

Emotion Regulation in Language Learning: Strategies for Managing Foreign Language Anxiety among Iranian EFL Learners

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Abstract

This study employed a mixed-methods approach to examine the utilization of two emotion regulation strategies, namely cognitive reappraisal and expressive suppression, among a group of Iranian learners of English as a foreign language (EFL) at universities in Isfahan, Iran. The investigation was based on the Process Model of Emotion Regulation, a psychologically-validated theoretical model proposed by Gross (2015). The study also investigated the correlation between emotion regulation and levels of foreign language anxiety (FLA), and as an additional area of investigation, the impact of emotion regulation on the association between FLA and motivation for learning a second language. A total of 295 learners were questioned using a quantitative questionnaire. The qualitative research involved the selection of thirteen respondents from three levels (high, medium, low) of FLA. The primary component employed in this study was a stimulated recall interview. Data collection was undertaken online due to scheduling constraints. The findings indicated a low frequency of utilization for the two emotion regulation strategies, with cognitive reappraisal being more commonly employed compared to expressive suppression. Learners with low English proficiency exhibited a lower prevalence and preference for cognitive reappraisal. There was a stronger positive correlation observed between expressive suppression and FLA. The study found a negative correlation between cognitive reappraisal and FLA. It provides evidence that understanding the inner workings of learners' emotion regulation may inform pedagogical practices.

Keywords: EFL learners, emotion, emotion regulation model, foreign language anxiety, mixed methods study

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1. Introduction

Speaking a foreign language (FL) or second language (L2) involves risk-taking. Second/foreign language education has long been acknowledged as one of the most challenging and emotional jobs around the world (Derakhshan, 2022). Emotional variables, which include positive and negative emotions, are at the core of second and foreign language education (Derakhshan et al., 2023). The most significant characteristic of an emotionally literate person is the ability to handle emotions in a way that improves his/her quality of life and that of others (Ghiasvand et al., 2024). This has implications for an individual's cultural identity and even self-esteem (García & Kleifgen, 2018; Rubio, 2021). As a social species, human beings are inherently inclined to wonder how much they are liked by other members of the community and to identify with them (Young, 2008). Added to this psychological complexity is the desire to feel sufficiently competent not only in socialization into a community but also in the use of language per se (Pu & Xu, 2022; Rubio, 2021). Yet, learning to speak an FL/L2 is a process that involves risks, ranging from losing face because of mistakes to experiencing discomfort in the reshaping of self-identity. Moreover, it offers not only enjoyment but also senses of uncertainty and lack of control (Boudreau et al., 2018; Dewaele & MacIntyre, 2014), making it a potential source of anxiety. Given the pervasiveness of anxiety in FL/L2 learning, researchers have expended considerable research effort on understanding this emotion (Horwitz, 2001; MacIntyre, 2017; Teimouri et al., 2019; Zhang, 2019).

Despite this extensive body of research, current literature predominantly recommends pedagogical practices and research directions based on the identification of the extent, causes, and effects of foreign language anxiety (FLA) in what is described in the present study as a top-down, teacher-oriented approach. Little is known, however, about the bottom-up, learner-oriented perspective, in which FL learners are conceptualized as unique, autonomous individuals with the ability and willingness to take charge of their own learning, including the emotions involved, although there might be differences across cultures (Jiang & Dewaele, 2019). From this perspective, language learners are social yet independent agents capable of bringing about change themselves, if they want to. Accordingly, this research study investigated learners' self-initiated strategies to manage their own FLA, with a

particular focus on speaking because it is one of the most anxiety-provoking aspects of language learning (Horwitz, 2001). From a practical perspective, the present research was intended to give FL teachers a slightly firmer grasp of how they could harness learners' emotion regulation tendencies to achieve pedagogical goals.

In addition to examining learners' self-initiated strategies for managing FLA, a subordinate line of investigation of the present research aimed to clarify the relationship between foreign language anxiety and L2 motivation. FLA has been considered a factor in an influential motivational model because it arguably influences a learner's motivation to engage in learning behavior (Dörnyei, 2000); however, previous decades have witnessed research into FLA and L2 motivation as separate concepts. Nevertheless, these largely parallel lines of research have converged on a broad consensus among researchers that the two work in opposite directions (Yan & Horwitz, 2008). Putting it simply, and probably a bit too simplistically, motivated language learners tend to be less anxious, whereas less motivated learners are more susceptible to FL anxiety. However, it remains largely unclear how the two might be linked (Liu & Huang, 2011), and even less is known about how their relationship might be influenced by other factors. Empirical evidence is scant, but researchers have provided plausible explanations for how the two could be related. For example, FLA may lead to poor self-perceived FL proficiency, which in turn undermines confidence and motivation to learn.

Against this background, there is a body of literature, albeit not yet a comprehensive systematic body of research, on how learners manage and control foreign language anxiety. Moreover, there are a limited number of mixed-methods studies in this area. Although these limited but expanding studies are important in highlighting the significance of emotion control in foreign language learning, several shortcomings remain to be addressed. Prior research has relied solely on comprehensive quantitative measurements that encompass psychological constructs outside emotion regulation strategies, thereby impeding the ability to establish definitive findings regarding the association between these strategies and FLA (e.g., Bai et al., 2021). Furthermore, it is necessary to obtain learners' qualitative input in order to gain a deeper understanding of the intricate logic underlying the selection of regulatory techniques. Some studies, such as those using vignettes, take an inductive

approach and do not rely on theory; however, they are innovative in their techniques for collecting data (e.g., Bielak & Mystkowska-Wiertelak, 2020). Therefore, the current study was designed to enhance understanding of learners' regulation of foreign language anxiety (FLA) and to investigate a theoretical model and research methodologies that could overcome the aforementioned constraints.

In this regard, investigating the control of emotions in foreign language learners has the potential to make valuable contributions to enhancing foreign language acquisition and performance. According to Gardner and MacIntyre (2017), when FLA levels are high, it negatively affects L2 motivation. At the same time, the way learners manage their anxiety can impact their motivation to learn a second language. This, in turn, can serve as a potential means for learners to maintain their own motivation, which is essential for improving their performance in foreign language or second language acquisition (Dörnyei, 2000; Ushioda, 2008). Additionally, an essential aspect of the current study is examining how emotion management mechanisms and L2 motivation may combine to influence levels of foreign language anxiety (FLA). Collectively, the aforementioned considerations have the potential to enhance our comprehension of the connections between emotional elements and foreign language ability. Importantly, the current study also represents a unique investigation of expressive suppression, a rarely explored emotion regulation approach in FL/L2 literature on affect.

2. Review of the Literature

2.1. Emotion and Emotion Regulation

Emotion is likely defined the same way in psychology as in foreign and second language acquisition. Very much in line with the components defining foreign language anxiety, emotions involve psychological and physiological reactions to a specific event the individual considers relevant, resulting in behavioral or motivational tendencies that may manifest as expressive behavior in response to the event (Gross, 2015; Pekrun, 2017).

The borrowing of literature from psychology is particularly necessary in

understanding emotion regulation, and such a practice is common in studies on language learner psychology (Bai et al., 2021; Resnik & Dewaele, 2020). The research since the 1970s to date has provided invaluable insights into the nature of FLA and increasingly into how it may relate to other kinds of emotions, including positive ones, such as FL enjoyment (Dewaele & Dewaele, 2020; Dewaele & MacIntyre, 2014; MacIntyre et al., 2016).

The two models are the premises on which a model from psychology called the Process Model of Emotion Regulation (Gross, 2015) was introduced for the present study. Anxiety, as a construct, is hard to define (Levitt, 2017). However, there is a high degree of consistency in both general psychology and FL/L2 literature that anxiety is characterized as a state of worry arising in response to a specific stimulus. This definition embodies the three elements in social cognitive theory: context, behavior, and cognition, which are entailed in the evaluation of the stimulus.

As a state emotion, anxiety happens for a brief period of time in the face of a stimulus which may exist in the immediate external environment or internally in several forms, such as a thought, an image, or a physiological sign (Gross, 2015). While state anxiety refers to transient apprehension, trait anxiety refers to the predisposition to feel anxious. An individual with high trait anxiety tends to experience higher state anxiety more often than another individual with low trait anxiety.

2.2. Foreign Language Anxiety: A Social Cognitive Perspective

In psychology, among the most widely used models of the cognitive generation of emotion is appraisal theory proposed by Lazarus (1991). According to appraisal theory, emotions are elicited when a person appraises that the environment or situation is relevant to their own personal well-being. A salient dimension of FLA is the social environment. Communication apprehension refers to the fear a FL learner experiences when communicating with others in the language, and fear of negative evaluation is the fear FL learners have when they believe they are being negatively appraised by others. Studies using different measures have identified a clear link

between negative self-comparison with peers and FLA (Kao & Craigie, 2010).

2.3. Consequences of Foreign Language Anxiety

Since the Foreign Language Classroom Anxiety Scale (FLCAS) was introduced in the mid- 1980s and became widely adopted, research has produced consistent findings about the consequences of foreign language anxiety. Although FLA had previously been conceptualized as either facilitating or debilitating, the extant literature has reliably shown that FLA tends to have negative impacts on the learning process through compromising the learner's cognitive, psychological, physiological, and social functioning (Horwitz, 2001; MacIntyre, 2017; Teimouri et al., 2019; Zhang, 2019). In daily conversations, "anxiety" is often used to refer to the uncomfortable feeling over an uncertain outcome which may or may not be positive. However, in psychology terminology, the distinction between the positive and negative anticipated outcome is clear-cut.

Anxiety has a subtle yet potentially pervasive and powerful influence on language achievement. Two recent meta-analytical studies on FLA literature, including Zhang (2019), indicated a moderate correlation between FLA and overall language achievement, which was operationalized as either self-perceived FL proficiency or external performance measures such as GPA and course grades. Teimouri, Goetze and Plonsky (2019) surveyed 105 independent samples in 96 original research projects involving a total of 19,933 participants from 23 countries. An average correlation r of $-.36$ ($p = .001$) was identified, with a confidence level between $-.39$ and $-.33$.

2.4. Foreign Language Anxiety and Second Language Motivation

Foreign language motivation, or more commonly referred to as second language (L2) motivation, is arguably among the most widely researched ones. Foreign language anxiety and L2 motivation have been extensively researched as distinctive lines of investigation rather than in an integrated approach. Compared to the voluminous bodies of the two literatures, there is relatively little theory-driven, systematic

research on how FLA and L2 motivation are linked (Papi, 2010). Most importantly, little is known about what empirically- proven, specific strategies learners might use with their anxiety to sustain motivation and vice versa. Anxiety is more likely to result from the perceived inadequate ability and progress in evading negative outcomes (O'Connor, 2014).

2.5. Recent Empirical Research on Foreign Language Anxiety and Emotion

Recent empirical research has increasingly highlighted the importance of emotional and contextual factors in understanding foreign language anxiety. For example, Taherian et al. (2022) investigated the longitudinal relationship between trait emotional intelligence (TEI) and foreign language classroom anxiety among 309 Iranian L2 learners. Using latent growth curve modeling, they found that learners' TEI increased while their foreign language classroom anxiety decreased over the course of one year. They also reported a negative association between TEI and foreign language classroom anxiety, which became stronger over time. These findings suggest that learners' capacity to understand and manage emotions may be closely associated with the development and reduction of foreign language anxiety.

Previous research has also demonstrated that foreign language anxiety is shaped by specific classroom and task-related factors. Ayuningtyas et al. (2022), for instance, examined anxiety among 171 English for Specific Purposes students in a vocational education setting and found communication apprehension to be the most influential anxiety domain. In particular, performing without preparation was identified as a notable source of communication apprehension, while self-negative evaluation was prominent within fear of negative evaluation. Their findings emphasize the importance of preparation, supportive classroom interaction, and collaborative activities in addressing learners' anxiety. Another related study by Elhambakhsh et al. (2026) revealed that the academic and psychological involvement of mothers alongside teacher-led private tutoring could lead to positively directed changes in students' academic performance, self-esteem, and English language anxiety. This indicated that the integration of specialized teacher education with maternal emotional support may have beneficial psychological and educational

effects.

Taken together, these studies indicate that foreign language anxiety cannot be adequately understood solely in terms of its intensity or its negative consequences.

Rather, learners' emotional capacities, perceptions of their linguistic competence, and the specific conditions under which language performance takes place may influence how anxiety is experienced and managed. However, although previous research has established associations between emotional characteristics and foreign language anxiety, less attention has been paid to the specific strategies that learners themselves employ to regulate anxiety during actual foreign language speaking performances. This gap is particularly relevant to cognitive reappraisal and expressive suppression, which constitute the focus of the present study.

2.6. Regulation of Foreign Language Anxiety

Only relatively recently has there been more effort to understand what FL/L2 learners do to manage their emotions and how it may affect FLA. However, a gap in research conceptualization and methodology remains. In the following, the limited but expanding research into learners' FLA regulation strategies is presented.

Intriguingly, there has not been much attempt to define FLA regulation in FL/L2 literature. The shared assumptions seem to be that it refers to efforts to experience a lower level of anxiety and/or for a shorter period of time, and that the learner is not encouraged to experience anxiety because it is not conducive to FL learning (Dewaele & Dewaele, 2020). Another note-worthy observation is that the FL/L2 literature has rarely reported learners' attempts to control expressions of anxiety, such as trembling hands, as a means to alter the experience of anxiety.

Specifically, studies have consistently shown that habitual suppression of emotional expression is linked to increased negative emotion (Gross & John, 2003). There is a clear need for language researchers and practitioners to understand how learners manage their own anxiety symptoms and how they may in turn affect the experience of anxiety.

The present study aimed to deepen understanding of the learners' perspective. It

complemented the emerging, quantitative- dominant research on FL learners' emotional intelligence by offering a qualitative account in addition statistical insights. Also, the present research was intended to give FL teachers a slightly firmer grasp of how they could harness a learner's emotion regulation tendencies to achieve pedagogical goals. Finally, A subordinate line of investigation of the present research aimed to clarify the relationship between foreign language anxiety and L2 motivation. The four research questions are in this study as below:

1. In what ways and for what reasons are the following emotion regulation strategies used by Iranian EFL learners to regulate FLA in oral presentation?
2. To what extent are cognitive reappraisal and expressive suppression used by Iranian EFL learners to regulate FLA in oral presentation?
3. Is there a relationship between the extent to which cognitive reappraisal and expressive suppression are used during FL speaking and FLA levels?
4. Do the two strategies moderate the relationship between FLA and L2 motivation?

3. Method

3.1. Research Design

The current research employed a mixed-methods, cross- sectional design to examine emotion regulation among a sample of Iranian EFL learners and how it related to FLA. To have a manageable scope, this study focused on FL speaking, specifically oral presentation. The current study is guided by the philosophical framework of critical realism (Bhaskar et al., 1998), which offers the benefit of reconciling the divide between positivism and constructivism by incorporating aspects from both approaches in its understanding of ontology and epistemology (Fletcher, 2017, p. 182). The statement implies that theories provide a means to acquire knowledge and come closer to understanding "reality" (Danermark et al., 2002). By employing rational analysis and judgment, we can investigate potential causes, or 'reality,' that underlie social events with a reasonable level of certainty (Archer & Tritter, 2000). Although the universe is subject to various unpredictable variables that influence our

experience of reality, it is feasible to acquire information about the world by systematically studying it using scientific procedures (Bhaskar et al., 1998). Nevertheless, it is crucial for researchers to be cognizant of the effects of social connotations they attribute to 'reality' (Clarke & Braun, 2013). Contextualism is an epistemological perspective that runs parallel to critical realism, which is commonly known as an ontological position. It can be seen as a less intense kind of constructionism because it does not presume that there is just one reality and believes that knowledge is formed based on different circumstances (Clarke & Braun, 2013).

Aligned with the principles of critical realism and contextualism, this research was designed to be heavily influenced by theory rather than being solely determined by theory. The incorporation of a quantitative element emphasized the notion that there exists an external 'reality' that can be quantified to a certain extent. Nevertheless, it is important to acknowledge that no measurement is entirely impartial or flawless (Erzberger & Prein, 1997). Consequently, it is imperative to subject the research issue to scrutiny employing an alternative research approach. Researchers acknowledge that there are other individual difference characteristics (such as linguistic ability) and contextual factors (such as power dynamics) that may also influence a learner's FLA. However, their focus is primarily on three variables: FLA, emotion regulation, and L2 motivation. All of these aspects were evaluated in the qualitative study, which was intended to supplement the quantitative findings.

This study utilized a parallel convergent strategy, as described by Clarke and Braun (2015). An initial quantitative questionnaire survey was carried out, followed by semi-structured interviews with a chosen group of participants. The study employed both qualitative and quantitative methods simultaneously, and the findings from these two approaches were compared to determine any similarities or differences in the data. This technique facilitated the utilization of the advantages of qualitative and quantitative investigations (Clarke & Braun, 2013). Although the current research topic was new and exploratory, it was appropriate to use an inductive qualitative approach. Additionally, the use of a quantitative deductive approach was justified because the model of emotion regulation (Gross, 2015) employed in the study had strong empirical support in psychological literature. The current study aims to give a comprehensive and detailed analysis of FLA regulation, utilizing a bottom-

up qualitative methodology. Additionally, it seeks to generate data that can be applied to a wider context, employing a deductive statistical method (Fletcher, 2017, p. 170).

3.2. Participants and Setting

Several sampling strategies were used in this study. On the broadest level, purposive and convenience sampling were used. The research venue was in Isfahan, Iran. Purposive sampling was used in this study to ensure that the participants selected were specifically relevant to the research objectives. The goal was to obtain detailed and focused insights into emotion regulation and foreign language anxiety (FLA) among Iranian EFL learners, particularly during oral presentations. By selecting participants who were enrolled in English courses with oral presentations as a major assessment, the researchers aimed to:

1. **Ensure Relevance:** Select participants who were directly involved in the specific language activity being studied (oral presentations), ensuring that the data collected would be highly relevant to the research questions.
2. **Obtain Rich Data:** Focus on a group that is likely to provide rich, detailed information about their experiences with emotion regulation and FLA in the context of oral presentations.
3. **Address Specific Research Questions:** Target a population that fits the study's criteria, enabling the researchers to explore specific aspects of emotion regulation and FLA in a defined educational setting.

The target population for the present study was stratified in the English proficiency levels, especially with the second- and third-level English language department courses, because every student had to take them no matter their English proficiency ($n = 295$). The target sample comprised English major undergraduates taking compulsory, credit-bearing English courses at language departments. The participants had most likely been learning and using English as a foreign language in a Persian-speaking region (Isfahan). The researchers recruited the participants for the study through lecturers who were teaching English courses that had oral presentation as one of the major assessments.

3.3. Instruments

3.3.1. Stimulated recall interview

The researchers collected most of the qualitative data from each informant ($n = 13$) through a main interview involving a stimulated recall. The stimulus was the video- or audio-recording of an oral presentation that the participant had delivered as an assessment of the English courses they were taking at the time of this research. Stimulated recall is an effective tool to access the memory structures at the time of a foreign language activity, especially in relation to cognitive processes and strategy use. The interviews, held on Zoom, had to be scheduled around the date of the informant's oral presentation because it was mainly assigned by their course instructor.

Content validity refers to the extent to which the interview questions accurately represent the construct being studied. For this research, content validity was ensured by reexamining the interview questions with the help of two language teachers. Their expertise helped in verifying that the questions were appropriate and relevant to the study's objectives, ensuring that the interviews adequately covered the necessary topics related to foreign language anxiety, cognitive processes, and strategy use during oral presentations. Construct validity is about how well the interview measures the concept it is intended to measure.

In this study, the stimulated recall interviews were designed to probe into the cognitive processes and strategies used by participants during their oral presentations. Using the actual recordings of the presentations as stimuli ensured that the interviews elicited detailed and relevant responses about the participants' experiences, thoughts, and strategies during the event. This method aligns well with the goal of understanding the cognitive and emotional processes involved in language performance, thereby supporting construct validity.

3.3.2. Observation of the oral presentation

Before the main interview took place, one of the researchers observed and jotted notes on the recorded oral presentation. The purpose of having observation notes was to

deepen my understanding of the informant's anxiety tendency and possible symptoms and sources, which helped me to ask more precise questions and to conduct the main interview more confidently and smoothly.

3.3.3. Questionnaire

The whole questionnaire comprises four sections (Sections A-D) and a total of 85 items. Section A consists of the Foreign Language Classroom Anxiety Scale (FLCAS) with 33 items, which surveys foreign language anxiety as a situation-specific trait anxiety. In other words, it measures an individual's tendency to experience state anxiety in a foreign language situation (Horwitz, 2001). Section B is a 10-item Foreign-Language-Specific Emotion Regulation Questionnaire (FLERQ) in which participants reported their frequency of use of cognitive reappraisal (6 items) and expressive suppression (4 items) during a typical in-person assessed English oral presentation. It was adapted from the Emotion Regulation Questionnaire (ERQ) developed by Gross and John (2003) to suit the research context. Section C contains an L2 motivational scale. Second language (L2) motivation, which is a secondary variable in this study, is operationalised through the survey Second Language Motivational Self-System (L2MSS) by Taguchi, Magid and Papi (2009) created according to the L2 Motivational Self-System proposed by Dörnyei (2005; 2009). Section D of the survey collected demographic information, namely age, gender, academic major, year of study, education background, beginning age of learning English, number of years spent on learning English, and self-rated overall and speaking proficiency levels.

To ensure the reliability of the scales used in the questionnaire, the researchers conducted an internal consistency analysis using SPSS version 26.0. The reliability of the scales is indicated by the Cronbach's alpha coefficients, which measure how well the items in each scale correlate with each other, providing an indication of the scale's internal consistency. The percentage of valid questionnaires was 91.0%, meaning that the data collected was largely complete and usable for analysis. The Cronbach's alpha coefficients for all scales in the questionnaire were greater than .70. Generally, a Cronbach's alpha value above .70 is considered acceptable, indicating

good internal reliability. This suggests that the items within each scale consistently measured the intended constructs. Additionally, factor analysis using principal axis factoring was conducted to identify latent factors within the scales. This analysis confirmed that the identified factors were highly correlated with the subscales of the original questionnaires, further supporting the reliability and validity of the scales used.

3.4. Data Collection Procedure

The data collection in fact started with the main quantitative data collection, i.e., questionnaire survey, followed by the main qualitative method, i.e., interviews. The two minor data collection methods, i.e., observation of the oral presentations and collection of grades on oral presentation, will be described where appropriate. The questionnaire, in two language versions (English and Persian) was uploaded to SurveyMonkey, which is one of the most well-known survey platforms. The researchers took caution to select and invite participants for the qualitative part of the study, which consisted of a warm-up interview and a main interview based on a stimulated recall. The researchers conducted the interviews online through a popular application, Adobe Connect.

3.5. Data Analysis Procedure

In the main stage of quantitative data analysis, the factors identified in the EFA would be submitted for key analyses, which would involve Pearson's correlation, t-test, ANOVA, regression statistics, and moderation analyses. Those analyses were conducted using SPSS26.0 and 28.0, with additional R scripts by Leys et al. (2018) and the PROCESS software by Hayes (2013). The researchers analyzed the qualitative data using thematic analysis. The main interviews and observations in the form of audio-video recordings were transcribed verbatim to retain the nuances according to a list of translation conventions established before the interviews. NVivo was used for organization.

4. Results

4.1. Quantitative Results

4.1.1. Paired sample t-test and ANOVA

For a quantitative understanding of the extent of use of cognitive reappraisal and expressive suppression as reported by respondents, a paired sample t-test was conducted. The same test would also check if there was a significant difference between use of the two emotion regulation strategies.

Table 1

Paired-Samples t Test of Cognitive Reappraisal and Expressive Suppression

Comparison	MD	SDD	SED	95% CI	t	df	p
Cognitive Reappraisal and Expressive Suppression	0.36	0.675	0.035	[0.304, 0.440]	9.17	222	< .001

Note. MD = mean of the paired differences; SDD = standard deviation of the paired differences; SED = standard error of the paired differences; CI = confidence interval.

As Table 1 shows, cognitive appraisal was significantly more frequently used than expressive suppression. The difference was .36, 95%CI [. 304, 440], $t(222) = 9.17, p < .001$.

Table 2

Levene's Tests and One-Way ANOVA Results for Cognitive Reappraisal and Expressive Suppression Across Academic Majors

Variable	Levene's F	df1	df2	P	Source	SS	df	MS	F	p
Cognitive reappraisal	2.670	6	237	.013	Between groups	1.542	7	.225	.728	.463
	2.133	6	237	.047	Within groups	121.789	237	.273		
	2.133	6	116.56	.045	Total	123.444	222			
	2.655	6	237	.014						
Expressive suppression	.424	6	237	.768	Between groups	3.865	7	.568	1.224	.135
	.384	6	237	.781	Within groups	186.954	237	.430		

Variable	Levene's <i>F</i>	<i>df</i> 1	<i>df</i> 2	<i>P</i>	Source	SS	<i>df</i>	MS	<i>F</i>	<i>p</i>
	.384	6	217.42	.782	Total	191.958	222			
	.416	6	237	.774						

Note. SS = sum of squares; MS = mean square; *df* = degrees of freedom. Levene's test was used to assess the homogeneity of variances across academic majors

A one-way ANOVA was performed to see if academic discipline means differed in strategy use. Table 2 displays the assumption test for variance homogeneity between two or more samples. The table indicates that cognitive appraisal ($p < .05$) violated the premise, but not expressive suppression. The violated assumption did not affect the interpretation because the one-way ANOVA showed that at least two academic majors used the two emotion regulation strategies similarly, $F(7, 237) = .728, p = .463$ for cognitive reappraisal and $F(7, 237) = 1.224, p = .135$.

Table 3

One-Way ANOVA of Place of Education on Emotion Regulation Strategies

Emotion regulation strategy	Source	SS	<i>df</i>	MS	<i>F</i>	<i>p</i>
Cognitive reappraisal	Between groups	1.309	5	.272	.877	.318
	Within groups	122.031	239	.273		
	Total	123.431	222			
Expressive suppression	Between groups	2.461	5	.484	1.134	.216
	Within groups	187.457	239	.422		
	Total	190.832	222			

Note. SS = sum of squares; MS = mean square; *df* = degrees of freedom

A one-way ANOVA test was also performed to investigate the effect of place of education prior to university on emotion regulation strategies. The results, as presented in Table 3, suggest that there was no statistically significant difference among the groups. ($F(5, 239) = .877, p = .318$ for cognitive reappraisal; $F(5, 239) = 1.134, p = .216$).

4.1.2. Pearson Correlations

Table 4

Correlations Between Emotion Regulation Strategies, Years of English Learning, and Self-Assessed English-Speaking Proficiency

Variable	1	2	3	4
1. Cognitive reappraisal	—			
2. Expressive suppression	.173**	—		
3. Years of English learning	.046	-.023	—	
4. Self-assessed English-speaking proficiency	.219**	-.137**	.236**	—

Note. Values represent Pearson correlation coefficients. $p < .01$. ** $p < .001$

A bivariate Pearson correlation test was conducted to identify the direction and magnitude of relation between emotion regulation, years of English learning and self-assessed English- speaking proficiency. Table 4 shows the results. English speaking proficiency was statistically significantly positively related to cognitive appraisal ($r = .219, p < .001$) but negatively correlated with expressive suppression ($r = -.137, p = .004$). It is to be noted that while years of English learning had no statistically significant difference with the two emotion regulation strategies, it was significantly positively correlated with English speaking proficiency by ($r = .236, p < .001$).

Table 5

Correlations Between FLCA and Emotion Regulation Factors

Emotion regulation strategy	Speaking English in the impromptu English classroom	General anxiety in the English classroom	Speaking with native speakers	Negative self-comparison with others	FLCA total
Cognitive reappraisal	-.136**	-.147**	-.242**	-.074	-.176**
Expressive suppression	.286**	.242**	.128**	.223**	.262**

Note. FLCA = foreign language classroom anxiety. Values represent Pearson correlation coefficients. $p < .01$.

We also tested bivariate Pearson correlation to determine how emotion control affects Foreign Language Classroom Anxiety (FLCA) factor scores. According to Table 5, cognitive reappraisal and expressive suppression had significant negative

and positive correlations with FLCA as a whole factor scale ($r = -.176, p < .001$; $r = .262, p < .001$), but the magnitude of the relationship varied. Cognitive reappraisal was negatively correlated with “Speaking with native speakers” ($r = -.242, p < .001$), followed by “General anxiety in the English classroom” ($r = -.147, p = .003$) and “Speaking English impromptu” ($r = -.136, p = .005$). Insignificant relationship with “Negative self-comparison with others” ($r = -.074, p = .113$). Expressive suppression was positively associated with “Speaking English impromptu” ($r = .286, p < .001$), “General anxiety in the English classroom” ($r = .242, p < .001$), “Negative self-comparison with others” ($r = .223, p < .001$), and “speak with native speakers” ($r = .128, p = .005$).

Table 6*Correlations Between FLCA and L2MSS Factors*

Variable	1	2	3	4	5	6	7
1. Speaking English in the impromptu English classroom	—						
2. General anxiety in the English classroom	-.279**	—					
3. Speaking with native speakers	-.314**	-.349**	—				
4. Negative self-comparison with others	-.425**	-.418**	-.170**	—			
5. FLCA total	-.256**	-.339**	-.056	-.089	—		
6. Ideal L2 self	-.405**	.428**	.320**			—	
7. Attitudes toward English learning	-.257**	-.349**	-.418**	-.339**	.428**	.460**	—
8. Criterion measures	-.026	-.029	-.170**	-.056	-.089	.320**	

Bivariate Pearson correlation tests were then performed to see if Foreign Language Classroom Anxiety (FLCA) and L2 Motivational Self-System (L2MSS) were related in the sample student group, as suggested by a wealth of literature. All five L2MSS factors except “Ought-to L2 self for recognition” were statistically substantially connected with at least one FLCA component, however the association was small to medium (Table 6). “Ideal L2 self” and “Attitudes towards English learning” moderately negatively correlated with all FLCA components and total. “Ideal L2 self” was significantly correlated with “Anxiety over speaking with native speakers” ($r = -.425, p < .001$) and FLCA total ($r = -.418, p < .001$). “Attitudes towards

English learning” was inversely related with FLCA total ($r = -.428$ ($p < .001$)) and “Anxiety over speaking with native speakers” ($r = -.418$ ($p < .001$)). The factor “Ought-to L2 self for recognition” was unrelated to FLCA factors, while “Ought-to L2 self for avoidance” was moderately positively correlated with “Anxiety over general situations in the English classroom” ($r = -.324$, $p < .001$), weakly positively associated with “Anxiety over speaking impromptu” ($r = -.158$, $p < .001$), “Negative self-comparison with others” ($r = -.132$, $p < .001$), and FLCA total ($r = -.418$, $p < .001$). The component “Criterion measures” (efforts spent on English learning) had a weak negative correlation with “Anxiety over speaking with native speakers” ($r = -.170$, $p < .001$). Table 6 demonstrates L2MSS factor relationships. Note that “Ought-to L2 self for avoidance” was positively correlated with “Ought-to L2 self for recognition” ($r = .335$, $p < .001$), while the former was less significantly related to criterion measures ($r = .318$, $p < .001$ vs. $r = .162$, $p < .001$).

Table 7

Pearson Correlations Between FLER and L2MSS Factors

L2MSS factor	Cognitive reappraisal	Expressive suppression
Expressive suppression	.161**	—
Ideal L2 self	.365**	-.053
Attitudes towards English learning	.232**	-.105*
Criterion measures	.112*	.024
Ought-to L2 self for avoidance	-.108*	.105*
Ought-to L2 self for recognition	.104*	.052

Note. FLER = foreign language emotion regulation; L2MSS = L2 Motivational Self System. Values represent Pearson correlation coefficients. $p < .05$. * $p < .01$.

As a foundational investigation for a subsequent analysis of moderation of FLERQ on the relation between FLCAS and L2MSS, a bivariate Pearson correlation test was also run between FLERQ and L2MSS (Table 7). The emotion regulation strategy “Cognitive reappraisal” was in a statistically significant positive relationship with “Ideal L2 self” ($r = .365$, $p < .001$), “Attitudes towards English learning” ($r = .232$, $p < .001$), “Criterion measures” ($r = .112$, $p < .001$) and “Ought-to self for recognition” ($r = .104$, $p < .001$), but was in a statistically significant negative

relationship with “Ought-to L2 self for avoidance” ($r = -.109, p < .001$).

As for expressive suppression, while it was in a small statistically positive relationship with cognitive reappraisal ($r = .106, p < .001$), it correlated to L2MSS in opposition directions. It was found to be statistically unrelated to “Ideal L2 self,” “Criterion measures” and “Ought-to L2 self for recognition.” However, it was in a weak significant negative relationship with “Attitudes towards English learning” ($r = -.105, p < .001$) and a similarly weak but significant positive association with “Ought-to L2 self for avoidance” ($r = .104, p < .001$).

4.1.3 Moderation Analyses

Table 8

Summary of Full Moderation Regression Models and Results of Moderation Between X and W

Model	Y	X	W	R	R ²	MSE	F (HC0)	df1	df2	p	ΔR ²	F (HC0)	df1	df2	p
I	FLCA total	Ideal L2 self	Expressive suppression	.741	.55	5.121	72.318	9	229	<.001	.001	1.554	1	229	.222
II	FLCA total	Attitudes toward English learning	Expressive suppression	.743	.55	5.097	71.188	9	229	<.001	.003	3.355	1	229	.066
III	FLCA total	Ought-to L2 self (avoidance)	Expressive suppression	.743	.55	5.135	69.135	9	229	<.001	.000	.000	1	229	.973
IV	FLCA total	Ought-to L2 self (recognition)	Expressive suppression	.745	.55	5.131	71.285	9	229	<.001	.000	.331	1	229	.411
V	Speaking impromptu	Ought-to L2 self (recognition)	Expressive suppression	.595	.35	.700	52.634	5	230	<.001	.001	.448	1	230	.322
VI	General anxiety	Attitudes toward English learning	Expressive suppression	.660	.47	.608	83.931	6	229	<.001	.002	1.542	1	229	.811
VII	General anxiety	Ought-to L2 self (avoidance)	Expressive suppression	.680	.47	.610	82.346	6	229	<.001	.000	.105	1	229	.655
VIII	Native	Ideal L2 self	Cognitive	.637	.40	.687	45.373	7	226	<.001	.006	4.003	1	226	.004

Model	Y	X	W	R	R ²	MSE	F (HC0)	df1	df2	p	ΔR ²	F (HC0)	df1	df2	p
		speakers									.001				
IX		Native speakers	Ideal L2 self												
			Expressive suppression	.635	.40	.690	45.523	7	226	<.001	.004	3.125	1	226	.007
X		Native speakers	Attitudes toward English learning												
			Cognitive reappraisal	.634	.40	.691	44.521	7	226	<.001	.002	1.423	1	226	.225
XI		Native speakers	Attitudes toward English learning												
			Expressive suppression	.638	.40	.690	45.583	7	226	<.001	.003	2.270	1	226	.112
XII		Negative self-comparison	Attitudes toward English learning												

Table 8 shows the summaries of all the full models of moderation analyses and results of tests of interactions between the independent variable (X) and moderator variable (W). As expected, all of the full models were statistically significant ($p < .001$). Regarding interaction between X and Won Y, it was found that cognitive reappraisal and expressive suppression respectively significantly moderated the negative relation between “Ideal L2 self” and “Anxiety over speaking with native speakers,” $F(1, 226) = 4.003, p = .05$, and the negative relation between “Attitude toward English learning” and “Negative self-comparison with others,” $F(1, 232) = 6.262, p = .01$.

4.2. Qualitative Results

4.2.1. Sources and symptoms of foreign language anxiety

Table 9

Interview Themes: Sources and Symptoms of Foreign Language Anxiety

Theme	Description
Academic Assessment	Belief in the salience of the presentation to academic studies; anxiety related to assessment weighting and credits; catering to instructor preferences for higher grades.

Theme	Description
Task Uncertainty	Anxiety in tasks involving impromptu presentations; higher anxiety when participants lack control over the presentation process.
Comparison with Peers	Anxiety from comparing oneself to proficient speakers; fear of being judged negatively by peers.
Self-Perceived Competence	Anxiety linked to participants' self-assessment of English proficiency; heightened anxiety when task difficulty exceeds perceived ability.
Audience Uncertainty	Anxiety from uncertainty regarding audience reactions and interactions; increased anxiety during Q&A sessions due to unexpected questions

Anxiety levels are influenced by the weighting of assessments in the course and the number of credits attached to them. Some participants cater to instructor preferences or inclinations to meet perceived expectations, leading to heightened anxiety. Anxiety is higher in tasks with more uncertainty, such as impromptu presentations or those requiring critical analysis. Participants feel more anxious when they lack control over the process and outcome of the presentation. Participants experience anxiety when comparing themselves to peers, especially those perceived as proficient speakers. Anxiety is heightened when participants fear being judged negatively by peers or compared unfavorably to others. Anxiety is influenced by participants' self-assessment of their English proficiency relative to the difficulty of the task. Participants with low confidence in their English abilities experience heightened anxiety, particularly when the task requires quick thinking and expression. Anxiety arises from uncertainty regarding audience reactions and interactions. Participants feel anxious during Q&A sessions when faced with unexpected questions, leading to worries about providing adequate answers.

4.2.2. Emotion regulation strategies

Table 10

Interview Themes: Emotion Regulation

Theme	Description
Cognitive Reappraisal	Most interviewees, except Zahra, Niloufar, and Maryam with low FLA, did not engage in cognitive reappraisal during presentations. Lack of time and cognitive

Theme	Description
	space due to various tasks made it challenging to reappraise the situation to reduce anxiety. Hamid, with low anxiety levels, did not feel the need for cognitive reappraisal.
Expressive Suppression	Many informants described avoiding showing anxiety during presentations, although some needed prompting to recall using this strategy. Niloufar provided detailed spontaneous mention of her attempt to suppress anxiety. Most informants believed that expressive suppression could exacerbate anxiety rather than lessen it, except for Nasrin, who endorsed it based on her secondary school teacher's advice.
Expressive Modification	Some participants channeled their anxiety into gestures to appear and feel less anxious, a strategy termed expressive modification. This varied among participants, with low-FLA individuals showing higher awareness of this energy transformation.
Distraction	The majority of informants across different FLA levels mentioned distraction as an effective strategy. This included avoiding direct eye contact with the audience and re-engaging in the speaking task. Averting eye contact helped reduce anxiety associated with audience judgment, while focusing on the task occupied the mind, reducing attention to anxiety sources.
Differences in FLA Levels	There were complex differences in emotion regulation strategies among individuals with varying levels of FLA and English learning motivation

The qualitative data highlights complex differences in emotion regulation strategies among individuals with varying levels of FLA and English learning motivation. Cognitive reappraisal was challenging due to limited cognitive space, while expressive suppression was not popular and might intensify anxiety. Distraction, on the other hand, was frequently used and involved averting anxiety stimuli and refocusing on the speaking performance. These findings provide insights into how individuals manage anxiety during oral presentations, considering their language proficiency and FLA levels.

4.2.3. Cognitive reappraisal

Table 11

Interview Themes: Cognitive Reappraisal

Theme	Sub-theme	Description
Goal Setting and FLA	Unrealistic goals	Informants with higher FLA often set unrealistic goals such as achieving a native-like accent or flawless speech.

Theme	Sub-theme	Description
Goal Setting and FLA	Re-adjusting goals	Lowering anxiety involves re-adjusting unattainable goals to more feasible ones, like focusing on visual aids design.
Goal Setting and FLA	Interpretation of assigned goals	External goals, even if assigned, can be interpreted differently, affecting anxiety levels. Those who attach less importance to the goal tend to experience lower FLA.
Coping Potential and FLA	Belief in ability	Belief in one's ability to achieve goals in oral presentations correlates with lower FLA. Higher anxiety occurs when there's a significant gap between the goal and perceived language proficiency.
Perceived Progress and FLA	Awareness of progress	Awareness of progress and ability to reappraise situations affect anxiety levels. Rumination, common among those with higher FLA, can distract from the presentation and exacerbate anxiety. Individuals with lower FLA tend to avoid rumination and focus on the task at hand.
Perceived Progress and FLA	Rumination	Rumination, common among those with higher FLA, can distract from the presentation and exacerbate anxiety.
Cognitive Demands and Reappraisal	Conducting reappraisal	Conducting cognitive reappraisal during a presentation is challenging. Flexibility in adjusting goals and having spare cognitive capacity are conducive to effective reappraisal.

Table 11 captures the main themes and sub-themes, focusing on how individuals with different levels of FLA manage their anxiety during oral presentations through goal setting, coping potential, perceived progress, rumination, and cognitive reappraisal.

4.2.4. Expressive Suppression

Table 12

Interview Themes: Expressive Suppression

Theme	Description
Differences in FLA Levels	Individuals with low FLA demonstrate more assertiveness and control over anxiety-induced reactions.
Differences in FLA Levels	They engage in reflective practices to manage anxiety, whereas medium-to-high FLA individuals show less certainty. Examples are provided, such as Niloufar's reflection on her preference for suppressing anxiety symptoms during presentations and her eventual realization that being closer to the audience helped

Theme	Description
	reduce anxiety.
Awareness and Proactivity	Low FLA individuals demonstrate awareness of their anxiety-inducing behaviors and actively work to change them. Individuals like Hamid demonstrate a high level of awareness of their anxiety.
Awareness and Proactivity	They engage in intentional practices to reduce anxiety, such as confident postures and gestures.
Uncertainty in Medium-to-High FLA	Medium-to-high FLA individuals exhibit uncertainty and require guidance to recognize and explain suppressive behavior. They may require guidance or prompts from interviewers to recognize and explain their suppressive behavior. Leila's uncertainty is highlighted, as she initially opposes the idea of using expressive suppression but later reflects on how speaking loudly helps her cope with anxiety.
Motivations for Expressive Suppression	Medium-to-high FLA individuals suppress anxiety symptoms to avoid negative social outcomes, such as appearing scared or incompetent. Examples include Morteza's attempt to sound less terrified by speaking with greater energy and Ali's decision to continue speaking despite high anxiety levels to avoid being perceived as incapable

The excerpt delves into how individuals with different levels of FLA engage in expressive suppression and how it affects their behavior and anxiety levels during language-related activities such as presentations. Overall, the excerpt provides insights into how individuals with different levels of FLA manage their anxiety through expressive suppression and highlights the role of self-awareness and motivation in this process.

4.2.5. Important aspects of emotion regulation

Table 13

Interview Themes: Important Aspects of Emotion Regulation

Theme	Subtheme	Description
Emotional Awareness and Sense of Control	Differential Manifestation	Individuals with varying levels of FLA display differences in their emotional awareness and sense of control over anxiety. They were able to articulate their feelings and strategies for managing anxiety.
Emotional Awareness and Sense of Control	Cognitive vs. Emotional Expression	Low FLA individuals often express emotional awareness through introspective thoughts and emotional self-reflection. They may focus on internal experiences and physical reactions to anxiety, while also considering cognitive interpretations of situations. Niloufar and Maryam demonstrated introspection and a deep understanding of their anxiety triggers and coping mechanisms. Hamid and Majid employed cognitive reappraisal techniques to

Theme	Subtheme	Description
Emotional Awareness and Sense of Control	Peer Influence and Feedback	manage anxiety by setting realistic goals and positively reframing their thoughts.
		Emotional awareness develops over time through self-reflection and peer feedback. Low FLA individuals may receive support from trustworthy peers who understand their anxiety patterns and provide feedback at appropriate times.
Engagement with the Body	Interpretation of Bodily States	Low FLA individuals demonstrate a greater ability to interpret and distinguish between bodily states during English presentations. Maryam and Niloufar interpreted their physical actions as manifestations of anxiety and had strategies to cope with them.
Engagement with the Body	Habitual Behaviors	Low FLA individuals may recognize and interpret their habitual behaviors, such as twirling hair or holding onto objects, as manifestations of anxiety.
Engagement with the Body	Influence of External Factors	Medium to high FLA individuals may struggle to interpret bodily reactions, possibly influenced by external expectations or assessment criteria.
Engagement with the Body	Avoidance Strategies	Some individuals, particularly high FLA learners, may employ avoidance strategies to cope with anxiety, such as avoiding looking bad rather than focusing on effective regulation. Nasrin, a high FLA learner, showed some ability to interpret her anxiety behaviors, albeit with more prompting

Overall, the findings suggest that emotional awareness, sense of control, and engagement with the body are important aspects of emotion regulation in the context of FLA during English presentations. Low FLA individuals tend to exhibit higher levels of these aspects, while medium to high FLA individuals may struggle with them, potentially impacting their performance and well-being during language learning activities.

5. Discussion

Considering that time plays a crucial role in the effectiveness of cognitive reappraisal, it is plausible that having a high level of skill in a foreign language can enhance cognitive reappraisal. Working memory, as described by Bialystok and Hakuta (1994), is a crucial cognitive function responsible for the retention and manipulation of language. Working memory encompasses the cognitive processes responsible for controlling, regulating, and actively maintaining task-relevant information to support

complex thinking (Maher & King, 2022).

Empirical research consistently demonstrates a positive correlation between working memory and FL/L2 proficiency (Miyake & Friedman, 1998; Shao et al, 2024). According to cognitive load theory (Sweller, 1988), being proficient in a language is likely to free up mental capacity for other cognitive tasks. Importantly, in the current research, cognitive reappraisal exhibited a statistically significant and favorable association with self-assessed English proficiency. Put simply, learners who have a higher level of confidence in their English-speaking abilities are more likely to participate in cognitive reappraisal.

The aforementioned findings are predominantly corroborated by the existing research on emotion in bilingualism studies, which suggests that the processing of emotions is more challenging in the second language (L2). Bilingual processing and emotion regulation both necessitate the use of executive control, thereby leading to a competitive relationship in the allocation of cognitive resources (Calkins & Marcovitch, 2010). Multiple studies have consistently shown that emotion words are perceived as more intense in a person's native language (L1) compared to their second language (L2) (Caldwell-Harris et al., 2010; Pavlenko, 2012). Neurophysiological studies have demonstrated that emotional processing is quicker in the first language (L1) compared to the second language (L2) (Dewaele & Dewaele, 2020; Dewaele & MacIntyre, 2014; MacIntyre et al., 2016). Significantly, there is preliminary data suggesting that individuals who are bilingual possess a larger working memory capacity compared to those who are monolingual. This means that bilinguals may be more proficient in regulating their emotions, as indicated by Chen and Chen (2020). It can be deduced that learners who have a better level of foreign language proficiency are more inclined to effectively process and control their emotions.

The aforementioned discoveries are supported by the current body of literature. The study conducted by MacIntyre (2017) revealed a substantial positive correlation between rumination and foreign language anxiety (FLA), as well as a negative association with readiness to speak. Rumination depletes cognitive resources that may be used for other mental processes, making it one of the primary reasons for its significance (Horwitz, 2001, MacIntyre, 2017; Teimouri et al., 2019; Zhang, 2019).

In order for cognitive reappraisal to be effective, it is necessary to regulate obsessive thoughts. It is crucial when there is evidence that rumination has a tendency to result in a downward spiral of anxiety and declining language proficiency. According to MacIntyre (2017), when a student becomes more self-aware and concentrates on their performance that has deteriorated due to anxiety, it hampers their cognitive process and makes their anxiety worse. The current study presented evidence that some objectives, influenced by cultural factors, should be given special consideration by individuals engaging in long-term cognitive reappraisal. According to O'Connor (2014), a major source of anxiety in the study was the learners' unrealistic aspiration to speak English like a native speaker, despite struggling with fundamental aspects of speaking such as pronunciation, vocabulary, and fluency.

The present study provides evidence that it is feasible to cultivate a cognitive reappraisal habit and gradually diminish rumination. In the FL/L2 field, incorporating cognitive-behavioural therapy (CBT) techniques, which focus on promoting cognitive transformation, has shown encouraging outcomes Dewaele & Dewaele, 2020; Dewaele & MacIntyre, 2014; MacIntyre et al., 2016). The results align with previous psychological studies conducted in controlled laboratory environments as well as real-life situations, which have shown that cognitive reappraisal is linked to favorable performance outcomes (Gross, 2015; Pekrun, 2017). Essentially, although cognitive reappraisal may be a valuable method for regulating emotions, it may pose challenges for individuals who are learning a foreign language. The results align with empirical research in the fields of psychology and neuroscience, which indicate that the act of expressive suppression does neither diminish or intensify the feeling of negative emotions (Jiang & Dewaele, 2019).

Emotion regulation flexibility refers to the ability to adjust and modify emotion regulation procedures based on the specific needs and objectives of different situations (Pruessner et al., 2020, p. 21). Pruessner et al. (2020) conducted a literature review that integrated behavioral psychology, neuroimaging studies, and Gross's Extended Model of Emotion Regulation (2015). They argued that in order to achieve flexibility in regulating emotions over time, cognitive control of three specific components is essential: strategy stopping or switching, strategy maintenance, and monitoring. Approach cessation refers to the act of discontinuing the utilization of a

certain approach, while strategy substitution involves employing an alternative strategy instead of the existing one (Gross, 2015; Pruessner et al., 2020). Distraction requires significantly less cognitive processing of the emotional significance of the stimuli, in comparison to cognitive reappraisal (McRae et al., 2012). This aligns with Gross's Process Model of Emotion Regulation (2015), where distraction can occur without the learner engaging in analysis or closely attending to the input. In contrast, cognitive reappraisal, which involves considering several aspects of the stimulus, may result in a more negative emotional experience (Gross, 2015).

The qualitative findings of this study suggested that distraction and expressive suppression were used in times of high anxiety, whereas cognitive reappraisal happened when anxiety was relatively manageable. This echoes laboratory findings in psychology (Shafir et al., 2015). High anxiety could lead to low cognitive capacity in the moment, thereby reducing the time available to attend to and hold the anxiety-inciting stimulus in memory long enough to reappraise it. In such cases, cognitive reappraisal, which is likely to take more time than other regulation strategies, might not be the most viable option. Experimental research has shown that when negative emotion is of low to medium intensity, cognitive reappraisal tends to be more successful (Shafir et al., 2015). In contrast, distraction is more effective and therefore preferred in the face of high-intensity negative emotion (Shafir et al., 2015).

The present study identified awareness and sense of control of emotion regulation among the low-FLA interviewees but not those with medium-and-high FLA. This finding appears in line with the construct of emotion regulation flexibility in psychological literature. Emotion regulation flexibility pertains to how “[emotion] regulatory strategies are adapted to changing situational demands and goals” (Pruessner et al., 2020, p. 21). In a review of relevant literature bridging behavioral psychology, neuroimaging studies, and Gross’s Extended Model of Emotion Regulation (2015), Pruessner et al. (2020) contended that cognitive control of the following three components is necessary in achieving emotion regulation flexibility over time: strategy stopping or switching, strategy maintenance, and monitoring. Strategy stopping refers to the termination of the use of a strategy, and strategy switching means using another strategy in lieu of the current one (Gross, 2015; Pruessner et al., 2020). Strategy maintenance is the deployment of “operations that

promote the sustained implementation of regulatory strategies over time” (Pruessner et al., 2020, p. 27).

The belief that one has the competence to regulate their own emotions, referred to broadly as “emotion regulation self-efficacy” in the present research, was not common among learners with higher trait FLA levels. There is ample evidence for the positive link between self-efficacy and educational achievements in educational research (Filippello et al., 2019). In other words, the more a learner believes in their capability to influence their learning, the better they perform in the particular area. The most likely reason why expressive suppression has a greater link to anxiety in all major foreign language situations is that it is fast-acting, easy to employ, and can become an automatic response (Gross & Cassidy, 2019; Shafir et al., 2015).

6. Conclusions

This study has made at least two significant contributions to the currently underdeveloped literature on how and how effectively foreign language learners manage their anxiety in FL speaking. First, compared to the extant literature, which mostly takes a teacher perspective on FLA reduction, the present study is probably one of the first to examine how learners bring with them their own views and strategies of anxiety regulation into foreign and second language (FL/L2) situations. It provides evidence that understanding the inner workings of learners’ emotion regulation may inform pedagogical practices. Second, it has provided a feasible explanation for the long-existing inconsistencies in the literature on the link between FLA and L2 motivation.

The second main contribution of the current study is that it has provided evidence that a theory from psychology might be useful in explaining the process of regulation of FLA and the effectiveness of different strategies. This study focused on the two strategies most well-documented in psychology, namely cognitive reappraisal and expressive suppression, based on Gross’s model. Using a mixed-methods research design with a sufficient sample size, this study has identified findings that fit well with the wealth of research on FLA only and the dearth of literature on FLA regulation. For example, high FL proficiency is linked to lower FLA and higher

motivation. The common causes of anxiety include having unrealistic goals and lacking self-confidence in achieving goals. The coherence between findings from this study and the literature indicated that Gross's model has the potential to serve as one of the theoretical frameworks to further research regulation of FLA.

The current study has provided important new findings about the two specific emotion regulation strategies. While the results corroborate the extant literature that cognitive reappraisal is linked to lower FLA therapies (Maher & King, 2022), one specific finding from the present study is original and worthy of attention. It is that language barriers could compromise cognitive reappraisal. Empirical findings in this study showed that reappraisal is a cognitively demanding process susceptible to competition for resources from other mental tasks, including translation and/or code-switching. There are both disadvantages and advantages with synchronous online interviews. Because of limitations of existing video-conferencing platforms, the researcher does not have many contextual and non-verbal cues during the interview, which could make it harder to build rapport.

Anxiety tends to compromise and bias memory and is likely to make it difficult, especially for those with relatively high trait and/or specific FLA, to give reliable and/or detailed data. If circumstances allow, objective measures can be employed in future research, such as standardized assessments. Research is highly recommended on the difference between using a FL in comparison to the first language in cognitive reappraisal. It would also be interesting to investigate if there is a threshold level of target language proficiency for cognitive reappraisal to be effective.

One can gain knowledge about their own emotions and how to control them when speaking a foreign language in various contexts, such as participating in extracurricular activities or working part-time as a language teacher. The learners have the ability to apply the knowledge they have acquired to their actual spoken use of a foreign language. It is recommended that the teacher actively seek the learners' input on how they manage their anxiety while acquiring new abilities. Facilitating learners' discussions and exchanges regarding their personal experiences in emotion management might enhance their consciousness of emotions and their potential impact on their acquisition of foreign language speaking skills.

FL learners may find cognitive reappraisal challenging due to the need for a sufficient level of proficiency in the target language. They might give up. Hence, it is recommended that language educators take into account the level of linguistic challenge faced by speakers when instructing them on the process of cognitive reappraisal. Teachers should encourage learners to engage in cognitive reappraisal in either a basic foreign language or their native language.

It is necessary to broaden the use of scaffolding in foreign language speaking instruction to include 'emotion regulation scaffolding,' which refers to providing timely assistance to learners in developing an adaptable emotional regulation profile. The goal is to enable FL learner speakers to develop self-awareness of their emotions, including anxiety, and to actively observe and track them. There is a requirement for direct focus and guidance on developing abilities to manage and control emotions. It is advisable for instructors to openly instruct pupils to contemplate their own fear when speaking the foreign language.

As an illustration, one such approach would be to encourage students to regularly write in a journal, specifically focusing on reflecting on their experience of speaking fear. Learners are encouraged to engage in regular activities that enable them to directly experience and recognize the connections between sources of anxiety, emotions of anxiety, and coping mechanisms. For instance, students can engage in systematic exercises to study and document their anxiety, including its symptoms and sources, as well as their attempts to regulate their emotions, i.e., their efforts to manage anxiety.

Including exercises that focus on identifying and explaining negative emotions, such as worry, in the language learning curriculum could be highly beneficial for learners in managing their emotions. These verbalization exercises can be utilized as warm-up activities for certain indicated tasks, such as FLA records. Providing specific instruction on how to describe anxiety and related subjects is likely to enhance learners' understanding of their own emotions. The language instructor should instruct and motivate FLA students to recognize and document their own inclination to repress nervousness while speaking, if any, and the resulting consequences. Exercises can be provided to help individuals develop their own

method for transforming and redirecting repressive energy.

Conducting research is strongly advised to explore the distinction between utilizing a foreign language and employing one's own language in cognitive reappraisal. It would be intriguing to explore whether there exists a minimum level of competency in the target language for cognitive reappraisal to provide positive results. The outcomes of these types of studies are expected to provide information for intervention studies that evaluate pedagogies on cognitive reappraisal in the language classroom.

There is evidence suggesting that the fundamental components of emotion regulation, including emotion awareness, emotion self-efficacy, and bodily involvement, have a role in enhancing emotion regulation flexibility. Further research is required to investigate the three dimensions of emotion regulation flexibility and their impact on the acquisition of a foreign language. Cognitive reappraisal and facial expression will be highly compatible with the majority of neutral and positive subjects. Understanding the techniques for managing emotions is just one aspect of the situation; effectively implementing them at the right moment necessitates developing a heightened sense of mindfulness and fostering supportive self-confidence.

It is crucial to investigate a pedagogy that is both successful and efficient in providing individual learners with the abilities and self-assurance to identify and analyze their problematic notions, as well as to seek input from others when needed. Researchers highlight the need for both effectiveness and efficiency in language learning. While the significance of emotion in this process is widely recognized, the curriculum must allocate sufficient time for meaningful and adequate attention to be given. An examination of how the instruction of emotion control strategies might be integrated into the language curriculum would be highly beneficial in fostering the development of effective emotion regulation skills in students.

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