747	1	5	-.805	1.522
Expressive Suppression	3.076	.941	1	5	-.207	-.410
FLE	4.101	.662	1.556	5	.358	-.307
FLA	2.649	.903	1	5	.673	-.053
WTC	4.120	.855	1	5	-.941	.282
SPCC	3.604	.698	1.750	5	.019	-.401

Table 2. Correlation Matrix

	1.	2.	3.	4.	5.	6.
1. Cognitive Reappraisal	-					
2. Expressive Suppression	.198**	-				
2. FLE	.298***	.178**	-			
3. FLA	-.204**	.058	-.348***	-		
4. WTC	.351***	.090	.298***	-.195**	-	
5. SPCC	.198**	-.082	.381***	-.447***	.441***	-

Note. *** $p < .001$; ** $p < .01$; * $p < .05$

Measurement Models

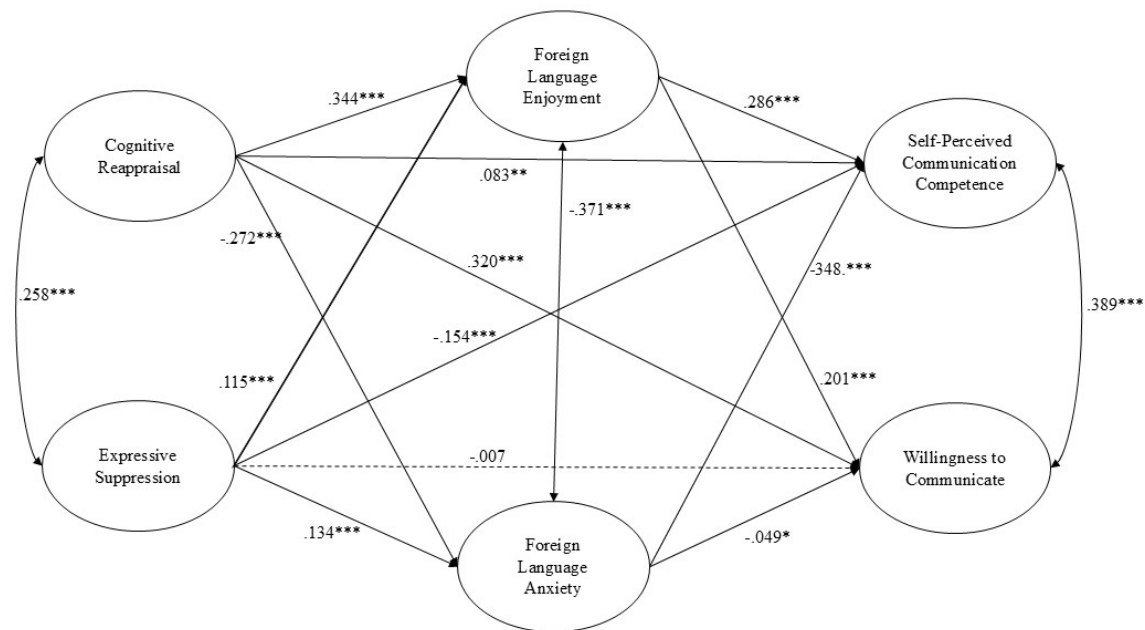
All measurement models tested were deemed to have reasonable fit (Kenny, 2020; see Table 3). Although some small deviations from the guidelines were present (e.g. FLE and FLA having an RMSEA slightly over the .08 desired limit), this does not pose a major concern, as model evaluation should be based on a holistic consideration of multiple fit indices rather than a single criterion. All factor loadings were sufficiently large ($> .400$; Field, 2013; see Supplementary Materials).

Table 3. *Fit Indices of Measurement Models*

	χ^2	<i>df</i>	RMSEA	SRMR	CFI	TLI
Emotion	36.410	34	.017	.065	.997	.996
Regulation						
FLE	64.046	24	.084	.049	.963	.922
FLA	56.156	19	.091	.036	.956	.935
WTC	15.801	8	.065	.020	.993	.987
SPCC	118.699	54	.072	.088	.979	.974

Structural Equation Model

In order to examine the direct effects stipulated in the first three research questions, a structural equation model was fitted with predictors, mediators, and outcomes, but without estimating indirect effects. The model closely fit the data (χ^2 (926) = 1267.121; $p < .001$; see Figure 2), with the CFI (.981), TLI (.980), RMSEA (.040), and SRMR (.069) all meeting the needed requirements. Cognitive reappraisal positively predicted FLE ($\beta = .344$; $p < .001$) and negatively predicted FLA ($\beta = -.272$; $p < .001$). In turn, emotional suppression positively predicted FLE ($\beta = .115$; $p < .001$) and positively predicted FLA ($\beta = .134$; $p < .001$). In terms of the outcome variables, SPCC was positively predicted by cognitive reappraisal ($\beta = .083$; $p = .001$) and FLE ($\beta = .286$; $p < .001$) and was negatively predicted by expressive suppression ($\beta = -.154$; $p < .001$) and FLA ($\beta = -.348$; $p < .001$). WTC was positively predicted by cognitive reappraisal ($\beta = .320$; $p < .001$) and FLE ($\beta = .201$; $p < .001$) and negatively predicted by FLA ($\beta = -.049$; $p = .025$). WTC was not significantly predicted by expressive suppression ($\beta = -.007$; $p = .775$). FLE and FLA correlated significantly negatively ($r = -.371$; $p < .001$), whereas cognitive reappraisal and expressive suppression correlated significantly positively ($r = .258$; $p < .001$), as did SPCC and WTC ($r = .389$; $p < .001$).

Figure 2. Structural Equation Model

Note. *** $p < .001$; ** $p < .01$; * $p < .05$

Mediation Model

In a second step and in order to answer research questions four and five, the indirect and total effects of the mediations were included in the structural equation model, with the exception of possible mediations of the path from expressive suppression and WTC, as the path between these variables (c4) was found to be insignificant and as such mediation modelling was not possible (Kline, 2015). The overall mediation model had acceptable fit ($\chi^2(927) = 1267.203$; $p < .001$), with the CFI (.981), TLI (.980), RMSEA (.040), and SRMR (.069) all meeting the needed requirements.

The total effect of cognitive reappraisal on SPCC was small and non-significant ($\beta = .093$; $p = .073$). However, when the mediators were included, two significant indirect pathways emerged: a positive indirect effect via FLE ($\beta_{ab} = .630$; $p < .001$) and a negative indirect effect via FLA ($\beta_{ab} = -.619$; $p < .001$). This pattern is consistent with competitive mediation (Zhao et al., 2010), due to significant indirect effects of opposing slopes. In turn, there was a significant positive indirect effect of cognitive reappraisal

on WTC via FLE ($\beta_{ab} = .544$; $p < .001$), whereas the indirect effect via FLA was significantly negative ($\beta_{ab} = -.323$; $p < .001$). The total effects from cognitive reappraisal to WTC was significantly positive ($\beta_c = .538$; $p < .001$). Lastly, in the path from emotional suppression to SPCC, a significant positive indirect effect via FLE ($\beta_{ab} = .399$; $p < .001$) and a significant negative indirect via FLA were found ($\beta_{ab} = -.214$; $p < .001$), with a small positive significant total effect ($\beta_c = .032$; $p = .005$).

Table 4. Mediation Effects

	Std. Estimate	Std. Error	z-value	p-value
<u>Indirect Effects:</u>				
CR → FLE → SPCC	.630	.043	15.035	<.001
CR → FLA → SPCC	-.619	.037	-17.272	<.001
CR → FLE → WTC	.544	.042	13.879	<.001
CR → FLA → WTC	-.323	.035	-11.777	<.001
ES → FLE → SPCC	.399	.042	9.692	<.001
ES → FLA → SPCC	-.214	.031	-4.334	<.001
<u>Total Effects:</u>				
CR → SPCC	.093	.052	1.795	.073
CR → WTC	.538	.056	10.010	<.001
ES → SPCC	.032	.052	2.837	.005

DISCUSSION

This study aimed to explore the direct and indirect relationships of the emotion regulation strategies of cognitive reappraisal and expressive suppression in relation to the FL emotions of enjoyment and anxiety and the outcome variables of WTC and SPCC.

The first research question regarding cognitive reappraisal and expressive suppression as predictors of SPCC and WTC was partially supported by the latent model. Cognitive reappraisal had a small positive effect on SPCC and a moderate positive effect on WTC. These findings are supported in the literature, with Guo et al. (2025) also reporting a positive association between cognitive reappraisal and WTC and several studies reporting positive associations between self-beliefs and cognitive reappraisal strategy use (Shirley et al., 2022; Zhao et al., 2021). In terms of the direct effect, cognitive reappraisal was therefore consistently beneficial, as it was positively associated with SPCC and WTC. In turn, expressive suppression indicated mixed results. Expressive suppression negatively predicted SPCC, but had no significant association with WTC. This insignificant path between expressive suppression and WTC also meant that no mediation effects of the path between expressive suppression and WTC could be tested. Guo et al. (2025) also found mixed results in terms of expressive suppression and WTC, with WTC in online, digital contexts being significantly related to expressive suppression, but WTC in non-digital settings having null results. As the participants were recruited from language school classrooms and were learning English in an in-person setting, the null results between expressive suppression and WTC are therefore in line with Guo et al. (2025). This absence of a direct relationship between expressive suppression and WTC may suggest that regulating emotional expression may not play a central role in learners' motivational readiness to initiate communication in classroom settings. This may be due to the fact that participation in classroom settings is often expected and encouraged, whether or not the learner is experiencing emotional strain or is engaging in suppression. Overall, the positive relationships between cognitive reappraisal and SPCC and WTC found may be a valuable potential avenue for future research. Cognitive reappraisal interventions have already proven beneficial in other educational domains such as mathematics learning (Jamieson et al., 2016), and future research intervention research on cognitive reappraisal strategies in the FL classroom is recommended.

The second research question involved cognitive reappraisal and expressive suppression as predictors of FLE and FLA. Cognitive reappraisal significantly positively predicted FLE and significantly negatively predicted FLA. Thus, students who habitually used cognitive reappraisal as an emotion regulation strategy were more likely to experience positive emotions and less likely to experience negative emotions in the FL classroom. These findings corroborate previous research in the field regarding the beneficial emotional responses of utilising cognitive reappraisal as a habitual strategy (Jiang et al., 2025). Interestingly, expressive suppression positively predicted both FLE and FLA, indicating that students who often use the emotion regulation strategy of suppressing their felt emotions were more likely to experience both higher enjoyment and anxiety in the FL classroom. These findings contradict previous non-significant associations found between expressive suppression and FLE (Alqarni, 2024; Jiang et al., 2025). One possible explanation for the positive association between expressive suppression and FLE may lie in the context-dependent and socially regulated nature of classroom emotions in the Iranian educational context. Although expressive suppression is often characterised as a maladaptive emotion regulation strategy, particularly in Western psychological models (Gross & John, 2003), its effects may differ in structured environments such as the FL classroom in Iran, a collectivist country (Hofstede et al., 2010). In this context, suppressing the outward expression of emotions (especially negative emotions) may help students maintain social harmony, avoid embarrassment, and adhere to perceived classroom emotion display rules (Schutz et al., 2006). As a result, students who habitually suppress emotional expressions may experience higher levels of enjoyment insofar as suppression enables continued participation and engagement in classroom activities without the social costs associated with visible anxiety or frustration.

The third research question regarding FLE and FLA as predictors of WTC and SPCC was supported by the latent model. FLE moderately positively predicted both WTC and SPCC, whilst FLA moderately negatively predicted SPCC. FLA also

negatively predicted WTC, however the effect size found can be considered small ($\beta = -.049$; $p = .025$). These findings are in line with previous research on the relationships between FL emotions and SPCC (Asmali, 2019; Nadeem et al., 2023b) and WTC (Botes et al., 2022a; Elahi Shirvan et al., 2019; Zou et al., 2025). Previous research has shown that FLE is usually more strongly associated with classroom-related variables, whereas FLA is consistently related to learner-internal variables (Dewaele et al., 2018; Dewaele & MacIntyre, 2019). The stronger effect sizes for FLE as a predictor of both SPCC and WTC is therefore surprising, as self-beliefs regarding communication can be considered a learner-internal variable. This finding highlights the strength of FLE as a predictor of positive outcomes, raising promising pedagogical implications, as teachers who seek to boost FLE through, for example, employing humour in their teaching, may also have beneficial effects on outcomes such as SPCC and WTC. Future research on the association between FLE and communication outcomes is therefore recommended, especially experimental or longitudinal designs.

The fourth research question regarding FLE as a mediator between cognitive reappraisal and expressive suppression as predictors and the outcome variables of SPCC and WTC was partially supported by the latent mediation model. FLE positively mediated the relationships between cognitive reappraisal as predictor and WTC and SPCC as outcome variables, with strong positive indirect effects found. FLE therefore served as a positive mediator of cognitive reappraisal on the communication outcomes. Furthermore, FLE also positively mediated the relationship between expressive suppression and SPCC, with a moderate positive indirect effect found. The direct effect between expressive suppression and SPCC was found to be negative ($\beta = -.154$; $p < .001$), whereas the indirect effect via FLE was positive, indicating that expressive suppression exerted two opposing influences on students' perceived communicative competence. On the one hand, habitual expressive suppression appears to undermine SPCC directly, potentially because suppressing emotional expressions may reduce spontaneous verbal engagement. This aligns with prior work characterising expressive suppression as a strategy that can impair social and

communicative functioning (Butler et al., 2003; Gross & John, 2003). On the other hand, expressive suppression also indirectly predicted higher SPCC through increased enjoyment. This suggests that in classroom contexts where emotional display norms are salient, suppression may help students manage visible emotional reactions in ways that facilitate continued participation. As such, while suppression may be directly detrimental to students' SPCC, it can simultaneously contribute to more positive outcomes when it operates indirectly through enjoyment. This pattern indicates that expressive suppression functions neither as uniformly maladaptive nor uniformly beneficial in the FL classroom context. Lastly, as the direct path between expressive suppression and WTC was found to be non-significant, no mediating effects were tested (Kline, 2015).

Again, partial support was found for the fifth research question regarding FLA as a mediator between cognitive reappraisal and expressive suppression as predictors and the outcome variables of SPCC and WTC. A strong negative indirect effect via FLA as a mediator of the relationship between cognitive reappraisal and SPCC was found, whereas a moderate negative indirect effect via FLA as a mediator between cognitive reappraisal and WTC was found. Although these negative indirect effects were uncovered, the direct effects between cognitive reappraisal and SPCC and WTC were significantly positive. This pattern indicates that cognitive reappraisal exerted two simultaneous influences on students' communicative outcomes. On the one hand, cognitive reappraisal was associated with lower FLA, which in turn predicted higher SPCC and WTC. This pathway reflects the expected anxiety-reducing function of reappraisal (Jamieson et al., 2016) and aligns with its role as an adaptive emotion regulation strategy. On the other hand, the persistence of positive direct effects suggests that cognitive reappraisal also promotes communicative outcomes through mechanisms independent of anxiety reduction. That is, even after accounting for FLA, students who habitually reappraise emotional situations reported higher SPCC and WTC. These direct effects may reflect broader cognitive and motivational benefits of reappraisal, such as increased cognitive control and performance (Jamieson et al.,

2010; McRae et al., 2012), which are not fully captured by changes in anxiety alone. Furthermore, a negative indirect effect was found for FLA as a mediator between expressive suppression and SPCC. Therefore, expressive suppression negatively predicted SPCC both directly and indirectly via FLA. Students who habitually suppressed emotional expressions reported higher levels of anxiety, which in turn were associated with lower perceived communicative competence. This pattern indicates that anxiety functions as a mediating mechanism through which expressive suppression undermines students' self-perceptions of their communicative competence. In addition to its direct constraining effects on communication, expressive suppression appears to heighten anxiety, thereby compounding its negative impact on SPCC.

Beyond the indirect effects found in the latent mediation model, the total effects also deserve further discussion. Examination of the total effects provides further insight into the relative strength of positive and negative emotional pathways in the model. For cognitive reappraisal, the indirect effects via enjoyment and anxiety were both large and opposing in direction, yet their combined influence resulted in a non-significant total effect on SPCC and a strong, positive total effect on WTC. This pattern suggests that while cognitive reappraisal simultaneously is linked to lower anxiety and higher enjoyment, the benefits associated with increased enjoyment are particularly consequential for students' WTC, as their positive emotional experiences appear to play a more decisive role in shaping their readiness to engage in communication, than reductions in anxiety alone. A similar, albeit weaker, pattern was observed for expressive suppression. Although suppression was associated with increased anxiety and a negative indirect pathway to SPCC, the positive indirect effect via enjoyment was sufficient to result in a small but significant positive total effect on SPCC. Thus, these findings indicate that positive emotions exert a substantial influence on communicative outcomes, often offsetting or even outweighing the detrimental effects of FLA within the same model. The results underscore the central role of enjoyment

as a powerful affective mechanism through which emotion regulation strategies translate into communicative confidence in the FL classroom.

LIMITATIONS

There are several limitations to consider in the interpretation of the results of this study. Firstly, the cross-sectional design limits the ability to make causal inferences and the measurement of both emotions and emotion regulation strategies at the same time means that temporal ordering could not be considered. Future longitudinal designs are recommended. In addition, the study only includes two emotion variables (enjoyment and anxiety) and the nomological network of emotion variables in FL learning has expanded considerably in recent years (Dewaele et al., 2025). The inclusion of additional emotion variables in examining the impact of emotion regulation strategies is recommended, especially in latent form, as a complex network of inter-variable relationships is likely to be present (Resnik et al., 2025).

CONCLUSION

This study set out to explore the role of emotion regulation strategies in FL learning to better understand the (potentially differing) function of cognitive reappraisal and expressive suppression in the process of learning another language. More specifically, we investigated their relationship with Iranian EFL learners' FLE and FLA, as well as their WTC and SPCC, both directly and indirectly. The findings demonstrated that emotion regulation strategies shape FL learners' communicative outcomes not only directly, but also indirectly through emotional experiences in the classroom. Cognitive reappraisal emerged as a consistently adaptive strategy, supporting WTC and SPCC by fostering enjoyment and attenuating anxiety. In contrast, expressive suppression showed a more complex and context-dependent pattern, exerting both detrimental and situationally beneficial effects on SPCC depending on the emotional pathways

involved. Furthermore, the findings highlight the central role of FLE as a powerful affective mechanism that can counterbalance, and in some cases outweigh, the negative influence of anxiety on communicative outcomes. Taken together, the results underscore the importance of adopting a nuanced, process-oriented view of emotion regulation in FL learning and point to the pedagogical value of fostering regulation strategies that enhance positive emotional experiences in the classroom.

Authors' Contributions

EB was responsible for the conceptualisation, methodology, formal analysis, writing – original draft, and project administration. PR was responsible for the conceptualisation, methodology, and writing – original draft. MAN was responsible for the methodology, investigation, data curation, writing – original draft, and project administration. MM was responsible for the methodology, investigation, data curation, and writing – original draft. J-MD was responsible for writing – original draft and supervision.

Ethics Approval & Consent to Participate

This study followed the guidelines of Hakim Sabzevari University for data collection in Iran. All participating learners, teachers, and language schools' administrations provided written informed consent prior to enrollment and data collection in the study.

Declaration of GenAI and AI-Assisted Technologies

In the preparation of this work the authors used ChatGPT 5.2 in order to perform a spelling and grammar check. Grammar improvement suggestions provided by the tool was reviewed and changes in the manuscript made. The authors take full responsibility for the content of the publication.

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