

## The Combined Impact of Autonomous and Self-Reflective Writing Activities on EFL Learners' Anxiety Level and Anxiety Reducing Strategies

**Behdokht Mall-Amiri**

Department of English, Central Tehran Branch, Islamic Azad University, Tehran, Iran

[bmallamiri@gmail.com](mailto:bmallamiri@gmail.com)

### Abstract

One debilitating factor in language learning is anxiety, which has attracted teachers' and researchers' attention for so long. Additionally, learners' own ability to control and reduce their anxiety level may play a great role in their educational success. One way to enhance this capability, which eventually leads to lower anxiety, could be through involvement in autonomous and introspective activities. This project was conducted to explore the combined effect of autonomous and self-reflective activities on EFL learners' anxiety and their preferred strategies to reduce their anxiety. Thus, in this experimental research, 61 EFL learners at intermediate proficiency level were selected on an availability basis and randomly split into an experimental and a control group. The experimental group was taught through autonomous activities, and the control group received routine instructions on writing. The two groups were pretested on their anxiety level and their preferred anxiety-reducing strategies to make sure that they were homogeneous regarding the two dependent variables. After ten sessions of instructions, the posttests on the two dependent variables were administered to the two groups. One independent sample t-test and an ANCOVA analysis were carried out, which demonstrated that the intervention could significantly lower the learners' anxiety and increase their preferred strategies to lessen their anxiety. The outcomes of this project have remarkable implications for EFL teachers in that they are recommended to include autonomous activities in their syllabus where applicable to help their learners overcome their anxiety and hence learn better.

**Keywords:** Anxiety, Anxiety reducing strategies, Autonomous activities, Self-reflection, Writing

### Introduction

Foreign Language Learning (FLL) as a highly arduous endeavor involves numerous variables, including cognitive and affective ones (Can, 2019). One affective factor in the milieu of FLL is anxiety (LLA). As Horwitz et al. (1986) maintained, language learning anxiety is a “distinctive complex of self-perceptions, beliefs, feelings, and behaviors related to classroom language learning arising from the uniqueness of the language learning process” (p. 128). LLA became subject to research in the FLA milieu since the mid-1960s (Tosun, 2018). Since then, it has been the center of consideration for ample studies, namely, Alamer et al. (2023), who explored the impact of WhatsApp on learners' anxiety levels; Baş and Özcan (2018), who compared school and university anxiety levels; Gopang et al. (2018), who examined Pakistani university students' anxiety levels; Li and We (2023), who explored Chinese students' boredom, enjoyment, and

anxiety; Luo (2018), who focused on the predictors of foreign language anxiety; Yang and Quadir (2018), who worked on the impact of prior knowledge on anxiety levels of learners; and Yassin and Razak (2018), who developed a theoretical framework for Yemeni university students anxiety.

The extensive study on language anxiety (e.g., Ghorban et al., 2013; Mak, 2011; Na, 2007) attests that learners go through some degrees of anxiety in their course of language learning. A number of investigations (e.g., Kim, 2009; Pichette, 2009; Hurd & Xiao, 2010) have probed the amount of anxiety in foreign language learners in diverse language learning settings, while others (e.g., Suwantarathip & Wichadee, 2010) have probed the efficiency of some approaches, such as cooperative learning, towards reduction of anxiety. In general, anxiety is a complicated concept that is dependent not only on people's feelings but also on appraisals regarding particular contexts (Horwitz, 2010). A strand of studies has explored the go-togetherness of EFL reading with anxiety (e.g., Zoghi & Alivandivafa, 2014; Matsuda & Gobel, 2004). Moreover, some investigations (e.g., Li & Wei, 2023; Young, 1986) have explored the association between course achievement and language anxiety. Bahrami (2023) revealed that anxiety does not have any relationship with the language level of the learners.

Foreign language classroom anxiety was defined by Horwitz et al. (1998) in three aspects:

(a) communication apprehension, (b) test anxiety, (c) and fear of negative evaluation. The three domains are described as follows: Communication apprehension originates from the need to speak in front of the group, while test anxiety comes from fear of failure on tests. Fear of negative evaluation is connected with others' judgment in any social situation, such as a job interview or presentation. (p.34)

Trang et al. (2013) explored how much EFL teachers and learners were cognizant of their anxiety and their feelings towards it. The outcomes exhibited that most of the learners suffered from anxiety while teachers were ignorant. Trang and Moni's (2015) study about ways of controlling FLA came to the conclusion that a unique and unitary model for FLA management cannot be practiced. The review of the literature shows that some investigations (e.g., Hashemi & Abbasi, 2013; Kondo & Yang, 2004; Liu, 2007) have probed into the strategies to cope with foreign LLA. As Ewald (2007) noted, since anxiety has a detrimental role in foreign language learning, this construct has gained enormous attention. The main reason, as Ewald (2007) stated, is that anxiety is generally considered to leave a devastating impact on the learning process and consequently on the learners' psychological comfort. Undoubtedly, L2 classes create anxiety for many learners. Teachers report about their daily experiences with anxious learners who take their seats at the back of the room and do their best to 'hide' in their seats.

Strategies to cope with anxiety have been subject to an abundant amount of research (Hashemi & Abbasi, 2013; Lucas, 1984; Tsiplakides & Keramida, 2009). Hashemi and Abbasi (2013) conducted a thorough review by summarizing previous investigations. They listed 20 strategies, among which the main ones are teachers' recognition of the presence of anxiety in L2 learners, teachers' use of formative assessment to reduce students' fear of classroom activities and scores, students' use of positive self-talk, and students inspiring themselves to take risks in EFL learning. Kondo and Ying-Ling (1994, as cited in Buchler, 2013), after developing a scale for measuring sources of anxiety, asked learners to mention certain strategies they employed to control their anxiety. The results yielded 81 strategies that were categorized as "(a) disaffiliation, (b) resignation, (c) relaxation, (d) positive thinking, and (e) passivity" (p. 49).

Quite similarly, Adelian et al. (2024) probed the employment of anxiety coping tactics in Iranian EFL learners and came up with 5 main strategies of “preparation, relaxation, positive thinking, peer-seeking strategies, and resignation” (p. 1). A lot of studies conducted on L2 learning anxiety have probed the effect of anxiety amelioration techniques on L2/FL learning. Accordingly, they put forth some helpful strategies in reducing the foreign language anxiety of FL learners (Gregersen, 2003; Tsiplakides & Keramida, 2009). Foss and Reitzel (1988) elaborated on multiple anxiety-reducing tactics linked with personal and interpersonal anxiety, coming to the conclusion that if L2/FL students could realize their dread of language learning, they could figure out stressful circumstances and overcome them realistically. Therefore, they have insisted that learners be asked to express orally their fears while writing them on the board. It helps the L2/FL learners feel not alone when it comes to feeling anxious in the classroom (Young, 1991). Ahmadpour et al. (2021) showed that learners' free riding reduced after getting acquainted with Choice Theory instructed by the teacher. They held that the result could be attributed to the reduced anxiety as the result of the intervention. In the present study, Young's (1991) and Kondo and Young's (2004) models were used as the conceptual framework.

Zarei and Feizollahi (2019) suggested some techniques to overcome the writing anxiety of EFL learners, including giving students time to think about the topic as well as concept mapping and brainstorming. However, the magnitude of effects of autonomous activities on the learners' anxiety has not been explored hitherto, which is partly what the present study tried to reveal. Language learners' engagement in autonomous tasks/activities has been shown to have many benefits. Reflection and self-evaluation are the two key points of autonomous learning, which contain planning, setting goals, decision-making, operating in actual situations, and assessing the learning process. The upshot of reflection and self-evaluation is the creation of motivation, which itself leads to learning more effectively (Karbson et al., 2007). Little (1995) proposed that autonomy is associated with the way that learning is organized. He further said that "essentially, autonomy is a capacity for detachment, critical reflection, decision-making, and independent action (P. 124). According to Schumenk (2005), autonomy in language learning should have three important points that the learner can control. First, the learner has to have the ability to manage their learning. Second, the learner should govern and be cognizant of the mental processes. Third, the learner should practice managing the content of learning. He believed that these three levels are interrelated because the efficient organization of learning is related to the management of the involved cognitive processes. White (2003) maintained that the concept of autonomy is built on aspects of 'learner engagement' and 'collaborative control' that are greatly related to classroom applications. It is also believed that autonomy is somehow related to other concepts, including "learning strategies and self-regulation and sociocultural theory" (Benson, 2001, p. 28).

Given that adopting tactics to tackle anxiety is a manifestation of independent and critical decision-making, it is tenable to assume that autonomous activities may lead to more inclination towards anxiety-reducing strategies. Research shows that engaging in autonomous activities can lead to reduced anxiety levels, as it enhances feelings of control and self-efficacy (Deci & Ryan, 2000). Likewise, studies have shown that allowing students to participate in autonomous learning can significantly decrease academic anxiety. For example, when students have the choice in their learning processes, they tend to feel more competent and less anxious (Schunk, 2003).

Autonomy has been linked to better mental health outcomes. One study by Weisz et al. (2006) revealed that adolescents who engaged in autonomous activities, such as choosing personal

topics, displayed lower levels of anxiety. However, the impact of autonomous activities may not be considered constant across cultures. Research by Chirkov et al. (2003) highlights that cultural attitudes toward autonomy can influence how individuals manage anxiety. As they maintained, “in collectivist cultures, the relationship might be less direct, as the communal aspects of choices can interplay with individual anxiety” (p. 101).

Various types of autonomy have been proposed. Kumaravadivelu (2003) held that there is a discrepancy between “narrow and broad views of autonomy” (p.133). As he said, “the narrow view maintains that the chief goal of the learner is to learn to learn, while the broad view maintains that the goal should be to learn to liberate” (p. 133).

Self-reflection is individuals’ introspection about their feelings and manners. As Perry (2022) put it, “at its heart, self-reflection is setting aside time to think deeply and evaluate your thoughts, attitudes, motivations, and desires. It’s examining your emotions and behaviours and then asking yourself, ‘Why do I feel and act this way?’” (p. 2). Ackerman (2017), likewise, defined self-reflection as an inner talk about one’s present and past thoughts and actions. He stated that “the informal reflection process can be defined as examining one’s own internal thoughts and feelings and reflecting on what they mean. The process can be focused on either one’s current mental experience or mental experiences from the very recent past” (p. 1). Self-reflection, as inward thinking, is a self-management technique that is recommended by therapists to alleviate negative thoughts and improve practice. It is actually thinking about one’s own thoughts and deeds. Ackerman (2017) stated that this inner thought focuses on the person’s emotional experience in the present or the past. According to him, the origins of this introspection go back to Wilhelm Wundt in the 1800s, who stressed on the three mental processes of “thoughts, images, and feelings” (Ackerman, 2017, p. 3), which eventually led to the emergence of cognitive psychology. Perry (2022) maintained that,

We might think of this act of introspection as something that naturally occurs as we grow older, but the truth is that self-reflection can and should be practiced at any age. And it can be as simple as looking back at your behavior in any scenario to ask yourself why you behaved the way you did. (p. 3)

Self-reflection has numerous benefits. Gupta (2023) held that self-reflection makes one self-confident, enables self-development, enhances self-awareness, and escalates sense of control (working on mindfulness and experiencing the moment). This may assist one to have more self-control, improves communication skills (understanding what one is feeling can help one express themselves plainly, decently, and caringly), causes deeper orientation toward the core values (this may guarantee that one’s utterances and deeds are more oriented toward one’s essential values), leads to better decision-making skills (this may assist one to make rational and suitable decisions), and creates grander responsibility (it may also help to enhance one’s ability to be responsible for the goals one is working toward).

Research indicates that self-reflection allows students to articulate and challenge their anxious thoughts. Hofman et al. (2012) maintained that cognitive restructuring through self-reflection can significantly diminish anxiety levels in learners as it helps them to process their emotional experiences. In a similar vein, peer feedback and reflective practices can create a supportive environment that lowers anxiety. Hattie and Timperley (2007) proposed that collaborative reflection fosters a sense of belonging and shared understanding, which in turn

alleviates anxiety. Schunk and Zimmerman (2008) refer to individual differences in response to self-reflective activities. They stated that not all learners benefit equally, highlighting the need to tailor reflective practices to cater for different needs.

In conclusion, the literature encompasses research findings that attest to the impact of autonomous activities as well as self-reflective activities independently on lowering the anxiety level of learners. However, their combined effect has not been addressed yet. Likewise, no research addressed their effects on learners' anxiety-reducing strategies, neither independently nor collectively. The present research was inspired by the thought that language learning anxiety is an amalgamation of self-perceptions, views, approaches, and manners pertaining to language classrooms (Horwitz et al., 1986) and by virtue of the fact that anxiety functions as a pivotal point in second language learning and that adoption of anxiety-reducing strategies seems to be tightly related to self-regulation, learning strategies, and sociocultural selves induced in autonomous activities (Benson, 2001). It was an attempt to unveil the combined role of autonomous and self-reflective activities in the EFL learners' anxiety level on the one hand and the propensity of the learners to autonomously control and lower their anxiety on the other. What makes this study unique is the combination of autonomy and introspection as a technique of teaching to impact the learners' anxiety level and anxiety-reducing tactics. Hence, the following questions were addressed:

Do autonomous and self-reflective activities significantly impact EFL learners' language learning anxiety?

Do autonomous and self-reflective activities significantly impact EFL learners' preference for anxiety reducing strategies?

## Method

### Design

The current investigation was a quasi-experimental research type employing a non-randomized posttest-only control group design (Ary et al., 2019), as the sample was not selected randomly and the study was carried out on two intact classes. 'Autonomous and self-reflective activities' was the independent variable, and the two dependent variables were 'anxiety level' and 'anxiety-reducing strategies' of learners. Additionally, the learners' English language proficiency was controlled, hence functioning as the control variable in this study.

### Participants

This research project was conducted on two intact classes at the undergraduate level at the Islamic Azad University, Central Tehran Branch. The participants, majoring in English Teaching and translation fields, were selected based on their obtained score from the OPT. That is, only those who obtained scores 28-36, who were the majority (61), were included in the investigation. The rest only attended the classes, but their scores were not included in the analyses pertaining to this study. The classes were mixed-gender, and their age ranged between 19 and 24. These learners had passed preliminary writing and reading courses at the university as their

compulsory credit hours and were taking the 'advanced writing' course at the time of investigation. The two classes were considered an experimental group with 30 students and a control group with 31 students. The assignment was done randomly, utilizing a simple random selection technique.

### Instruments

This investigation used three main instruments. One was Horwitz et al.'s (1986) FLCAS (Foreign Language Classroom Anxiety Scale). The scale has thirty-three 5-point Likert-type items that are answered by choosing one alternative from among 'strongly agree' to 'strongly disagree' with 5 to 1 value, respectively. But, for items 2, 5, 8, 11, 14, 18, 22, 28, 32, the values are reversed (strongly agree 1, to strongly disagree, 5). The reliability of the instrument was estimated by the developers to be 0.93 and 0.83, checking the internal consistency and using the test-retest method, respectively. In the present study, the reliability of the instrument was checked a priori, which turned out to be 0.89.

The other instrument used in the current study was the LARS scale (Learners' Anxiety Reducing Strategies), developed and validated by Bekhrad et al. (2024). The developed scale sought to explore the anxiety-reducing strategies adopted by EFL learners. It contains 13 items with 5-point Likert alternatives of 'strongly agree' to 'strongly disagree' that are valued 5 to 1, respectively, and made up of three factors of anxiety-reducing strategies (metacognitive, social, and tactile). The highest score from this scale is 65, which indicates maximum tendency for strategies to control anxieties, and the least is 13, which shows minimum level of propensity. Questions 1 to 5 pertain to metacognitive strategies, items 6 to 9 correspond to the social component, and items 10 to 13 relate to the tactile aspect. The scale demonstrated an acceptable reliability coefficient of 0.969 for two factors and 0.892 for one.

As another instrument used in this investigation, an OPT was administered to 75 learners comprising the two intact classes. The Oxford Placement Test (OPT) by Edwards (2009) consists of 60 items that measure students' language performance regarding grammar, vocabulary, and reading comprehension. Those students who obtained scores from 28 to 36 were considered the participants, and their pre-treatment and post-treatment scores were included in the final calculations (61 students). As reliability is sample-dependent, the OPT was pre-piloted on 30 students with comparable features with the participants of this study, and Cronbach's alpha estimation demonstrated that it had an index of .81, which is desirable.

### Data Collection Procedure

Initially and after making sure about the similarity of the learners with regard to their general English knowledge, the classes were randomly designated as the experimental and control groups. Afterwards, the two groups were pretested on anxiety as well as anxiety-reducing strategies using the two apt questionnaires. Then the instructions incorporating autonomous and self-reflective treatments to the experimental group and the main-stream instruction contents commenced. It lasted for 14 sessions, including the pre- and post-tests.

As for the instructions provided in the experimental group, mainly based on Kumaravadivelu's (2006) suggested techniques, the researcher dedicated 45 minutes of each session's class time to general instructions on the principles of paragraph writing and 45 minutes to the treatment specifically. For the treatment part, she wanted the learners to bring exciting subjects, including news, snaps, and images, to the class and impart their opinions about them in the form of a mini-lecture. Then the rest were required to rewrite/write about the topic and ask their peers to correct and score it and give it to the teacher. This practice was meant to instill in them the feeling of autonomy as they were held responsible for their own learning and choice of materials and their own evaluations, as the researcher had minimum control over the materials and assessment, except for the intermittent feedback on their evaluations. This practice was implemented for 6 sessions.

The experimental group was further split into small sub-groups of 3 to 4 students so that they could work with the group-mates to decide upon writing about their preferred subjects, like describing pictures, making a story based on some pictures, reciting an interesting event, retelling interesting news, etc. They had about 5 minutes to choose the topic and about 15 minutes to write about the chosen topic. Then they had an extra 10 minutes to collaborate in their groups and monitor their group mates' writing regarding vocabulary selection, sentence structure, spelling, cohesion, and coherence. Even when they faced difficulties in putting down ideas, they sought help from their peers. This activity was aimed at developing their collaborative learning, which is said to increase the learners' independence and autonomy, which results in an enhancement in the skill they are learning together (Benson, 2001; Pemberton & Nix, 2012). This technique was practiced for 6 sessions. During the whole intervention period, students rated their peers' writings, and their given scores were recorded in the teacher's file. This was supposed to motivate them to exhibit their capability of remaining objective in their evaluations and enjoy controlling their own as well as their classmates' learning and assessment. The teacher's sporadic feedback came after students' self-evaluations, self-correction, peer-evaluation, and peer-correction for the purpose of instilling the essence of autonomy in them.

Aligned with Perry's (2022) and Gupta's (2023) guidelines, learners in the experimental group were further required to keep journals about their feelings. Initially, they were trained about self-reflection and its meaning and importance. After each session, they learned to jot down a few fundamental questions.

- What happened this session that made me happy or sad?
- Why did I feel good or bad?
- What can I do to boost the good feeling?
- What can I do to alleviate the bad feeling?

They were encouraged to think deeply about their class experiences anew and raise as many questions as they wished, as time passed, that tapped their emotions and attitudes, and try to answer them honestly. They were further invited to share their feelings and/or journals with their friends if they so desired. The journals were not checked by the teacher for the fear of causing dishonesty in their expressions. She merely made sure that all of them were doing the

activity, and the sharing among the peers occurred. She further made sure that both autonomous and self-reflective activities were equally practiced and weighted during the treatment sessions.

In the control group, the researcher followed the regular and main-stream procedure of instruction using the Longman Academic Writing Series by Oshima and Hogue (2016) as the course book. The researcher/teacher decided upon the topics for the students' homework writings. The learners worked individually, and the writings were corrected and commented on by the teacher exclusively. Nothing tantamount to autonomy and self-reflection activities were encouraged and practiced in the control group.

## Results

### The First Research Question

To test the null hypothesis, 'Autonomous and self-reflective activities do not significantly impact EFL learners' language learning anxiety, corresponding to the first question, firstly the mean scores of the groups on the FLCAS were compared through an independent samples t-test after verifying the normality condition.

Table 1

*Anxiety Pretest Scores*

	Groups	N	Mean	Std. Deviation	Std. Error Mean
Anxiety Pretest	Experimental group	30	117.76	21.78	3.97
	Control group	31	117.64	19.56	3.51

Table 1 depicts, that the anxiety pretest means obtained by both groups were quite similar.

Table 2

*Independent Samples Test on Anxiety Pretest Scores*

Levene's Test for Equality of Variances		t-test for Equality of Means						
F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
							Lower	Upper

Anxiety Pretest	Equal variances assumed	.147	.703	.023	59	.98	.12	5.29	-10.47	10.72
	Equal variances not assumed			.023	57.86	.98	.12	5.30	-10.50	10.74

As Table 2 shows, with equal variances assumed, the two groups' anxiety pretest means were not significantly different ( $t = .023, p = .982 > .05$ ). As such, the researcher rested assured about the groups' homogeneity with regard to their level of anxiety before the intervention. Hence, their posttest scores could be safely compared, attributing any possible difference to the intervention.

Table 3

*The Anxiety Posttest scores*

	Groups	N	Mean	Std. Deviation	Std. Error Mean
Anxiety Posttest	Experimental group	30	26.00	9.29	1.69
	Control group	31	115.51	19.01	3.41

Table 3 displays a considerable dissimilarity between the two means, with the control group obtaining a higher mean score.

Table 4

*Independent Samples Test on the Anxiety Posttest Scores*

Levene's Test for Equality of Variances		t-test for Equality of Means						
F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
							Lower	Upper

Anxiety Posttest	Equal variances assumed	12.24	.001	-	23.259	.000	-89.51	3.85	-97.22	-81.80
	Equal variances not assumed			-	23.48	.000	-89.51	3.81	-97.20	-81.82

Table 4 exhibits that, with equal variances not assumed, the two means were significantly different ( $t = 23.46, p = .000 < .05$ ). It implies that the experimental group showed significantly less anxiety after the intervention. To calculate the effect size, the formula suggested by Pallant's (2007, p. 240) was used:

$$\text{Eta squared} = \frac{t^2}{t^2 + N - 1}$$

The result turned out to be as large as 0.9 which is large based on Cohen's (1988) guidelines.

### The Second Research Question

To test the null hypothesis, 'Autonomous and self-reflective activities do not significantly impact EFL learners' preference for anxiety-reducing strategies' corresponding to the second question, the LARS pretest scores of the groups were compared to ensure their homogeneity prior to the intervention. After checking for the normality condition, their means were compared through an independent samples t test.

Table 5

*Group Statistics of the LARS Pretest Means*

	Groups	N	Mean	Std. Deviation	Std. Error Mean
LARSpretest	Experimental group	30	27.80	7.96	1.45
	Control group	31	23.61	6.78	1.21

As Table 5 presents, the two groups obtained two rather discrepant mean scores (27.8 vs. 23.61).

Table 6

*Independent Samples Test on the LARS Pretest Means*

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference Lower Upper	
LARS pretest	Equal variances assumed	.810	.372	2.21	59	.031	4.18	1.89	.40	7.97
	Equal variances not assumed			2.20	56.88	.031	4.18	1.89	.38	7.98

As illustrated in Table 6, with the assumption of equal variances, the mean scores are shown to be significantly different ( $t = 2.21, p = .031 < .05$ ). With the heterogeneity of the two groups regarding their LARS pretest scores, an ANCOVA was utilized to control for the initial difference effect. Firstly, the condition of homogeneity of the regression slopes was verified statistically, as depicted in Table 7:

Table 7

*Homogeneity of Regression Slopes*

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	8673.117 <sup>a</sup>	3	2891.0	117.65	.000
Intercept	928.286	1	928.28	37.77	.000
grouping	453.845	1	453.84	18.46	.000
LARS pretest	1956.408	1	1956.40	79.61	.000
grouping * LARS pretest	7.010	1	7.01	.285	.595
Error	1400.654	57	24.57		
Total	82025.000	61			
Corrected Total	10073.770	60			

Table 7 evinces that the p value corresponding to the grouping\*LARS pretest is larger than.05. Hence the condition was not violated. With other conditions of normality and homogeneity of variances being verified, the outcome of ANCOVA is presented to test the null hypothesis:

Table 8

*ANCOVA on the Post-tests*

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	8666.107 <sup>a</sup>	2	4333.05	178.53	.000	.860
Intercept	941.391	1	941.39	38.78	.000	.401
LARS pretest	1963.304	1	1963.30	80.89	.000	.582
grouping	4409.485	1	4409.48	181.68	.000	.758
Error	1407.664	58	24.27			
Total	82025.000	61				
Corrected Total	10073.770	60				

Table 8 exhibits that after controlling for the effect of the covariate having a significant effect (F=80.89, p=.000<.05), the grouping was a significant factor (F=181.68, p=.000<.05). Thus, with a large effect size (.758), the result implies that the intervention could significantly increase the learners' preference for anxiety-reducing strategies. Table 9 shows the adjusted LARS posttest means after controlling for the effect of the covariate.

Table 9

*Estimated Marginal Means*

Groups	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Experimental group	43.33	.918	41.50	45.17
Control group	25.64	.903	23.83	27.44

Figures 1 and 2 illustrate the posttest means of the two groups:

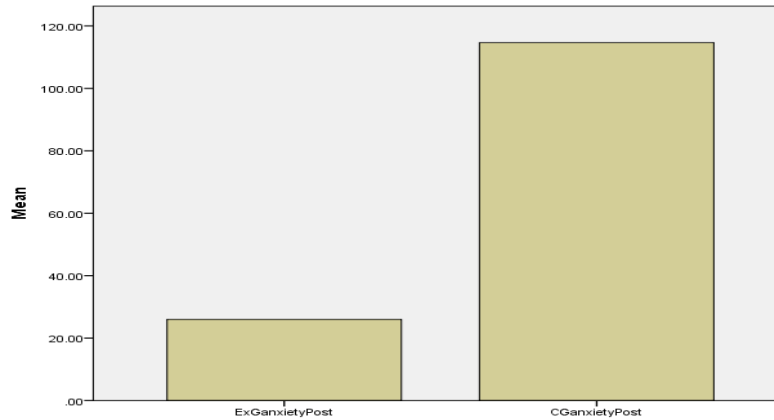


Figure 1. Anxiety Posttests

As Figure 1 illustrates visually, the experimental groups' anxiety level (represented by the left-hand box) turned out to be less than that of the control group (shown by the right-hand box) in the posttest.

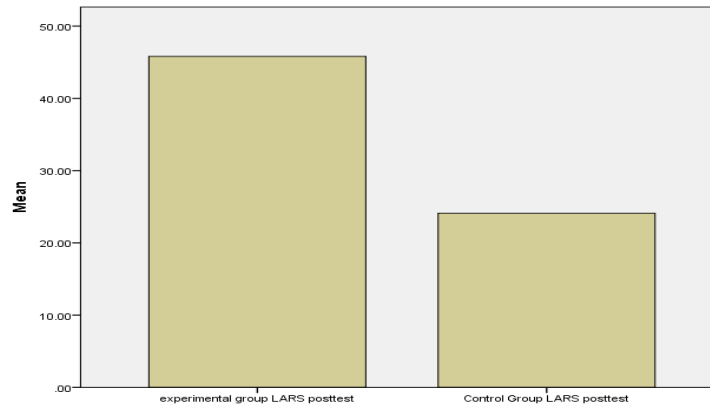


Figure 2. LARS Posttests

Figure 2 visually displays the supremacy of the experimental group in terms of their preferred strategy use, shown by the left-hand box, compared with the control group in the posttest stage.

### Discussion

This investigation addressed two questions: 'Do autonomous and self-reflective activities significantly impact EFL learners' language learning anxiety?' And, 'Do autonomous and self-reflective activities significantly impact EFL learners' preference for anxiety-reducing strategies?' The outcomes of the analyses of data displayed that both corresponding null hypotheses were

rejected with a large effect size, meaning that the intervention could significantly reduce the learners' anxiety level and increase their tendencies for applying strategies to reduce their anxiety.

The obtained results are corroborated by Savaskan's (2017) finding, which shows that a high level of autonomy in EFL learners is correlated with a low level of anxiety. Kabiri et al. (2018) and Liu (2012) also demonstrated that learners' autonomy and their anxiety level are negatively related. According to Chan (2001), autonomous learners are goal-oriented, disciplined, highly motivated, initiative-driven, assiduous and eager to learn, willing to communicate, and fervent to improve their learning. Each of these characteristics may be brought up to explain the low level of anxiety in such learners. In fact, when learners are involved in autonomous activities, they have the freedom to pick the pace, content, and methods best suiting their learning style and preference. This makes them feel more motivated and empowered, which leads to a reduction in anxiety associated with language learning.

It can be further argued that anxiety is basically a social phenomenon. Put another way, people get anxious when they are in direct or indirect contact with others. Likewise, autonomy has much to do with one's social being. Veugelers (2011) argued that autonomy is not secluded independence; rather, it is how an individual communicates with others. It's people's agency. Likewise, Paiva (2006, as cited in Paiva, 2011, p. 63) asserted that autonomy has to do with social and mental behaviors inherent in the SLA system. It is concerned with the person's cognitive status quo as well as the political, social, and economic aspects. Perry (2022), Ackman (2017), and Gupta (2023) also asserted that self-reflection boosts communication skills and empowers individuals to control their senses and eventually their behavior. Schon (1983), likewise, emphasized the role of reflection in professional practice and anxiety management. Keng et al. (2011) also discussed the benefits of mindfulness, which includes reflective practices on mental health and anxiety. Then, it could be cogently argued that autonomous and self-reflective people learn how to relate to others and reserve themselves with high self-reliance, which ensues less feelings of anxiety and a higher propensity to control their negative feelings.

Furthermore, drawing on the literature and research findings, it could be deduced that autonomous and self-reflection activities may help learners build self-confidence in their language skills and examine themselves. Buchler (2013) demonstrated that instructing anxiety-reducing strategies to students leads to a heightened tendency to utilize them in stressful situations and that learners develop an autonomous approach towards them. Hence, it could be argued that autonomy and use of anxiety-decreasing techniques are positively correlated. As mentioned in Wakelet (2023), by taking ownership in their learning and deciding upon what and how to study on their own, learners can experience a sense of success and improvement. This positive reinforcement, as maintained by Wakelet (2023), can boost their self-esteem and reduce feelings of inadequacy or anxiety about their language abilities. Liu (2015) asserted that autonomous tasks also provide learners with opportunities to concentrate on their favorite parts of language learning that are also most relevant to them. This personalized approach may render the learning more fascinating and pleasurable, which in turn can help reduce anxiety and increase motivation, which eventually leads to strategies to control anxiety. Back in 1997, Williams and Bruden also stated that "as a step towards autonomy, it is important also to help learners to get their own challenges" (p. 75). This

might be tenably construed as developing the ability to bring anxiety, as a big challenge, under control by adopting certain strategies as a result of practicing autonomy.

### Conclusion

This investigation, which aimed at revealing the combined impact of autonomous and self-reflective writing activities on EFL learners' anxiety levels and their tendencies for anxiety-reducing strategies, demonstrated that instilling autonomy and self-reflection in EFL learners can cause a statistically significant reduction of language learning anxiety and an escalation of preference for anxiety-reducing strategies in them. The finding is in line with Sanadgol and Abdolmanafi-Rokni (2015) and Kabiri et al. (2018), who concluded that anxiety and autonomy of EFL learners are negatively related. Savaskan (2017), likewise, revealed that learners' level of anxiety was significantly lower when they experienced a higher level of autonomy. Contrary to the present results, however, Ahmadi and Izadpanah (2019) and Chan (2001) established a positive relationship between these variables; that is, as the variance in autonomy increases, variance in anxiety upturns as well. They argued that learners should be ready for autonomy in the classroom environment.

Given the gigantic influence of anxiety in learning a language, and by virtue of the findings of the current investigation, EFL teachers are suggested to instill autonomy in their classes generally and in writing instructions specifically, in an attempt to upsurge the efficacy of instructions and improve students' learning.

Finally, it should be mentioned that a certain limitation might have influenced the outcomes of the investigation. Actually, the researcher could not control the homogeneity of the learners regarding genders, as female learners outnumbered male learners. As anxiety control might be a personal characteristic that is differentially identified across genders, the result of the study might have altered if gender could be controlled.

Based on the limitations and the obtained findings of this study, it is suggested that further research be conducted to reveal the comparative impact of self-reflective activities on autonomy and non-autonomy-oriented EFL learners' anxiety levels and their propensity for adopting tactics to reduce their anxiety. Furthermore, investigating the difference between male and female EFL learners in terms of their attitudes towards self-reflective and autonomous activities and their anxiety levels may be addressed in further research.

### Conflict of interests

The authors declare that they have no conflict of interest.

### References

Ackerman, C. E. (2017). 87 self-reflection questions for introspection [+ Exercises]. Retrieved from <http://www.positivepsychology.com>

- Adelian, R., Afraz, S., & Fahandezh Sa'di, F. (2024). EFL learners' coping strategy use in managing their English language anxiety. *Iranian Journal of English for Academic Purposes*, 13(2), 1-15.
- Ahmadi, M., & Izadpanah, S. (2019). The study of relationship between learning autonomy, language anxiety, and thinking style: The case of Iranian university students. *International Journal of Research in English Education*, 4(2), 73-88.
- Ahmadpour, L., Asadollahfam, H., & Kuhi, D. (2021). Cognizance of rational choice theory and teachers' intervention in reducing EFL learners' free riding. *Foreign Language Research Journal*, 11(4), 728-740. <https://doi.org/10.22059/jflr.2021.323340.837>
- Alamer, A., Al Khateeb, A., & Jenou, L. M. (2023). Using WhatsApp increases language students' self-motivation and achievement, and decreases learning anxiety: A self-determination theory approach. *Journal of Computer Assisted Learning*, 39(2), 417-431. <https://doi.org/10.1111/jcal.12753>
- Ary, D., Jacobs, L. C., & Walker, D. A. (2019). *Introduction to research in education*. Cengage Learning, Inc.
- Kashef, S. H., & Ashrafi, R. (2023). Investigating the Relationship between Iranian Intermediate EFL Learners' Language Anxiety and Their Reading Ability. *International Journal of Practical and Pedagogical Issues in English Education*, 1(1), 43-55. doi: 10.22034/ijpie.2023.170628
- Bahrami, K. (2023). The role of fear and anxiety in learning German: a field study of German language teaching in Iran. *Foreign Language Research Journal*, 13(2), 287-298. <https://doi.org/10.22059/jflr.2023.353194.1007>
- Baş, G., & Özcan, M. (2018). Foreign language learning anxiety: A comparison between high school and university students. *Journal of Human Sciences*, 15(3), 1584-1596.
- Bekhrad, A., Mall-Amiri, B., & Shangarffam, N. (2024). Development and validation of Iranian EFL learners' preference for anxiety reducing strategies questionnaire. *Journal of Modern Research in English Language Studies*, 11(3), 51-78. DOI: 10.30479/jmrels.2024.19169.2247
- Benson, P. (2001). *Teaching and researching autonomy in language learning*. Longman.
- Buchler, R. K. (2013). *Anxiety-reducing strategies in the classroom* [Unpublished doctoral dissertation]. Western Michigan University.
- Chan, V. (2001). Readiness for learner autonomy: What do our learners tell us? *Teaching in Higher Education*, 6(4), 505-518. <https://doi.org/10.1080/13562510120078045>

- Chirkov, V., Ryan, R. M., Kim, Y., & Kaplan, U. (2003). Relationships of personal autonomy and individualism to the self-determination of individuals in collectivist and individualistic cultures. *Journal of Personality and Social Psychology*, 84(1), 97-110.
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences*, (2<sup>nd</sup> ed.). Hillsdale, Erlbaum.
- Deci, E. L., & Ryan, R. M. (2000). The ‘what’ and ‘why’ of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11(4), 227-268.
- Ewald, J. D. (2007). Foreign language learning anxiety in upper-level classes: Involving students as researchers. *Foreign Language Annals*, 40(1), 122-142. <https://doi.org/10.1111/j.1944-9720.2007.tb02857.x>
- Foss, K. A., & Reitzel, A. C. (1988). A relational model for managing second language anxiety. *TESOL quarterly*, 22(3), 437-454.
- Ghorban Dordinejad, F., & Nasab, A. H. F. (2013). Examination of the relationship between perfectionism and English achievement as mediated by foreign language classroom anxiety. *Asia Pacific Education Review*, 14(4), 603-614. <http://dx.doi.org/10.1007/s12564-013-9286-5>
- Gopang, I. B., Bughio, F. A., & Pathan, H. (2018). Investigating foreign language learning anxiety among students learning English in a public sector university, Pakistan. *MOJES: Malaysian Online Journal of Educational Sciences*, 3(4), 27- 37.
- Gregersen, T. S. (2003). To err is human: A reminder to teachers of language-anxious students. *Foreign Language Annals*, 36, 1, 25-32. <http://dx.doi.org/10.1111/j.1944-9720.2003.tb01929.x>
- Gupta, S. (2023). The importance of self-reflection: how looking inward can improve your mental health. Retrieved August 28, 2023 from <http://www.verywellmind.com/self-reflection-importance>
- Hashemi, M., & Abbasi, M. (2013). The role of the teacher in alleviating anxiety in language classes. *International Research Journal of Applied and Basic Sciences*, 4(3), 640–646.
- Hattie, J., & Timperley, H. (2007). The power of feedback. *Review of Educational Research*, 77(1), 81-112.
- Hofmann, S. G., Asnaani, A., Vonk, I. J. J., Sawyer, A. T., & Fang, A. (2012). The efficacy of cognitive behavioral therapy: A review of meta-analyses. *Cognitive Therapy and Research*, 36(5), 427-440.
- Horwitz, E. K. (2010). Foreign and second language anxiety. *Language Teaching*, 43, pp. 154-167. <https://doi.org/10.1017/S026144480999036X>

- Horwitz, B., Rumsey, J. M., & Donohue, B. C. (1998). Functional connectivity of the angular gyrus in normal reading and dyslexia. *Proceedings of the National Academy of Sciences*, 95(15), 8939-8944. <https://doi.org/10.1073%2Fpnas.95.15.8939>
- Horwitz, E. K., Horwitz, M. B., & Cope, J. (1986). Foreign language classroom anxiety. *The Modern Language Journal*, 70(2), 125-132.
- Hurd, S., & Xiao, J. (2010). Anxiety and affective control among distance language learners in China and the UK. *RELC Journal*, 41(2), 183-200. <http://dx.doi.org/10.1177/0033688210373640>
- Kabiri, M., Nosratinia M., & Mansouri, M. (2018). The relationship between EFL learners' autonomy, anxiety, and their motivated strategies for learning. *Journal of Applied Linguistics and Language Research*, 5(1), 253-268.
- Karbson, L., Kjisik, F., & Nordlund, J. (2007). Language counseling: A critical and integral component in promoting an autonomous community of learning. *System*, 35, 46-65.
- Kashef, S. H., & Barzegari Kahrizi, F. (2023). EFL teachers' attitudes toward self-directed language learning in diverse academic settings. *International Journal of Practical and Pedagogical Issues in English Education*, 1(3), 1-11. <https://doi.org/10.22034/ijpie.2023.179557>
- Keng, S. L., Smoski, M. J., & Robins, C. J. (2011). Effects of mindfulness on psychological flexibility and well-being: A meta-analytic review. *Journal of Counselling Psychology*, 58(2), 170-182.
- Kim, S. Y. (2009). Questioning the stability of foreign language classroom anxiety and motivation across different classroom contexts. *Foreign Language Annals*, 42(1), 138-157. <http://dx.doi.org/10.1111/j.1944-9720.2009.01012.x>
- Kondo, D. S., & Yang, Y.-L. (2004). Strategies for coping with language anxiety: The case of students of English in Japan. *ELT Journal*, 58(3), 258-265. <http://dx.doi.org/10.1093/elt/58.3.258>
- Kumaravadivelu, B. (2006). *Understanding language teaching: From method to postmethod*. Mahwah, Lawrence Erlbaum Associates.
- Kumaravadivelu, B. (2003). *Beyond methods: Macro-strategies for language teaching*. Yale University Press.
- Li, C., & Wei, L. (2023). Anxiety, enjoyment, and boredom in language learning amongst junior secondary students in rural China: How do they contribute to L2 achievement? *Studies in Second Language Acquisition*, 45(1), 93-108. <http://dx.doi.org/10.1017/S0272263122000031>

- Little, D. (1995). Learner autonomy: definitions, issues and problems. *Australian Universities Review*, 30(2), 43-44.
- Littlewood, W. (1999). Defining and developing autonomy in East Asian Contexts. *Applied Linguistics*, 20(1), 71-94.
- Liu, H. J. (2015). Learner autonomy: The role of motivation in foreign language learning. *Journal of Language Teaching and Research*, 6(6), 1165. <http://dx.doi.org/10.17507/jltr.0606.02>
- Liu, H. J. (2012). Understanding EFL undergraduate anxiety in relation to motivation, autonomy, and language proficiency. *Electronic Journal of Foreign Language Teaching*, 9(1), 123-139.
- Liu, M. (2007). Anxiety in oral English classrooms: A case study in China. *Indonesian Journal of English Language Teaching*, 3(1), 119–137. <https://dx.doi.org/10.25170/ijelt.v3i1.132>
- Luo, H. (2018). Predictors of foreign language anxiety: A study of college-level L2 learners of Chinese. *Chinese Journal of Applied Linguistics*, 41(1), 3-24. <http://dx.doi.org/10.1515/cjal-2018-0001>
- Mak, B. (2011). An exploration of speaking-in-class anxiety with Chinese ESL learners. *System*, 39, 202-214. <http://dx.doi.org/10.1016/j.system.2011.04.002>
- Matsuda S. & Gobel P. (2004). Anxiety and predictors of performance in the foreign language classroom. *System*, 32, 21-36. <http://dx.doi.org/10.1016/j.system.2003.08.002>
- Oshima, A., & Hogue, A. (2016). *Longman academic writing series*. Pearson.
- Paiva, V. L. M. O. (2011). Identity, motivation and autonomy in second language acquisition from the perspective of complex adaptive systems. In G. Murray, X. Gao, & L. Lamb (Eds.). *Identity, motivation and autonomy in second language* (pp. 57-75). Multilingual Matters
- Pallant, J. (2007). *SPSS survival manual: A step by step guide to data analysis using IBM SPSS*. Routledge.
- Perry, E. (2022). Get to know yourself through the act of self-reflection. Retrieved October 18, 2023, from <http://www.betterup.com/blog/self-reflection>
- Pichette, F. (2009). Second language anxiety and distance language learning. *Foreign Language Annals*, 42(1), 77-93. <http://dx.doi.org/10.1111/j.1944-9720.2009.01009.x>
- Sanadgol, F., & Abdolmanafi-Rokni, S. J. (2015). Anxiety, motivation and autonomy in Iranian high school students: A quantitative study. *Advances in Language and Literary Studies*, 6(1), 143-149.

- Savaskan, I. (2017). Does foreign language classroom anxiety mitigate learner autonomy development? *Psychology Research*, 7(8), 436-444. <http://dx.doi.org/10.17265/2159-5542/2017.08.003>
- Schon, D. A. (1983). *The reflective practitioner: how professionals think in action*. Basic Books.
- Schumenk, B. (2005). Globalizing learner autonomy. *TESOL Quarterly*, 39(1), 107-118.
- Schunk, D. H. (2003). Self-efficacy for reading and writing: Influence of modeling, goal setting and self-evaluation. *Reading & Writing Quarterly*, 19(2), 159-172.
- Schunk, D. H., & Zimmerman, B. (2008). *Motivation and self-regulated learning: Theory, research, and applications*. Routledge.
- Suwantarathip, O., & Wichadee, S. (2010). The impacts of cooperative learning on anxiety and proficiency in an EFL class. *Journal of College Teaching and Learning*, 7(11), 51. <https://doi.org/10.19030/tlc.v7i11.252>
- Tosun, B. (2018). Oh no! Not ready to speak! An investigation on the major factors of foreign language classroom anxiety and the relationship between anxiety and age. *Journal of Language and Linguistic Studies*, 14(1), 230-241.
- Trang, T. T. T., Baldauf, R. B., & Moni, K. (2013). Foreign language anxiety: Understanding its status and insiders' awareness and attitudes. *TESOL Quarterly*, 47(2), 216-243.
- Trang, T. T. T., & Moni, K. (2015). Management of foreign language anxiety: Insiders' awareness and experiences. *Cogent Education*, 2(1), 1-20. <http://dx.doi.org/10.1080/2331186X.2014.992593>
- Veugelers, W. (2011). Introduction: Linking autonomy and humanism. In W. Veugelers (Ed.). *Education and humanism: Linking autonomy and humanity* (pp. 1-9). Sense Publishers.
- Wakelet. (2023). *Empowering students: The key to student ownership of learning*. <https://blog.wakelet.com/empowering-students-the-key-to-student-ownership-of-learning>
- White, C. (2003). *Language learning in distance education*. Cambridge University Press.
- Williams, M., & Bruden, R. L. (1997). *Psychology for language teachers*. Cambridge University Press.
- Yang, J. C., & Quadir, B. (2018). Effects of prior knowledge on learning performance and anxiety in an English learning online role-playing game. *Educational Technology and Society*, 21(3), 174-185.
- Yassin, A. A., & Razak, N. A. (2018). Investigating foreign language learning anxiety among Yemeni University EFL learners: A theoretical framework development. *English Language Teaching*, 11(10), 38-51. <http://dx.doi.org/10.5539/elt.v11n10p38>

- Young, D. J. (1991). Creating a low-anxiety classroom environment: What does language anxiety research suggest? *The Modern Language Journal*, 75(4), 426- 439. <https://doi.org/10.1111/j.1540-4781.1991.tb05378.x>
- Zarei, A. A., & Feizollahi, B. (2019). Concept mapping and brainstorming affecting writing anxiety and accuracy. *Journal of Modern Research in English Language Studies*, 5(1), 117-144. <https://doi.org/10.30479/jmrels.2020.13464.1655>
- Zoghi, M., & Alivandivafa, M. (2014). EFL reading anxiety inventory (EFLRAI) factorial validity and reliability. *Journal of Psychoeducational Assessment*, 32(4), 318-329. <https://doi.org/10.1177/0734282913513686>