

Available Online at: https://www.ejal.info https://dx.doi.org/10.32601/ejal.10125



Eurasian Journal of Applied Linguistics, 10(1) (2024) 299-307

Influence of Foreign Language Anxiety on University Students' Cognitive Processing in English Language Classrooms

Anna Stepanovna Borisova^{*}^a, Svetlana Alekseevna Moskvitcheva^b, Oksana Ivanovna Aleksandrova^(D), Muhammad Arif Soomro^d

^a Peoples' Friendship University of Russia (RUDN University) Moscow, Russia. Email: <u>borisova-as@rudn.ru</u>

^b Director of Laboratory, "Dynamics of Languages in a Minority Situation" Research and Academic Institute of Modern Languages, Intercultural Communication and Migration, RUDN University Moscow, Russia. Email: <u>moskvicheva-</u>sa@rudn.ru

^c Peoples' Friendship University of Russia (RUDN University) Moscow, Russia. Email: <u>alexandrova-oi@rudn.ru</u>

^d Quaid-e-Awam University of Engineering, Science and Technology (QUEST) Nawabshah-Sindh, Pakistan & Peoples' Friendship University of Russia (RUDN University) Moscow, Russia. Email: <u>muhammadarif@quest.edu.pk</u>

Received: 15 December 2023 | Received: in Revised form 26 March 2023 | Accepted 15 April 2024

APA Citation:

Borisova, A. S., Moskvitcheva, S. A., Aleksandrova, O. I., Soomro, M. A. (2024). Influence of Foreign Language Anxiety on University Students' Cognitive Processing in English Language Classrooms. Eurasian Journal of Applied Linguistics, 10(1), 299-307.

Doi: http://dx.doi.org/10.32601/ejal.10125

Abstract

Foreign language anxiety (FLA), whose impact is often negative on learners' cognitive processing, happens when a learner pursues a foreign language as a non-native speaker. This study aimed to investigate anxiety in learning English as a foreign language and its influence on learners' cognitive processes. The sample comprised graduate and undergraduate students of RUDN university (n=306 respondents), who were asked to fill up an adapted Foreign Language Classroom Anxiety Scale. The data was analyzed through SPSS v.20 and descriptive statistics were drawn. The findings indicate a statistically important anxiety influence on language performance among university students in classroom settings. Interestingly, the findings also confirmed that foreign language anxiety negatively affects cognitive processing in learning the English language. The study also identified some important affective factors with regard to English language classrooms. These findings would provide useful insights in the domain of foreign language anxiety while taking cognitive dimensions of students' classroom environments. The study also contributes to language education, teaching and learning of English as foreign language, educational psychology, and cognitive sciences. The study recommends to provide more exposure to the learners about the target language to reduce anxiety. Future studies should consider socio-biographical variables such as gender, socioeconomic status, educational background, and age differences as significant variables for a more comprehensive analysis of foreign language anxiety.

© 2024 EJAL & the Authors. Published by Eurasian Journal of Applied Linguistics (EJAL). This is an open-access article distributed under the terms and conditions of the Creative Commons Attribution license (CC BY-NC-ND) (http://creativecommons.org/licenses/by-nc-nd/4.0/).

Keywords: EFL, Foreign Language Anxiety, Cognitive Processing, Learning and Teaching, University Students.

Introduction

Anxiety is prevalent in nearly all fields of study, especially when it comes to anxiety in learning a foreign/second language. Foreign language anxiety (FLA) is a significant field in language education. This type of anxiety happens when a learner is pursuing a foreign language as a part of their education or career. Individuals who experience FLA most are non-native speakers and immigrants. The impact of this anxiety is often negative due to socio-cultural differences in their learning environments, which eventually also has an impact on learners' cognitive processing (Castillejo, 2023; Shtembari, Lozano, & Forte, 2023). However, later the scope of FLA was confined to a more generic term 'language anxiety' as both foreign and second language learners encounter similar levels of anxiety (Horwitz & Young, 1991).

The development of linguistic competence in English as a foreign language (EFL) is closely related to FLA, as well as to differences in the levels of anxiety caused due to variations in the learning environment. The significance of the learning environment is considered a crucial element in examining anxiety, which is understood when a focus is given on classroom learning (Alnuzaili & Uddin, 2020; Oruç & Demirci, 2020). It is hypothesized that foreign language anxiety has a significant influence on cognitive processes in the English language determined by the role of the learning environment, and that can be examined only through classroom setting (Maher & King, 2023). The process of language learning in classroom setting also exposes the perceptual and sensitive factors related to foreign language anxiety. Affective factors in foreign language learning can be attitudes, anxiety, motivation, communication apprehension, and fear. Among these factors, the current study is limited to anxiety in foreign language learning.

There is a dearth of studies on the complexities in foreign language anxiety affecting cognitive processes of learners. So far studies have focused only on various other factors like learners' lack of motivation causing anxiety (Dörnyei, 2008; MacIntyre & Gardner, 1994), anxiety as a more generic term (Horwitz, Horwitz, & Cope, 1986), anxiety causing lack of confidence (Baş & Özcan, 2018), lack of any emotional feelings or enjoyment in learning a foreign language (Dong, Liu, & Yang, 2022; MacIntyre, 2017; MacIntyre & Vincze, 2017), and correlating FLA with the quality of performance (Eysenck, 1979). This shows that the area of cognitive processing has been overlooked in previous studies.

Hence this study aimed to fill this research gap by investigating the relationship between anxiety and foreign language learning (which is the English language in this context) in a Russian academic setting. To get better results, this research focused on the elements of anxiety in the English language within a classroom setting that potentially influences Russian students' proficiency and cognitive processing (Erzhanova, Koncha, & Kharkhurin, 2023; Yunusova, 2023). The first objective of this study, therefore, was to investigate foreign language anxiety in classrooms, and the second was to explore influence of anxiety of foreign language (English) on cognitive processing. To achieve these objectives, the following questions were put forth:

- 1. What influence does foreign language anxiety have overall on university students' ability to speak English?
- 2. How does foreign language anxiety affect university students' cognitive processing of English and what are the main emotional factors that influence anxiety during the perception, processing, and production stages of the English language?
- 3. What anxiety components ('worry' or 'emotionality') affect more on students' English language performance?

Literature Review

Foreign Language Anxiety

The concept of foreign language anxiety (FLA) was first defined by Horwitz et al. (1986) within the context of situation-based anxiety. As a result of the unique nature of a language learning process, they defined FLA as a complex cluster of self-perceptions, convictions, emotions, and actions, all of which were related to classroom language acquisition. For sake of understanding, factors like test anxiety, fear of failure, and communication apprehension were kept different from FLA. It is interesting to mention that, later the scope of FLA was confined to a more generic term 'language anxiety' as both foreign and second language learners encounter anxiety (Horwitz & Young, 1991). It was argued that contexts for anxiety in both second and foreign languages are determined by the influence of culture and the learning environment (Horwitz & Young, 1991).

Since the 1970s, there has been a great deal of research done in the area of applied linguistics and language education on the subject of classroom anxiety in foreign languages. Horwitz et al.'s (1986) Foreign Language Classroom Anxiety Scale (FLCAS) was one of the main contributions. Their anxiety scale encompasses three aspects: apprehension in communication, anxiety in tests, and fear of receiving negative feedback. Nevertheless, not all studies that followed confirmed this three-dimensional structure (Dong et al., 2022). Instead, different cultural contexts have predicted foreign language performance using either two or four dimensions (Cheng, Horwitz, & Schallert, 1999). However, what has been consistent among all studies is that anxiety in foreign/second language is a leading factor among students and its influence on language learning outcomes and performance.

Ganschow & Sparks (1996) examined anxiety and foreign language aptitude differences showing basic language problems. Moreover, the relationships between anxiety and foreign languages have shown that they are a crucial area in language education (Naser Oteir & Nijr Al-Otaibi, 2019). Chinese high school students experience a moderate to high level of anxiety, according to research into the relationship between the anxiety scale used in foreign language classrooms and its influence on them (Dong et al., 2022; Zhang & Lai, 2023).

Foreign Language Anxiety and its Factors

In the past various studies have investigated how FLA negatively affected the learning process (MacIntyre & Gardner, 1994), and what factors caused FLA in learning situations (Horwitz et al., 1986), and contributed to the difficulty of second/foreign language learning, where anxiety seems to play a significant role in some manner or another (Baş & Özcan, 2018). The teaching environment was correlated with language learning techniques, and found to be the greatest factor which negatively affected any EFL setting causing anxiety and poor communication skills (Marashi & Assgar, 2019). Owing to this factor of a learning environment not conducive to FL/SL learning, several students were found struggling to achieve higher grades but failed (Bai, 2023). Other factors that have been found causing FLA included lack of motivation to learn a foreign language (Dörnyei, 2008), lack of emotions or enjoyment of learning a foreign language (Dong et al., 2022; MacIntyre, 2017; MacIntyre & Vincze, 2017), and the fear of not attaining quality performance (Eysenck, 1979).

However, FLA is not limited to only these factors only, as several other studies examined a variety of contexts revealing factors such as the English classroom environment, not limited to cognitive skills in English (Cummins, 1984), and learners' and instructors' beliefs about language learning (Young, 1991). In another study (Yahya, 2013), it was found that FLA was caused due to lack of ability to communicate in English. The study examined the presence of speaking anxiety among the Arab students in their communication classes, and found factors like evidence of fear of negative feedback, communication apprehension, and test anxiety impacting the academic achievements of students (Ali & Anwar, 2021).

Foreign Language Anxiety and Cognitive Processing

The scope of anxiety faced by learners in foreign language has now expanded and widened to include any kind of stress and fear particularly linked to foreign language environments involving speaking, listening, and learning (MacIntyre & Gardner, 1994). Studies have assigned several factors that cause anxiety in learning a foreign language, as mentioned above, but the term FLA is less explore to investigate the cognitive processing of learners to find out any correlation between FLA and their cognitive learning processes (Jin, Dewaele, & MacIntyre, 2021). The current study does not wish to enter into this debate of terminology shifts as foreign language anxiety is more relevant to this study. The study is mainly concerned with the dynamic trends seen in different models of FLA and what adaptability measures are adopted to understand the dynamic of anxiety (Shırvan & Talebzadeh, 2020).

Although the FLA phenomenon has been investigated in various contexts and circumstances since its origin, its first influence in the context of cognitive processes was found on native Hebrew speakers' English reading and writing assignments (Argaman & Abu-Rabia, 2002). The study found foreign language anxiety as a consequence that needed wider variables such as general cognition and native language skills. When students' cognitive skills are inadequate, the study argued, situational influences are seen in language classrooms, negatively affecting their performance (Lambert, 2023). It was therefore recommended to understand foreign language anxiety and interpret learners' cognitive load imposed on their working memory when doing a particular task. Yan & Liang (2022), too, found that FLA can pose a negative influence and create additional difficulties in cognitive processing, as there existed a significant negative correlation between the interpretation of foreign languages and its achievements. This is consistent with Chen, Zhang, & Yin (2022), who found that FLA can negatively influences the learners' cognitive load to complicate the learning process in diverse gamification factors.

Cognitive processing in the simplest form can be defined as the ability to comprehend and communicate ideas through spoken and written words, whereas cognitive abilities are a person's capacity to learn, process, and apply knowledge (Cherry, 2023). To understand how learners gain knowledge and comprehend in a foreign or second language, it is important to look at cognitive and affective factors. The cognitive component of anxiety was examined by Eysenck (1979), who classified anxiety components on cognition into two components: 'worry' component—which included comparing self with others' performance to peers, fear of failure, low level of confidence, and evaluation; and the second component of 'emotionality'—which involved negative feelings due to physiological functioning such as heartbeat, skin response, nausea, dizziness, and feelings of panic (Eysenck, 1979; Zheng & Cheng, 2018).

Tobias (1979), too, divided the cognitive influence model of anxiety on learning into three stages: input, processing, and output. The Input stage involved students' initial encounters with provided stimuli at a specific moment. Input is linked with the initial reflection of tasks in memory. For instance, the pace of speaking or dictation may create difficulties for learners. The Processing stage refers to the mental/thinking processes on the topic as categorization, retention, and integration of the given assignments/information. At this stage, processing

information or new messages gains accommodation and contextualization. In case anxiety occurs at this stage, understanding, and learning are affected. Hence, at this stage compartmentalization of information occurs. For instance, coping to understand and contextualize new linguistic expressions or vocabulary items would show difficulties at this stage. The Output stage involves the production of previously acquired information in the shape of spoken or written formats. The success at this stage relies on the preceding two stages, with regards to arrangement and the speed of generating output remembered from memory.

MacIntyre (2017) highlights the importance of self-referential cognition such as thoughts of inadequacy and self-criticism. Furthermore, as stated by Eysenck (1979), anxiety has the potential to impair cognition and disrupt memory. Foreign language anxiety can act as an emotional barrier that prevents the information from reaching a learner's cognitive processing system (Argaman & Abu-Rabia, 2002; MacIntyre & Gardner, 1994; Tobias, 1979; Tobias, 1986; Zheng & Cheng, 2018). In other words, at this stage retrieval of linguistic expressions or learned vocabulary items, or an inability to respond at all. For instance, test results do not reflect what has been taught to the learners. The model's stages are arbitrarily defined, but it is challenging to draw clear distinctions between them because learning is a continuous process, making it difficult to pinpoint when one stage ends and the next begins (Khan & Zafar, 2010; MacIntyre & Gardner, 1994; Tobias, 1979; Tobias, 1986). Nevertheless, the model is important in corroborating foreign language anxiety and its influence on cognitive processing in this study. Keeping in view the recommendation from Horwitz (2017) further research requires comprehension and address of the issues in anxious learners of different classroom situations.

Methods

Research Design

The research design of this study draws on both quantitative and qualitative approaches to the data, presented in numerical and descriptive forms. The quantitative data utilized Foreign Language Classroom Anxiety Scale (FLCAS), which comprised 33 items, corroborated by cognitive processing in the English language with an extended model of learning. The model was originally based on Tobias' (1979; 1986) three-stage model of learning: input (1 to 13 FLCAS items), processing (14 to 24 FLCAS items), and output (25 to 33 FLACAS items). The *Input anxiety stage* referred to the apprehension experienced while taking in information; the *Processing anxiety stage* involved the apprehension experienced when learning and thinking; and the *Output anxiety stage* encompasses the apprehension felt when communicating orally or in writing in a non-native/secondary language. This model was adapted in line with the study context to gain a deeper understanding of the phenomenon.

Sampling and Population

The population of the study comprised the Faculty of Philology of Peoples' Friendship University of Russia (RUDN), which is a public sector university located in Moscow. A total number of 306 participants agreed voluntarily to participate in the study. The participants were studying in their first (28.4%) and final year (71.6%) at the undergraduate and master levels. Although gender is a significant factor in such analytical studies, however, in this investigation, the gender variation was purposely disregarded.

Purposive sampling facilitates researchers due to the easy accessibility of the participants with specific criteria (Creswell & Creswell, 2022). Therefore, we used the purposive sampling technique due to its suitability of participants with specific eligibility criteria of studying English language programs and years of studying in the English language at RUDN University Moscow. Moreover, the selection population from RUDN University was due to academic mobility and a growing interacting hub for international students. Moreover, degree programs follow class tests, oral presentations, writing tasks, and mini-project submissions every semester. While all participants were assured of anonymity, informed consent was obtained from all of them.

The participants reported to be bi/multilingual (see Table 1) and belonged to 25 countries, with 77.5% primarily from Russia. The RUDN is Russia's largest international university hosting a large number of international students from 155 countries. All participants reported to have started English language learning from the age of 7-10 years. Consequently, it was decided to focus only the relationship between foreign language anxiety and cognitive processes in the English language in a classroom context. The participant demographic information assisted in understanding participants' background which helped in the interpretation of the results. Table 1 summarizes all this information.

Table 1: Statistical Information of the Participants.

Age	%	Gender	%	Languages Spoken by Participants	%
19-23 years	86.3	Female	77.5	2 languages	39.2
24-27 years	7.8	Male	22.5	3 languages	44.1
28-31 years	2.9			4 languages	16.7
31 years above	2.9				
Total	100%		100%		100%

Instrument and data collection

The data for the study was collected through a Foreign Language Classroom Anxiety Scale (FLCAS), a questionnaire designed by Horwitz et al. (1986). A 5-point Likert scale was utilized, which measured respondents' opinions as strongly agree (SA); agree (A); neutral (N); disagree (D); and strongly disagree (SD). For descriptive analysis the scale indicated a more language anxiety score for positively worded items as 'strongly agree 5', 'agree 4', 'neutral 3', 'disagree 2' and a decrease point of 1 'strongly disagree' for negative items. Moreover, the questionnaire was created on Google Forms and it was distributed online in different WhatsApp groups among participants.

Data Analysis

The data was analyzed using mixed methods including noting down concurrent timings and corroborating the data to provide more comprehensive findings. The survey data were examined using SPSS v.20 by employing descriptive statistics such as average/mean, frequency, and percentage.

Results

This section presents findings in the form of cumulative percentages presented on the Likert scale ranging from strongly agree to strongly disagree, corroborating each statement that indicated anxiety about foreign language. These findings were also corroborated with the three-stage model of Tobias' (1979; 1986), classifying all FLCAS items into input (1 to 13 items), processing (14 to 24 items), and output (25 to 33 items). The findings of *input anxiety stage* revealed that 59.8% students were positive in reporting anxiety while speaking in an English classroom; while those who felt worried about making mistakes in English tests comprised 56.8% (FLCAS item 2); 39.2% (FLCAS item 3); 48% (FLCAS item 4); 56.9% (FLCAS item 5); and 46.1% (FLCAS item 7). These findings indicate that students faced communication apprehension when speaking in English in front of their class fellows. It is evident that students experienced fear at the input anxiety stage as revealed in FLCAS item 6 (37.2%), which referred to students feeling lack of confidence in English classes.

In the *processing anxiety stage*, anxiety was felt by students mainly while learning and thinking, as reported by 64.7% (FLCAS item 8); 47.1% (FLCAS item 9); and 39.2% (FLCAS item 10). These students also indicated poor performance in the English language and experiencing panic about taking tests without preparation. In response to FLCAS item 13 (56.9%) students indicated negative alternatives and highlighted that they did not feel embarrassed to volunteer in learning the English language. In response to FLCAS item 12 and FLCAS item 15, a total of (55.9%) and (59.8%) students demonstrated a willingness to communicate with native English speakers respectively. On the other hand, (62.8%) students disagreed with the FLCAS item 16 and (57.8%) with FLCAS item 17, which asked them whether they felt any fear or lack of confidence in talking to foreigners. This response is contrary to the previous positive responses of students demonstrating anxiety.

Moreover, (63.7%) students for FLCAS item 18; (47.1%) for FLCAS item 19; and (46%) for FLCAS item 20 revealed negative responses which meant students avoided being corrected in front of other people, and that FLA did not affect their confidence. A few anxious students (56.9%) of FLCAS item 21 and (69.6%) of FLCAS item 22 also disagreed that preparation for English tests confused them. The findings suggest that students' test preparation and class participation were less impacted in English classrooms; however, their anxiety increased when corrections were made by teachers resulting in their absence from the classes.

The Output anxiety stage reveals students' responses to FLCAS item 23 (45.1%) and FLCAS item 24 (45.1%). The students accepted that they lacked English speaking ability and felt uncomfortable in front of other fellows. However, there was a negative response to FLCAS item 25 (55.8%) and to FLCAS item 26 (66.7%), when students demonstrated that they were not bothered by being in an English classroom and that they did not experience any tension or anxiety while learning the language. This shows that students were more willing to focus on English than other classes. Students' responses on FLCAS item 27 (64.7%) and FLCAS item 28 (68.6%) indicated that students felt confident and felt relaxed going to English classrooms. They also got nervous while comprehending English language teachers. Nervousness in the English language of students about lectures was reported by (48%) in response to FLCAS item 29 and by (52.1%) in response to FLCAS item 29; however, these students were not afraid of other students' attitudes (FLCAS item 31) like making fun of their English-speaking abilities (50%). Students reported that they would feel comfortable (FLCAS item 32; 63.7%) with native speakers of English; while (48%) agreed that they got anxious (FLCAS item 33) when language instructors asked them questions.

These findings from FLCAS items indicate that students lacked confidence and were worried about making mistakes which frightened them in front of other people. Moreover, they felt worried about English tests and questions posed by the teachers. These findings reveal that being corrected for mistakes and tests were continuous stressors on cognitive processing in the English language. Table 2 summarizes these findings on all 33 FLCAS items.

	Mean	Frequency of <i>n</i> =306						
FLCAS Item No		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree		
FLCAS item 1	3.25	9	174	42	45	36		
FLCAS item 2	2.73	15	75	42	162	12		
FLCAS item 3	2.74	3	117	39	90	57		
FLCAS item 4	3.19	63	84	42	81	36		
FLCAS item 5	3.68	75	99	132	18	12		
FLCAS item 6	3.06	12	102	105	66	21		
FLCAS item 7	3.10	27	114	51	90	24		
FLCAS item 8	3.74	78	120	66	33	9		
FLCAS item 9	2.95	18	126	33	81	48		
FLCAS item 10	3.00	15	99	72	111	9		
FLCAS item 11	2.83	12	54	123	105	12		
FLCAS item 12	3.23	21	150	36	75	24		
FLCAS item 13	2.43	12	21	99	129	45		
FLCAS item 14	3.64	78	114	45	63	6		
FLCAS item 15	3.52	42	111	42	66	15		
FLCAS item 16	2.31	9	72	33	84	108		
FLCAS item 17	2.48	27	69	33	72	105		
FLCAS item 18	3.72	75	120	69	33	9		
FLCAS item 19	2.99	51	72	39	111	33		
FLCAS item 20	2.70	6	75	84	102	39		
FLCAS item 21	2.55	3	81	48	123	51		
FLCAS item 22	3.74	60	153	54	30	9		
FLCAS item 23	3.29	72	66	69	78	21		
FLCAS item 24	3.09	12	126	72	69	27		
FLCAS item 25	2.83	60	39	36	132	39		
FLCAS item 26	2.39	12	60	30	138	66		
FLCAS item 27	2.51	15	69	24	147	51		
FLCAS item 28	3.71	48	162	69	12	15		
FLCAS item 29	3.18	69	78	36	144	39		
FLCAS item 30	2.54	15	24	108	63	36		
FLCAS item 31	2.70	12	111	30	78	75		
FLCAS item 32	3.54	27	168	63	39	9		
FLCAS item 33	3.46	105	42	69	69	21		

Table 2: FLCAS Items with Descriptive Statistics.

Discussion

The findings of the study reveal that foreign language anxiety (FLA), being a major reason of nervousness, affects university students' performance in the English language negatively. It is also revealed that students' anxiety increases when they cannot choose the right words to express or struggle to recollect ideas when speaking in English. This phenomenon is mostly seen in the input stage when students face complexity most in cognitive processing. Despite spending time on test preparation, they are not able to perform in tests, while other students' English-speaking abilities also undermine their confidence level. Such anxiety may also be due to fear of tests, and lack of test preparation affecting their performance in the English language.

MacIntyre (1995) argue that fear may be a significant factor in the development of individual differences in both second language acquisition and communication. Fear among the anxious students is not seen only during tests, but also when speaking in public and perceiving teacher error correction as uncomfortable in front of other students. Khan & Zafar (2010) reported that the state of anxiety increases when introducing video cameras in vocabulary learning tasks. Such situational differences create more anxiety among language learners, as they develop the fear of not able to achieve the tasks. Foreign language anxiety affects students' achievement in the classroom of being left behind in comparison to other fellow students. Poor achievement is attributed to the negative influence of anxiety which interferes with cognitive processes (Abbaszadeh & Vizayaletchumi, 2020). Another research by Alrashidi (2022) explored the sources of FLA and found fear of mistakes, negative evaluation, unfamiliarity with topics, and lack of preparation as main anxiety factors.

The cognitive processing of the FLA among university students was examined in three stages. At the input anxiety stage, students reported psychological factors affecting cognition. They felt fear, nervousness, communication apprehension, low self-confidence, and felt negative about the English language. In the next stage of processing, anxious students were found avoiding tests taken in English which impacted their English-speaking abilities. Furthermore, they indicated less anxiety for native English speakers and demonstrated a willingness to spend more time on improving the English language. In the output anxiety

stage, students lack English speaking due to other fellows' native responses or making fun in the classrooms. Anxiety affects the output of students in the English language.

The results of the current study are consistent with those of Horwitz et al. (1986), who agreed that students are anxious about foreign language learning at the university level and react severely. Zheng & Cheng (2018), too, investigated the relationship between students' fear of a foreign language in the classroom and the cognitive influence of test anxiety. The results confirmed that cognitive processes were adversely affected when students expressed fears about their English skills in the classroom. Likewise, Pérez Castillejo (2019) analyzed the relationship between language anxiety and oral competence, whose results supported cognitive processing deficits caused by foreign language anxiety.

The study also made evident that when teachers spot corrections, students do not feel undermined in their cognitive processing; rather, they are highly motivated to improve their English language skills, which is consistent with a recent study (Toyama & Yamazaki, 2021b). On the contrary, Khajavy et al. (2018) found that students' progress was hindered by anxiety and shame, by their inability to answer the questions, and also by the anxiety caused due to factors like class observation and lack of preparation. Toyama & Yamazaki (2021a), too, analyzed classroom interventions and foreign language anxiety, and concluded that student-student interactions, student-teacher interactions, self-management, and mood boosters differed in type, duration, and scale to measure foreign language anxiety. In this way, it was suggested that such categories of classroom intervention played a determining role in foreign language anxiety. Zhang et al. (2020) found that Chinese-English bilinguals express more anxiety when speaking a foreign language than when interacting with their native language which affects the cognitive process. Hence, on the contrary in our study, students reported being highly motivated to interact with native English speakers. Foreign language anxiety among Chinese is seriously affected negatively and is an important issue (Liu & Wu, 2021).

To sum up, foreign language anxiety impairs students' ability to learn the English language and, as a result, lowers their cognitive processing of the language. In university students, the 'worry' component of anxiety is more prominent than 'emotionality'. The strong relationships between items of input, processing, and output and foreign language anxiety demonstrate that anxiety persists at all stages of cognitive processing in English language learning. Fears of different types are more often related to the activities in which the teacher is involved, which means the role of the teacher in reducing the level of students' English language anxiety is increasing.

Conclusion

The goal of this study was to investigate the relationship between anxiety and foreign language learning in three stages of cognitive processing and study the impact of anxiety on students' English speaking. The current study findings indicate that anxiety is a common factor negatively affecting the cognitive processing of university students when studying the English language. FLA affects performance and attainment of English language skills, which may result in success or failure. Hence, it seems that early-stage anxiety affects the cognitive processing stage, the teacher's role is important as students are tasked with tests and teaching materials introduced in the classrooms. The anxiety influences output stage students feel more worried as noticed by Horwitz et al. (1986) argue that students experiencing anxiety may avoid speaking in class, and delay tasks assigned by the teachers. Thus, proficiency in the English language seems to be an important feature of classroom setting.

The findings have considerably important implications for second/foreign language teaching, classroom environment, pedagogical activities, English language education, educational psychology, and cognitive science. To reduce foreign language anxiety, we recommend that learners be provided more exposure to the target language to reduce anxiety such as increased speaking activities. The study has some limitations as it did not consider the variables of gender, years of studying English, and age differences in foreign language anxiety. Future studies may take up these variables for examining their impact on foreign language anxiety. A bigger sample from a wider population would also give more responses and reveal further interesting facts in correlations between Russian and international students of the English language. Last, but not the least, a qualitative inquiry into the phenomenon may reveal individual differences between university students on FLA and cognitive processing.

Acknowledgments

This publication has been supported by the RUDN University Scientific Projects Grant System, project N $_{0}$ 050738–0-000: "Diagnosis of Cognitive Violations and Success/Failure in Rehabilitation Practice and Educational and Scientific Activities." Peoples' Friendship University of Russian (RUDN University), 6, 117198, Russian Federation.

References

- Abbaszadeh, M., & Vizayaletchumi, P. R. (2020). Investigating the relationship between language skills anxiety and foreign language learning aptitude among Iranian EFL learners. *Journal of Social Sciences and Humanities Research*, 8(2), 8-12. doi: <u>https://doi.org/10.24200/jsshr.vol8iss2pp8-12</u>
- Ali, B. J., & Anwar, G. (2021). Anxiety and Foreign Language Learning: Analysis of students' anxiety towards Foreign language learning. *International Journal of English Literature and Social Sciences*, 6(3), 234-244. doi: <u>https://doi.org/10.22161/ijels.63.32</u>
- Alnuzaili, E. S., & Uddin, N. (2020). Dealing with Anxiety in Foreign Language Learning Classroom. Journal of Language Teaching & Research, 11(2), 269-273. doi: <u>https://doi.org/10.17507/jltr.1102.15</u>
- Alrashidi, O. (2022). Sources of foreign language teaching anxiety among Saudi preservice English teachers: A qualitative inquiry. SAGE Open, 12(3), 21582440221119486. doi: <u>https://doi.org/10.1177/21582440221119486</u>
- Argaman, O., & Abu-Rabia, S. (2002). The influence of language anxiety on English reading and writing tasks among native Hebrew speakers. *Language Culture and Curriculum*, 15(2), 143-160. doi: <u>https://doi.org/10.1080/07908310208666640</u>
- Bai, S. (2023). The predictive effects of foreign language anxiety and boredom on willingness to communicate among Chinese struggling EFL learners. *Heliyon*, 9, 1-11. doi: <u>https://doi.org/10.1016/j.heliyon.2023.e19610</u>
- 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. Retrieved from <u>https://www.j-humansciences.com/ojs/index.php/IJHS/article/view/4441</u>
- Castillejo, S. P. (2023). Prior processing, foreign language classroom anxiety, and L2 fluency. *International Review of Applied Linguistics in Language Teaching*, 61(2), 519-544. doi: <u>https://doi.org/10.1515/iral-2021-0091</u>
- Chen, Y., Zhang, L., & Yin, H. (2022). A Longitudinal Study on Students' Foreign Language Anxiety and Cognitive Load in Gamified Classes of Higher Education. Sustainability, 14(17), 10905. doi: <u>https://doi.org/10.3390/su141710905</u>
- Cheng, Y. s., Horwitz, E. K., & Schallert, D. L. (1999). Language Anxiety: Differentiating Writing and Speaking Components. Language Learning, 49(3), 417-446. doi: <u>https://doi.org/10.1111/0023-8333.00095</u>
- Cherry, K. (2023, April, 23). What Does 'Cognitive' Mean in Psychology? How People Think and What's Involved in Cognitive Processes. Verywell Mind. Retrieved from <u>https://www.verywellmind.com/</u> what-is-cognition-2794982#toc-definition-of-cognition
- Creswell, J. W., & Creswell, J. D. (2022). Research Design: Qualitative, Quantitative, and Mixed Methods Approaches (6th ed.). SAGE Publications.
- Cummins, J. (1984). Bilingualism and Special Education: Issues in Assessment and Pedagogy. San Diego: College-Hill.
- Dong, L., Liu, M., & Yang, F. (2022). The relationship between foreign language classroom anxiety, enjoyment, and expectancy-value motivation and their predictive effects on Chinese high school students' selfrated foreign language proficiency. *Frontiers in Psychology*, 13, 860603. doi: <u>https://doi.org/ 10.3389/fpsyg.2022.860603</u>
- Dörnyei, Z. (2008). The Psychology of the Language Learner: Individual Differences in Second Language Acquisition. Mahwah, NJ: Lawrence Erlbaum.
- Erzhanova, A., Koncha, V., & Kharkhurin, A. (2023). Exploring xenoglossophobia: How subjective sociodemographic status and language experience relate to foreign language classroom anxiety? *Psychological Research*, 16(90), 3. doi: <u>https://doi.org/10.54359/ps.v16i90.1435</u>
- Eysenck, M. W. (1979). Anxiety, learning, and memory: A reconceptualization. Journal of Research in Personality, 13(4), 363-385. doi: https://doi.org/10.1016/0092-6566(79)90001-1
- Ganschow, L., & Sparks, R. (1996). Anxiety about foreign language learning among high school women. *The* Modern Language Journal, 80(2), 199-212. doi: <u>https://doi.org/10.1111/j.1540-4781.1996.tb01160.x</u>
- Horwitz, E. K. (2017). On the Misreading of Horwitz, Horwitz and Cope (1986) and the Need to Balance Anxiety Research and the Experiences of Anxious Language Learners. In G. Christina, D. Mark, & D. Jean-Marc (Eds.), *New Insights into Language Anxiety* (pp. 31-48). Multilingual Matters. doi: <u>https://doi.org/10.21832/9781783097722-004</u>
- Horwitz, E. K., Horwitz, M. B., & Cope, J. (1986). Foreign Language Classroom Anxiety. The Modern Language Journal, 70(2), 125-132. doi: <u>https://doi.org/10.2307/327317</u>
- Horwitz, E. K., & Young, D. J. (1991). Language anxiety: From theory and research to classroom implications. Prentice Hall.
- Jin, Y., Dewaele, J.-M., & MacIntyre, P. D. (2021). Reducing anxiety in the foreign language classroom: A positive psychology approach. System, 101, 102604. doi: <u>https://doi.org/10.1016/j.system.2021.102604</u>
- Khajavy, G. H., Ghonsooly, B., Fatemi, A. H., & Frenzel, A. C. (2018). Antecedents of Pleasant and Unpleasant Emotions of EFL Teachers Using an Appraisal-theoretical Framework. *Iranian Journal of Language Teaching Research*, 6(2), 39-55. doi: <u>https://doi.org/10.30466/ijltr.2018.120559</u>
- Khan, Z. A., & Zafar, S. (2010). The Effects of Anxiety on Cognitive Processing in English Language Learning. English Language Teaching, 3(2), 199-209. doi: <u>https://doi.org/10.5539/elt.v3n2p199</u>

- Lambert, D. (2023). Student Anxiety in the Foreign Language Classroom: A Qualitative Phenomenological Study (Doctoral dissertation, Liberty University). Retrieved from <u>https://www.proquest.com/</u><u>openview/2cfd91440b311699751dd7636adf86b5</u>
- Liu, M., & Wu, B. (2021). Teaching anxiety and foreign language anxiety among Chinese college English teachers. Sage Open, 11(2), 21582440211016556. doi: <u>https://doi.org/10.1177/21582440211016556</u>
- MacIntyre, P. D. (1995). How does anxiety affect second language learning? A reply to Sparks and Ganschow. The Modern Language Journal, 79(1), 90-99. doi: <u>https://doi.org/10.1111/j.1540-4781.1995.tb05418.x</u>
- MacIntyre, P. D. (2017). An Overview of Language Anxiety Research and Trends in its Development. In G. Christina, D. Mark, & D. Jean-Marc (Eds.), New Insights into Language Anxiety (pp. 11-30). Multilingual Matters. doi: <u>https://doi.org/10.21832/9781783097722-003</u>
- MacIntyre, P. D., & Gardner, R. C. (1994). The subtle effects of language anxiety on cognitive processing in the second language. Language Learning, 44(2), 283-305. doi: <u>https://doi.org/10.1111/j.1467-1770.1994.tb01103.x</u>
- MacIntyre, P. D., & Vincze, L. (2017). Positive and negative emotions underlie motivation for L2 learning. Studies in Second Language Learning and Teaching, 7(1), 61-88. doi: <u>https://doi.org/10.14746/ssllt.2017.7.1.4</u>
- Maher, K., & King, J. (2023). Language anxiety and learner silence in the classroom from a cognitivebehavioral perspective. Annual Review of Applied Linguistics, 43, 105-111. doi: <u>https://doi.org/10.1017/S0267190523000077</u>
- Marashi, H., & Assgar, F. (2019). EFL teachers' effective classroom management and learners' anxiety and learning strategies. Iranian Journal of Language Teaching Research, 7(2), 65-82. doi: <u>https://doi.org/ 10.30466/ijltr.2019.120698</u>
- Naser Oteir, I., & Nijr Al-Otaibi, A. (2019). Foreign language anxiety: A systematic review. Arab World English Journal (AWEJ), 10(3), 309-317. doi: <u>https://doi.org/10.24093/awej/vol10no3.21</u>
- Oruç, E., & Demirci, C. (2020). Foreign language anxiety and English language achievement in higher education: The mediating role of student engagement. *European Journal of Education Studies*, 7(3), 199-212. doi: http://dx.doi.org/10.46827/ejes.v0i0.3012
- Pérez Castillejo, S. (2019). The role of foreign language anxiety on L2 utterance fluency during a final exam. Language Testing, 36(3), 327-345. doi: <u>https://doi.org/10.1177/0265532218777783</u>
- Shirvan, M. E., & Talebzadeh, N. (2020). Tracing the signature dynamics of foreign language classroom anxiety and foreign language enjoyment: a retrodictive qualitative modeling. *Eurasian Journal of Applied Linguistics*, 6(1), 23-44. doi: <u>https://doi.org/10.32601/ejal.710194</u>
- Shtembari, A., Lozano, M. G., & Forte, P. (2023). Managing foreign language classroom anxiety among French undergraduate students: pedagogical implications and perspectives. *International Journal of Management and Decision Making*, 22(2), 219-235. doi: https://dx.doi.org/10.1504/IJMDM.2023.129840
- Tobias, S. (1979). Anxiety Research in Educational Psychology. Journal of Educational Psychology, 71(5), 573-582. doi: https://doi.org/10.1037/0022-0663.71.5.573
- Tobias, S. (1986). Anxiety and cognitive processing of instruction. In R. Schwarzer (Ed.), *Self-related cognition* in anxiety and motivation (pp. 35-54). Hillsdale, NJ: Erlbaum. Retrieved from <u>https://www.</u> taylorfrancis.com/chapters/edit/10.4324/9780203781609-3
- Toyama, M., & Yamazaki, Y. (2021a). Anxiety reduction sessions in foreign language classrooms. *The Language Learning Journal*, 49(3), 330-342. doi: <u>https://doi.org/10.1080/09571736.2019.1598474</u>
- Toyama, M., & Yamazaki, Y. (2021b). Classroom interventions and foreign language anxiety: A systematic review with narrative approach. *Frontiers in Psychology*, 12, 614184. doi: <u>https://doi.org/10.3389/fpsyg.2021.614184</u>
- Yahya, M. (2013). Measuring speaking anxiety among speech communication course students at the Arab American University of Jenin (AAUJ). *European Social Sciences Research Journal*, 1(3), 229-248. Retrieved from <u>https://www.academia.edu/download/53011726/full_text_measuring_speaking_anxiety_among_speech_communication.pdf</u>
- Yan, J. X., & Liang, J. (2022). Foreign language anxiety and dependency distance in English–Chinese interpretation classrooms. Frontiers in Psychology, 13, 952664. doi: <u>https://doi.org/10.3389/fpsyg.2022.952664</u>
- Young, D. J. (1991). Creating a Low-anxiety Classroom Environment: What Does Language Anxiety Research Suggest? The Modern Language Journal, 75(4), 426-439. doi: <u>https://doi.org/10.2307/329492</u>
- Yunusova, S. (2023). Literature as an" Affective Magnet": Defining, Engaging and Investigating Emotions in a (Russian) Language-Literature Classroom. *Russian Language Journal*, 73(1), 3. Retrieved from <u>https://scholarsarchive.byu.edu/rlj/vol73/iss1/3</u>
- Zhang, J., Lu, Y., Zhang, Q., & Zhang, J. (2020). The effects of foreign language anxiety, nervousness and cognitive load on foreign language lying: Evidence from Chinese-English bilinguals. Acta Psychologica Sinica, 52(7), 861-873. doi: <u>https://doi.org/10.3724/SP.J.1041.2020.00861</u>
- Zhang, S., & Lai, C. (2023). Investigation of factors underlying foreign language classroom anxiety in Chinese university English majors. *Applied Linguistics Review*. doi: <u>https://doi.org/10.1515/applirev-2021-0062</u>
- Zheng, Y., & Cheng, L. (2018). How does anxiety influence language performance? From the perspectives of foreign language classroom anxiety and cognitive test anxiety. *Language Testing in Asia*, 8(1), 13. doi: <u>https://doi.org/10.1186/s40468-018-0065-4</u>