

Anxiety and Personality as Indicators of Academic Performance in University Foreign Language Classrooms

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ABSTRACT: The main purpose of this study is to test whether students' performance in official language tests in the university context is influenced, apart from anxiety, by certain personality traits. A sample of 394 university students in Spain were assessed in language academic performance using the Test of English for International Communication: Listening and Reading (TOEIC L&R), Foreign Language Anxiety using the Spanish version of the Foreign Language Classroom Anxiety Scale (FLCAS), Test Anxiety, by means of the Spanish version of the Test Anxiety Inventory and Personality Traits through the Five Factor Inventory (NEO-FFI). Frequency analyses for the categorical variables, and means and standard deviations for continuous variables were calculated, and a forward stepwise regression model was used to assess the independent variables that contributed significantly to the variance in the score on the academic performance. Foreign Language Classroom Anxiety (FLCA) correlated most significantly with student foreign language academic performance, followed by the Neuroticism dimension, Test Anxiety and Extraversion. These results show that anxiety can still be considered the best indicator to predict language academic performance and that personality traits do play a relevant part in the foreign language learning process in the university context.

Key words: Foreign Language Anxiety, Personality Traits, Test Anxiety, Academic Performance, Higher Education

Ansiedad y personalidad como indicadores del rendimiento académico universitario en el aula de idiomas

RESUMEN: El objetivo de este estudio es comprobar si, aparte de la ansiedad, ciertas dimensiones de la personalidad tienen influencia en el rendimiento académico universitario en exámenes oficiales de idiomas. En una muestra de 394 estudiantes de una universidad española, se evaluó el rendimiento académico en idiomas mediante el examen Test of English for International Communication: Listening and Reading (TOEIC L&R), la ansiedad en lengua extranjera con la FLCAS, la ansiedad ante los exámenes

con el Test Anxiety Inventory y las dimensiones de la personalidad con el NEO-FFI. Se calcularon análisis de frecuencias para las variables categóricas, y medias y desviación estándar para las variables continuas, y se aplicó un modelo de regresión lineal múltiple por pasos para identificar las variables independientes que contribuyen de manera significativa a la varianza del resultado del rendimiento académico. La ansiedad en el aula de idiomas es la variable que correlaciona más significativamente con el rendimiento académico, seguida por la dimensión de Neuroticismo, la Ansiedad ante los Exámenes y Extraversión. Los resultados muestran que la ansiedad puede seguir siendo considerada el indicador más eficaz para predecir el rendimiento académico en idiomas y que las dimensiones de la personalidad tienen cabida en el proceso de aprendizaje de idiomas en el contexto universitario.

Palabras clave: Ansiedad en Lengua Extranjera, Dimensiones de Personalidad, Ansiedad ante los Exámenes, Rendimiento Académico, Educación Superior

1. INTRODUCTION

There are many studies that show and measure the different factors that influence a learner in the foreign language classroom setting and how they impact academic performance and second language learning and acquisition. Among these factors, we can find attitude and motivation (for example Brady, 2019; Dörnyei, 2009; Ushioda & Dörnyei, 2009), willingness to communicate (MacIntyre & Doucette, 2010), self-perception of linguistic competence (Donovan & MacIntyre, 2004), cultural aspects (Sallinen-Kuparinen et al., 1991), a huge number of affective and emotional variables and even cognitive factors (Dewaele & Li, 2020; Spielberger in Scovel, 1978) and, of course, anxiety (see Horwitz, 2010). Personality variables, strangely enough, raised interest in early studies of language learning but researchers tended to avoid including them in the L2 research agenda, probably due to the failure to produce significant findings (Griffiths, 1991) and they have only just started to be considered a relevant element in the complex equation of second language learning (SLL) and its connection to anxiety.

2. LITERATURE REVIEW

2.1. Foreign Language Anxiety

Anxiety, connected to foreign language learning, its causes, effects and impact on academic performance has been the object of much research for the last 50 years. Due to its complexity, it cannot simply be measured in high or low amounts (Kleinmann, 1977), since it is continuously interacting with learner, situational or other factors including linguistic abilities, physiological reactions, self-related appraisals, pragmatics, interpersonal relationships, topics, setting, and so on (MacIntyre, 2017).

Spielberger et al. (1970) classified general anxiety into Trait Anxiety, a relatively stable behavioural disposition to respond anxiously to a wide range of threatening stimuli, and State Anxiety, a transitory emotional state of arousal to perceived dangerous stimuli. A-State may

vary in intensity and fluctuate over time. Foreign Language Anxiety (FLA) would fall into a third type of anxiety, situation-specific, since it applies to the specificities of language learning and acquisition, being stable over time, but only transitory, limited to the duration of the class, and in a very particular setting (Gardner, 1985; Horwitz et al., 1986; MacIntyre & Gardner, 1991a). MacIntyre and Gardner (1989, 1991a) distinctively separated FLA from General Anxiety, and therefore Trait or State anxieties, which, they claimed, play little or no part in language acquisition, and placed it inside the broader term of Communicative Anxiety. Therefore, FLA was defined by Horwitz et al. (1986) as “a distinct complex of self-perceptions, beliefs, feelings, and behaviors related to classroom language learning arising from the uniqueness of the language learning process” (p.128). Horwitz later explained that FL learners “have the trait of feeling state anxiety when participating in language learning and/or use” (Horwitz, 2017, p. 33).

FLA has been firmly discriminated from other types of anxiety but, as Dewaele (2013) points out, this differentiation could be disputed, since FLA has often positively correlated both with State-Trait anxiety inventories and Test Anxiety Scales, from which we can conclude that FLA might not be so independent from other anxieties or particular personality traits.

When Horwitz et al. (1986) created the first tool to measure FLCA, the Foreign Language Classroom Anxiety Scale (FLCAS), they conceived it by drawing “parallels between it [FLCA] and three related performance anxieties” (p. 127), which are Communication Apprehension, Fear of Negative Evaluation and Test Anxiety. They added that, although these three anxieties “provide useful conceptual building blocks for a description of foreign language anxiety, (...) foreign language anxiety is not simply the combination of these fears transferred to foreign language learning” (p. 127), but rather has a conceptual identity of its own. Horwitz later had to clarify that “Language Anxiety was only analogous to – and not composed of – the three related anxieties” (2017, p. 33) Despite this, a lot of literature was already written to try to identify the constructs behind the FLCAS, Test Anxiety being the most controversial of all. Some authors excluded Test Anxiety in the factor structure, considering it a general anxiety problem and conceptually unrelated to FLA or language learning (Aida, 1994; MacIntyre & Gardner, 1989; Pérez Paredes & Martínez-Sánchez, 2001), while others have found between three and five factors, and included Test Anxiety as one of them (Kim, 2002; Na, 2007; Park, 2012).

As can be seen, Test Anxiety, defined by Zeidner (1998) as “the set of cognitive, affective, and behavioral reactions that accompany concern over possible negative consequences contingent upon performance in a test or evaluative situation” (p. 25), is probably the most controversial of the three dimensions. What differentiates Test Anxiety from the previous two anxieties related to FLA is that, for over 60 years, different theories and models have been created that analyse how anxiety and test-taking relate. Among them we can find the drive model (Spence & Spence, 1966); the deficit models, including the interference model (Saranson, 1972; Wine, 1971), and the study skills deficit model (Benjamin et al., 1981); cognitive-motivational models (see Zeidner, 1998); or the transactional model (Spielberger & Vagg, 1995). There is no one explanatory model or hypothesis, though, that can include the myriad of factors that take part in test anxiety or that have been consistent with most of test anxiety research but, one way or another, where there is broad agreement is in that test anxiety is associated with lower academic performance (Zeidner, 1998).

Anxiety, when applied to the classroom environment, as in language learning in particular, can have an effect in all three stages of instruction: pre-processing, interfering with the quality and amount of input the student receives; processing, which depends on the difficulty of the task, reliance on memory and organisation; and output, interfering with retrieval of learned information (MacIntyre & Gardner, 1994; Tobias, 1986).

Its effects on academic performance have been of particular interest, producing a great amount of literature. In early studies, the debate revolved around whether FLA has a facilitating or debilitating effect on the learner, after suggestions (Alper & Haber, 1960; Kleinmann, 1977; Scovel, 1978) that anxiety could be considered an asset to performance when learning a second language. But the debate can now be considered closed, and anxiety can be better conceptualised only as debilitating (Horwitz, 2017) since there is virtually no reliable evidence of facilitating anxiety in the literature that cannot otherwise be explained by either using non-language specific measurements, or misusing the original idea of facilitating anxiety (MacIntyre, 2017).

Most of the research that has analysed the relationship between FLA and achievement has consistently found a moderate negative connection between the two (Horwitz, 2001). Teimouri et al. (2019) examined 97 studies where the connection between FLCA and achievement was analysed and even when there are different measures for achievement, language tests, course grades, self-assessment or grade course average, the results were that, overall, language anxiety accounts for 13 % of the variance.

The relationship between anxiety and test performance has also been the source of much debate, not only on whether one influences the other, but also on the direction of their causal relationship, since most authors consider poor results to be the consequence of anxiety (Dutke & Stroeber, 2001; Gardner & MacIntyre, 1993; Hembree, 1988; Horwitz et al., 1986; Salehi & Marefat, 2014), but others (Argaman & Abu-Rabia, 2002; Sparks & Ganschow, 1991), have postulated that it is poor results that cause anxiety.

In the case of Salehi and Marefat (2014), they claimed that it is both FLCA and Test Anxiety that explain poor academic results, although Zheng and Cheng (2018), found that Test Anxiety was a significant negative predictor of test scores, whereas FLCA was not.

2.2. Personality and Foreign Language

Much has been changing in recent years in the study of SLL since Ellis (1985) and contemporaries found little connection with personality and tended to focus more on the effect of affective variables. Up to the 1990s, studies had failed to produce consistently significant findings (Griffiths, 1991), although Guiora et al. (1972) already defended the strong connection between language and personality, and how one may feel as a different person when speaking a foreign language and how a highly integrated ego functioning plays a major role in learning and manipulating grammar, syntax, and vocabulary. They perceived *language ego* as a maturational concept that refers to self-representation, and its development “directly parallels that of general ego development” and defended that “to learn a second language is to take on a new identity” (p. 422). Cohen and Norst (1989, in MacIntyre, 2017) argued that language and a sense of self are so closely tied together that a threat to one is a threat to the other.

The unique characteristics of a language class challenge learners' self-concept and identity as competent speakers, on occasions changing their personality from outgoing to reserved, for example, having to redefine themselves through a process of ego-threatening, anxiety, worry, or frustration stemming from not being able to communicate a message (Horwitz et al., 1986; MacIntyre & Gardner, 1991b). One personality-related factor that has been used as a predictor for academic achievement in the FL classroom has been self-confidence (Alrabai, 2017; Matsuda & Gobel, 2004). Young (1991) quotes Krashen when he says that "people with low self-esteem worry about what their peers think; they are concerned with pleasing others. And that I think has to do to a great degree with anxiety" (p. 427). Indeed, it is a very complex endeavour to disentangle the effect of personality among the multitude of cognitive, social, and situational factors involved in SLL, since personality variables interact with its dynamic socio-educational context (Dewaele, 2012b).

The distinction and classification of the different traits that form a personality are key to trying to explain what it is that defines a person. The labelling of these traits has produced vast amounts of literature, with a variety of results, but all these attempts try to point to recurring patterns to allow for generalizations about how individuals with similar traits are likely to act and react (McCrae & Costa Jr., 2008).

The Big Five construct is one of the dominant taxonomies (Dewaele, 2012a; McCrae & Costa Jr., 2008), and comprises all personality traits into five: Extraversion, Agreeableness, Conscientiousness, Neuroticism and Openness. Although the five traits have received many different names, they always refer to the same characteristics. *Extraversion* would be connected to adjectives such as sociable, assertive, or talkative; *Agreeableness* would imply likeability, friendly compliance, or conformity; *Conscientiousness* is understood as task interest, responsibility, efficiency, or self-control; *Neuroticism* refers to a lack of emotional stability or control, or negative emotionality; and *Openness* to intelligence, creativity or inquisitiveness (Digman, 1990; MacIntyre & Charos, 1996; McCrae & John, 1992).

The Big Five have met with great interest as predictors of academic achievement but with mixed results, and most of the studies that have connected them to SLL and FLA have mainly focused on the traits of Extraversion, Neuroticism and Conscientiousness (Baba Khouya, 2018). MacIntyre and Charos (1996) did make a connection between personality traits and the learning of an L2, although not a direct one. They theorized that personality influenced affect, affect impacted on motivation and motivation determined Frequency of L2 use. But motivation was later outperformed as a predictor for Grade Point Average by personality traits (Komarraju et al., 2009) and, contrary to Dewaele et al.'s study (2008) 2007, they did not find a relation between Neuroticism/emotional stability and FLA.

As for each of the personality traits and their connection with academic achievement, *Conscientiousness* is regarded as a clear predictor, if not the best (Baba Khouya, 2018; Busato et al., 2000; Chamorro-Premuzic & Furnham, 2003; Costa & McCrae, 1992; Furnham et al., 2003; Komarraju et al., 2009, 2011). Krashen (1981) suggested that those students who have an analytic orientation, i.e., rating high in conscientiousness, would be expected to exhibit a more favourable attitude towards conscious learning and language learning contexts. Not so for language acquisition, which Krashen defends would relate better to an outgoing personality or a lack of anxiety. Perfectionism has been shown to hinder language learning and academic results in languages (Wang et al., 2018) and these more meticulous and highly conscientious students tend to experience higher FLA (Gregersen & Horwitz, 2002).

Regarding language achievement, though, *Extraversion* has been of primary interest in many investigations. It is generally accepted that introverts may have an advantage over extraverts with respect to the ability to consolidate learning in general, as well as lower distractibility and better study habits (Furnham et al., 2003; Kiany, 1998). But for language learning, a higher willingness to communicate and sociability are characteristics seen as advantageous. Strangely enough, though, both ends of this dimension – introversion/ extraversion – have been considered ideal (Baba Khouya, 2018; Kiany, 1998; MacIntyre & Charos, 1996; Sharp, 2008). Dewaele and Furnham (1999) argued that Extraversion could be a beneficial dimension as having an effect on L2 speech production and, although extraverts had lower social and language anxiety and better resistance to stress in environments with high information flows and time pressure, this may not necessarily affect the process of language learning.

Neuroticism has been suggested to have a significant correlation with FLA, and therefore considered detrimental for language learning (Chamorro-Premuzic & Furnham, 2003; Dewaele, 2002, 2013; Komarraju et al., 2009; Sharp, 2008), but in other cases, the lack of emotional stability a neurotic personality entails, although making the individual more prone to FLA, has been considered separate from trait anxiety and so, independent from SLL (MacIntyre & Charos, 1996). Similarly, it has been connected, along with other cognitive factors, to directly impact test anxiety (Cassady & Johnson, 2002; Hembree, 1988), and with lower levels of attendance, a lower self-concept or even physiological symptoms (Furnham et al., 2003).

Agreeableness has been positively correlated with academic performance (Komarraju et al., 2009) as well as with four different learning styles, due to the broadly beneficial effects of cooperative attitude (Komarraju et al., 2011). MacIntyre and Charos (1996) suggested a path from agreeableness to integrativeness, or the willingness to interact with members of the L2 community, and suggest that learners scoring high on this dimension are more likely to engage in positive interactions with members of the L2 community, which will eventually impact on language learning outcomes.

In their study, Verhoeven and Vermeer (2002) found *Openness* to be a good predictor of foreign language learning achievement, in fact, the only dimension that, to them, substantially correlated with L2 linguistic abilities of the learners. Together with conscientiousness and extraversion, although these to a lesser extent, they found openness to be connected to the construction of basic organisation skills, which include lexical and syntactic and functional abilities, acquisition of pragmatic skills and development of monitoring strategies.

Komarraju et al. (2009, 2011) positively correlated openness with academic performance, with intrinsic motivation, and two reflective learning styles, since individuals scoring high on this trait tend to display strong intellectual curiosity and are eager to learn. These learners, in a foreign language learning context, focus on meaning and possibilities, are good at dealing with constant change, are good readers, tend to seek hidden patterns and can pick up native-like ways of self-expression (Ehrman, 2008, in Dewaele, 2012a).

As can be seen, all five traits have, in one way or another, or at one time or another, been considered good predictors of academic performance and of language learning and acquisition, and the debate as to which would be more desirable for an ideal language learner is still open. FLA, on the other hand and as has been seen, has also been used as

a predictor for academic achievement, but the studies that combine both are very scarce. This study aims to determine to what extent academic performance is influenced by the combination of these factors.

3. RESEARCH METHOD

3.1. Sample

A questionnaire was applied to a convenience sample of 394 university students from Madrid at the Rey Juan Carlos University, who were part of the 2,648 students enrolled in the subject *Modern Language* in a wide range of degrees, from Law or Education to Biology or Engineering, during the first term of the 2019-2020 academic year. The average age was 21.07 (SD = 3.94) with an age range between 18-56 years. The subject Modern Language (*Idioma Moderno*) is compulsory and common to all degrees in this University, and students are grouped in class by language level and schedule preference, not by degree. Teachers follow one same methodology and the subject has a communication-oriented approach and focuses both on improving students' language skills and teaching and drilling test-taking skills.

3.2. Instruments used in data collection

From October to December 2019, the questionnaire containing the different scales and socio-demographic information, i.e. age, gender and studies, was distributed to students via their university email. Teachers were briefed on how the questionnaire should be answered so students received the explanation and could complete it in the first 10/15 minutes of class or any other time, and the results were then matched to students' TOEIC scores, which were obtained at the end of the course. Students participated voluntarily using an electronic platform and anonymity was ensured. This study was approved by the Ethics Committee of the Rey Juan Carlos University in accordance with the ethical standards established by the Helsinki Declaration in 2008 and revised in Fortaleza (World Medical Association, 2013). The response rate was 14.87 %, and the scales used were the following:

Test Of English for International Communication (TOEIC®) score: this is an official language exam provided by Educational Testing Services®, external to Universidad Rey Juan Carlos but taken in campus. This is a multi-level exam, and the format used for this study was the Listening and Reading Test, used to assess students in the subject. The Listening section lasts approximately 45 minutes and the Reading 75, and three scores are given: Listening, Reading and Overall. The latter was used as a measure for Foreign Language Academic Performance.

Foreign Language Classroom Anxiety Scale (FLCAS) (Horwitz et al., 1986): For this study we used the validated Spanish version. It was composed of 33 items with answers on a 5-point Likert scale from *1 Strongly Agree* to *5 Strongly Disagree*. The Cronbach's alpha for the original instrument was .93 with a test-retest $r = .83$ ($p < .001$) and for the Spanish validation, the index of reliability was .89. (Pérez Paredes & Martínez-Sánchez, 2001).

Neo Five-Factor Inventory (NEO-FFI) (Costa & McCrae, 1992) in its Spanish version, consisting of 60 items (twelve for each factor) with answers presented also on a 5-point Likert scale, being *1 Totally Disagree* and *5 Totally Agree*. Although the results of the NEO-FFI are not as detailed as the ones provided by the NEO-PI-R, which includes 30 subordinate facets of those 5 factors, the NEO-FFI was considered more appropriate because of time requirements. The Cronbach's alpha for each of the factors in the validation of the Spanish version of the test is: Neuroticism: 0.82; Extroversion: 0.81; Openness: 0.76; Agreeability: 0.71; Conscientiousness: 0.81 (Manga et al., 2004)

Test Anxiety Inventory (TAI) (Spielberger, 1980), presented as *Test Attitude Inventory*, following the author's recommendation, which assesses the three facets of Test Anxiety (Worry, Emotionality and Total Anxiety) through 20 items to be answered using a 4-point Likert scale ranging from *1 Almost Never* to *4 Almost Always*. The Spanish version was used (TAI-E), and validated by Villegas et al. (2015) with a reliability index of .943.

The values of the test used in this study will be provided in the results section.

3.3. Data analysis

Statistical analyses were performed with SPSS 25.0 for Windows (IBM-SPSS, 2017). Frequency analyses for the categorical variables, and means and standard deviations for continuous variables were calculated. Moreover, the relationships between continuous variables were applied with Pearson product moment correlations. Before that, Kolmogorov-Smirnov test was applied in order to reveal that all quantitative data had a normal distribution ($p < .05$), no multicollinearity with Variance Inflation Factor (VIF) and tolerance and independency of the variables (Durbin-Watson). Finally, we calculated Cronbach's alpha for each scale (FCLAS, TAI) and personality dimensions in order to check internal consistency (reliability).

In this sense, a forward stepwise regression model was used to assess the independent variables that contributed significantly to the variance in the score on academic performance, the TOEIC overall score. These independent variables were: (FLCA, TAI and dimensions of NEO-FFI: openness, conscientiousness, extraversion, agreeableness and neuroticism); the significance criterion of the critical F value for entry into the regression equation was set at $p < 0.05$.

4. RESULTS AND DISCUSSION

4.1. Results

Firstly, we checked the assumptions related with this type of analysis: Kolmogorov-Smirnov test $p > .05$, Durbin-Watson = 1.90, variance inflation factor (VIF) ranged from 1.018-1.439, tolerance range between 0.717-0.982. Moreover, the bivariate correlations between academic performance and the independent variables were significant ($p < 0.01$, $p < 0.05$). Secondly, Cronbach's alphas for each scale were: FLCAS, $\alpha = .830$, TAI, $\alpha = .933$; for the NEO-FFI dimensions: openness, $\alpha = .792$, conscientiousness, $\alpha = .796$, extraversion, $\alpha = .883$, agreeableness, $\alpha = .701$ and neuroticism, $\alpha = .864$.

Next, Table 1 shows the descriptive analysis (mean, standard deviation, minimum and maximum) of the independent variables and Pearson's correlation coefficients between academic performance and the rest of independent variables. On the one hand, significant negative correlations were observed between academic performance and foreign language classroom anxiety ($r = -.435$, $p < .01$), test anxiety ($r = -.187$, $p < .01$) and neuroticism ($r = -.117$, $p < .01$); on the other hand, significant positive correlations were found with conscientiousness ($r = .171$, $p < .01$), extraversion ($r = .171$, $p < .01$) and agreeableness ($r = .168$, $p < .05$). There was no significant correlation with openness ($r = .093$, $p > .05$).

Table 1. Descriptive results and Pearson-product moment correlation between academic performance and FLCAS, TAI and NEO dimensions

	r	M	SD	Min	Max
1. TOEIC (academic performance)		741.04	159.89	280	990
2. FLCA (Foreign Language Classroom Anxiety)	-.435**	100.44	17.97	55	137
3. TAI (Test Anxiety)	-.187**	51.76	14.07	23	79
4. Openness	-.093	29.02	7.81	12	53
5. Conscientiousness	.171**	31.15	7.18	14	57
6. Extraversion	.171**	31.34	9.28	12	59
7. Agreeableness	.168*	30.98	6.57	17	53
8. Neuroticism	-.117**	33.79	9.55	12	59

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

Finally, Table 2 shows the forward stepwise regression analysis developed in this study. The set of independent variables explained 24 % of the academic performance variance ($R^2 = .178$ for step 1; $R^2 = .213$ for step 2; $R^2 = .226$ for step 3; $R^2 = .240$ for step 4; ** $p < .001$). For the first step, foreign language anxiety was significant ($\beta = -.422$, $t = -7.75$, $p < .01$); for the second step, foreign language anxiety was significant ($\beta = -.422$, $t = -8.30$, $p < .01$) and also neuroticism ($\beta = -.189$, $t = -3.51$, $p < .01$); for the third step, the significant variables were: foreign language classroom anxiety ($\beta = -.407$, $t = -7.21$, $p < .01$), neuroticism ($\beta = -.245$, $t = -4.14$, $p < .01$), Test Anxiety ($\beta = -.137$, $t = -2.20$, $p < .05$); and finally for the fourth step, foreign language classroom anxiety ($\beta = -.402$, $t = -7.17$, $p < .01$), neuroticism ($\beta = -.193$, $t = -3.06$, $p < .01$), Test Anxiety ($\beta = -.145$, $t = -2.33$, $p < .05$) and extraversion ($\beta = .130$, $t = 2.25$, $p < .05$). The adjustment index for all models was significant (F range = 21.76-60.08, $p < .01$).

Table 2. Summary of the forward stepwise regression analyses to determine the predictors of academic performance (TOEIC), R² = 24 %

INDEPENDENT VARIABLES	B	SE B	β	t
Step 1				
Foreign Language Classroom Anxiety	-3.74	.483	-.422	-7.75**
Step 2				
Foreign Language Classroom Anxiety	-3.97	.478	-.447	-8.30**
Neuroticism	-3.14	.895	-.189	-3.51**
Step 3				
Foreign Language Classroom Anxiety	-3.61	.501	-.407	-7.21**
Neuroticism	-4.07	.984	-.245	-4.14**
Test Anxiety	-1.52	.693	.137	-2.20**
Step 4				
Foreign Language Classroom Anxiety	-3.57	.498	-.402	-7.17**
Neuroticism	-3.21	1.04	-.193	-3.06**
Test Anxiety	-1.61	.689	-.145	-2.33*
Extraversion	2.20	.978	.130	2.25*

Note: R² = .178 for step 1; R² = .213 for step 2; R² = .226 for step 3; R² = .240 for step 4;
 ** p < .01; * p < .05

4.2. DISCUSSION

Firstly, in line with the literature (Dutke & Stroeber, 2001; Gardner & MacIntyre, 1993; Hembree, 1988; Horwitz et al., 1986; Salehi & Marefat, 2014), FLCA proved to be the best predictor for academic performance in the foreign language classroom. The fact that the independent variables explained only a 24 % of the academic performance variance could partly be explained because the FLCAS focuses mainly on oral production. Although it should be taken as a unitary construct, and Horwitz herself explained that it is not a sum of three components (Horwitz, 2017), communication apprehension is very closely related to the FLCAS, as measures of speech anxiety and communication apprehension were reviewed to create the FLCAS (Horwitz, 1986). Although the language course the students underwent was focused on communication, as well as test-taking techniques, the version of the TOEIC test used assesses Listening and Reading Comprehension, not production, therefore it could be considered less anxiety-provoking. Having said this, due to its nature, the course could produce anxiety on students and could have an effect on the input and processing stages of language learning, and not exclusively at the time of the exam. Therefore, it is safe to say that students who scored high on FLCA experienced more difficulty during the foreign language class and/or during the exam and this had a direct impact on their performance.

As did Test Anxiety, particularly in a subject where, unlike others, students are assessed through an official exam, which tends to add more pressure to students. Test Anxiety can also be seen as a clear detrimental marker for academic performance, also in line with the literature (Cassady & Johnson, 2002; Zeidner, 1998). Although the cause of this anxiety cannot be ascertained with this study, since the students were trained and drilled on test-taking skills during the course, it can be concluded that test-taking skills deficit (Benjamin et al., 1981) is probably not its source. The possible positive effect of test anxiety suggested by Scovel (1978), which some authors still defend (Ahmetović et al., 2020), is certainly against what these data show, and the idea of considering the facilitating/debilitating FLA debate closed is also supported using these measures.

These results also conform with Zheng and Cheng's (2018) in that test anxiety is a significant predictor of test scores but not so with their idea that FLCA does not predict performance.

Concerning academic results, and in reference to Dewaele (2013), FLCA and Test Anxiety do not seem so far from other types of anxiety as previously suggested (Horwitz et al., 1986; MacIntyre & Gardner, 1989, 1991a), bearing in mind that anxiety is a well-established component of Neuroticism, which appears in the guise of fear of failure or test-taking anxiety in educational contexts (De Raad & Schowenborg, 1996), and Neuroticism also shows significant negative correlation with academic performance and language-learning aptitude, second in significance after FLCA in this study, in line with prior research (Chamorro-Premuzic & Furnham, 2003; Komarraju et al., 2009; Sharp, 2008).

It is evident that a lack of emotional stability is not only detrimental for classroom instruction, making learners less receptive to input, but also very deleterious when it comes to test-taking. As has been seen, it is difficult to exactly explain the causes of test and foreign language anxiety, but the fact that neuroticism also plays a detrimental role on language test performance is definitely an element to be taken into consideration. It seems coherent that FLCA, Neuroticism and Test Anxiety show a significant negative correlation with the TOIEC score, all three having in common the element of worry. The interconnection between the three cannot be determined in this study, or to what extent they influence one another, but what is evident is that all three have a direct impact on student achievement, and the connection among them shouldn't be disregarded and opens a promising line of research to define the influence of personality traits on FLA, Test Anxiety and Second Language Learning, as suggested by previous studies (Dewaele & Li, 2020; Dewaele, 2013; Griffiths, 1991; Sharp, 2008).

Regarding the debate of whether Introversion or Extraversion is a better quality for language students, these results undoubtedly place us on the *Extraversion* end of the dimension. Introversion may grant learners better study skills or predisposition for academic learning as most of the literature agrees, but when language, and therefore communication, is the topic at hand, these data show extraversion as a good predictor for success, contrary to Dewaele and Furnham's (1999) conclusions. *Openness*, however, contrary to Verhoeven and Vermeer's study (2002), showed no significant correlation with performance; nor did *Agreeableness* or *Conscientiousness*.

As has been seen, creating an environment where students' levels of anxiety are kept low both during class instruction and during test-taking can be really beneficial for them

and will very likely have an effect on their learning and performance. And, although it is not feasible for teachers to adapt their classes to all their students' types of personality, it can prove useful to know what added difficulties they may be facing simply because of one dominant personality dimension, in line with Horwitz's (2017) suggestions that "language teachers are not mental health professionals, [so] individual support within the context of a positive classroom environment would seem to be our best approaches for helping our anxious students"(p. 38). Creating or adapting activities or methodologies so they provide safe places for introvert students to express themselves, for example, may lead them to be more willing to engage in their language learning and result in improved academic performance.

Positive Psychology is having a great influence on how training students on emotional intelligence can have a beneficial impact on anxiety and foreign language learning and acquisition (Li & Xu, 2019), since higher emotional intelligence has proved to correlate with lower FLA (Dewaele et al., 2008)2007. Our results are very much in line with new pedagogical line.

5. CONCLUSION

These data show that FLCA, Test Anxiety and Neuroticism have proved significantly detrimental, and Extraversion significantly positive for academic achievement in foreign language tests. Whether they impact directly, or mediating through affective variables or learning styles, is still debatable, but what cannot be denied is that they are good predictors for academic performance in a university context, and that this should be taken into account by teachers when designing their approach to their classes.

6. REFERENCES

- Ahmetović, E., Bećirović, S., & Dubravac, V. (2020). Motivation, anxiety and students' performance. *European Journal of Contemporary Education*, 9(2), 271-289.
- Aida, Y. (1994). Examination of Horwitz, Horwitz, and Cope's Construct of Foreign Language Anxiety: The Case of Students of Japanese. *The Modern Language Journal*, 78(2), 155-168.
- Alper, R., & Haber, R.N. (1960). Anxiety in academic achievement situations. *Journal of Abnormal and Social Psychology*, 61(2), 207.
- Alrabai, F. (2017). Self-esteem of Saudi Learners and Its Relationship to Their Achievement in English as a Foreign Language. *English Linguistics Research*, 6(4), 1.
- 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.
- Baba Khouya, Y. (2018). English Language Anxiety and the Big Five Personality Factors. *International Journal of Humanities and Social Science*, 8(2), 191-200.
- Benjamin, M., McKeachie, W.J., Lin, Y.G., & Holinger, D.P. (1981). Test anxiety: deficits in information processing. *Journal of Educational Psychology*, 73(6), 816-824.
- Brady, I.K. (2019). A multidimensional view of l2 motivation in southeast Spain: Through the 'ideal selves' looking glass. *Porta Linguarum*, 2019(31), 37-52.

- Busato, V.V., Prins, F.J., Elshout, J.J., & Hamaker, C. (2000). Intellectual ability, learning style, personality, achievement motivation and academic success of psychology students in higher education. *Personality and Individual Differences*, 29(6), 1057-1068. [https://doi.org/10.1016/S0191-8869\(99\)00253-6](https://doi.org/10.1016/S0191-8869(99)00253-6)
- Cassady, J.C., & Johnson, R.E. (2002). Cognitive Test Anxiety and Academic Performance. *Contemporary Educational Psychology*, 27, 270–295. <https://doi.org/10.1006/ceps.2001.1094>
- Chamorro-Premuzic, T., & Furnham, A. (2003). Personality predicts academic performance: Evidence from two longitudinal university samples. *Journal of Research in Personality*, 37(4), 319–338. [https://doi.org/10.1016/S0092-6566\(02\)00578-0](https://doi.org/10.1016/S0092-6566(02)00578-0)
- Costa, P.T.J., & McCrae, R.R. (1992). *Revised NEO Personality Inventory (NEO-PI-R) and NEO Five-Factor Inventory (NEO-FFI) Professional Manual*. Psychological Assessment Resources.
- De Raad, B., & Schowenburg, H.C. (1996). Personality traits in learning and education. *European Journal of Personality*, 10(3), 185-200.
- Dewaele, J.M. (2002). Psychological and sociodemographic correlates of communicative anxiety in L2 and L3 production. *International Journal of Bilingualism*, 6(1), 23-38.
- Dewaele, J.M. (2012a). Personality: Personality traits as independent and dependent variables. In S.R. Mercer & M. Williams (Eds.), *Psychology For Language Learning: Insights form Research, Theory and Practice* (pp. 42-58). Palgrave Macmillan.
- Dewaele, J.M. (2012b). Personality in Second Language Acquisition. In C.A. Chapelle (Ed.), *The Encyclopedia of Applied Linguistics*. <https://doi.org/10.1002/9781405198431.wbeal0904>
- Dewaele, J.M. (2013). The link between Foreign Language Classroom Anxiety and Psychoticism, Extraversion, and Neuroticism. *The Modern Language Journal*, 97(3), 1-21.
- Dewaele, J.M., & Furnham, A. (1999). Extraversion : The Unloved Variable in Applied Linguistic Research. *Language Learning*, 49(3), 509–544.
- Dewaele, J.M., & Li, C. (2020). Emotions in Second Language Acquisition: A critical review and research agenda. *外-界 Foreign Language World*, 196(1), 34–49.
- Dewaele, J.M., Petrides, K.V., & Furnham, A. (2008). Effects of trait emotional intelligence and sociobiographical variables on communicative anxiety and foreign language anxiety among adult multilinguals: A review and empirical investigation. *Language Learning*, 58(4), 911–960.
- Digman, J. (1990). Personality Structure: Emergence Of The 5-Factor Model. *Annual Review of Psychology*, 41(1), 417–440. <https://doi.org/10.1146/annurev.psych.41.1.417>
- Donovan, L.A., & MacIntyre, P.D. (2004). Age and sex differences in willingness to communicate, communication apprehension, and self-perceived competence. *Communication Research Reports*, 21(4), 420–427.
- Dörnyei, Z. (2009). The L2 motivational self system. In Z. Dörnyei & E. Ushioda (Eds.), *Motivation, Language Identity and the L2 Self* (pp. 9–42). Multilingual Matters.
- Dutke, S., & Stroeber, J. (2001). Test anxiety, working memory, and cognitive performance: Supportive effects of sequential demands. *Cognition and Emotion*, 15, 381-389.
- Ellis, R. (1985). *Understanding Second Language Acquisition*. OUP.
- Furnham, A., Chamorro-Premuzic, T., & McDougall, F. (2003). Personality, cognitive ability, and beliefs about intelligence as predictors of academic performance. *Learning and Individual Differences*, 14(1), 47–64. <https://doi.org/10.1016/j.lindif.2003.08.002>
- Gardner, R.C. (1985). *Social psychology and second language learning: The role of attitudes and motivation*. Edward Arnold Publishers.
- Gardner, R.C., & MacIntyre, P.D. (1993). On the Measurement of Affective Variables in Second Language Learning. *Language Learning*, 43(2), 157-194.

- Gregersen, T., & Horwitz, E.K. (2002). Language Learning and Perfectionism: Anxious and Non-Anxious Language Learners' Reactions to Their Own Oral Performance. *The Modern Language Journal*, 86(4), 562–570. <https://doi.org/10.1111/1540-4781.00161>
- Griffiths, R. (1991). Personality and second-language learning: Theory, research and practice. In Sadtono, Eugenius (Ed.), *Language Acquisition and the Second/Foreign Language Classroom. Anthology Series 28*; (pp. 103–135). Seameo.
- Guiora, A.Z., Beit-Hallahmi, B., Brannon, R.C.L., Dull, C.Y., & Scovel, T. (1972). The Effects of Experimentally Induced Changes in Ego States on Pronunciation Ability in a Second Language: An Exploratory Study. *Comprehensive Psychiatry*, 13(5), 421-428.
- Hembree, R. (1988). Correlates, Causes, Effects, and Treatment of Test Anxiety. *Review of Educational Research*, 58(1), 47–77.
- Horwitz, E.K. (1986). Preliminary Evidence for the Reliability and Validity of a Foreign Language Anxiety Scale. *TESOL Quarterly*, 20(3), 559-562.
- Horwitz, E.K. (2001). Language Anxiety and Achievement. *Annual Review of Applied Linguistics*, 21, 112–128.
- Horwitz, E.K. (2010). Foreign and second language anxiety. *Language Teaching*, 43(2), 154-167. <https://doi.org/10.1017/S026144480999036X>
- 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 C. Gkonou, M. Daubney, & J.M. Dewaele (Eds.), *New Insights into Language Anxiety: Theory, Research and Educational Implications* (pp. 31–47). Multilingual Matters.
- Horwitz, E.K., Horwitz, M.B., & Cope, J. (1986). Foreign Language Classroom Anxiety. *The Modern Language Journal*, 70(2), 125-132.
- IBM Corp. Released (2017). IBM SPSS Statistics for Windows, Version 25.0. IBM Corp.
- Kiany, G.R. (1998). English proficiency and academic achievement in relation to extraversion: A preliminary study. *International Journal of Applied Linguistics*, 8(1), 113-130. <https://doi.org/10.1111/j.1473-4192.1998.tb00123.x>
- Kim, J. (2002). Anxiety and Foreign Language Listening.pdf. *English Teaching*, 57(2), 3-34.
- Kleinmann, H.H. (1977). Avoidance Behavior in Adult Second Language Acquisition. *Language Learning*, 27(1), 93-107.
- Komarraju, M., Karau, S.J., & Schmeck, R.R. (2009). Role of the Big Five personality traits in predicting college students' academic motivation and achievement. *Learning and Individual Differences*, 19(1), 47-52. <https://doi.org/10.1016/j.lindif.2008.07.001>
- Komarraju, M., Karau, S.J., Schmeck, R.R., & Avdic, A. (2011). The Big Five personality traits, learning styles, and academic achievement. *Personality and Individual Differences*, 51(4), 472-477. <https://doi.org/10.1016/j.paid.2011.04.019>
- Krashen, S. (1981). *Second language acquisition and second language learning*. Pergamon Press.
- Li, C., & Xu, J. (2019). Trait emotional intelligence and classroom emotions: A positive psychology investigation and intervention among chinese EFL learners. *Frontiers in Psychology*, 10(OCT), 1-17.
- MacIntyre, P.D. (2017). An Overview of Language Anxiety Research and Trends in its Development. In C. Gkonou, M. Daubney, & J.M. Dewaele (Eds.), *New Insights into Language Anxiety: Theory, Research and Educational implications* (pp. 11–30). Multilingual Matters.
- MacIntyre, P.D., & Charos, C. (1996). Personality Attitudes and Affect as Predictors of Second Language Communication. *Journal of Language and Social Psychology*, 15(1), 3-26.
- MacIntyre, P.D., & Doucette, J. (2010). Willingness to communicate and action control. *System*, 38(2), 161-171.

- MacIntyre, P.D., & Gardner, R.C. (1989). Anxiety and Second-Language Learning: Toward a Theoretical Clarification. *Language Learning*, 39(2), 251-275.
- MacIntyre, P.D., & Gardner, R.C. (1991a). Language Anxiety: Its Relationships to Other Anxieties and to Processing in Native and Second Languages. *Language Learning*, 41(4), 513-534.
- MacIntyre, P.D., & Gardner, R.C. (1991b). Investigating Language Class Anxiety Using the Focused Essay Technique. *The Modern Language Journal*, 75(3), 296-304. <https://doi.org/10.2307/328723>
- 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.
- Manga, D., Ramos, F., & Morán, C. (2004). The Spanish norms of the NEO five-factor inventory: New data and analyses for its improvement. *Revista Internacional de Psicología y Terapia Psicológica*, 4(3), 639-648.
- Matsuda, S., & Gobel, P. (2004). Anxiety and predictors of performance in the foreign language classroom. *System*, 32, 21-36.
- McCrae, R.R., & Costa Jr., P.T. (2008). The Five Factor Theory of personality. In O.P. John, R.W. Robins and L.A. Pervin (Eds.), *Handbook of Personality: Theory and Research*, (pp.159-181). Guilford.
- McCrae, R.R., & John, O.P. (1992). An Introduction to the Five-Factor Model and Its Applications. *Journal Of Personality*, 60(2), 175-215.
- Na, Z. (2007). A Study of High School Students' English Learning Anxiety. *Asian EFL Journal*, 9(3), 22-34.
- Park, G. (2012). Investigation into the Constructs of the FLCAS. *English Teaching*, 67(2), 207-220.
- Pérez Paredes, P., & Martínez-Sánchez, F. (2001). A Spanish version of the foreign language classroom anxiety scale: revisiting Aida's factor analysis. *Revista Española de Lingüística Aplicada*, 14, 337-352.
- Salehi, M., & Marefat, F. (2014). The effects of foreign language anxiety and test anxiety on foreign language test performance. *Theory and Practice in Language Studies*, 4(5), 931-940. <https://doi.org/10.4304/tpls.4.5.931-940>
- Sallinen-Kuparinen, A., McCroskey, J.C., & Richmond, V.P. (1991). Willingness to Communicate, Communication Apprehension, Introversion, and Self-Reported Communication Competence: Finnish and American Comparisons. *Communication Research Reports*, 8(1), 55-64. <https://doi.org/10.1080/08824099109359876>
- Saranson, I.G. (1972). Experimental approaches to test anxiety: Attentiona dn the uses of information. *Anxiety: Current Trends in Theory and Research*, 2, 383-403.
- Scovel, T. (1978). The Effect of Affect on Foreign Language Learning: A Review of the Anxiety Research. *Language Learning*, 28(1), 129-142.
- Sharp, A. (2008). Personality and second language learning. *Asian Social Science*, 4(11), 17-25.
- Sparks, R.L., & Ganschow, L. (1991). Foreign language learning differences: Affective or native language aptitude differences? *The Modern Language Journal*, 75(1), 3-16.
- Spence, J.T., & Spence, K.W. (1966). The motivational components of manifest anxiety: Drive and drive stimuli. In C.D. Spielberger (Ed.), *Anxiety and behaviour* (pp. 291-326). Academic Press.
- Spielberger, C.D. (1980). *Test Anxiety Inventory: Preliminary Professional Manual*. Consulting Psychologists Press.
- Spielberger, C.D., Gorsuch, R.L., & Lushere, R.E. (1970). *Manual for the state-trait anxiety inventory*. Consulting Psychologists Press.
- Spielberger, C.D., & Vagg, P.R. (1995). Test Anxiety: A transactional process. In C. D. Spielberger & P.R. Vagg (Eds.), *Test Anxiety: Theory, assessment, and treatment* (pp. 3-14). Taylor & Francis.

- Teimouri, Y., Goetze, J., & Plonsky, L. (2019). Second language anxiety and achievement. *Studies in Second Language Acquisition*, 41(2), 363-387.
- Tobias, S. (1986). Anxiety and cognitive processing of instruction. In R. Schwarzer (Ed.), *Self-related cognitions in anxiety and motivation* (pp. 35-54). Lawrence Erlbaum Associates.
- Ushioda, E., & Dörnyei, Z. (2009). Motivation, Language Identities and the L2 Self: A Theoretical Overview. In Z. Dörnyei & E. Ushioda (Eds.), *Motivation, Language Identity and the L2 Self* (Vol. 13, Issue 5, pp. 1-8). Multilingual Matters.
- Verhoeven, L., & Vermeer, A. (2002). Communicative competence and personality dimensions in first and second language learners. *Applied Psycholinguistics*, 23(3), 361-374. <https://doi.org/10.1017/S014271640200303X>
- Villegas G., G., Domínguez L., S., Sotelo L., N., & Sotelo L., L. (2015). Propiedades psicométricas del Inventario de Autoevaluación de la Ansiedad ante Exámenes (IDASE) en universitarios de Lima Psychometric properties of the Anxiety Inventory Test (AIT) in university students of Lima. *Psicología Educativa*, 3(1), 15-21.
- Wang, K.T., Permyakova, T.M., Sheveleva, M.S., & Camp, E.E. (2018). Perfectionism as a predictor of anxiety in Foreign language classrooms among Russian college students. *Journal of Educational, Cultural and Psychological Studies*, 18, 127-146.
- Wine, J. (1971). Test anxiety and direction of attention. *Psychological Bulletin*, 76(2), 92-104.
- World Medical Association (2013). World Medical Association Declaration of Helsinki: ethical principles for medical research involving human subjects. *JAMA* 310, 2191-2194.
- Young, D.J. (1991). Creating a Low-Anxiety Classroom Environment : What Does Language Anxiety Research Suggest? *The Modern Language Journal*, 75(4), 426-439.
- Zeidner, M. (1998). *Test Anxiety: The state of the art*. Plenum Press.
- 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(13).