

INVESTIGATING LANGUAGE LEARNERS' EMOTION REGULATION STRATEGIES VIA ACHIEVEMENT EMOTIONS IN LANGUAGE LEARNING CONTEXTS

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Abstract: This study investigates the role of emotion regulation strategies on achievement emotions among tertiary-level English as a Foreign Language (EFL) students. It also explores the strategies employed by students to regulate these emotions. Employing a mixed-method sequential explanatory design, data was collected from forty-nine language learners attending prep-classes at the Department of Foreign Languages in a state university in Türkiye. The participants were categorized based on their utilization of cognitive reappraisal (CR), expressive suppression (ES), or a combination of both emotion regulation strategies (ERSs). They completed the Emotion Regulation Questionnaire and the Academic Emotions Questionnaire-Foreign Language Classroom to assess differences in achievement emotions among groups. Subsequently, the participants provided narratives regarding their perceptions and regulation of emotions. Thematic analysis using MAXQDA (Version 2020) was conducted. Results revealed significant variations in emotions among groups, with the ES group reporting lower levels of positive emotions and higher levels of negative emotions compared to others. The study underscores the importance of evaluating emotion regulation strategies to foster sustainable and enjoyable language learning environments.

Keywords: appraisal, suppression, emotion regulation, achievement emotions, L2 learners

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The spotlight on achievement emotions (e.g., enjoyment, shame, anxiety) has been prevalent within general education (Harley et al., 2019; Pekrun, 2006). Similarly, in the context of second language learning, there exists a notable emphasis on specific emotions (e.g., anxiety, enjoyment) and their impact on the language learning process (Dewaele, 2015; Dörnyei & Ryan, 2015; MacIntyre & McGillivray, 2023; Xie, 2021). This process is marked by what Dörnyei and Ryan (2015) describe as an “emotionally loaded experience,” necessitating a nuanced understanding that acknowledges the unique aspects of each learner (p. 10). The intricate nature of achievement emotions, which takes on varying forms in individuals, can be attributed to the outcomes of success and failure in “achievement activities” (Pekrun et al., 2017, p. 2). Notably, emotions have a significant bearing on learners’ achievement or failure thereof in language

learning, tightly intertwined with the process of second language learning/acquisition (Dewaele, 2015).

Echoing this perspective, research has affirmed that positive emotions such as enjoyment, hope, excitement, and pride are central to effective language learning/acquisition (Dörnyei & Ryan, 2015). Dewaele and MacIntyre's (2014) delineation characterizes enjoyment as a pivotal emotion aligned with the core sentiment of joy. Their exploration into enjoyment and anxiety within language learning settings revealed these emotions to be distinct entities, dispelling the notion of a singular continuum. Importantly, their proposal to foster enjoyable learning environments through the involvement of parents, peers, and educators is instrumental in propelling individuals toward more positive emotional experiences. However, sustaining these positive emotions necessitates a strategic approach to emotion regulation by language learners, enabling the maintenance of positive emotions and the creation of their desired learning atmospheres.

Importantly, positive psychology offers a novel vantage point to explore the nuanced facets of language learning and teaching, enriching both pedagogical practices and learner development within the framework of second language acquisition (MacIntyre et al., 2016). In alignment with the broaden-and-build theory, negative emotions are shown to confine experiences and narrow focus, whereas positive emotions broaden experiences and construct emotional and cognitive reservoirs, perpetuating an upward spiral (Bielak & Mystkowska-Wiertelak, 2020).

Concurrently, the influence of achievement emotions on the language learning process is underscored. These emotions may arise due to dynamic factors such as “directing attentional processes and the use of cognitive resources, inducing and sustaining student interest in the learning material, triggering different modes of information processing, and facilitating/impeding students’ engagement and self-regulation of learning” (Shao et al., 2019, p. 2). The strategies for emotion regulation, under the umbrella of self-regulated learning strategies, lie in intensifying learner’s active participation in tasks, nurturing the initiation and endurance of positive emotions, enhancing motivation levels, and cultivating constructive cognitive assessments of learning tasks at hand (Oxford, 2016). Learners likely navigate the intricate nature of these dimensions, experiencing various ranges of achievement emotions. The regulation of those emotions manifests diversely influenced by individual disparities and contextual nuances. Therefore, the effectiveness of employing emotion regulation strategies hinges on an individual’s ability to adeptly apply them in distinct situations (Gross, 2015).

Notably, the current landscape of research on emotions in second language learning primarily examines individual emotions in isolation, often without fully appreciating their intricate interconnectedness (Helgesen, 2016; Jin & Zhang, 2018). Insight into the analysis of achievement emotions and their regulation remains relatively limited (Bielak & Mystkowska-Wiertelak, 2020; Karimi et al., 2022). Bielak and Mystkowska-Wiertelak (2020) underscore the necessity of achieving equilibrium among achievement emotions through effective emotion regulation. Exploring these emotions and their regulation in diverse language learning settings is a worthwhile endeavor in this regard.

LITERATURE REVIEW

Achievement Emotions

Achievement emotions address a variety of emotions that originate from achievement outcomes or achievement activities, which can be classified into two categories, namely, positive emotions (PEs) such as hope, pride, relief and enjoyment and negative emotions (NEs) such as hopelessness, anger, shame, anxiety, and boredom (Pekrun et al., 2005).

PEs are considered to be essential components of motivation (Goetz et al., 2008; Pekrun et al., 2002). Only when students experience positive emotions, can their self-regulation skill be effectively translated into factors promoting academic achievement (Villavicencio & Bernardo, 2012). Furthermore, they can have a beneficial effect on cognitive functions, such as strengthening cognitive flexibility, and are also conducive to promoting personal resources, including habits, health, thoughts, and interpersonal relationships (Frederickson & Branigan, 2005). For example, enjoyment, which triggers positive emotion, maintains cognitive capacity, directs learners' attention to achievement tasks, sustains motivation, and deepens learning (Meinhardt & Pekrun, 2003; Pekrun et al., 2002). However, anxiety as a negative emotion is generally observed to limit learners' cognitive capacity, distract them from achievement tasks, and ultimately result in shallow learning (Pekrun et al., 2002; Turner & Schallert, 2001). Thus, emotions can promote learning by capturing and holding attention (Clore & Huntsinger, 2007) and encoding new information (Yiend, 2010), or inhibit learning by blocking these cognitive processes in the face of threat (Lupien et al., 2009). While there is increasing research on the importance of achievement emotions in general education, there is a lack of research on how to regulate these emotions and the impact of effective regulation strategies, particularly in second language learning/acquisition.

Emotion Regulation Strategies (ERSs)

Emotion regulation strategies (ERSs) address "the processes by which individuals influence which emotions they have, when they have them, and how they experience and express these emotions, and it involves a strategy to influence the experience and expression of emotion" (Gross, 1998, p. 275). This process model of emotion regulation delineates five distinct strategies for altering the trajectory of emotions: situation selection, situation modification, attentional deployment, cognitive change, and response modulation. These strategies can be further categorized into two overarching approaches: cognitive reappraisal and expressive suppression. Specifically, the response modulation strategy falls under the broader category of 'expressive suppression,' while attentional deployment, situation selection, cognitive change, and situation modification fall under the cognitive reappraisal framework. The former occurs after the emotional experience as an attempt to conceal, impede or diminish the continuation of emotion-related behavior, while the latter takes place before the emotional experience by re-thinking the instance to either change its emotional influence or its meaning in a more positive/neutral manner (Gross & John, 2003).

To illustrate the strategies adapted from the Gross's process model of emotional regulation in hypothetical scenarios, anxious language learners employ various approaches during a

speaking activity. They modify the situation that induces anxiety (situation modification), anticipate emotional reactions by either choosing to engage in or abstaining from certain situations (situation selection), become alert and strategically direct their attention to either amplify or diminish the emotion (attentional deployment), and engage in self-talk or anticipate positive outcomes to alter their emotional perspective (cognitive change). These cognitive reappraisal strategies are associated with positive outcomes, reducing the experience of negative emotions and promoting positive behaviors (Ben-Eliyahu & Linnenbrink-Garcia, 2013; Gross & John, 2003). On the other hand, response modulation, a form of expressive suppression strategy, happens explicitly after the emotion has already occurred. During this process, learners might have various changes on behaviors, thoughts, or feelings. For instance, learners address affective artifacts such as hand-shaking and sweating during speaking by altering their behaviors. These artifacts and alike might also be mainly associated with detrimental effects, such as lessening the experience of PEs and increasing negative emotions (Ben-Eliyahu & Linnenbrink-Garcia, 2013; Gross & John, 2003).

The Emotion Regulation Questionnaire (the ERQ), a self-report instrument developed by Gross and John (2003) offers a means to assess language learners' inclinations toward cognitive reappraisal and expressive suppression strategies. Thus, it serves as a tool to investigate language learners' tendencies regarding ERSs and how these tendencies impact their achievement emotions, making it a central focus of this research.

Research on ERSs and Achievement Emotions

A meta-analysis on the efficiency of ERSs excluding situation selection and situation modification (Webb et al., 2012) revealed that attentional deployment did not influence emotional outcomes, response modulation had a small effect, and finally cognitive change had a small-to-medium effect. However, the effect of ERSs might vary in different contexts concerning the intensity of emotions and the overall emotional climate (Gross, 2014). Moreover, five studies involving young adults suggest individual differences in the use of these strategies, with each strategy relating predictably ways to psychological functioning (Gross & John, 2003). The findings from these studies demonstrate that reappraisers experienced more positive and less negative emotions, while suppressors had the opposite pattern (Study 3). Study 4 linked reappraisal to better interpersonal functioning, and suppression to worse functioning. Lastly, Study 5 associated reappraisal with higher well-being and suppression with lower well-being.

The ERSs employed by tertiary-level students have been found to be beneficial particularly in fostering better teacher-student relationships and enhancing students' learning outcomes, and creating practical teaching opportunities (Teng & Zhang, 2016). Utilizing the vignette methodology, some students employed both cognitive reappraisal and expressive suppression strategies in response to positive and negative emotions across different levels. These included various approaches such as controlling breathing, positive suppression (replacing initial emotional outcomes with positive emotions, e.g., replacing hand-shaking with smiling), self-explanatory strategies (mediation), suppression (holding back or inhibiting emotions), resting, or emotional release to modify their emotional experiences (Bielak & Mystkowska-Wiertelak, 2020). A comparison of high, mid and low achievers' achievement emotions, language learning

strategies and motivation revealed that the low achievers experienced more negative achievement emotions and rarely employed affective, meta-cognitive, and social strategies (Junming, 2017). Additionally, English language learners who chose maladaptive ERSs (such as avoiding and venting unpleasant feelings, indicating a response modulation) showed a deficiency in the protective function of motivation on burnout (Yu et al., 2022). Contrastingly, Zheng and Zhou (2022) presented findings highlighting the significance of emotion regulation and cooperative learning in foreign language enjoyment. University EFL students with higher levels of ER abilities were more likely to experience enjoyment in the learning process.

With the flourishing ground of positive psychology in mind (Frederickson & Branigan, 2005), significant outcomes of emotion regulation strategies can be traced through the research conducted by Katana et al. (2019). Their study examined subjective well-being and perceived stress. Content analysis of diaries kept by participants showed that cognitive reappraisals contributed to an increase in pleasant emotions. This evidence was positively related to higher degrees of subjective well-being and negatively associated with perceived stress. In contrast, expressive suppression helped participants abstain from expressing unpleasant emotions, but was not significantly correlated with well-being or perceived stress. Similarly, an exploration of teachers' emotions and their use of emotion regulation strategies, as perceived by both teachers (N= 4) and their students (N= 53), indicated that cognitive reappraisals were more effective in reducing unpleasant emotions and increasing pleasant emotions compared to expressive suppression (Jiang et al., 2016). Another study focusing on pre-service teachers' emotion regulation strategies, particularly cognitive reappraisal, demonstrated that these teachers tended to modify their teaching situations, seek support and guidance, and make adjustments to mitigate emotional challenges (Imamyartha et al., 2023).

Research in general psychology, including both experimental and individual-difference studies, suggests that cognitive reappraisal tends to be more effective than expressive suppression as an emotion regulation strategy. In light of these findings in general psychology, the current study aims to examine the dynamic interaction of achievement emotions and ERs in the context of L2 learning/teaching. The goal is to address the existing gaps in the literature and contribute to a deeper understanding of the functions of ERSs on L2 learners' achievement emotions. Specifically, the following research questions were addressed.

1. What are the primary emotion regulation strategies employed by Turkish language learners of English at the tertiary level in managing their achievement emotions?
2. Do variations in the employment of emotion regulation strategies among language learners correlate with significant differences in their experienced achievement emotions?
3. How do they implement emotion regulation strategies to manage achievement emotions during language learning activities?

METHOD

The study adopted an explanatory sequential mixed methods design, wherein the researchers conducted quantitative research to establish initial findings, which were then expanded upon and explained in greater detail using qualitative research methods (Creswell,

2013). The researchers conducted thematic analysis (Nowell et al., 2017) on the prompted narrative writings for each achievement emotion.

Context and Participants

The study involved 63 first-year Turkish students, consisting of 13 males and 50 females, with an average age of 19 (SD = 2.29). These participants were enrolled in an English preparatory school at a state university situated in the southeast part of Turkey. After its completion, they were supposed to initiate the Department of Translation and Interpreting (English). During the study, the students were at the B1 language proficiency level and were receiving 20 hours of English language instruction each week, encompassing the development of four language skills. In addition to their regular coursework, students were assigned supplementary tasks, including the creation of short films, participation in debates, and essay writing, all aimed at enhancing their English proficiency. Informal interviews with four different teachers, each teaching separate classes, revealed that the students encountered a variety of language learning conditions, leading to the intense experience and expression of both positive and negative emotions.

Instruments and Procedure

Emotion Regulation Questionnaire (ERQ)

The Turkish version of the ERQ (Gross & John, 2003) was used in the present study to measure the participants' usage of two emotion regulation strategies, namely cognitive reappraisal (CR) and expressive suppression (ES), on a 7-point Likert-type response scale. Two separate scale scores were derived for CR and ES, with higher scores indicating a greater use of the corresponding ER strategy. The ERQ has been reported to have high internal consistency (.79 for CR, .73 for ES) and test-retest reliability ($r=.69$) (Gross & John, 2003; John & Gross, 2004). An item for the CR strategy is "When I want to feel more positive emotion (such as joy or amusement), I change what I am thinking about," while an item for the ES strategy is "I keep my emotions to myself." Totan (2015) validated the Turkish version of the ERQ, and found that the internal consistency coefficients were $r=.78$ for CR and $.71$ for ES, with the test-retest reliability results of the sub-scales being more than .65.

Academic Emotions Questionnaire-Foreign Language Classroom (AEQ-FLC)

The revised version of the Academic Emotions Questionnaire (Davari et al., 2020) explored the academic achievement emotions originating from failure and success during the language learning process. The original scale was developed by Pekrun et al. (2005) and then applied to the L2 context by Davari et al. (2020). The questionnaire includes eight sub-scales, with statements related to each emotion: enjoyment ($r=.85$), hope ($r=.75$), pride ($r=.81$), anger ($r=.89$), anxiety ($r=.80$), shame ($r=.82$), hopelessness ($r=.80$) and boredom ($r=.82$). Also, Cronbach's alpha of the questionnaire was .83.

The Prompted Narrative Writing

The qualitative data came from the prompted narrative writings of students. The narrative writing instrument was applied as this method reveals “... the distinctions between lives and experiences and tries to understand why some experiences are privileged over others” (Given, 2008, pp. 489-490). To elicit recollection of emotional instances related to academic achievement, students were given a set of two core questions. It was designed to probe each academic achievement emotion (N= 8) possibly experienced during classroom activities. The questions are (a) Recall a specific instance in a general classroom interaction when you felt anger. Briefly describe the situation. How did you attempt to influence or manage this academic achievement emotion during that moment? (b) During that classroom interaction where you experienced anger, did you actively try to change how you were feeling? If so, what strategies or approaches did you use to manage your anger?

Data Analysis Procedure

Quantitative Analysis

In the first phase of the study, the data collected through the seven-point ERQ were analyzed by SPSS-22. The scores were calculated for the CR (1, 3, 5, 7, 8, 10) and the ES items (2, 4, 6, 9) (see the items, Table 1).

Table 1. Emotion Regulation Items

Cognitive Reappraisal (CR)	Expressive Suppression (ES)
1. When I want to feel more positive emotion (such as joy or amusement), I change what I'm thinking about.	2. I keep my emotions to myself.
3. When I want to feel less negative emotion (such as sadness or anger), I change what I'm thinking about.	4. When I am feeling positive emotions, I am careful not to express them.
5. When I'm faced with a stressful situation, I make myself think about it in a way that helps me stay calm.	6. I control my emotions by not expressing them.
7. When I want to feel more positive emotion, I change the way I'm thinking about the situation.	9. When I am feeling negative emotions, I make sure not to express them.
8. I control my emotions by changing the way I think about the situation I'm in.	
10. When I want to feel less negative emotion, I change the way I'm thinking about the situation	

The highest scores were found to be 42 and 28, respectively. Scores falling between 30 and 42 were categorized as 'high' for the CR group, while for the ES group, it was between 20 and

28 (Gross & John, 2003). Other than these two groups, a third group emerged comprising students with high scores in both CR and ES. Participants scoring below these thresholds (N = 14) were not included for the next phase to focus on the meaningful comparisons of distinct groups (high scorers for cognitive reappraisal, expressive suppression, and both emotion regulation strategies). Therefore, 49 out of 63 students (50 females, 13 males) completed the AEQ-FLC scale, and a one-way ANOVA was used to determine whether there were significant differences among the three ERS groups regarding their academic emotions.

Qualitative Analysis

The narrative texts of students from three groups were analyzed individually to determine how and when LLs use ERSs to regulate academic achievement emotions. MAXQDA (2020) was used to conduct the analysis, and a thematic analysis approach was followed by examining ERS categories and focusing on frequent themes and patterns. The study grounded its investigation in the existing literature on ERSs in language learning (Bielak & Mystkowska-Wiertelak, 2020; Greenier et al., 2021; Oxford, 2016) and general education (Harley et al., 2019; Webster & Hadwin, 2015).

Unlike previous studies, this research did not measure the degree to which LLs experienced academic achievement emotions. Instead, students' written narratives were coded to understand their use of ERSs to regulate achievement emotions (AEs). The narratives were coded into five basic categories outlined by Gross (1998, - 2015) and Gross & John (2003): situation selection, situation modification, attention deployment, cognitive change, and response modulation.

To increase reliability, the researchers engaged in recurring discussions regarding grouping the strategies that the students employed to regulate their academic achievement emotions. Credibility was ensured through "prolonged engagement" with the data and "peer debriefing" served as an external check on the research process (Lincoln & Guba, 1985). To promote transferability, the researchers provided detailed descriptions of ERSs in AEs in language learning so that other researchers could apply the results to their own sites (Lincoln & Guba, 1985). Dependability was achieved through a well-designed data collection, analysis, and interpretation methodology that followed a logical and traceable approach. Finally, reflexivity was incorporated throughout the research process through internal and external dialogues and the use of a reflexive journal (Tobin & Begley, 2004).

FINDINGS AND DISCUSSION

Quantitative Findings

RQ1. What are the predominant emotion regulation strategies utilized by Turkish language learners of English on their achievement emotions at the tertiary level?

Descriptive statistics indicate that 29 students used CRSs at a high level (46 %), while 9 participants used ES strategies (14.3 %) and 11 used both CR and ES strategies (17.5 %) at a high level. Fourteen out of 63 participants fell within the continuum of 1 and 5 (22.2 %).

RQ.2 Do variations in the employment of emotion regulation strategies among language learners correlate with significant differences in their experienced achievement emotions?

Primary assumptions were checked to perform a one-way ANOVA. Equal variances were assumed based on the results of Levene tests for each emotion. The data received from the students regarding their levels of emotions (enjoyment, pride, hope, shame, boredom, and hopelessness) were normally distributed, except for anxiety, which showed a slight deviation. A one-way between-groups ANOVA was run to determine if a significant difference existed between learners' emotions and their ERSs. The initial tests revealed a statistically significant difference among the groups based on their levels of PEs and NEs (see Table 2).

Table 2. Achievement Emotions among CR, ES, and the Group-with-both ERs

Achievement Emotions		SS	df	MS	F	p.
Hope	Between Groups	3.548	2	1.774	5.19	.009
	Within Groups	15.702	46	.341		
	Total	19.250	48			
Pride	Between Groups	4.465	2	2.232	6.46	.003
	Within Groups	15.887	46	.345		
	Total	20.352	48			
Anger	Between Groups	6.830	2	3.415	345	.040
	Within Groups	45.410	46	.987		
	Total	52.240	48			

To determine which groups show significant differences in PEs and NEs, a multiple comparisons tests via Games-Howell were applied, taking the roughly unequal group sizes into account (Field, 2017, pp. 459-472). A post hoc Games-Howell test revealed that the 'hope' mean score for the 'High in Both' group (M = 4.59, SD = .477) was significantly different from the ES group (M = 3.75, SD = .684). However, it did not show a significant difference between the ES group (M = 3.75, SD = .684) and the CR group (M = 4.27, SD = .587). Regarding the 'pride' mean, a significant difference was observed between the ES group (M = 3.72, SD = .642) and the High in Both group (M = 4.59, SD = .451) and CR (M = 4.44, SD = .613). For the emotion 'anger', the mean score for the ES group (M = 2.88, SD = .952) was significantly different from the CR group (M = 1.93, SD = .949). The widely studied foreign language academic emotion 'anxiety' was showed significant differences between the ES group (M = 3.22, SD = .457) and

both CR ($M = 2.57$, $SD = .941$) and High in Both ($M = 2.37$, $SD = .899$). Additionally, ‘boredom’ exhibited a significant difference between the ES group ($M = 2.04$, $SD = .536$) and High in both ($M = 1.34$, $SD = .537$). However, among the PEs and the NEs, ‘hopelessness,’ ‘shame’ and ‘enjoyment’ mean scores did not show any significant differences across the three groups (see Table 3).

Table 3. The Multiple Comparisons of Achievement Emotions across Three Groups

Dependent variable	(I) Cohorts	(J) Cohorts	Mean difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Anxiety	ES	CR	.65*	.23	.024	.0772	1,2243
		High in Both	.84*	.31	.039	.0394	1,6518
Hope	ES	CR	-.52	.25	.136	-1.2015	.1498
		High in Both	-.84*	.26	.020	-1.5480	-.1338
Pride	ES	CR	-.72*	.24	.026	-1.3677	-.0845
		High in Both	-.86*	.25	.011	-1.5332	-.2041
Anger	ES	CR1	.95*	.36	.050	.0016	1.9142
		High in Both	.97	.46	.119	-.2126	2.1722
Boredom	ES	CR	.32	.22	.360	-.2598	.9005
		High in Both	.69*	.24	.026	.0808	1.3172

*. The mean difference is significant at the 0.05 level.

Based on the quantitative findings, it can be stated that language learners with different ERSs (CR and ES) tend to experience a range of AEs differently. The examination on how and when they regulate these emotions was explored in the second qualitative research phase.

Qualitative Findings

RQ3. How do the participants implement emotion regulation strategies for achievement emotions during the process of language learning activities?

The students' narratives were analyzed to determine how they regulate their emotions in the language learning process. CRSs refer to situation selection, situation modification, attention deployment, cognitive change, while ES refers to response modulation.

Themes and sub-themes related to the ERSs used by the three groups to regulate their PEs and NEs in the classroom were identified, along with the situations where these emotions might arise. The learners were identified as CR+ for the CR group, ES+ for the ES group, and CRES+ for users of both strategies.

Cognitive Change Strategy

Across three groups, the sub-themes under 'cognitive change' referred to 'self-belief,' 'positive thoughts,' 'self-talk,' and 'projection of pleasant outcomes'. LLs in the CR group tended to use all those approaches to regulate their emotions. In contrast, the ones in the ES group and the group with both strategies were limited to merely 'projection of pleasant outcomes' and 'self-belief.'

CR1. *'In the first place, feeling unhappy was disadvantageous, but believing in what I can do is an immense advantage.'*

ES4. *'I had to stop hiding, and I should have been more self-confident. Even though I spoke wrong, I should not have been shy.'*

CRES9. *'... because my friends could do it, and I thought and asked myself 'Why can't I do that?'; I did it and developed myself a lot more.'*

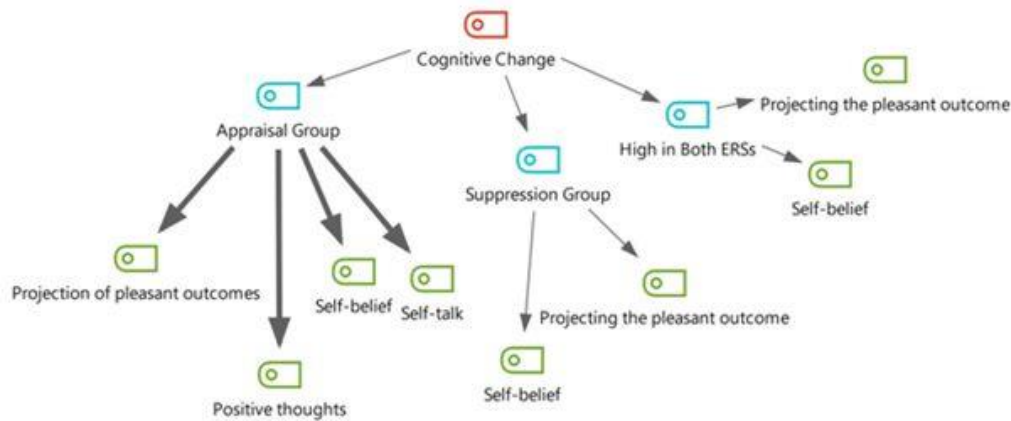


Figure 1. Cognitive Change across Three Groups' Achievement Emotions
 (Note: Thicker lines show more repeated tendencies)

Situation Selection

The learners select the situations in the class to have the emotions they desire or the emotions they do not to want to have. The learners might change the situation, avoid it, or try to find it. In the study, this strategy referred to choosing some potential learning situations. The only subtheme emerging was ‘participation in activities’ across three groups. However, the ones in the CR group tended to be more active in participating in learning activities than ES and the users of both strategies.

CR11. *‘When I sufficiently participate in activities, I feel happier, and I enjoy it more.’*

Attention Deployment

This approach involves language learners proactively identifying and addressing various factors to manage their emotions. The cognitive reappraisal (CR) group learners utilized specific factors to regulate their PEs and NEs, including paying attention to the teacher, teacher feedback, the task at hand, progress made, and the value of the learning activity. Interestingly, although the group that employed both strategies did not utilize these factors, some learners in the ES group focused only on “progress” and “the value of the learning activity.”

CR7. *‘It can become better over time. I try not to feel bored. I enjoy and try to concentrate. If I do not listen to the lesson and fail it, I blame myself for not giving enough attention.’*

ES5. *‘It was exciting to find out the missing words in listening activities, and I paid full attention to select those words, which cheered me at the moment.’*

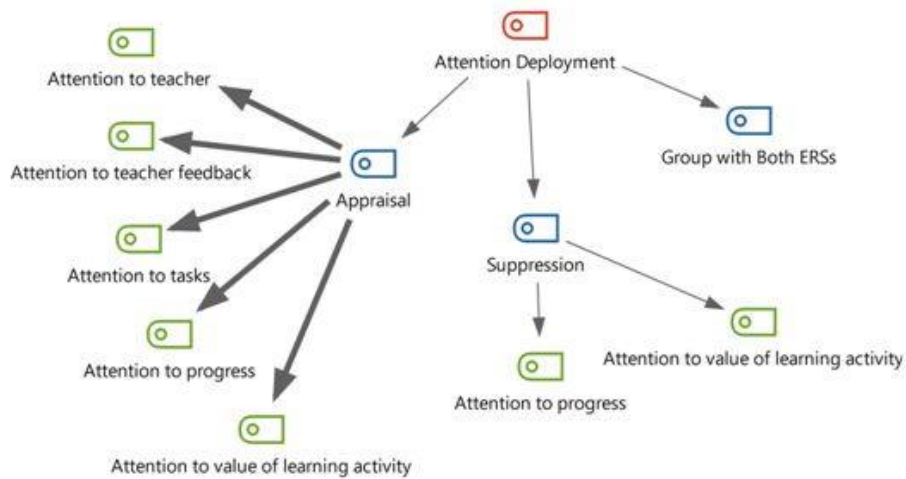


Figure 2. Attention Deployment across Three Groups’ Achievement Emotions
(Note: Thicker lines show more repeated tendencies)

Situation Modification Strategy

Regulating learners' PEs and NEs was influenced by positive outcomes in all three groups. Mostly, learners in the group of CRES employed a strategy of modifying their learning environment such as L2 practice in the classroom, taking initiative in learning, preparing in advance for lessons, exams, and activities, and being more active to regulate their emotions.

ES3. *'Seeing my success made me happier. By thinking that 'if I pay more attention to other language skills, I will be successful as well at these skills,' I wholeheartedly believed in myself.*

CRES2. *'When I feel proud, I would like to work more and more. Simply, there is no desire to study when you see that you are so much down.'*

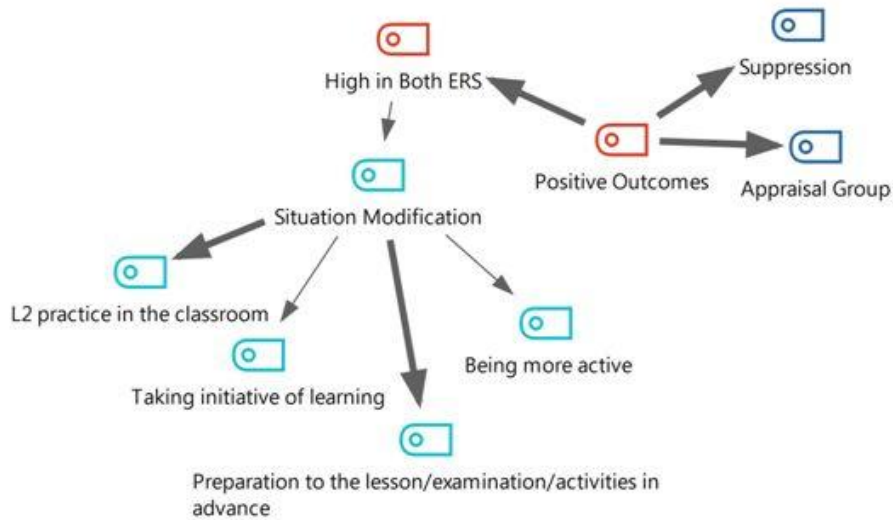


Figure 3 Situation Modification across Three Groups' Achievement Emotions
(Note: Thicker lines show more repeated tendencies)

Response Modulation

This approach pertains to the actions taken by language learners to increase or decrease the intensity of their emotions at the moment of experiencing them. Learners in the CR group exhibited “personality” traits such as introversion and modesty. Similarly, the ES group also displayed “personality” traits. The research indeed shows that introverted students might also be successful (Ehrman, 2008); however, it depends on what kind of activities they do in the class. For instance, the introspection required and individual focused activities might be suitable for introverted language learners, while a natural inclination towards interaction and social engagement might be better for extraverted students (MacIntyre & Charos, 1996). Conversely, learners in the group of CRES had a lack of confidence in regulating their emotions. The research

has already provided evidence to support the claim that low self-confidence seems to be related to foreign language learning anxiety (Horwitz et al. 1986; MacIntyre & Gardner, 1989).

CR6. 'The reason is that I am a shy person. Moreover, when I face such an embarrassing situation, I never want to show it or do not want anyone to see me under this condition.'

ES2. 'In fear that I would make mistakes in grammar or speak with bad pronunciation even when I wanted to answer the question, I became shy and could not even answer what I knew.'

CRES2: '... I enjoyed it a lot, but I could not show it so much because of my shyness. It might be because of being unsure of how my teacher would respond to this emotion.'

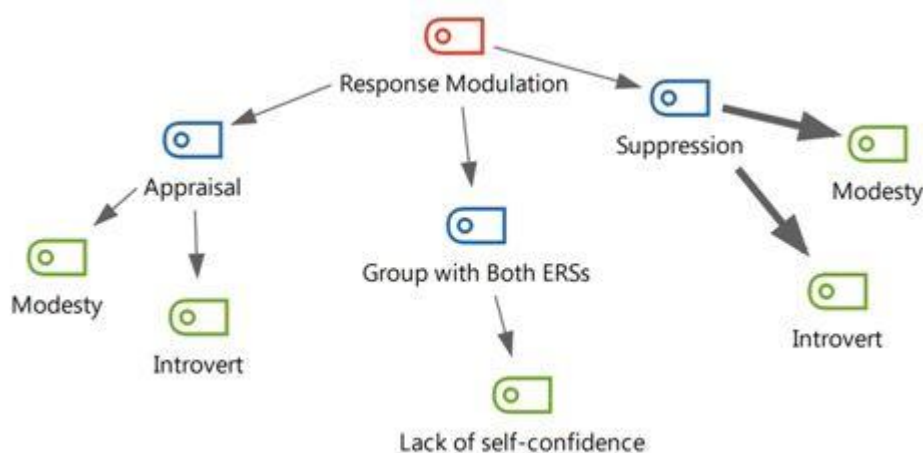


Figure 4. Response Modulation across Three Groups' Achievement Emotions
(Note: Thicker lines show more repeated tendencies)

Discussion

RQ1 aimed to identify the primary ERSs employed by Turkish language learners of English at the preparatory level and to determine whether any distinctions existed in the utilization of these strategies among the learners through the ERQ.

The questionnaire used in general psychology has revealed that there are users of cognitive reappraisal and expressive suppression (Cutuli, 2014). To our knowledge, this study is one of the first to examine the highest scores of both emotion regulation strategies through the ERQ in a language learning context (cognitive reappraisal, N= 29, 46 %; expressive suppression, N= 9, 13%). However, the questionnaire has revealed that there is also a group who might adopt both ERSs (N= 11, 17.5%) at higher scores.

Fourteen language learners (22.2%) fall below the midpoint of the continuum, indicating a low utilization of identified emotion regulation strategies among learners. This finding may relate to consciousness regarding emotion regulation strategies (Bielak & Mystkowska-Wiertelak, 2020; Gyurak et al., 2011). Explicitness in emotion regulation strategies refers to

consciousness or awareness, as described by Gyurak et al. (2011). They propose that “(i) individuals are aware of the cues that elicited emotional responses...; (ii) aware of the emotions itself...; and (iii) are aware of the effect of the regulation on their behavior (i.e., if prompted, can report back having engaged in emotion regulation)” (p. 403).

Based on this definition of explicitness in ERSs, it is possible to state that some language learners might be unaware of the emotions and the way they regulate them and its impact on their learning behavior. Also, in Bielak and Mystkowska-Wiertelak's study (2020), through the scenarios, the students reported ERSs explicitly rather than unconscious ER attempts. As highlighted in Bielak and Mystkowska-Wiertelak's (2020) study, this research also underscores the issue of consciousness concerning ERSs to be further investigated, particularly regarding whether language learners are aware of their emotions and how they regulate them. These findings provide insight into the diversity of emotion regulation approaches adopted by Turkish language learners of English at the preparatory level and suggest that distinctions exist in the employment of these strategies within the studied population.

RQ2 aimed to explore whether variations in the utilization of emotion regulation strategies among language learners correlated with significant differences in their experienced emotions. Bielak and Mystkowska-Wiertelak's (2020) study marked the inaugural investigation into ERSs for both down-regulating negative emotions (NEs) and up-regulating positive emotions (PEs). In their study, no systematic difference was found between groups in terms of down-regulating negative emotions (NEs) and up-regulating positive emotions (PEs). In the present study, we examined the three groups with the highest scores to explore potential distinctions in their achievement emotions and their utilization of ERSs. The analysis revealed that individuals 'High in Both ERSs' had significantly higher hope scores compared to those in the ES group, with no difference between ES and CR. The ones in the ES group had lower pride scores compared to both High in Both and CR groups. Anger was higher among ES individuals compared to CR. ES participants also experienced higher anxiety compared to CR and High in Both. Boredom was higher in ES compared to High in Both. However, no significant differences were found for hopelessness, shame, and enjoyment among the groups. In summary, the quantitative findings suggest that language learners who utilize various emotion regulation strategies tend to experience various achievement emotions differently. The findings provides insights into how the selection of distinct emotion regulation strategies might shape the learners' academic achievement emotions.

The findings showed that CRSs were important, as they were associated with higher levels of positive achievement emotions and lower levels of negative achievement emotions among CR strategy users, as compared to ESS users and users with both ERSs. This is in alignment with Gross and John's (2003) theories as well as with the other studies' promising results (see, Ben-Eliyahu & Linnenbrink-Garcia, 2013; Jiang et al., 2016; Katana et al., 2019). The multi-functional benefits of ERSs in the language learning context (MacIntyre et al., 2019; Yu et al., 2022) seem to be possible and reasonable. Moreover, previous studies on the instruction of ERSs have demonstrated their impact on learners' well-being, increasing learning opportunities related to their achievements, better teacher-student relationships, and developing learners' emotional balance (Karimi et al., 2022; Oxford, 2016; Webb et al., 2012). In all, speaking of the ERSs' significance, the studies highlight the necessity of considering low achievers' achievement

emotions in their struggle with affective, metacognitive, and social strategies (Jun-ming, 2017), and maximizing enjoyment in the learning process (Zheng & Zhou, 2022). Therefore, regulating NEs in instructional settings can prevent their adverse impact on learning performance, while fostering PEs can create a pleasant learning environment and facilitate learning activities (Greenier et al., 2021; Teng & Zhang, 2016). Additionally, Dewaele and MacIntyre (2014) propose creating contexts that enhance enjoyment in language learning, aligning with the notion of fostering positive emotions for improved learning outcomes.

Research on brain activation patterns associated with the use of cognitive reappraisal and expressive suppression indicates that the former is linked to healthier patterns of affect, social functioning, and well-being compared to the latter (Cutuli, 2014). Therefore, it is possible to state that the present study's findings related to up-regulation and down-regulation of achievement emotions in language learning context is necessary as it is multi-faceted with various dynamic factors involved in language learning-teaching context.

Through narrative writing accounts from the individuals in the CR, ES, and the group with both ERSs, the study provides qualitative evidence linking the quantitative findings with how learners experience and regulate those emotions.

RQ3 aimed to examine how language learners perceive and implement strategies for regulating academic achievement emotions during language learning/acquisition activities.

Cognitive Change

The participants' responses were organized into several themes and sub-themes that provide insights into their cognitive approaches to emotion regulation. The prominent theme of 'Cognitive Change' strategies encompassed several sub-themes: 'self-belief,' 'positive thoughts,' 'self-talk,' and 'projection of pleasant outcomes.' These sub-themes reflect the participants' strategies for altering their emotional experiences by influencing their cognitive processes (see Figure 1).

The "Cognitive Change" strategies has also been found to be the most commonly used strategy among language learners who had control over their achievement situations. This aligns with the findings of a recent study (see Bielak & Mystkowska-Wiertelak, 2020). Self-motivation and self-encouragement, as forms of cognitive change, have been used as strategies to alleviate anxiety and are favored by successful learners (Bown, 2006). Learners who employed cognitive reappraisal strategies, such as self-belief, self-talk, and positive thoughts, might lead to more favorable implicit beliefs in their language learning progress.

According to Sheppes et al. (2011), cognitive reappraisal strategies may not always be effective in managing highly emotional situations such as high-stakes achievement situations. The degrees of emotion generated by a quiz and a final exam, for example, are not the same, with the latter generating more intense emotions (Harley et al., 2019). On the other hand, cognitive change strategies, as indicated in the students' comments in this study, are found to be more effective in regulating retrospective AEs by encouraging them to reflect on both emotions and outcomes (Harley et al., 2019). This emphasizes the significance of control and value as crucial appraisals for cognitive change strategies in outcome-based emotions (Harley et al., 2019).

Situation Modification

The strategy of situation modification was more prevalent among learners who utilized both emotion regulation strategies, as evidenced by themes such as 'L2 practice in the classroom,' 'taking initiative in learning,' 'preparation for lessons, exams, or activities in advance,' and 'being more active.' These themes align with the idea of careful observation of progress and the flow of lessons, allowing learners to reflect on their expectations, comprehend tasks better, and resolve conflicts they may encounter (Harley et al., 2019). Consequently, learners who observe positive progress are more likely to modify the situation by valuing and appreciating tasks more (Pekrun & Perry, 2014). These themes directly highlight the importance of regulating emotions in language learning, as learners anticipate the consequences of their actions and adjust their approach accordingly.

However, students situated between expressive suppression and cognitive reappraisal strategies may find it challenging to regulate their emotions effectively, leading them to modify their learning environment by putting more effort into cognitive tasks. As an evidence to this, metacognitive knowledge was found to be a significant factor in situation modification (Webster & Hadwin, 2015). Their research revealed that experienced language learners' approaches to situation modification were directly related to the emotion regulation strategies of task management and task enactment.

The study found that language learners used more situation modifications in their studying sessions and classroom situations, which are less evaluative compared to test-taking situations. Additionally, the findings suggest that learners can enhance their competence to positively influence their emotions, increasing their chances of success and reducing the likelihood of failure (see the findings, situation modification). This is consistent with the idea that competency-based strategies, such as deep learning strategies, are effective in increasing achievement in studying (Pekrun, 2018; Winne, 2011).

Response Modulation

Individuals can regulate their emotions through response modulation (the RM), which involves increasing or decreasing emotions. For example, someone feeling anxious during a classroom presentation could use deep breathing techniques to modify their emotional response, which can be traced from the approaches used by the ES group, such as breathing, resting, emotional release, eating or drinking, and listening to music (Bielak & Mystkowska-Wiertelak, 2020). In the current study, the RM is primarily used by individuals in the expressive suppression (ES) group and is less popular among those who use cognitive reappraisal (CR) strategies (Webster & Hadwin, 2015). Additionally, personality factors such as introversion and modesty may make it difficult for individuals in the ES group to regulate their emotions. The study found that individuals in the ES group experience higher levels of anxiety, anger, and boredom (see Table 3). In line with this fact, response modulation is least effective at regulating these emotions (Harley et al., 2019). Therefore, frequent use of ESs may lead to higher levels of unfavorable emotions (etc., anxiety, anger, and boredom).

Situation Selection

The CR group showed more involvement in classroom activities, which helped them regulate their academic emotions better, in comparison to the ES and the group with both ERSs. The strategy of situation selection, where individuals take action to choose desirable situations, can lead to positive achievement outcomes and reduce unacceptable emotions (Harley et al., 2019).

According to Harley et al. (2019), situation selection strategies can be employed effectively to regulate achievement situations with a prospective time frame. Additionally, situation selection can be used to regulate enjoyment. In this study, the CR group reported the highest level of participation in classroom activities and had a greater tendency to use situation selection.

For instance, the quote “When I sufficiently participate in activities, I feel happier, and I enjoy it more” may imply a future perspective. It might also be associated with the notion proposed by Dewaele and MacIntyre (2014) about creating enjoyable contexts by parents, peers, and teachers. In this sense, situation selection can be related to students’ being involved in the created enjoyable contexts to sustain their pleasant emotions. Additionally, the study showed that the desired emotions of achievement resulting from appropriate situation selection, such as participating in activities, are the source of such feelings. This indicates that positive outcomes from past experiences can lead to positive emotions in the future. In addition, selecting a situation that results in success, such as answering questions and speaking in English, can lead to a similar situation in the future.

Attentional Deployment

Attentional deployment is the process of flexibly directing one’s attention to manage emotional responses in various achievement situations. The effectiveness of this strategy depends on the characteristics of the situation, such as its level of high evaluative versus low evaluative and individual versus social. For instance, attention deployment is found to be less forced in studying situations and more in test-taking situations (Harley et al., 2019).

The study found that students in the CR group regulated their academic achievement emotions by directing their attention to their progress, tasks, teacher, feedback, and the value of activities. Directing attention to a specific target can create a different emotion and is an effective approach to regulating enjoyment (Harley et al., 2019). To sum up, attention deployment seems to be labelled as an important strategy for regulating emotions in the classroom, and this finding supports the use of attentional deployment as a positive psychology intervention to enhance well-being in education contexts.

Hopelessness, Shame, and Enjoyment

The emotions of hopelessness, shame, and enjoyment were similar across the three groups, and there were no significant differences between them. The study suggests that learners in the preparatory school, awaiting the start of the Translation and Interpreting department, may have already developed strategies to regulate feelings of hopelessness, and their keen interest in learning the English language contributes to their overall enjoyment. Likewise, enjoyment was the most frequently reported emotion among language learners (Bielak & Mystkowska-

Wiertelak, 2020), emphasizing its role in language acquisition (see, Dewaele & MacIntyre, 2014). Besides, even though the quantitative results indicated that there are no significant differences among the groups experiencing 'shame', the qualitative data revealed that individuals in expressive suppression group actually experienced shame more frequently than those in the other groups (see Figure 4).

The present study found that the use of cognitive reappraisal and expressive suppression strategies can moderate the level of negative emotions and decrease positive experiences, which is in alignment with the previous research (Gross & John 2003; Szasz et al., 2011). Only five of the eight achievement emotions examined showed significant differences among the three groups, indicating differences in the use of emotion regulation strategies between CR and ES users.

CONCLUSIONS

Numerous factors influence language learners' willingness to communicate, as discussed in Dörnyei and Ryan's (2015) research. These factors can be organized within a multi-layered 'pyramid' model, which encompasses linguistic and psychological elements. These elements include linguistic self-confidence, the desire to communicate with specific individuals, interpersonal motivation, intergroup attitudes, motivation and climate, social context, communicative competence, and personality traits, as outlined by MacIntyre et al. (1998). In light of the findings from this study, it becomes evident that within this comprehensive framework, ERSs may play a significant role in various aspects of willingness to communicate, as they offer learners the opportunity to become more engaged in classroom activities, as observed in the learners' narrative reports.

Furthermore, this study reveals that some language learners use ERSs to manage their academic achievement emotions, with learners categorized into three groups based on their ERSs: those who use CR strategies, those who use ES strategies, and those who use both. While the quantitative data support Gross and John's (2003) general hypotheses, the qualitative data suggest that some learners may use ES strategies in the CR group and vice versa. These findings emphasize the significance of emotion regulation strategies to create more desirable contexts for the sustainability of pleasant academic achievement emotions in language learning/acquisition process. It is also noted that teachers need to recognize the significance of emotions in language learning and to provide emotion regulation training activities to assist their students in regulating their emotions appropriately. By doing so, teachers can actively support their students' emotional development, which is critical to their overall academic success, personal and social development.

The use of ERSs might provide significant pedagogical implications for both teachers and students, as they can facilitate positive academic achievement emotions and improve learning outcomes. With this in mind, teachers can create a supportive learning environment by assisting language learners in recognizing their practical situations and managing their emotions through ERSs. Based on the results of this study and others mentioned throughout the research, it seems to be crucial to acknowledge that students' academic achievement levels may vary, resulting in differing levels of PEs and NEs. As a result, ERSs should be incorporated into the language

learning curriculum to promote personal development and positive achievement emotions (see Dewaele & MacIntyre, 2014). Moreover, these strategies can be included as part of students' learning autonomy toolkit (Webster & Hadwin, 2015).

The process of assessing emotions in language learning is challenging due to self-reporting methods (Webster & Hadwin, 2015). Researchers recommend using more detailed and accurate methods, such as intensity and instantaneity of emotions by asking learners to report the strategies they use. Language learners can write diaries of their emotions and ERSs, which can provide a more insightful way to capture the phenomena (Op't Eynde & Turner, 2006; Schmitz & Wiese, 2006) than prompted narrative writing questions exploring their retrospective achievement emotions. On the other hand, this method provides the researchers with a more structured approach to analyze how language learners experience and express achievement emotions in a single session.

Our study faced challenges related to the small sample size of our participants, who were divided into three groups based on their highest scores of CR, ES and the ones with the three groups. To overcome the issue of small group sizes, we used the post-hoc Games-Howell test for multiple group comparisons, which takes into account unequal group sizes (Field, 2017, pp. 459-472) when comparing the achievement emotions among the three groups. Despite these limitations, we were able to find significant differences in LLs' achievement emotions based on their use of emotion regulation strategies (ERSs), which supports the general theories proposed by Gross and John (2003) regarding positive and negative emotion levels.

The study suggests that integrating ERSs into language learning-teaching curricula can support students' personal development and promote positive academic achievement. Larger sample sizes and diverse contexts are needed to provide more evidence regarding the impact of ERSs on language learners' achievement emotions, and the individual differences related to emotion regulation strategies. From this angle, future studies might also explore how cognitive reappraisal strategies are related to language learners' well-being and interpersonal functioning (Gross & John, 2003). Furthermore, the emotion regulation interventions can be applied to the ones with higher scores of expressive suppression to see the impact of effective cognitive reappraisal strategies on language learners' positive academic achievement emotions.

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APPENDICES

A. The Prompted Narrative Writing

In this questionnaire, you will answer the questions about eight emotions (Anger, boredom, anxiety, hopelessness, shame, pride, enjoyment, and hope). Please recall one situation where you felt this emotion in the general classroom interactions.

1. Recall a specific instance in a general classroom interaction when you felt anger. Briefly describe the situation. How did you attempt to influence or manage this academic achievement emotion during that moment?
2. During that classroom interaction where you experienced anger, did you actively try to change how you were feeling? If so, what strategies or approaches did you use to manage your anger?

B. Foreign Language Academic Achievement Emotions Scale

Enjoyment

1. I am motivated to go to the English class because it is exciting.
2. It's so exciting that I could sit in English class for hours listening to the teacher.
3. I enjoy being in the English class.
4. I get excited about going to the English class.
5. After the English class, I start looking forward to the next class.
6. I am looking forward to learning a lot in the English class.
7. I am glad that it paid off to go to the English class.

Hope

8. I am confident because I can understand the English materials.
9. I am hopeful that I will make good contributions in the English class.
10. My hopes for success motivate me to invest a lot of effort in the English class.
11. I am confident when I go to the English class.

Pride

12. Because I am proud of my accomplishments in this English course, I am motivated to continue.
13. I am proud of the contributions I have made in the English class.
14. When I do well in the English class, my heart pounds with pride.
15. I am proud of my ability to deal with the English materials.

Anger

16. I feel frustrated in the English class.
17. Thinking about the useless things I have to learn in the English class makes me irritated.
18. Thinking about the time I waste in the English class makes me angry.
19. I wish I could tell the English teacher to shut up.

Anxiety

20. Because I may say something wrong, I prefer not to say anything in the English class.
21. I worry about the high demands of the English class.
22. Even before the class, I worry whether I will be able to understand the English materials.
23. Thinking about the English class makes me feel uneasy.
24. I worry that my classmates will understand English more than I do.
25. When I don't understand something important in the English class, my heart pounds fast.
26. Because I get nervous in the English class, I prefer to skip the class.

Shame

27. I feel ashamed in the English class.
28. I am ashamed because my classmates understand English lectures better than I do.
29. When I say something in the English class, my face turns red.
30. After I say something in the English class, I wish I could crawl into a hole and hide.
31. When I can't express myself in English well, I get embarrassed.

Hopelessness

32. Thinking about the English class makes me feel hopeless.
33. Because I don't understand the English materials, I look disconnected and desperate.
34. It's useless to prepare for the class since I don't understand the English materials anyway.
35. Because I've given up, I don't have energy to go to the English class.

Boredom

36. During the English class, I feel like I'm sinking into my chair.
37. I find the English class fairly dull.
38. I think about what else I can do rather than sitting in this boring English class.
39. I can't wait for the English class to end because the class bores me.
40. I get bored in the English class.