

The Relationship between EFL Learners' Anxiety and Writing Complexity

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Abstract

The present study was an attempt to investigate the relationship between EFL learners' anxiety and writing complexity. For the purpose of the study, 70 female learners, between 17 and 24 years old (mean=20) from Najm language school in Tehran participated in the study. The participants' level of anxiety was measured using Horwitz, Horwitz, and Cope's Anxiety Questionnaire (1986) and their writing complexity was measured through writing a narrative text based on their course book. The results revealed that there was a significant positive correlation between anxiety and writing complexity ($p=.00$). In addition, the results of examining the predictability of writing complexity by anxiety showed that anxiety significantly predicted writing complexity ($F(1, 68)=16.67, p<.01$). The results of this study have implications for students, teachers, and all those involved in the area of teaching and learning.

Keywords: anxiety, writing complexity, writing ability, EFL learners

Introduction

As Brown (2004) maintains, writing is an authentic way of expressing ideas and manifesting thoughts. It is a basic skill to be learned because it contributes to overall learning and it is also an indispensable part of language learning. This skill is complex in nature since it is not simply restricted to the learning of linguistic items. Writing is defined as a productive skill in which one expresses his thoughts (Chastain, 1988). According to Hedge (2000), writing is the result of employing strategies to manage the composing process, which is one of gradually developing a text. It involves a number of activities such as setting goals, generating ideas, organizing information, selecting appropriate language, making a draft, reading and reviewing it, then revising and editing.

The objective of the teaching of writing in a foreign language, as Ur (1996) believes, is to get learners to gain the abilities and skills they need to create a range of different kinds of written texts similar to those an educated person would be expected to produce in his own language. This highlights the need to define the specific objective in a situation. Narrative writing reports an event or tells the story of something that happens (Richards & Schmidt, 2002).

Researchers in the area of second/foreign language learning are now in agreement that L2 proficiency, in general, and writing proficiency, in particular, are concepts which involve three main dimensions: accuracy, complexity, and fluency (Ellis & Barkhuizen, 2005). Similarly, Skehan (1996) points out that in both oral and written language productions, increasing these three aspects of performance is favorable.

In addition, writing belongs to a productive skill because the students are required to produce a piece of writing, such as writing an enjoyable and interesting paragraph, a letter, a proposal, an article, and so on. In order to produce these kinds of writings, the students should be able to write some words and make sentences, develop the sentences into paragraphs, and finally make essays, etc. Besides, the students should consider the word choice, the use of appropriate grammar, word order, and the organization of ideas into a coherent and cohesive form (Attamim, 2007).

Many writing teachers a few decades ago were mostly concerned with the final product of writing. Today many of them such as Nudee, Chatupote, & Teo (2010) focus on “the process of writing such as planning, drafting, revising and editing, rewriting, and publishing that leads to the final product” (p. 2). Similarly, Skehan (1996) points out that in both oral and written language productions, increasing these three aspects of performance is favorable.

In any educational setting, anxiety is experienced by students which affect their working memory, and consequently, their ability to perform effectively. In language classroom, anxiety can also have various effects. According to MacIntyre and Gardner (1991), it can impede the learners' academic achievements. As a result, students with anxiety cannot give full attention to what they are learning. MacIntyre and Gardner (1991) further mentioned that in addition to the negative effect of anxiety on the students' performance in the second language, it seems that anxiety has a negative effect on listening comprehension, vocabulary acquisition and retention which consequently leads to the problems in reading and writing.

Moreover, Fisher (2006) believes that anxiety is a natural language process and mentioned that it affects the learner's self-perception. He further states that the higher the level of anxiety, the lower the foreign language skill the learner displays. Therefore, reducing anxiety in order to enhance students' achievement is a major concern in any educational setting. Since individual factors in learning a language is important, affective factors such as learners' attitudes, empathy, inhibition, motivation and anxiety have been accounted for successful consequences of language learning in different contexts (Na, 2007). In the past three decades, anxiety as an influential factor has been under study and examined among a large number of language learners, particularly foreign language learners in many contexts.

In Iran, some researchers (e.g. Azarfam and Baki, 2012; Noori, 2013; Rezazadeh & Tavakoli, 2009; Riasati, 2011; Talebinejad & Nekouei, 2013) have conducted research with different groups of learners. They showed that anxiety-related research has been in consonance with other related studies in other EFL contexts. Atef-Vahid and Kashani (2011) explored EFL learning anxiety among 38 third-year high school students in English classrooms and its relationship with overall English achievement. Students' anxiety was also analyzed, and their English achievement was measured through their final exam, which was administered at school. The results of these studies revealed that one-third of the students experienced moderate to high-anxiety levels while learning English in class; however, some students felt really confident and relaxed. English classroom anxiety had the highest correlational value among other types of anxiety in foreign language classes.

Complexity is important because it pushes learners to create more elaboration and structure in their developing language ability, makes language use more effective, and brings the foreign or second language in line with target language. Complexity also refers to the learners' perceptions of difficulty in which a factor such as anxiety can affect perceptions of difficulty. Formulating new ideas can be difficult because it involves transforming or modifying information, which is much more complex than writing as telling. It is undoubtedly the act of

composing which can create problems and anxiety for students especially for those writing in a second or foreign language in academic contexts (Cohen & Brooks-Carson, 2001).

While most research has focused on spoken language production, writing complexity and written language production still remain understudied. Because of the importance of writing as an effective means of communication, more and more studies are needed to explore the relation between writing complexity and anxiety as an affective factor for better instruction and better accomplishment.

The study is very helpful in considering students' anxiety in learning skills like writing. In addition, this research might be helpful to teachers and curriculum designers to make improvements on the current English program specifically to address concerns why students are not well rounded in the development of writing in L2. Writing achievement was found to be associated with many factors such as socio-economic factors (Lillydahl, 1990), peer relationships (Bjarnason, 2000), motivation (Bergin, 1998; Bong, 2001), anxiety, and the perception of social support (Yildirim & Ergene, 2008).

Gardner and MacIntyre (1993) recognize foreign language anxiety as an affective factor in foreign language learning (FLA) and normally discussed alongside other individual learner differences that this area is still considered to be a relatively important and developing within foreign language research. Additionally, as Horwitz (2001) states, most of the students experience anxiety in any educational setting when taking a test or giving a public performance. He further notes that when learners become highly anxious, acquisition of foreign language is not likely to be successful. Horwitz (2001) also believes that teachers should be knowledgeable enough in how to help students with their anxiety.

Regarding the negative effect of foreign language anxiety on language achievement, foreign language teachers must attempt to alleviate students' anxiety. If there exists a relationship between learners' anxiety and writing complexity, for improving learners' writing skills, anxiety should be more considered. The finding of this study, thus, will be useful to those who are on the front line of education, such as teachers, administrators, curriculum developers, students, and language program directors. Therefore, it is hoped that the description and discussion of this research will provide a useful basis for writing instruction and to help practitioners reflect on different ways to improve the current practice. For instance, syllabus designers and curriculum developers can develop some writing tasks taking into account the L2 learners' anxiety in order to provide them with the opportunity to have more efficient learning. Writing instructors can also employ new strategies to incorporate the principles into their writing classes in order to promote the writing performance of the learners. English language learners can also be aware of the forgotten power of anxiety in doing language learning activities, particularly in their writing ones.

Research Questions

The purpose of this study was to investigate the following questions:

Q1: Is there any significant relationship between EFL learners' anxiety, and writing complexity?

Q2: Can EFL learners' anxiety predict their writing complexity?

Research Hypotheses

In line with the research questions, the following null hypotheses were formulated:

H₀₁: There is no significant relationship between EFL learners' anxiety, and writing complexity.

H₀₂: EFL learners' anxiety cannot predict their writing complexity.

Methodology

Participants

In this study, 70 intermediate female students out of 110 who were studying English at Najm Institute in Tehran were selected. The mean age of the participants of the study was about 20, ranging from 17 to 24. Through their performance on the preliminary proficiency test (PET), 70 learners whose scores fell between one standard deviation above and one standard deviation below the mean were selected as the participants in the study.

Instrumentation

A preliminary proficiency test (PET)

First, the researchers utilized a sample PET from the internet to choose a homogenous sample of participants based on their level of proficiency prior to the study. PET is considered as the second level of Cambridge ESOL exam covering the four language skills (speaking, writing, listening, and reading) and is a valuable qualification if one wants to work or study abroad or to develop a career in international business. The rating scale used to rate the writing section of PET in this study was the one provided by Cambridge under the name of General Mark Schemes for Writing. The rating was done on the basis of the criteria stated in the rating scale including the rating scale of 0-5.

Horwitz, Horwitz, and Cope's Anxiety Questionnaire (1986)

The Foreign Language Classroom Anxiety Scale which was directly adopted from Horwitz et al. (1986) was used in this study. There are 33 question items, which are divided into three broad categories of Foreign Language Classroom Anxiety Scale: communication anxiety, test anxiety, and fear of negative evaluation. Finally, this Foreign Language Classroom Anxiety Scale was used to measure two dimensions of foreign language classroom anxiety: English use and test anxiety (questions 1 to 9), and English language class anxiety (questions 10 to 24). The response continuum is: 1= Strongly Disagree, 2= Disagree, 3=Neither Agree nor Disagree, 4=Agree, 5=Strongly Agree. It is worth mentioning that for preventing ambiguity, the piloted Persian version of questionnaire was administered in order to assess the degree of the anxiety in both groups.

Narrative writing test

The participants were asked to write a composition on a topic based on their course book in narrative type. In fact, they were asked to write a composition including at least 150 words on a narrative topic.

The writing complexity

In order to determine the participants' level of writing complexity and to examine the relationship between it and anxiety, the learners were requested to write a narrative text. The topic of the narrative selected at the time of testing was as follow: a memorable/unforgettable vacation trip. This topic is in line with their lesson of their course book which was *American File 2*. In fact, they were asked to write a composition including at least 150 words about this topic. The writing was analyzed in terms of complexity. They had 50 minutes to write about the predetermined topic. It is worth noting that one of the researchers explained that the composition should have three parts – Introduction, body paragraphs, and conclusion.

T-units as measures of complexity

The writing was divided into the total number of T-units (Hunt, 1970). The students' performance was scored in terms of complexity by two raters following the measurement profile. T-units are generally considered to be a good measure for writing (Ellis & Barkhuizen, 2005) because they provide a quantifiable unit for measuring sections of written language, and they are also viewed as a useful indicator of developmental progress in writing ability (Hudson, 2009). T-units are viewed as a good indicator of developmental progress in writing ability (Hunt, 1965). Complexity is classified into two levels of lexical and syntactic one. Lexical complexity of the written text was not taken into account because the learners used dictionaries to find the intended lexical item. However, for measuring syntactic complexity of the collected data, a measure of S-nodes per T-units was employed (Rahimpour & Hosseini, 2010).

Research Design

The present study used the correlational method to determine the level of EFL learners' anxiety. The participants answered the questionnaire to determine their anxiety level and then they wrote a narrative text to determine their writing complexity. The participants were selected based on convenient not random method. Anxiety was proposed as the predictor variables and writing complexity as the predicted variable. The participants' gender (female) was regarded as a control variable.

Procedure

The procedure of the study was sequenced as the pilot study and the main study:

Pilot Study

To begin the study, the researchers piloted a sample PET among a group of 30 EFL participants. Following item analysis, the finalized version was administered for participant selection; the participants of this study included 70 Iranian female intermediate EFL learners were selected based on their performance on the piloted PET from a group of 110 students at Najm Language School. The inter-rater reliability of the piloted PET's writing sections of a test was calculated using Cronbach's alpha formula, too. In order to determine the reliability of the scores, Pearson correlation coefficient was calculated. Therefore, the one of the researchers and her colleague who is a teacher with about eight years of experience and had MA rated the writing section. After making sure of the presence of internal consistency between the raters, the obtained score of each participant was considered as the average of the scores of the writing section given by two raters. In addition, the anxiety questionnaire was also piloted among the same thirty participants of the pilot group. The purpose of piloting the questionnaire was to find out if it is a reliable instrument of measuring the learners' anxiety. The reliability of this questionnaire was calculated using Cronbach's alpha formula.

Main Study and Data Collection Procedure

Initially, the piloted test was administered to 110 female intermediate students at Najm institute, but the researchers included only those participants whose scores were one standard deviation above and below the mean in the proficiency test. Subsequently, the anxiety questionnaire was distributed among these participants in one session. The respondents were briefed about the instructions of filling the questionnaires. In addition, they were asked to write a narrative text including at least 150 words about a topic based on their course book. The narrative-writing task was chosen in this study for a number of reasons. Various narrative tasks, particularly with regard to the use of pictures, have been used in other similar studies of task

complexity (e.g., Ellis & Yuan, 2004; Ishikawa, 2006) and thus comparison with the results of these studies would be easier. The participants had 50 minutes to write the composition. Their performances were scored objectively in terms of complexity by two raters (one of the researchers and one of her colleagues holding an MA degree in TEFL) following Polio's (1997) guidelines for T-units.

Data Analysis Procedure

In the present study, the data analysis contains descriptive statistics and inferential statistics as well. Descriptive statistics like mean, standard deviation, and standard error of the mean were obtained. Afterwards, to check the normality of distribution, skewness ratio and kurtosis ratio were calculated. Moreover, an assumption of linear correlations was checked to decide whether parametric or non-parametric techniques should be employed. Given the inferential statistics, considering the fact that the assumption of linear correlation was met, the Pearson's product-moment correlation as a parametric technique was used in order to investigate the relationship between the variables. In order to address the second research question, a multiple regression analysis was employed. Furthermore, the reliability of the research instruments was estimated through Cronbach's alpha coefficient.

Results

Before running the tests to answer the research questions, some preliminary analyses were needed to be done. These analyses were done regarding the participant selection. Following subsections elaborate on these analyses.

The first step in this study was to homogenize the participants regarding their proficiency. To reach a homogenized set of participants, a Preliminary English Test (PET) was administered to 110 intermediate students studying at Najm Institute of Tehran.

Before starting the treatment, PET was piloted among 30 learners bearing almost the same characteristics of the participants of the main study. The aim of piloting was to assure the reliability of PET. Following the piloting of the PET, the descriptive statistics of this administration were calculated with the mean and standard deviation standing at 53.26 and 10.185, respectively (Table 1).

Table 1. Descriptive Statistics of PET Scores at Piloting Phase

	N	Minimum	Maximum	Mean	Std. Deviation	Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error
PETpilot Valid N (listwise)	30 30	35.50	71.00	53.2667	10.18513	-1.049	.833

Furthermore, the reliability of the test scores gained by the participants on the pilot PET by using Chronbach Alpha as shown in Table 2 was 0.82

Table 2. Reliability of the PET

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.826	.815	67

Furthermore, the inter-rater reliability of the two raters scoring the two writing sections of PET proved significant ($r = 0.833$, $p = 0.00 < 0.01$; $r = 0.802$, $p = 0.00 < 0.01$). Hence, the researchers were reassured that the two raters could proceed with scoring all the subsequent writing papers in this study.

Table 3. Inter-rater Reliability of the Two Raters in the Piloting of Writing Part 2

			Rater1	Rater2
Spearman's rho	Rater1	Correlation Coefficient	1.000	.833**
		Sig. (2-tailed)	.	.000
		N	30	30
	Rater2	Correlation Coefficient	.833**	1.000
		Sig. (2-tailed)	.000	.
		N	30	30

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

Table 4. Inter-rater Reliability of the Two Raters in the Piloting of Writing Part 3

			Rater1	Rater2
Spearman's rho	Rater1	Correlation Coefficient	1.000	.802**
		Sig. (2-tailed)	.	.000
		N	30	30
	Rater2	Correlation Coefficient	.802**	1.000
		Sig. (2-tailed)	.000	.
		N	30	30

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

The above analyses approved that the PET was reliable; thus, the scores obtained from the test can be relied to measure the proficiency of the participants in the main study. Being sure of the reliability of PET, the prepared PET was administered to 110 students with the aim of selecting 70 of them for the study. The descriptive statistics of this process are presented below in Table 5.

Table 5. Descriptive Statistics for PET Proficiency Test

	N	Minimum	Maximum	Mean	Std. Deviation	Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error
PETadmin Valid (listwise)	N 110	35.50	69.50	55.7000	7.28836	.637	.457

As it is evident from Table 5 above, the mean and standard deviation of the scores were 55.70 and 7.28, respectively. Out of the 110 participants, 70 whose scores fell between one standard deviation above and below the mean were chosen.

Anxiety

The next step in analyzing the data was to obtain anxiety of the participants. To do so, the translated version of the questionnaire was to be administered to the selected 70 participants of the study. The questionnaire contains 33 items each of which had 5 scale of response. Since there was no need to use the standardized EQ, only the raw scores were calculated. Before administration of the questionnaire, in order to find if the instrument enjoys acceptable reliability, it was piloted among 30 learners bearing almost the same characteristics of the participants in the main study. Table 6, below, shows the descriptive statistics of the scores obtained from the piloting phase.

Table 6. Descriptive Statistics of Piloting Anxiety Questionnaire

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
AnxietyPilot Valid (listwise)	N 30	49.00	147.00	102.6000	24.74086	-.258	.427	-.186	.833

As it is evident from table 6, the mean and standard deviation of the scores were 102.6 and 24.74, respectively. The kurtosis ratio of .186 also indicated the normalcy of distribution. As it is evident from the table, no significant skewness can be inspected from the data. Based on the data obtained in this phase, the reliability of the anxiety questionnaire was calculated using Cronbach's alpha formula. Table 7 shows the reliability estimate of the anxiety questionnaire.

Table 7. Reliability of the Anxiety Questionnaire

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	on N of Items
.983	.983	33

As it is evident from table 4.7, the reliability of the questionnaire was estimated to be .98, which indicates the measurement done by this instrument is reliable for the purpose of the present study. Being sure of the reliability of the questionnaire, it was administered to the participants of the main study. Table 4.8 shows the descriptive statistics obtained from the questionnaire.

Table 8. Descriptive Statistics of Scores Obtained from Anxiety Questionnaire

	N	Minimum	Maximum	Mean	Std. Deviation	Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error
Anxiety Valid (listwise)	70 N 70	46.00	165.00	99.1000	24.87018	.014	.566

As it is evident from Table 8, the mean and standard deviation of scores were 99.1 and 24.87, respectively. Also, the kurtosis ratio shows the scores were normally distributed.

Writing Complexity

The final step in gathering the data of this research is to obtain the participants writing ability scores in terms of writing complexity. In this regard, the essay writing test was administered to the participants and the complexity of their writing pieces was analyzed as explained in chapter III. To measure the participant's writing complexity, the guideline provided by Polio (1997) was followed. Accordingly, writing complexity was calculated by dividing the total number of the clauses produced by each learner by total number of the T-units of his or her work. Table 9 shows the statistics obtained in this regard.

Table 9. Descriptive statistics of the writing complexity Scores

	N	Minimum	Maximum	Mean	Std. Deviation	Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error
WritingComplexity Valid N (listwise)	70 70	1.23	2.40	1.6636	.25689	.138	.566

As it is evident in Table 9, the mean and standard deviation of the scores were 1.66 and .25, respectively. The kurtosis ratio also indicated that the data was normally distributed.

Exploring the Research Questions

After the data were gathered, a correlation procedure was run to explore if there is any relationship between the participants' anxiety and writing complexity. Then, the predictability of the writing complexity by anxiety was measured through a linear regression analysis. However,

before running the correlation procedure, some assumption needed to be checked. Followings are the procedure accomplished to explore the two research questions.

Assumptions of Statistical Tests

The data were analyzed through Pearson's Product-moment correlation coefficient and linear regression both of which share a number of assumptions; namely, normality, linearity and homoscedasticity. The last two will be discussed later; yet, the assumption of normality is discussed using two methods; skewness/ratio and Kolmogorov-Smirnov/Shapiro-Wilk. As it is displayed in Table 4, the ratios of skewness and kurtosis over their respective standard errors were lower than the absolute value of 1.96; hence normality of the present data was proved.

Table 10. Descriptive Statistics; Testing Normality Assumption

	N	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Std. Error
WritingComplexity	70	.631	.287	.138	.566
Questionnaire	70	-.070	.287	.014	.566
Valid N (listwise)	70				

The normality of the present data was also supported by the inspection of the normal probability plots, Normal Q-Q Plots (Figures 1 and 2):

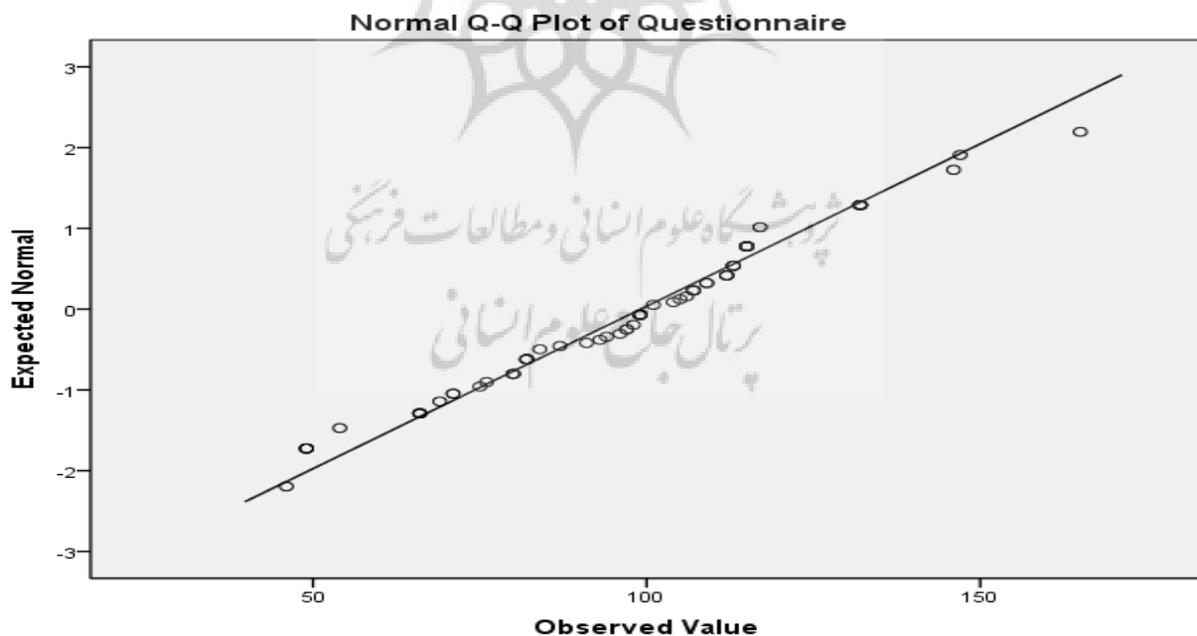


Figure 1. The Normality Probability Plot for Anxiety Questionnaire

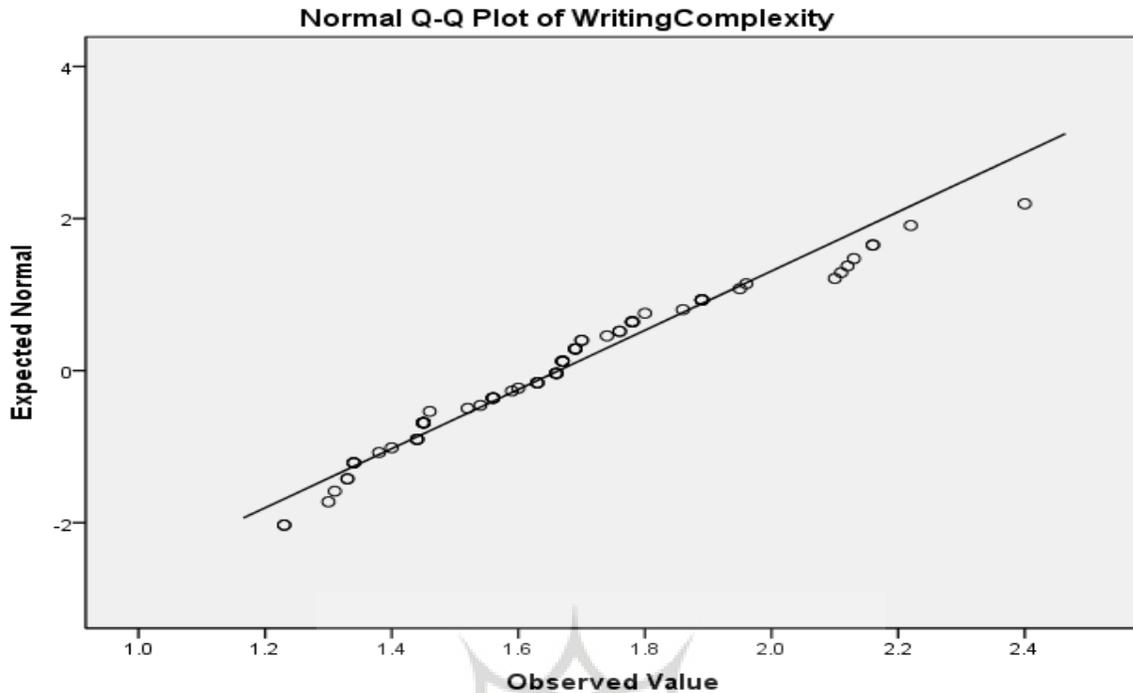


Figure 2. The Normality Probability Plot for Complexity Scores

The inspection of Q-Q plots shows that the dots are scattered around the line, suggesting the linear relationship between the normality of scores for both anxiety and writing complexity. Table 11 shows the result of Kolmogorov-Smirnov test of normality.

Table 11. Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	Df	Sig.
Questionnaire	.104	70	.047	.978	70	.249
WritingComplexity	.115	70	.022	.958	70	.019

a. Lilliefors Significance Correction

As it is displayed in Table 11, the Kolmogorov-Smirnov indices of normality were all significant ($p < .05$); hence, normality of the present data was assured. Regarding the fact the both inspection of the Q-Q plots and the Kolmogorov-Smirnov test of normality approved of the normalcy of the distribution of the data, it can be concluded that the data enjoyed normalcy of distribution and the assumption is met.

Testing the Research Questions

This study is a descriptive research. Due to the assumptions of normality, as stated above, parametric formulas could be employed in order to test the hypotheses. The following sections address the formulated research questions.

With regard to the first research question, i.e. “Is there any significant relationship between EFL learners' Anxiety and writing complexity?”, the results of the Pearson correlation ($r(183) = .80, p = .05$) (Table 12) indicated that there was a significant relationship between EFL learners' anxiety and writing complexity. Thus, the first null-hypothesis which stated that there is no significant relationship between EFL learners' anxiety and writing complexity was rejected.

Table 12. Pearson Correlation; Writing Complexity with Anxiety

		Questionnaire	Writing Complexity
Questionnaire	Pearson Correlation	1	.444**
	Sig. (2-tailed)		.000
	N	70	70
Writing Complexity	Pearson Correlation	.444**	1
	Sig. (2-tailed)	.000	
	N	70	70

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

The assumptions of linearity and homoscedasticity were met. Figure 3, below show the relationship between anxiety and writing complexity in a scatter plot.

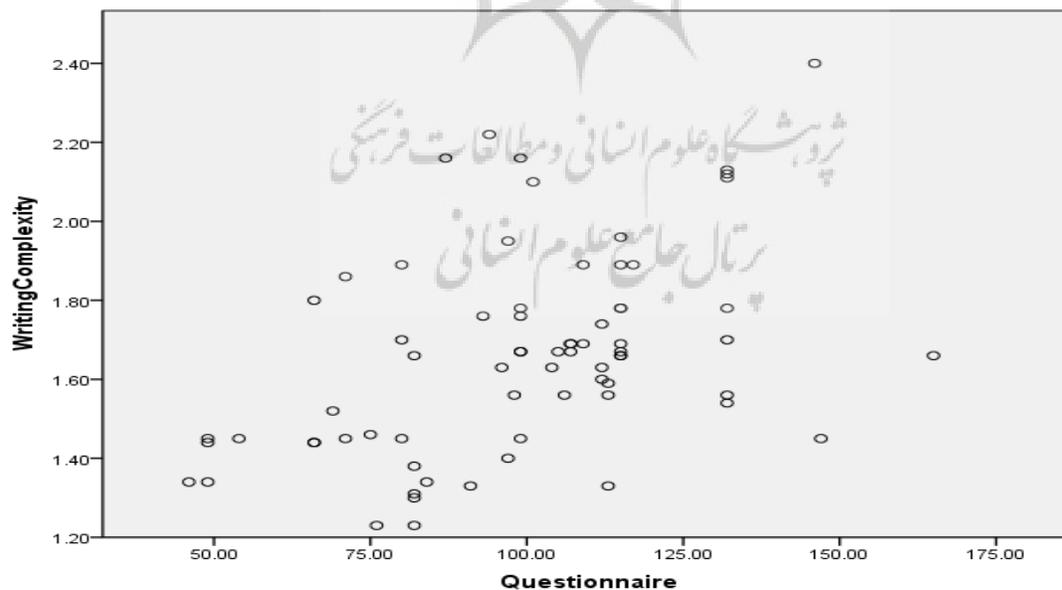


Figure 3. Relationship between Writing Complexity and Anxiety

As it is displayed in Figure 3, the spread of dots clustered around the diagonal, hence linear relationship between the two variables was shown. The spread of dots did not show a funnel shape -narrow at one end and wide at the other. Thus, the assumption of homoscedasticity was met. The subjects' scores on the writing complexity and anxiety enjoyed homogeneous variances.

After the correlation between anxiety and writing complexity was proved, a second question was posed. With regards to the second research question, "Can EFL learners' anxiety predict their writing complexity?", a linear regression was run to writing complexity by using EFL learners' anxiety. Based on the results displayed in Table 13, it can be concluded that anxiety can predict 19.7 percent of EFL learners' writing complexity ($R=.444$, $R^2=.197$). The adjusted R^2 -value was .185. The difference between the observed and adjusted R^2 ($.197 - .185=.012$) indicated that the observed predictive power had .012 (.02 percent) differences with the population index. Based on these results it can be concluded that the regression model enjoyed generalizability power.

Table 13. Model Summary (Anxiety and Writing Complexity)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					Square Change	F Change	df1	df2	Sig. Change	
1	.444 ^a	.197	.185	.23190	.197	16.670	1	68	.000	1.666

a. Predictors: (Constant), Anxiety

b. Dependent Variable: Writing Complexity

The Durbin-Watson (DW) index of 1.66 indicated that the assumption of independence errors was met. As noted by Filed (2013) DW indices between 1 and 3 are acceptable. If errors are correlated, the findings may not be generalized to population. The R^2 -value of .197 indicated that the anxiety can predict about 20 percent of writing complexity. Table 14 examines the statistical significance of the regression model. The results ($F(1, 68) = 16.67$, $P < .01$) indicated that the anxiety significantly predicted writing complexity.

Table 14. ANOVA^a (Anxiety and Writing Complexity)

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.897	1	.897	16.670	.000 ^a
	Residual	3.657	68	.054		
	Total	4.553	69			

Table 14. ANOVA^a (Anxiety and Writing Complexity)

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.897	1	.897	16.670	.000 ^a
	Residual	3.657	68	.054		
	Total	4.553	69			

a. Predictors: (Constant), Anxiety

b. Dependent Variable: Writing Complexity

Table 15 displays the regression coefficients which can be used to formulate the regression equation, as shown below:

$$\text{Writing Complexity} = (\text{Anxiety} * B) + \text{Constant}$$

$$\text{Writing Complexity} = (\text{Anxiety} * .005) + 1.209$$

Table 15. Coefficients (Anxiety and Writing Complexity)

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	95.0% Confidence Interval for B		Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
1	(Constant)	1.209	.115		10.549	.000	.981	1.438		
	Anxiety	.005	.001	.444	4.083	.000	.002	.007	1.000	1.000

a. Dependent Variable: Writing Complexity

The beta value of .444 indicated that one full standard deviation change in anxiety resulted in .444 standard deviation change in writing complexity. The results of the *t*-test ($t = 4.08$, $P < .01$) indicated that the beta value of .005 enjoyed statistical significance. As matter of fact the *F*-value of 16.67 (Table 15) was the square of *t*-value of 4.08. The other two important statistics, i.e. Tolerance and VIF (variance inflation rate), indicated that the assumption of lack of collinearity, too high correlation among all variables, was met. Tolerance values less than .10 and VIF values higher than 10 are problematic. The assumptions of linearity and homoscedasticity were probed through the Figure 4.9. The spread of dots did not form a funnel shape, narrow at one end and wide at the other end, thus, the assumption of homoscedasticity was met. The spread of dots did not form a curve shape. Therefore, it can be concluded that the relationship between anxiety and writing complexity was linear.

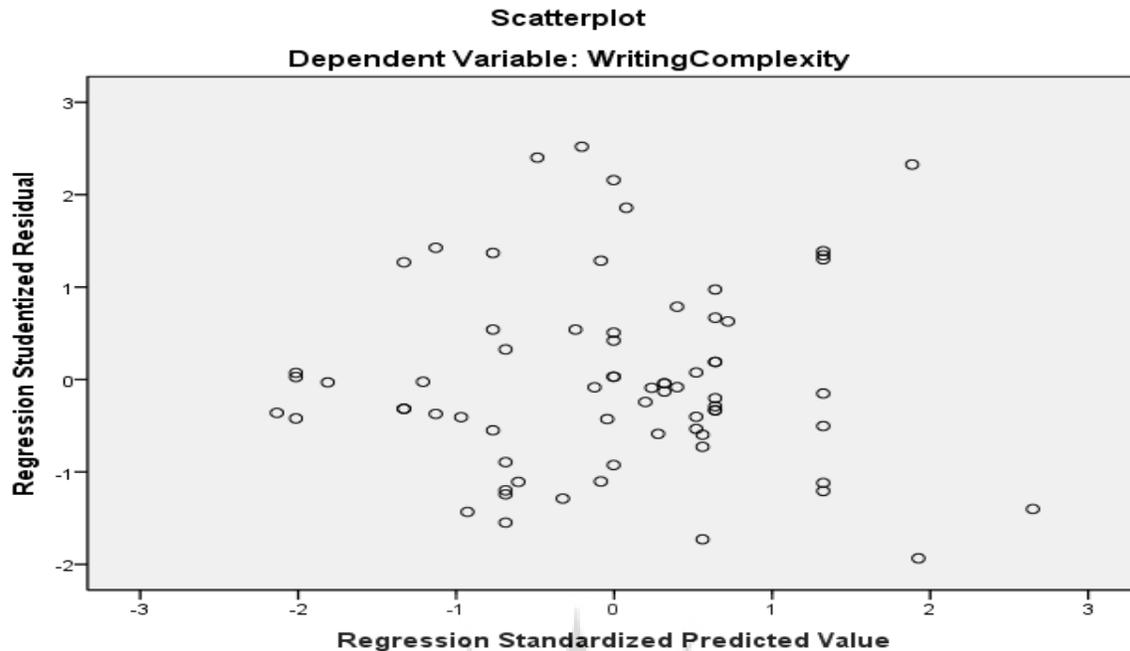


Figure 4. Relationship between anxiety and writing complexity

And finally, Figure 4 (Normal P-P Plot) indicated that the data enjoyed normal distribution because the spread of dots clustered around the diagonal.

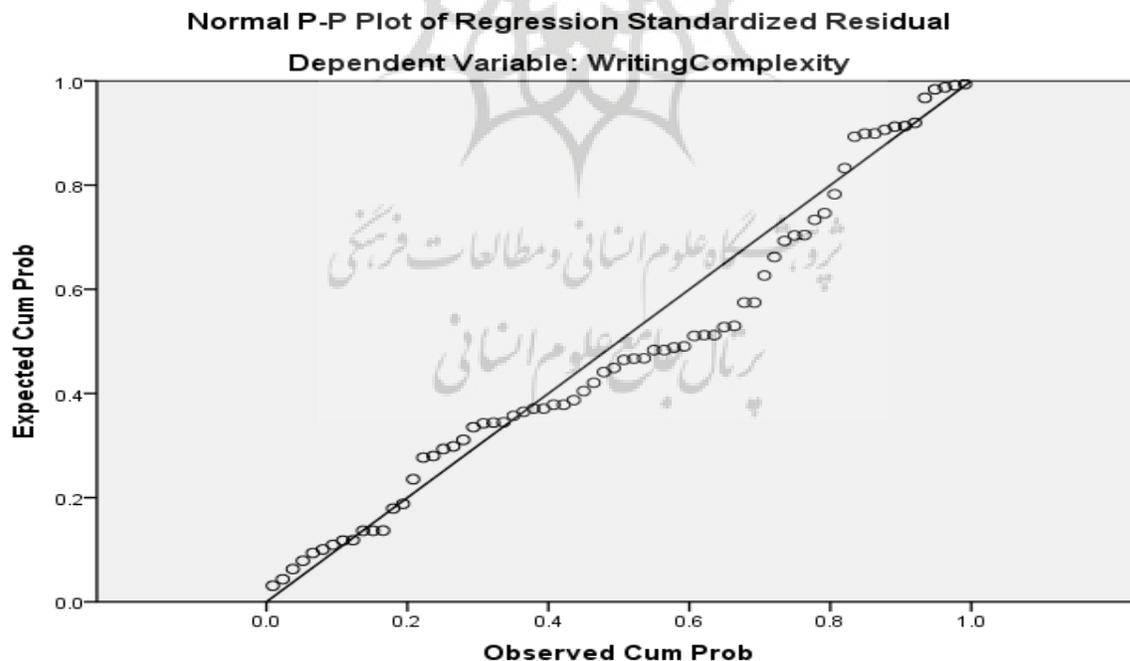


Figure 5. Normal P-P Plot of anxiety with writing complexity

Moreover, in order to make sure of the validity of the questionnaire, factor analysis was done. With factor analysis, the construct validity of a questionnaire can be tested (Bornstedt,

1977; Ratray & Jones, 2007). If a questionnaire is constructing valid, all items together represent the underlying construct well. The 33 items of the Anxiety Questionnaire were subjected to principal components analysis (PCA) using SPSS. Principal components analysis revealed that the population KMO was bigger than 0.6 (Table 16), which means that the data set is suitable for factor analysis (Sig. = 0.000).

Table 16. KMO sampling adequacy

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.734
Bartlett's Test of Sphericity	Approx. Chi-Square	4087.811
	Df	528
	Sig.	.000

The PCA also revealed the presence of 5 components with eigenvalues exceeding 1, explaining 61.92%, 8.07%, 6.07%, 4.54%, and 3.40% of the variance respectively (Table 17).

Table 17. Questionnaire factor analysis

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	20.435	61.924	61.924	20.435	61.924	61.924
2	2.663	8.070	69.994	2.663	8.070	69.994
3	2.003	6.071	76.065	2.003	6.071	76.065
4	1.500	4.544	80.609	1.500	4.544	80.609
5	1.124	3.405	84.014	1.124	3.405	84.014
6	.994	3.013	87.027			
7	.710	2.151	89.178			
8	.627	1.899	91.077			
9	.510	1.545	92.621			
10	.427	1.295	93.917			
11	.317	.960	94.876			
12	.306	.929	95.805			
13	.223	.675	96.480			
14	.193	.583	97.063			
15	.167	.505	97.568			
16	.146	.441	98.009			
17	.103	.312	98.322			
18	.097	.293	98.615			
19	.087	.263	98.878			
20	.072	.217	99.095			
21	.063	.190	99.284			
22	.046	.140	99.424			
23	.038	.116	99.540			

24	.037	.113	99.652		
25	.032	.098	99.751		
26	.023	.070	99.821		
27	.018	.056	99.877		
28	.016	.047	99.924		
29	.011	.033	99.957		
30	.005	.016	99.973		
31	.005	.014	99.987		
32	.003	.009	99.997		
33	.001	.003	100.000		

Extraction Method: Principal Component Analysis.

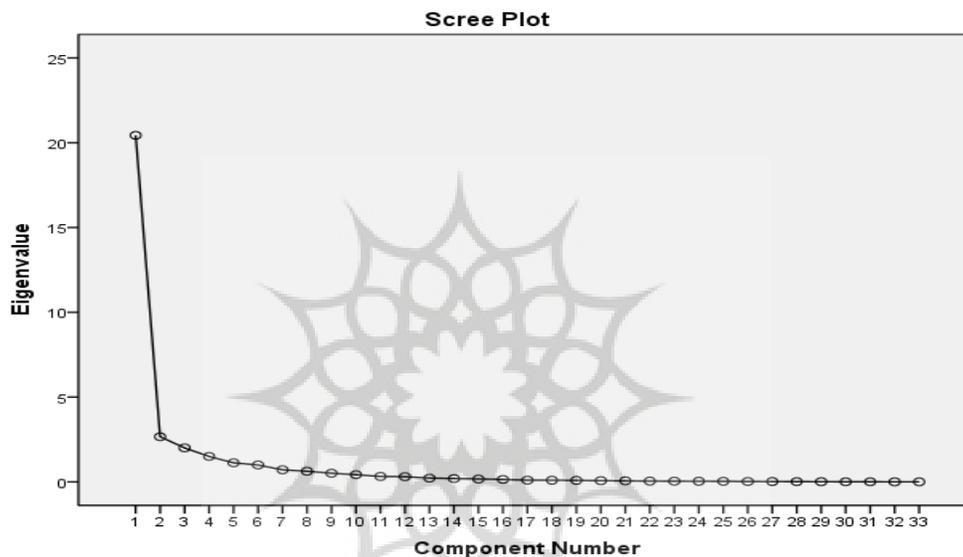


Figure 6. Factor analysis scree plot

An inspection of the scree plot revealed a clear break after the second component (Figure 6).

Discussion

The results of the statistical analyses in the current study indicated that there was a significant positive correlation between anxiety and writing complexity ($p=.00$). Furthermore, the results of examining the difference in predictability of writing complexity by anxiety showed that anxiety significantly predicted writing complexity $F(1, 68)=16.67$ ($p<.01$).

The findings of the present study were partially in line with those of Mousapour Negari and Talebi Rezaabadi (2012) who found that “When students were experiencing higher anxiety in their final exam their marks weren’t just better in one part of their writing but in all parts” (p. 2585). They also found that, regarding their final writing performance (high level of anxiety environment) in comparison to that of first writing performance (low level of anxiety environment), students who experienced higher levels of L2 writing anxiety scored higher. These results made them suggest that students, under lower pressure of anxiety, do not take the content as serious as they should. However, the results were partially opposed to the findings of Amini Naghadeh et al. (2014) who showed that there was a negative relationship between EFL learners’ anxiety and narrative writing performance.

Such differences in the results are well explained by Kleinmann (1977). He asserted that there are two types of anxiety, facilitating and debilitating. In his study he showed that facilitating anxiety is an assisting tool which has positive correlations with Arabic students' willingness to attempt difficult linguistic structures in English, while the anxiety he called "debilitating anxiety" is the one which is detrimental to performance. Debilitating anxiety, according to Kleinmann (1977) is the type of anxiety which people commonly conceive. However, his findings didn't show the expected negative correlations with performance. Putwain (2008) also suggested that some of students with high anxiety try more than those with low anxiety. This is how they compensate for their anxiety. So it can be suggested that some degree of anxiety is necessary for learners to do their job. As Mousapour Negari and Talebi Rezaabadi (2012) suggest, this is also important to scholars and teachers to be aware that some students become highly anxious about L2 writing, and this is associated with the class environment and their teacher. It is suggested that teachers try to keep the level of anxiety in a degree that all the students keep caring about their duties but not to increase or decrease it which will cause to either failure or negligence to show the true proficiency.

The result of present study shows that there was a significant relationship between anxiety and writing complexity. In other words, the students with higher anxiety seemed to have more complex writings. The results showed that in order for students to focus more on the complexity of writing, they need to enjoy a level of anxiety. The results also show that such anxiety can predict the writing complexity.

Implications

Findings related to the present study may have some implications for the English teachers, learners and materials developers.

Theoretical implications

Given the important functions of writing in language learning, it is urgent for English teachers to perform some studies in order to know about students' anxiety, it is necessary for teachers to take some appropriate measures to alleviate anxiety and enhance the English teaching efficiency. Moreover, the present research indicates that most students have no confidence in writing because of rather high anxiety, so it is important for teachers to release anxiety because anxiety seriously affected students' writing performance. If students are always in anxious situation, they will suffer from failure of learning.

Teachers should be able to diagnose learners' writing complexity in relation to anxiety precisely and then help students to cope with the anxiety-provoking situations. If students write in comfortable environment and are encouraged frequently by teachers rather than being criticized, students will become more confident and less anxious. Applying the theoretical framework based on the preceding interpretation helps clarify Horwitz (1986) and MacIntyre (1995), whose premise of foreign language anxiety theory was that anxiety influences language learning. It is hoped that increasing and extensive knowledge about the dynamics of foreign language anxiety will guide foreign language educators and researchers. As a result, these people will be in a better position to help reduce anxiety in the English classroom that will better benefit the students' English language learning.

Pedagogical implications

A number of researchers have suggested that the existence of foreign language anxiety is not a favorable phenomenon and it must be overcome by students at different stages of learning

and for different language learning situations, so that they can take full advantage of foreign language instruction (Horwitz, Horwitz, & Cope, 1986).

Furthermore, English teachers are expected to get familiar with the concept of anxiety and decrease anxiety in their learners, as well. As language instructors, it is their responsibility to create a language learning environment which does not lead to unnecessarily high levels of anxiety and resulting unpleasant emotions and stress.

It is also highly recommended that the teachers should exploit appropriate teaching methodologies to ensure friendly atmosphere in EFL classes to facilitate learning process. The students should be encouraged to participate actively not only in various class activities but also contribute positively by sharing their likes and dislikes in learning process. According to the result of this study, the teachers are suggested to ensure that the students' level is taken into consideration while presenting, explaining and practicing the target language. It also transpires that for better learning, the students should be given sufficient time and academic help so that they confidently and actively take part in various classroom activities. It is also extremely important to consider students' interest and capacity while selecting topic and teaching pace so that students' motivation is ensured.

The results of the present study provide foreign language teachers with several important insights for alleviating student anxiety. The first of these is that students with problems in foreign language history, especially those who perceive language learning to be difficult and attain low course grades, tend to suffer high levels of anxiety. For example, MacIntyre and Gardner (1991) documented the success of essay writing as such a self-perception enhancing experience that reduces anxiety over foreign language skills.

Finally, knowing about students' differences in term of the level of anxiety, can give the teachers a pre-evaluation understanding of the differences. The teacher can take these differences into account and try to compensate the weak performance of the students who have higher level of anxiety, by using strategies to decrease anxiety.

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