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## Enjoyment, Anxiety, and Reported Learning Effort of Saudi Military Cadets Studying English as a Foreign Language

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### **Abstract**

*The impact of positive and negative emotions in the acquisition of a foreign language (FL) has increasingly come the interest of researchers in the field of second language acquisition (SLA). This study aims to investigate the influence of positive emotions (Foreign Language Enjoyment (FLE)), and negative emotions (Foreign Language Classroom Anxiety (FLCA)) on the perception of the Saudi English learners of their own proficiency in the FL, their knowledge of the FL vocabulary, and the effort they invest in the FL. The study was conducted in a military academy in Saudi Arabia and 148 male cadets studying English as the only foreign language voluntarily participated in the study. Descriptive statistics showed that the participants a) obtained high scores in their English vocabulary test, b) were enjoying learning English at the academy, c) perceived themselves as competent English learners, d) were ready to invest more effort in their English learning. In addition, correlation analysis revealed a significant strong linear relationship between FLE and FL reported learning effort and a moderate linear relationship between FLE and FL perceived competence and their level of FL vocabulary knowledge, respectively. FLCA, on the other hand, negatively correlated with all the scales of the study. Finally, the regression analysis revealed that FL reported learning effort and FL perceived competence predicted a significant amount of the variance in FLE and FLCA. The regression analysis also revealed that FLE and FLCA combined with level of FL vocabulary knowledge contributed to the perception of this group Saudi cadets of their own competence in English.*

**Keywords:** Foreign Language Enjoyment, Foreign Language Classroom Anxiety, L2 Perceived Competence, Intended Learning Effort, X-Lex vocabulary test

### **1 Introduction**

Learning a foreign language (FL) transcends the mere transmission of skills and knowledge that could be measured by tests. It can be regarded as an investment in building the character and wellbeing of the FL learner to be active L2 user who engages in meaningful social relationships (Seligman, 2002). Language learning is a long tedious process that includes ambivalent positive and negative emotional experiences in which FL learners go through. The role of negative and positive emotions in FL learning was acknowledged by early research; nevertheless “it was buried in complex models, which made a direct comparison of their effect on FL acquisition and performance impossible.” (Dewaele & Alfawzan, 2018, p. 22).

The emergence of positive psychology in second language acquisition (SLA) “has caused a move away from an exclusive focus on negative emotions, such as foreign language classroom anxiety (FLCA), in favor of a broader range of learner emotions, including positive emotions,

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such as foreign language enjoyment (FLE)” (Dewaele & Dewaele, 2020, p. 46). Since the first study that investigated FLCA and FLE in the same research design (Dewaele & MacIntyre, 2014), a number of studies looked at the association of FLCA and FLE with a number of independent variables; such as perceived L2 proficiency, number of languages known, education level, number of foreign languages under study, general level of the FL (lower intermediate to advanced), age group, gender, and cultural background (Dewaele & MacIntyre, 2014), learner-internal variables and teacher-centered variables (Dewaele & Dewaele, 2017), foreign language performance (Dewaele & Alfawzan, 2018), levels of FLCA and FLE in the same language when FL learners have two different teachers (Dewaele & Dewaele, 2020), and flow experiences (Dewaele & MacIntyre, 2022).

The purpose of the study is to investigate the impact of positive emotions (FLE), and negative emotions (FLCA) on other variables; which are the perception of the Saudi military cadets learning English of themselves as proficient FL learners, their level of English vocabulary knowledge, and the effort they invest in learning English. Another issue adds to the importance of the study is its context: a Saudi military academy in which cadets study English as the only foreign language which can be regarded an under researched context.

## 2 Literature Review

### 2.1 FLCA

The influence of negative emotions on the development FL learning has been highlighted decades ago as it is believed that they reduce FL learners’ understanding and processing of language input (Krashen, 1982). One of the salient negative emotions is FLCA; Horwitz et al. (1986, p. 128) defined FLCA as “a distinct complex of self-perceptions, beliefs, feelings and behaviors related to classroom learning arising from the uniqueness of the language learning process”. MacIntyre (2017, p. 28) added that FLCA “is influenced by internal physiological processes, cognitive and emotional states along with the demands of the situation and the presence of other people, among other things, considered over different timescales. Anxiety has both internal and social dimensions”.

FLCA has negatively associated with FL achievement, which has been shown by many studies for nearly 30 years (Alqahtani, 2023a; Gardner, 1985; Horwitz, 2010; MacIntyre & Gardner, 1991; Yu et al., 2015). This negative relationship is believed to be interactive as FLCA hinders achievement and progress in FL learning, similarly a low level of achievement in FL triggers FLCA when using the FL (MacIntyre et al., 2019). Some studies has found that the higher the level of FL proficiency the lower the level of FLCA (Dewaele & MacIntyre, 2014). In addition, research shows an association between FLCA and the perception of the FL learners of their own proficiency in the FL (Alqahtani, 2023a; Dewaele & Ip, 2013; Dewaele & MacIntyre, 2014).

### 2.2 FLE

In the realm of the theory of positive emotions, enjoyment encourages individuals to play; which helps fostering social bonds and brain development, which in turn urges individuals to be creative and to extend their limits (Fredrickson, 2001). Furthermore, Dewaele and MacIntyre (2014, p. 261) asserted that for FL learners “enjoyment and its associated playful behaviors offer a safe psychological base from which to explore an unfamiliar linguistic and cultural world”.

In comparison to negative emotions (e.g. FLCA), positive emotions (e.g. FLE) are associated with

better performance (e.g. academic achievement) in the FL (Dewaele, 2023). For example, Dewaele and Alfawzan (2018) found that the positive effect of FLE on FL performance was stronger than FLCA. In addition, FLE was a stronger predictor of the frequency of the experience of flow than FLCA (Dewaele & MacIntyre, 2022). Finally, the association between the perception of the FL learners of their own FL competence is positively associated with FLE and negatively associated with FLCA i.e. the increase in the FL learners' perception of their proficiency in FL boosts their FLE and the less proficient they feel the more FLCA they experience (Dewaele & MacIntyre, 2014).

### **2.3 The FLCA and FLE Association**

A number of studies from different FL contexts (Dewaele & Alfawzan, 2018; Dewaele & Dewaele, 2017; Dewaele & MacIntyre, 2014; Li et al., 2020; MacIntyre & Gregersen, 2012) have come to the same conclusion that “positive and negative emotions are not opposites but are best conceptualized as independent, interacting experiences with specific functions and physiological consequences running in different directions” (Dewaele & MacIntyre, 2022, p. 3). In addition, the existence of one of the emotions does not necessarily mean the absence of the other, or as Dewaele and MacIntyre (2016) put it as the feet (i.e. FLE and FLCA (the sore aching foot)) of the runner (i.e. FL learner) that should be brought into equilibrium.

It has been found that FLCA and FLE are essential emotions for FL learning that are negatively associated (Dewaele & Alfawzan, 2018; Dewaele & MacIntyre, 2014; Dewaele & MacIntyre, 2016). Furthermore, these studies have found that FLCA and FLE had contradictory relationships with a number of scales as FLCA had a negative association while FLE had a positive association. Examples of the scales are perceived L2 proficiency, number of languages known, education level, number of foreign languages under study, general level of the FL (Dewaele & MacIntyre, 2014), foreign language performance (Dewaele & Alfawzan, 2018), self-perceived English proficiency and actual English achievement (Li et al., 2020), and flow experiences (Dewaele & MacIntyre, 2022).

To sum up, FL acquisition and performance is impacted by emotions (Dewaele, 2023). While FLCA hinders FL progression and performance (Botes et al., 2020), FLE is associated with better FL performance and academic achievement (Botes et al., 2022).

## **3 Research Questions**

1. What is the relationship between the following scales: a) FLCA, b) FLE, c) level of FL vocabulary knowledge, d) the FL learners' reported learning effort, and e) the FL learners' perceived competence?
2. How well do FLCA and FLE predict: a) level of FL vocabulary knowledge, b) the FL learners' reported learning effort, and c) the FL learners' perceived competence?
3. Is this set of variables: a) level of FL vocabulary knowledge, b) the FL learners' reported learning effort, and c) the FL learners' perceived competence still able to predict a significant amount of the variance in FLCA and FLE?

## **4 Method**

### **4.1 Participants**

The sample of the study is made up of 148 Saudi military cadets studying English as the only FL. The military academy accepts male students with high school degree, where they spend 3 years studying various subjects from two main domains: military and civilian. English is

regarded as a civilian subject that cadets study in every semester. Cadets must pass in all the subjects in order to graduate as lieutenants. As English has the lion share among other subjects from both domains (military and civilian) representing around 27% of the course units, the hierarchy of the cadets in the academy and after graduation is mainly decided by their results in English tests. This shows the significance of English for the future of these cadets. The sample of the study was randomly selected from the cadets of the second year who volunteered to participate in the study. The age of the participants was approximately 20 years old, and they represented 16.7% of the 885 second year cadets.

## 4.2 Instruments

A questionnaire consists of 36 items of a 5-point Likert-scale was used to measure the following: 1) FLCA, 2) FLE, 3) the FL learners' reported learning effort, and 4) the FL perceived competence. The used questionnaire was adapted from a number of studies: FLCA and FLE (Dewaele & MacIntyre, 2014), the FL learners' reported learning effort and the FL perceived competence (Alqabtani, 2020, 2023a, 2023b). To measure the FLCA, FLE, and FL learners' reported learning effort, participants were asked to indicate their agreement with 32 items from 1 = absolutely disagree to 5 = absolutely agree. Then, to measure the participants' FL perceived competence, they were asked to rate their competence in English in the four skills (listening, speaking, reading, and writing) from 1= the lowest value to 5= the highest value.

In addition, the level of FL vocabulary knowledge was measured using the X-Lex vocabulary test (Meara & Milton, 2003). The X-Lex vocabulary test measures the most frequent 5000 receptive words in English in written modality. The X-Lex is made up of 120 items: 100 real English words and 20 pseudowords to control guesswork. When a participant ticks a real word he gets 50 points, but he gets -250 points for each one of the pseudowords. The participants can obtain the maximum 5000 points if he ticked all the real words and none of the pseudowords.

The wording, comprehensibility and suitability of the questionnaire items were assessed before distributing the questionnaire among the cadets who volunteered to participate in the study. The author assured the respondents about their anonymity and that the collected data would be used only for research purpose.

## 4.3 Data Analysis Procedure

The author used the IBM SPSS 20 software to analyze the collected data. First, in order to define the levels of FL vocabulary knowledge of the participants, their scores in the vocabulary tests were divided into five levels ranging from 1= the lowest level to 5= the highest level. The highest score in the vocabulary test was 3500. Therefore, the highest score (3500) was divided by the number of the levels (5), which means that the length of the category = 700 (see table 1 for more detail).

**Table 1:** Levels of Participants Based on their Vocabulary Test.

Degree	Level	Vocabulary Test Score	Frequency	Percentage
1	Very poor	0-700	15	10.1
2	Poor	701-1400	31	20.9
3	Good	1401-2100	45	30.4
4	Very good	2101-2800	43	29.1
5	Excellent	2801-3500	14	9.5
Total			148	100

After that, to examine the reliability of the scales, the coefficient of their internal consistency

was firstly measured. Then, to check the possible violation of the variables as well as to get a holistic view of the characteristics of the sample of the study, a number of descriptive statistics (e.g. mean, standard deviation, and skewness) were calculated (Pallant, 2010). Next, the correlation analysis was administered to investigate the relationships among the variables used in the study. Finally, the regression analysis was used to explore the predictive ability of the scales of the study on each other.

## 5 Results

### 5.1 Reliability and descriptive statistics

The Cronbach's alpha coefficient was used to indicate the reliability of the questionnaire items. Ideally, the coefficient of the Cronbach's alpha of the scale should be above .7. Nevertheless, "with short scales (e.g. scales with fewer than ten items) it is common to find quite low Cronbach values (e.g. .5)" (Pallant, 2010, p. 97). The lowest Cronbach's alpha coefficient was for the scale measuring the reported learning effort of the participants (consisted of five items), which was within the acceptable value of Cronbach's alpha coefficient. Therefore, it could be claimed that the used questionnaire attained internal consistency. See table 2.

The skewness and kurtosis values helped the author to assess the normality of the data. The perfect normal distribution can be achieved when the values of skewness and kurtosis are '0'. Nevertheless, this is "rather an uncommon occurrence in the Social Sciences" (Pallant, 2010, p. 57), which does not "necessarily indicate a problem with the scale, but rather reflects the underlying nature of the construct being measured" (Pallant, 2010, p. 64). Therefore, it could be claimed that the distribution of the scores was reasonably normal. See table 2.

The mean and standard deviation values helped the author to check for variables with low or high scores and possible significant variation within the mean values. This could help to get a comprehensive view of the results as well as to make comparisons among them. For example, the mean values of all the variables except FLCA were above the 2.5 (midpoint), which suggested that the participants might have showed more positive emotions towards their FL, which possibly helped them to be less anxious, more optimistic regarding their FL competence and invest more effort in their FL learning. See table 2 for more detail.

**Table 2:** Reliability and Descriptive Statistics of the Scales.

	Name of the scale	Cronbach's alpha	Mean	Std. deviation	Skewness	Kurtosis
1.	FLE	.77	3.82	.378	-.177	-.280
2.	FLCA	.81	2.16	.761	.600	.395
3.	FL Reported Learning Effort	.67	4.30	.512	-.619	-.232
4.	FL Perceived Competence	.76	3.22	.920	-.147	-.759
5.	FL Vocabulary Knowledge		3.06	1.13	-.162	-.746

### 5.2 Correlation Analysis

The correlation analysis was used to investigate possible linear relationship between the scales of the study. The strength of the relationship was determined following the guidelines of Cohen (1988, pp. 79-81), which suggest (see table 3):

**Table 3:** Determining the Strength of the Relationship.

Relationship interpretation	r value
Weak	0.10 – 0.29
Moderate	0.30 – 0.49
Strong	0.50 – 1.0

The FLE showed a strong linear relationship with the FL reported leaning effort (.504), which might have indicated that when this group of Saudi cadets enjoyed learning English this might have helped them to invest more effort in their English language learning. On the other hand, the FLCA revealed a negative linear relationship with the other variables. This likely reflected the negative influence of anxiety on leaning a foreign language like English. See table 4 for more detail.

**Table 4:** Correlation Coefficient Values for the Scales.

Scales	1	2	3	4	5
1. FLE	—				
2. FLCA	-.316**	—			
3. FL Reported Learning Effort	.504**	-.228**	—		
4. FL Perceived Competence	.472**	-.436**	.175*	—	
5. FL Vocabulary Knowledge	.374**	-.262**	.229*	.432**	—

\*\*p < .01.

\* p < .05.

### 5.3 Regression Analysis

A stepwise regression analysis was administered to explore the predictive ability of the scales of the study on each other. The study included five scales; therefore, five regression models were conducted. Before proceeding with the regression analysis the data were tested for violation using the assumptions of normality, outliers, and multicollinearity. These assumptions were tested by inspecting Normal P-P Plot, Scatterplot, Mahalanobis distance values, Tolerance values and VIF values (Pallant, 2010, pp. 148-167). The inspection showed that these assumptions were not violated.

The first regression model had the FL reported learning effort as the dependent variable, which explained 25% of the variance in the reported effort of the group of Saudi cadets in their English learning. The FLE was the only variable that made a significant contribution to predicting the effort that the students invested in their FL learning. See table 5.

**Table 5:** Regression Model Based on the FL Reported Learning Effort as the Dependent Variable.

Variable	Final model		
	B	SE B	$\beta$
FLE	.68	.09	.50*
R <sup>2</sup>	.25		
F for change in R <sup>2</sup>	49.63*		

\*p < .05.

The second regression model was used to determine the scales that possibly contributed to the knowledge of the Saudi students of English vocabulary. The model explained 22% of the variance in the vocabulary knowledge of the Saudi FL learners. Two variables made a significant

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 contribution to predicting the English vocabulary knowledge for the Saudi participants; FL perceived competence and FLE, respectively. See table 6.

**Table 6:** Regression Model Based on FL Vocabulary Knowledge as the Dependent Variable.

Variable	Final model		
	B	SE B	$\beta$
FL Perceived Competenc	41	10	.33*
FLE	66	25	.22*
R <sup>2</sup>		22	
F for change in R <sup>2</sup>		6.95*	

\*p<.05.

The third regression model was used to determine the variables contributed to the FLE, which explained 41% of the variance in the FLE of the group of the Saudi cadets. Two variables made a significant contribution to predicting the FLE of the FL Saudi learners, which were the FL reported learning effort that was the stronger predictor followed by FL perceived competence. See table 7.

**Table 7:** Regression Model Based on FLE as the Dependent Variable.

Variable	Final model		
	B	SE B	$\beta$
FL Reported Learning Effort	32	05	43*
FL Perceived Competence	16	03	40*
R <sup>2</sup>		41	
F for change in R <sup>2</sup>		37.21*	

\*p<.05.

The fourth regression model had the Saudi students' FLCA as the criterion measure. The model explained 21% of the variance of the anxiety that these students likely felt while being in the classroom learning English. Two variables contributed negatively to predicting the students' FLCA, which were their FL perceived competence followed by their FL reported learning effort. See table 8.

**Table 8:** Regression Model Based on FLCA as the Dependent Variable.

Variable	Final model		
	B	SE B	$\beta$
FL Perceived Competence	-.34	.06	-.41*
FL Reported Learning Effort	-.23	.11	-.16*
R <sup>2</sup>		.21	
F for change in R <sup>2</sup>		4.36*	

\*p<.05.

The fifth regression model was used to determine the scales contributed to the perception of English competence for this group of the Saudi cadets. The model explained 61% of the variance of the perception of the Saudi cadets of their FL competence. The model revealed that three variables significantly contributed to predicting the perception of the participants of their English competence. The strongest predictor was FLE followed by FLCA and English

vocabulary knowledge, respectively. While the contribution of the FLE and FL vocabulary knowledge was positive, the FLCA negatively contributed to the perception of the Saudi English learners of their competence in English. See table 9.

**Table 9:** Regression Model Based on FL Perceived Competence as the Dependent Variable.

Variable	Final model		
	B	SE B	$\beta$
FLE	.71	.18	.29*
FLCA	-.34	.09	-.28*
FL Vocabulary Knowledge	.20	.06	.25*
R <sup>2</sup>		.61	
F for change in R <sup>2</sup>		11.91*	

\* $p < .05$ .

## 6 Discussion

The correlation analysis and regression analysis combined with the descriptive statistics revealed that this group of Saudi cadets showed more positive emotions (i.e. FLE) than negative emotions (i.e. FLCA). In addition, in contrary to FLCA, FLE was associated with positive performance of the Saudi FL learners in the FL (e.g. more learning effort invested in FL learning, high perception of their FL competence, and good vocabulary test scores). These results were in line with the findings of previous studies like Dewaele and Alfawzan (2018); Dewaele and MacIntyre (2022); and Dewaele and MacIntyre (2014). Moreover, the correlation analysis and regression analysis showed that there was a negative association between the FLE and FLCA. For example, the correlation analysis revealed a moderate negative linear relationship between them; nevertheless, the regression analysis indicated that they did not make a significant contribution to predicting each other as they both contributed to the students' FL intended effort and their perception of their FL competence (with a negative contribution of FLCA), similarly the students' FL intended effort and their perception of their FL competence contributed positively to the FLE and contributed negatively to the FLCA. This suggests an indirect relationship between FLE and FLCA; this needs more investigation, which is beyond the scope of the current study. Furthermore, the moderate negative correlation between FLE and FLCA lent more support to the claim of Dewaele and MacIntyre (2014, p. 261) that FLE and FLCA “appear to be independent emotions, and not opposite ends of the same dimension” that could overlap at the same time for the same FL learner.

The correlation analysis and regression analysis revealed an association between the Saudi students' score in the English vocabulary test and their perception of their competence in English. This result was in line with the findings of previous studies conducted in similar Saudi military contexts: Alqahtani (2020) and (Alqahtani, 2023a). All these studies, including this study, found a moderate to strong correlation between the Saudi cadets' perception of their competence in English and their score in the English vocabulary test. In addition, both variables significantly contributed to predicting each other, as the contribution of the perception of the cadets of their competence in English to their score in the English vocabulary test was higher. Furthermore, the regression analysis in these studies showed that the perception of the Saudi FL students of their competence in English was either the only contributor to their score in their English vocabulary score or associated with positive emotions such as FLE. Whereas the contribution of the English vocabulary test to the Saudi students'



perception of their competence in English was combined with positive emotions (e.g. language learning attitudes (Alqahtani, 2020) and L2WTC (Alqahtani, 2023a)), and negative emotions (FLCA) at the same time. This possibly means that when English learners obtain a good perception of their competence in English this likely helps them to get positive emotions that encourage them to get good scores in their English vocabulary tests. In the same vein ambivalent emotions positive and negative combined with their scores in English vocabulary tests impact their perception of their competence in English. When FL learners succeed to get high scores in their FL vocabulary tests, they might gain positive emotions that would likely boost their perception of their FL competence. However, when they fail to get high scores in their FL vocabulary tests, this would likely compel them to have negative emotions that might make them skeptical about their competence in the FL.

The mean score of the scale describing the effort that the Saudi FL learners reported they invest in their English learning was the highest among the other scales of the study. In addition, the correlation analysis showed that this scale had a strong positive linear relationship with the FLE and a moderate negative linear relationship with the FLCA. Moreover, the regression analysis revealed that the reported learning effort of this group of Saudi English learners combined with their perception of their own competence in English contributed positively to the prediction of the FLE and negatively to the prediction of the FLCA. Furthermore, FLE was the only predictor of the reported FL learning effort of the Saudi cadets. These results suggested as this group of Saudi cadets were likely seeing themselves as successful English learners and were confident of their own competence in English this might have helped them to enjoy their English learning process and be less anxious, which in turn might have helped them to invest more effort in their English language learning. In other words, unless these Saudi FL learners were convinced that they could succeed, they were unlikely to invest effort in their English language learning, which was in line with the claim of previous studies like (Alqahtani, 2020), (Alqahtani, 2017), Dörnyei and Ushioda (2009).

## 7 Conclusion

Revisiting the research questions set out earlier; first, the scales of the study showed some correlation between them. The strongest correlation was between FLE and FL reported learning effort. FLCA had a negative relationship with all the variables. Second, FLE predicted a significant amount of the variance in: a) level of vocabulary knowledge, b) FL reported learning effort, and c) FL perceived competence. The only variable predicted by FLCA was FL perceived competence. Third, FL reported learning effort and FL perceived competence predicted a significant amount of the variance in FLE and FLCA.

Due to the context of the study (a military academy) and its regulations (female candidates cannot join the academy) a major limitation of the study was inevitable as the population of the study restricted to male cadets. Therefore, the findings of the study might not be generalized to the wider community of the Saudi English learners.

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