

## Multilingualism and Anxiety: Evidence from Quadrilingual EFL Learners

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**Abstract:** This article reports on a study that addressed the relationship between anxiety, self-perceived proficiency, and multilingualism, which is an under-researched area in second language learning (Thompson & Lee, 2013). The current study explores the profiles of 277 quadrilinguals learning English as a Foreign Language in Tunisia. Using the Foreign Language Classroom Anxiety Scale the study found low to moderate levels of foreign language anxiety (FLA) among Tunisian quadrilinguals. The major sources of anxiety exhibited by participants were related to communication and evaluation. Results show that background variables such as age, year of study, as well as self-perceived proficiency are predictors of FLA. Finally, this study reports a significant negative correlation between FLA and language performance.

**Keywords:** Anxiety, foreign language learning, multilingualism, quadrilinguals.

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### العلاقة بين التعدد اللغوي والقلق لدى المتحدثين بأربع لغات من دارسي اللغة الإنجليزية كلغة ثانية

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ملخص البحث: تناولت هذه الدراسة العلاقة بين القلق والكفاءة المحسوسة والتعددية اللغوية وهو موضوع لم يحظ بالدراسة الكافية في مجال تعلم اللغة الثانية (Thompson & Lee, 2013) وتكشف هذه الدراسة عينة مكونة من 277 فرد يتحدثون أربع لغات ويدرسون اللغة الإنجليزية كلغة أجنبية في تونس. وباستخدام مقياس القلق الدراسي المرتبط بتعلم اللغة الأجنبية، وجدت الدراسة مستويات تتراوح بين المتوسطة والمنخفضة من القلق المرتبط بتعلم اللغة الأجنبية لدى هذه العينة من المتحدثين بأربع لغات بتونس. وكان التواصل والتقييم هما أهم أسباب القلق الذي ظهر على المشاركين في الدراسة. كما أظهرت الدراسة أن متغيرات العمر وسنة الدراسة والكفاءة المحسوسة مؤشرات دالة على القلق المرتبط بتعلم اللغة الأجنبية. وفي الختام تشير الدراسة إلى وجود ارتباط سلبي قوي بين الأداء اللغوي والقلق المرتبط بتعلم اللغة الأجنبية.

كلمات مفتاحية: القلق، تعلم اللغة الأجنبية، التعددية اللغوية، من يتقن أربع لغات.

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## Introduction

There has been growing evidence in the literature that knowledge of more than one language gives individuals more abilities to learn additional languages (De-waele, Petrides, & Furnham, 2008). Kemp (2001) argues that learners who know more than two languages tend to develop more grammar learning strategies, and thus become better language learners. As Cenoz (2013) asserts “the more languages one knows, the easier it becomes to acquire an additional language” (p.72). The learner’s linguistic background can act as a stepping stone to help overcome the challenges of learning a new language. This finding has prompted some researchers to explore the phenomenon of multilingualism and its impact on FLA. Specifically, researchers sought to find out if multilingualism would result in lower levels of FLA. Because FLA is a complex construct that involves many variables, it is important to explore the role of the different factors that may impact learners’ anxiety. Furthermore, the fact that FLA is a “situation-specific anxiety which occurs in a particular type of situation” (Hewitt & Stephenson, 2012, p.171), calls for the need to explore different language learning contexts.

This present study aims at investigating FLA with quadrilingual students learning English as a foreign language (EFL) in Tunisia, which is an underexplored context. Specifically, this study first measures the FLA levels of the quadrilingual participants. Second, in an attempt to increase current understanding of the factors precipitating FLA (Tóth, 2007) the study determines whether background variables (gender, age, year in college, major, and English self-perceived proficiency) influence anxiety. Finally, this study examines the correlation between self-perceived English language proficiency and FLA.

## Literature review Foreign language anxiety

Research has indicated that learners suffer from anxiety in foreign language classes more than other classes (Horwitz, Horwitz, & Cope, 1986; MacIntyre & Gardner, 1994). There is a consensus among researchers that foreign language learning is a complex process and the construct of anxiety is not easy to define

(Horwitz et al., 1986; MacIntyre & Gardner, 1994). MacIntyre and Gardner (1994) have defined FLA as “the feeling of tension and apprehension specifically associated with second language contexts including speaking, listening, and learning.” (p.284). Horwitz et al. (1986) have defined the construct of FLA 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).

FLA is different from trait anxiety, which is a permanent predisposition; people who suffer from high levels of trait anxiety tend to be nervous in most circumstances (Casado & Dereshiwsky, 2001; Ellis, 2008; Spielberger, 1983). FLA is also distinct from state anxiety, which happens as a response to a specific situation. It is temporary as it ends when the situation causing that anxiety disappears (MacIntyre & Gardner, 1991; Spielberger & Vagg, 1995).

FLA could possibly be “the affective factor that most pervasively obstructs the learning process” (Arnold & Brown, 1999, p.8).

Horwitz et al. (1986) who have designed the Foreign Language Classroom Anxiety Scale (FLCAS) to measure language anxiety argue that FLA is related to three types of anxiety: communication apprehension, test anxiety, and fear of negative evaluation. Communication apprehension is “a type of shyness characterized as fear of, or anxiety about communicating with people” (p. 127). It refers to an individual’s level of anxiety when interacting with other speakers. Test anxiety is defined by Horwitz et al. (1986) as “the type of performance anxiety resulting from a fear of failure in an academic evaluation setting” (p. 127). It refers to anxiety that learners may experience in an exam situation. Fear of negative evaluation refers to the “apprehension about others’ evaluations, avoidance of evaluative situations” (Horwitz et al., 1986, p.128). Negative evaluation involves fear from being evaluated in any setting, not just the classroom.

## Variables associated with FLA

Researchers have identified several variables linked to FLA such as age, gender, and language proficiency.

### *FLA and age*

The studies that explored the correlation between age and FLA have not yielded consistent results. Dono-

van and MacIntyre (2005) found that Anglo-Canadian university students studying French had higher levels of FLA than junior high and high school students. The same results were reported by Onwuegbuzie and Daley (2000) and Dewaele (2007a) who found that younger learners had lower levels of FLA across languages. However, other studies found opposite results. Dewaele et al. (2008), for example, found significant negative correlations between age of adult multilinguals and their FLA scores. Older participants experienced lower levels of FLA. MacIntyre, Baker, Clément, and Donovan (2002) also found that younger (grade 8) Anglo-Canadian reported higher levels of anxiety than grade 9 pupils at a junior high school in French immersion programs. In a more recent study, Dewaele and MacIntyre (2014) reported that teenage participants suffered more from FLA than participants in their twenties.

### ***FLA and gender***

Many studies examined the relationship between gender and FLA. The results have been inconsistent. In a study involving students learning Spanish, German, Russian, and Korean, Campbell and Shaw (1994) found that female students had lower levels of anxiety than their male counterparts. The same findings were echoed by MacIntyre et al. (2002) who reported lower levels of FLA among university female students. Conversely, other researchers reported different results. Park and French (2013), for example, found that female students learning EFL exhibited higher levels of FLA than male students in South Korea. Some studies have not revealed any relationship between FLA and gender. In other words, both male and female learners suffered from similar levels of FLA (Aida, 1994; Dewaele et al., 2008; Elkhafaifi, 2005; Kao & Craigie, 2010; Matsuda & Gobel, 2004).

### **FLA, multilingualism, and proficiency**

Research exploring the relationship between FL anxiety, proficiency, and multilingualism has been scant (Thompson & Lee, 2013). A few studies have established the link between multilingualism and lower levels of FLA (Dewaele, 2007a, 2010; Dewaele et al., 2008). Dewaele (2010) argues that once a learner has reached a high level of language competence, FLA

becomes less of an issue. In an earlier study, Dewaele (2007a) reported that learners who acquired more languages exhibited lower levels of FLA. In fact, trilinguals and quadrilinguals experienced lower levels of anxiety in their second language. Dewaele (2007a) explains this outcome by the fact that “trilinguals and quadrilinguals have become better communicators as a result of their multilingualism and that their self-confidence, as well as their self-perceived competence has grown as a result” (p.404). These findings were corroborated by the results of another study that involved multilinguals (Dewaele et al., 2008). Evidence showed that multilinguals who spoke more languages were linked with lower levels of FLA.

In a seminal study involving junior high, high school, and university students learning French, Donovan and MacIntyre (2005) reported a negative correlation between self-perceived competence and FLA. Participants who were higher in self-perceived competence had lower levels of FLA. The researchers conclude that self-perceived competence was a significant predictor of anxiety. The same results were echoed by Dewaele (2007b) who found that self-perceived oral proficiency in the learners’ second, third, fourth and fifth language predicted their levels of FLA.

There has been a concern among some researchers about the validity of self-perceived competence measures (DeKeyser, 2006) even though research has shown high correlation between self-report measures of proficiency and linguistic measures of proficiency (MacIntyre, Noels, & Clément, 1997). The concern stems from the fact that anxiety may bias learners’ perception about their true proficiency. Learners who suffer from high anxiety may underestimate their level of proficiency, while learners with lower levels of anxiety may overestimate their proficiency of the target language (MacIntyre et al., 1997).

### **FLA and language performance**

The bulk of the studies exploring the relationship between FLA and language performance reported an inverse correlation between FLA and language performance (Aida, 1994; Arnaiz & Guillén, 2012; Horwitz, 2001; Kao & Craigie, 2010; Lu & Liu, 2011). In other words, learners with lower scores tended to have higher levels of anxiety. Some studies measured English achievement tests (e.g., Shao, Yu & Ji, 2013). Other studies examined students’ achievement in specific language skills such as speaking

(Park & Lee, 2005) and reading (Zhang & Kim, 2014).

### Statement of the problem

The relationship between anxiety, self-perceived proficiency, and multilingualism, is an under-researched area in second language learning (Thompson & Lee, 2013). Therefore, this study is an attempt to investigate the correlation between anxiety, self-perceived proficiency, and multilingualism among Tunisian quadrilinguals learning EFL. It also seeks to increase our understanding of the impact of background variables (gender, age, year in college, major, and English self-perceived proficiency) on students' anxiety levels.

### Purpose of the study

The present study examines levels of FLA among quadrilinguals and the main sources of their anxiety. It also defines the relationship between anxiety, self-perceived proficiency, and multilingualism. Finally, it explores the relationship between FLA and language performance as measured by grades.

### Research questions

The following research questions were addressed:

1. What is the level of FLA among quadrilinguals? Do male and female students experience similar anxiety levels?
2. What are the major sources of FLA among quadrilinguals?
3. To what extent are background variables (gender, age, year in college, major, and English self-perceived proficiency) related to FLA?
4. Is there a relationship between FLA as measured by the FLACS and the participants' language performance?

### Method

#### Participants

The participants of this study were 277 students from lower intermediate, intermediate, upper intermediate and advanced courses of English classes at several public universities in Tunisia. Table 1 provides basic information about the participants. About 78 % of the

participants were female and 22% were male. A majority was between the age of 18 and 22 (91.3%). All participants were native speakers of Arabic. Their second language was French, which is taught beginning in elementary school. Along with English, all participants have learned a fourth language starting in high school. The majority of students (98%) achieved a certain level of proficiency in one of these languages: Italian, German and Spanish. The rest of students had one of the less commonly taught languages as a fourth language namely: Dutch, Hebrew, Korean, Japanese, Portuguese and Turkish. Learners with minimal amounts of previous language experience in the third language can still be classified as multilinguals (Thompson & Khawaja, 2015). Most of participants (80.5%) were majoring in English. Only 19.5% of participants were majoring in other areas of study namely engineering, agronomy and management. About 53% of participants self-rated their proficiency in English on a scale from 1 to 10 for listening, speaking, reading and writing. The same scale was used in previous studies (e.g., Dewaele et al., 2008; Santos, Cenoz & Gorter, 2015; Thompson & Lee, 2013). The average scores are reported in Table 2. The researcher was able to collect the final grades of 91 participants.

Table 1  
*Summary of Participants' Characteristics*

Variable	Category	Frequency	Percent
Gender	Female	217	78.3
	Male	60	21.7
Age	18-22	253	91.3
	23-35	24	8.7
Major	English	223	80.5
	Non-English	54	19.5
Year in college	Freshman (first year)	87	31.4
	Sophomore (second year)	68	24.5
	Junior (third year)	89	32.1
	Senior (fourth year)	33	11.9

Table 2  
*English Self-perceived Proficiency Levels*

Skill	Mean	SD
Listening (max = 10)	7.45	1.98
Speaking (max = 10)	6.99	1.94
Reading (max = 10)	7.91	1.86
Writing (max = 10)	6.87	1.71
Total (max = 40)	29.22	1.87

## Instruments

Self-report instruments and final grades were used to collect data in the present study. Below are details about each instrument.

**Background questionnaire.** This questionnaire was designed to elicit participants' information about age, gender, course level, major, and year in college. It included self-ratings of proficiency in English.

**Anxiety scale.** An adapted version of FLCAS was used to measure anxiety levels among participants. The phrase *foreign language* was replaced with *English language* because students in the current study were learning EFL. FLCAS is a self-reported measure of learners' anxiety in the foreign language classroom designed by Horwitz et al. (1986). It is the most commonly used scale to measure language anxiety in the classroom. It consists of 33 statements. Each item on the scale is rated on a five-point Likert scale ranging from 1 (strongly agree) to 5 (strongly disagree). The mean scores in the FLCAS range from 33 to 165, with lower scores indicating lower anxiety while higher scores indicate higher anxiety. Twenty-four of the items are positively worded; nine are negatively worded. The scale has been shown to be reliable with an alpha coefficient of .90 and above (e.g., Sevinç & Dewaele, 2016; Thompson & Khawaja, 2015). In the present investigation, the FLACS had a Cronbach's alpha coefficient reliability index of .89, which makes its use very reliable. The survey measure was pilot-tested prior to the onset of this study experiment.

## Procedure

About half of the participants completed the FLCAS and the background questionnaires online using Google documents. The second half of participants were handed hard copies during regular class time. Participants were reassured that

their personal information would be kept confidential. To measure language performance, the final course grade was collected when available at the end of the semester to examine possible significant correlation between language anxiety and language performance. All students received a score between 0 and 100. Previous studies (Aida, 1994; Horwitz & Young, 1991; Marcos-Llinas & Garau, 2009) have used final course grades to measure foreign language performance.

## Data analysis

In order to analyze the collected data, descriptive statistics (i.e., means and standard deviations) were used to summarize participants' responses. The eight items (2, 5, 11, 14, 18, 22, 28 and 32) that were negatively worded were reverse-coded so that a high score indicated high anxiety. An independent *t*-test was conducted to examine any statistically significant difference between the FLCAS scores of male and female students. Furthermore, Pearson correlations were performed to assess the strength and direction of the relationship between anxiety and each of the learners' background variables (gender, age, year in college, major, and self-perceived proficiency). In order to assess the effect of the five learners' background variables simultaneously and determine their relative contribution to the prediction of FLA, multiple regression analysis was performed of FLA. Finally, the Pearson correlation analysis was computed to test the relationships between the FLACS scores and language performance.

## Results

This section presents the results for each of the research questions.

*1. What is the level of foreign language anxiety among quadrilinguals? Do male and female students experience similar anxiety levels?*

To measure the level of FLA among quadrilinguals, means and standard deviations for participants' responses to each FLCAS item were calculated (see Table 3). The mean language anxiety score for the 277 participants was 91.60 (*SD* = 16.56). As displayed in Table 4, the range of scores in the present study was 37-134. Following Arnaiz and Guillén's (2012) scale, participants had three levels of anxiety. Table 4 summarizes the different levels of anxiety experienced by participants. The overwhelming majority of students (92.77%) experienced low to average levels of FLA. Only about 7% of students suffered from a high level

Table 3

**FLA Scores on FLCAS**

<i>Statement</i>	<i>Mean</i>	<i>SD</i>
1. I never feel quite sure of myself when I am speaking in my English class.	2.48	1.058
2. I don't worry about making mistakes in language class.*	2.84	1.225
3. I tremble when I know that I'm going to be called on in English class.	2.46	1.137
4. It frightens me when I don't understand what the teacher is saying in the foreign language.	2.75	1.254
5. It wouldn't bother me at all to take more foreign language classes.*	3.57	1.391
6. During language class, I find myself thinking about things that have nothing to do with the English course.	2.87	1.224
7. I keep thinking that the other students are better at languages than I am.	2.59	1.178
8. I am usually at ease during tests in my language class.	3.12	1.156
9. I start to panic when I have to speak without preparation in language class.	2.65	1.196
10. I worry about the consequences of failing my foreign language class.	3.34	1.313
11. I don't understand why some people get so upset over foreign language classes.*	3.10	1.149
12. In language class, I can get so nervous I forget things I know.	2.98	1.265
13. It embarrasses me to volunteer answers in my language class.	2.29	1.054
14. I would not be nervous speaking the foreign language with native speakers.*	3.12	1.306
15. I get upset when I don't understand what the teacher is correcting.	3.25	1.177
16. Even if I am well prepared for language class, I feel anxious about it.	2.61	1.166
17. I often feel like not going to my language class.	2.28	1.080
18. I feel confident when I speak in foreign language class.*	3.08	1.197
19. I am afraid that my language teacher is ready to correct every mistake I make.	2.45	1.130
20. I can feel my heart pounding when I'm going to be called on in language class.	2.65	1.187
21. The more I study for a language test, the more confused I get.	2.36	1.145
22. I don't feel pressure to prepare very well for language class.*	3.04	1.194
23. I always feel that the other students speak the foreign language better than I do.	2.46	1.138
24. I feel very self-conscious about speaking the foreign language in front of other students.	3.00	1.098
25. Language class moves so quickly I worry about getting left behind.	2.61	1.107
26. I feel more tense and nervous in my language class than in my other classes.	2.03	863.
27. I get nervous and confused when I am speaking in my language class.	2.35	1.000
28. When I'm on my way to language class, I feel very sure and relaxed.*	3.37	1.192
29. I get nervous when I don't understand every word the language teacher says.	2.83	1.155
30. I feel overwhelmed by the number of rules you have to learn to speak a foreign language.	2.91	1.158
31. I am afraid that the other students will laugh at me when I speak the foreign language.	2.05	1.044
32. I would probably feel comfortable around native speakers of the foreign language.*	3.27	1.239
33. I get nervous when the language teacher asks questions which I haven't prepared in advance.	2.90	1.223

\*Items are reverse-coded

Table 4  
Anxiety Levels for Participants

Level	Scores	Level of FLA	Frequency	Percentage
1	33-79	Low	79	28.51
2	80-117	Moderate	178	64.26
3	118-134	High	20	07.23

of anxiety.

The descriptive statistics associated with male and female participants' FLCAS scores are reported in Table 5. The male group ( $N = 60$ ) was associated with the numerically smaller mean ( $M = 90.70$ ) and the female group ( $N = 217$ ) was associated with the numerically higher mean ( $M = 91.85$ ). In order to examine differences between the male and female groups on the FLCAS scores, an independent samples  $t$ -test was conducted. The assumptions of homogeneity of variance were tested and satisfied via Levene's  $F$  test,  $F(275) = .394$ ,  $p = .53$ . The independent samples  $t$ -test was not associated with a statistically significant effect,  $t(275) = .478$ ,  $p = .633$ . These results suggest that both male and female participants experienced similar levels of FLA.

Table 5  
Descriptive Statistics of FLCAS Scores for Males and Females

Gender	$N$	Mean	$SD$
Female	217	91.85	16.25
Male	60	90.70	17.27
Total	277	91.4	16.95

## 2. What are the major sources of FLA among quadrilinguals?

Analysis of individual items revealed that 11 out of the 33 items were found to have a mean score larger than 3.0, which is the cut off score for high anxiety level. These items reflect mainly two major sources of anxiety for quadrilingual participants: communication anxiety and evaluation anxiety.

Seven items (5, 11, 14, 18, 24, 28 and 32) were in-

dicative of communication anxiety. These items are mainly related to fear of participation in class (item 18,  $M = 3.08$ ,  $SD = 1.197$ ), feeling of discomfort in class (item 11,  $M = 3.10$ ,  $SD = 1.149$ ) and lack of confidence in speaking in front of peers (item 24,  $M = 3.00$ ,  $SD = 1.098$ ) or native speakers (item 14,  $M = 3.12$ ,  $SD = 1.306$ ).

Four items (8, 10, 15 and 22) reflected anxiety related to evaluation. These items are related to fear of failing the English class (item 10,  $M = 3.43$ ,  $SD = 1.313$ ) or not doing well in tests (item 8,  $M = 3.12$ ,  $SD = 1.156$ ), fear of not being able to keep up with the instructor (item 15,  $M = 3.25$ ,  $SD = 1.177$ ), and fear related to the study of English language (item 22,  $M = 3.04$ ,  $SD = 1.194$ ).

## 3. To what extent are background variables (gender, age, year in college, major, and English self-perceived proficiency) related to FLA?

Table 6 presents the correlations between each of the selected background variables - gender, age, year of study, major, and English self-perceived proficiency - and total FLACS score. English self-perceived proficiency had the largest correlation with FLACS score. An inverse relationship was found between quadrilinguals' anxiety scores and their English self-perceptions, ( $r = -.300$ ,  $p < .0005$ ). This result indicates that the higher a learner's English self-perceptions were, the lower his/her anxiety levels.

Participants' major was also significantly correlated with FLACS score ( $r = -.191$ ,  $p < .0005$ ). Non-English participants had a tendency to experience higher levels of FLA than their English major peers.

Year in college was also significantly correlated with FLACS score ( $r = -.141$ ,  $p < .0005$ ). Finally, there was a significant negative correlation between age and FLCAS scores ( $r = -.123$ ,  $p < .0005$ ).

**Table 6**

*Correlations Between Gender, Age, Year of Study, Major, and English Self-perceived Proficiency Variables and FLA*

Predictor variable	FLA	<i>p</i>
Age	.123*	.041
Gender	.029	.633
Year in college	-.141*	.019
Major	.191**	.001
English self-perceived proficiency	-.300**	.001

\*. Correlation is significant at the 0.05 level (2-tailed).

\*\*. Correlation is significant at the 0.01 level (2-tailed).

This suggests that younger participants had higher levels of anxiety than their older peers.

In order to examine the simultaneous effect of the background variables (gender, age, year in college, major, and English self-perceived proficiency) on the participants' FLA level, multiple regression analysis was conducted. Results (see Table 7) show that the presented model is significant as there was a significant relationship between the background variables and anxiety ( $p = .00$ ;  $R^2 = 0.247$ ;  $R = 0.497$ ). The  $R$  value for the regression model indicates a medium linear relationship between the five learner variables and FLA. As shown in Table

7,  $R^2$  was 0.25, which means gender, age, year of study, major, and English self-perceived proficiency combined to explain 25% of the variance in first year English majors' anxiety. According to Cohen's (1988) criteria for assessing the predictive power of a set of independent variables, this indicates a medium effect size.

Three of the background variables, age, year of study and English self-perceived proficiency, explained 24.7% of the variance of anxiety in students. Among the useful predictor variables, age had the highest relative impact on anxiety with  $t$  value of 4.401, followed by English self-perceived

Table 7

*Regression Model for Predicting FLA*

Variable	$\beta$	Beta	$t$	$P$
Age	15.47	.382	4.401 **	.000
Gender	.923	.024	.314	.754
Year in college	-5.194	-.332	-3.143 **	.002
Major	3.86	.124	1.268	.207
English self-perceived proficiency	-.610	-.263	-3.50 **	.001

Model  $R = .497$ ;  $R^2 = .247$ ; Adjusted  $R^2 = .220$ ; Std. Error = 13.331;  $F = 9.122$ ;  $p < .0005$

\*\*  $p < .0005$

proficiency with  $t$  value of -3.50 and year of study with  $t$  value of -3.143.

4. *Is there a relationship between FLA as measured by the FLACS and the participants' language performance?*

In order to examine the relationship between FLA ( $M = 91.60$ ,  $SD = 16.56$ ) and participants' English language performance ( $M = 62.72$ ,  $SD = 11.58$ ), a Pearson correlation was calculated and reported in Table 8. Results of the analysis showed that there was a weak negative correlation between FLA and English language performance,  $r(130) = -.195$ ,  $p < .005$ ,  $d = .34$ . Students who experienced lower levels of foreign language anxiety tended to have higher language performance scores. The effect size for this analysis ( $d = .34$ ) was found to exceed Cohen's (1988) convention for a moderate effect ( $d = .30$ ).

Table 8  
*Correlation between language anxiety and language performance*

	Anxiety	Grade
Anxiety	1	-.195*
		.026
	277	130
Grade	-.195*	1
	.026	
	130	130

\*. Correlation is significant at the 0.05 level (2-tailed).

## Discussion

This section is devoted to the discussion of the results of each of the research.

The first research question examined the anxiety levels experienced by male and female participants. The results show that Tunisian quadrilinguals exhibited low to average levels of FLA. The anxiety level of the participants of the current investigation is lower than the one reported by Thompson and Khawaja (2015). Their study involved a mix of bilingual and multilingual Turkish learners who experienced high levels of FLA in the four categories of FLCAS: English class performance anxiety; confidence with English; nega-

tive feelings towards English, and fear of ambiguity. These findings of the current study provide further empirical evidence that additional language learning experiences can affect anxiety in language learners as shown in previous research (Dewaele, 2007a, 2010; Dewaele et al., 2008). Furthermore, the current study has not found any significant difference between the anxiety levels experienced by males and females. This outcome is consistent with some previous studies (e.g., Aida, 1994; Dewaele & Al-Saraj, 2015; Dewaele et al., 2008; MacIntyre et al., 2002; Matsuda & Gobel, 2004). The second research question attempts to explore the major sources of FLA. The results revealed two major sources of anxiety for quadrilingual participants: communication anxiety and evaluation anxiety. Regarding communication anxiety, participants reported fear of participation and speaking in front of others as anxiety-inducing situations. This seems to be a common problem among language learners regardless of their linguistic background whether they are bilingual or multilingual as shown in previous studies (Aida, 1994; Horwitz et al., 1986; Liu & Jackson, 2008; Mak, 2011; Thompson & Lee, 2013). The second major source of anxiety was related to evaluation. Participants expressed fear of failing the English class. The same problem was reported by recent studies (e.g., Arnaiz & Guillén, 2012; Santos et al., 2015). The limited opportunities for Tunisian students to practice English outside the classroom- Tunisia is a francophone country - may explain the tendency of learners to worry about their performance in English class.

The third research question focuses on the extent to which learners' background variables (gender, age, year of study, major, and English self-perceived proficiency) are related to FLA. Three of the background variables, age, year of study and English self-perceived proficiency, explained about a quarter of the variance of anxiety in students. Of particular interest are age and English self-perceived proficiency which had the highest relative impact on anxiety. Concerning age, analysis revealed that younger participants had higher levels of anxiety than their older peers. These results are aligned with the findings of the major studies that involved multilingual learners (Dewaele et al., 2008) as well as other studies (MacIntyre et al., 2002; Dewaele & MacIntyre, 2014).

English self-perceived proficiency had a negative correlation with FLA. In other words, students who had

lower self-perceived proficiency exhibited higher anxiety levels than students with higher self-perceived proficiency who suffered from lower anxiety levels. This outcome corroborates the findings of Donovan and MacIntyre (2005) and Dewaele (2007b) who reported that self-perceived oral proficiency in the learners' second, third, fourth and fifth language predicted their levels of FLA. The same results were reported by Tóth (2007). In a study involving Hungarian English major students she found a close relationship between learners' self-perceived proficiency and anxiety levels. The fourth research question examines the relationship between FLA and participants' English language performance. Results showed that students who experienced lower levels of foreign language anxiety tended to have higher language performance scores. These results are in line with the findings of previous studies (e.g., Aida, 1994; Horwitz, 1986; Gardner, Tremblay, & Masgoret, 1997; Kao & Craigie, 2010; Lu & Liu, 2011). The current study provides further evidence that FLA can negatively impact language performance even among multilinguals. There is evidence that the knowledge of more languages helps reduce anxiety. However, even reduced levels of anxiety can still undermine the learner's language achievement.

## Conclusion

This study is an attempt to shed light on FLA with quadrilingual students learning EFL in Tunisia, which is an under explored context. The findings showed that both male and female quadrilinguals equally experienced low to average levels of FLA. Their main sources of anxiety were related to communication and evaluation. The study has also examined FLA, quadrilingualism, and proficiency, which is an understudied area of research in second language acquisition. Results revealed that background variables such as age, year of study, as well as self-perceived proficiency are predictors of FLA. Finally, this investigation has provided further evidence for the negative correlation that exists between FLA and language performance.

## Pedagogical implications

In spite of their experience in learning multiple languages, participants in this study exhibited certain levels of anxiety that have negatively impacted their

language performance. Therefore, there is a need to continue exploring effective ways to undermine the impact of FLA in the classroom. Participants in this study reported anxiety related to communication and evaluation. Many educators argue that these sources of anxiety may not disappear as long as the classroom does not turn into a supportive learning environment. Students should be encouraged to participate without the fear of making mistakes as that is part of the learning process. Students should not worry about being evaluated by instructors or peers. Educators should consider implementing different evaluation tools spread out throughout the duration of the course. This allows students to make up for a potential bad test without suffering the consequences of getting a bad grade. Students should focus solely on learning as that will maximize the chances of higher achievement. Educators are not the only parties that should be involved in reducing the amounts of anxiety in the classroom. Students should also uncover their own sources of anxiety and share them with their instructors to maximize their chances of success in the language classroom.

## Limitations and future research

The study has limitations that must be addressed. Firstly, the data were collected using a research tool based on self-reported perceptions on anxiety. Conducting interviews or focus group discussions may yield more interesting results. Secondly, this study did not account for the different proficiencies of the second and third languages learned by participants. In fact, this was beyond the scope of this investigation. Future research may examine whether proficiency levels are correlated with anxiety levels. Finally, it would be interesting to explore the relationship between experience abroad and FLA, which has not received enough attention from researchers.

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