

**Effect of Three-Dimensional Writing Anxiety on Writing  
Performance: Evidence from Higher Education in an ESL Context**

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**ABSTRACT**

The effect of a three-dimensional writing anxiety on writing performance in higher education is meagre. The purpose of this quantitative study is three folds: to analyze a) whether avoidance behavior, somatic anxiety and cognitive anxiety are the three dimensions of writing anxiety; b) the effect of writing anxiety on a test-based writing performance; and c) whether the effect of writing anxiety on writing performance differs in public and private sector universities. A usable sample of 412 responses is drawn from students of three undergraduate degree programs from private and public sector universities of Karachi, Pakistan. Hypotheses are tested using the partial least square method. The results show that avoidance behavior, somatic anxiety and cognitive anxiety are the three significant dimensions of writing anxiety which in turn, has a significant negative effect on learner's writing performance. Moreover, the negative effect has been found consistent in private and public universities. This study substantiates the English language literature by arguing that foreign language writing anxiety is a three-dimensional construct that inhibits ESL/EFL writing performance. Therefore, the policy makers in higher education institutions should craft and timely execute cost-effective and useful courses of action to mitigate the level of writing anxiety of a foreign language to improve the learner's writing performance.

**KEYWORDS** Writing anxiety, writing performance, ESL/EFL, undergraduate students, higher education.

**1. Introduction**

In today's educational contexts, writing acts as a worldwide means of communication in the information realm to evaluate content and curricular knowledge across academic disciplines (Graham, MacArthur, and Fitzgerald, 2013). Proficient writing is a vital competency for academic performance in today's digital age, and also a prerequisite for career and individual success (Berninger, 2012; Moon, 2012). For many English as a second language (hereafter, ESL) and English as a foreign language (hereafter, EFL) writers, writing is a difficult activity due to its complexity, as well as a lack of lexical and language mastery of the English language.

To differentiate between EFL and ESL, Hyland (2003) states that when all the general public is predominantly English-speaking, like those in Australia, the United States, or the United Kingdom, an ESL scenario stems, whereas EFL settings exist when English is not the host language. He goes on to state that EFL environments might range from those where an indigenized variant has evolved (Singapore, India) to those where colonialism has given English a significant part of local society (Hong Kong, Philippines), and to those where English is rarely seen (Korea, Japan) (Hyland, 2003).

ESL and EFL writers may lack sufficient language skills, which makes it difficult for them to write successfully, as opposed to L1 writers, who can write more readily as they have instinctive and rapid access to the language's subtleties (Sabti, Rashid, Nimehchisalem, and Darmi, 2019a). For scholars and experts in ESL context, writing has been among the most difficult skills and considerations (Jones, 2008).

Writing attributes in English play a key role in educational and professional career in the ESL setting (Fareed, Khan, & Akhtar, 2021). Students at Pakistan's higher institutions are commonly expected to present

English-language projects, papers, assignments, and thesis (Dar and Khan, 2015). Writing is among the most important English language abilities in Pakistan, for either formal communication (letters, mails, memoranda, reports, and so on) or academic reasons (assignments, and formal written exams). Besides, insufficient linguistic competency, including mastery of grammar, syntax, and vocabulary, is a key difficulty in Pakistani undergraduate ESL learners' writing (Fareed, Ashraf, and Bilal, 2016).

When students struggle and face difficulty in writing, their conscience, individual self, and motivation may suffer, as a result, significantly hindering their cognitive development and writing performance. Such issues have been attributed to a lack of practice and expertise writing in English (Kirmizi and Kirmizi, 2015). In fact the relation between writing anxiety and writing performance is quite complex (Salah Alfarwan, 2021), hence needs to be researched further.

This study was carried out in Pakistani ESL context, where English is co-official language with Urdu; it is also the language of the elite and medium of communication at tertiary level (Fareed, Khan, Akhtar, 2021). Pakistan is among the countries where English language spread is at a fast pace (Dar & Khan, 2015; Fareed, Ashraf & Bilal, 2016). Though in official communication the use of English language for oral communication is limited to formal situations, but most of the written communication and documentation is in English language which makes writing skills more important in the context. Writing skills of Pakistani ESL learners have been questioned in local studies (Fareed, Jamal & Zai, 2021; Khan, 2009; Mashoori & Iqbal, 2007). ESL / EFL anxiety is considered a hindrance in language learning (Abdurahman, Rizqi, 2020; Fareed, Kahn, Akhtar 2021). Writing anxiety is a major problem that can have debilitating effects on ESL learners' writing performance (Fareed, Bilal & Ashraf, 2016; Blakeley, Ford & Casey, 2015). This research was carried to find out whether avoidance behavior, somatic anxiety and cognitive anxiety contribute to forming writing anxiety, effect of writing anxiety on writing performance and if the writing anxiety differs in public and private sector universities. The following three research questions were formed to meet the objectives: RQ1. Are avoidance behavior, somatic anxiety, and cognitive anxiety the three dimensions that contribute to forming writing anxiety as their higher-order variable?

RQ2. What is the effect of writing anxiety on a learner's writing performance?

RQ3. Does writing anxiety differ in Pakistani public and private sector universities?

## 2. Literature review

### 2.1 Theoretical background

Writing has been somewhat claimed to become the most challenging skill amongst language learners' macro competencies, whether it is their first, second, or foreign language (Nunan, 1989). At all levels, writing in English as a foreign or as a second language has been recognized as a challenging endeavor (Kim and Kim, 2005; Lee, 2005; Widodo, 2006). Writing is a nonlinear, goal-driven process. It becomes one of the most essential skill sets in learning a second language. Consequently, students could benefit by having a variety of preparation, writing, and editing techniques at their disposal (Hyland, 2003). In language acquisition, writing is an active and productive skill set (Erkan and Saban, 2011) and a never-ending effort of discovering the most efficient way to convey one's feelings and emotions (Tom, 1997).

The capability to express in English is seen as critical for preparing students for success in college and in their career opportunities (Tuan, 2010). Skilled academic writers must utilize strong cognitive skills to arrange thoughts into grammatically correct orderly patterns associated with high critical thinking skills (Erkan and Saban, 2011). Furthermore, the process of writing helps to the progression of individuals' cognitive abilities in achieving the essential learning techniques such as evaluation, synthesizing, deduction, and so on (Bacha, 2002). Academic achievement, especially in higher education, requires impactful writing skills (Erkan and Saban, 2011; Shang, 2013).

Writing ability, however, is not only a cognitive but also an emotional activity (Pajares and Valiante, 1997). To fulfill readers' expectations, writing performance requires direct engagement of EFL students in conveying ideas effectively, both intellectually and emotionally. Nevertheless, not all EFL students are equally adept at writing, and there are a number of roadblocks or issues that discourage individuals from writing or impede their capacity to improve (Basturkmen and Lewis, 2002).

Due to the current relevance of learner status in the process of language acquisition, emotive elements like learners' dispositions, compassion, inhibition, desire, and anxiety have now been attributed for effective

achievements of language learning in various situations (Na, 2007). EFL and ESL learners who experience writing anxiety often feel more anxious when required to write, and this worry is visible in their actions, attitudes, and written work. Anxiety is a subjective sensation of stress, trepidation, uneasiness, and concern caused by an activation of the autonomic nervous system (Horwitz, Tallon, and Luo, 2010). Anxiety can make it harder to complete particularly challenging tasks, notably during exam settings (Eysenck and Calvo, 1992).

According to Horwitz et al., (1986), foreign language anxiety has three elements: conversation anxiety, exam anxiety, and dread of unfavorable evaluation. Moreover, one of the most important reasons is that a significant number of EFL and ESL language learners claim to have problems acquiring a foreign language. Language learners, in particular, claimed that somehow their challenges were caused by an anxiety reaction that inhibited their capacity to function in a foreign language context (Horwitz et al., 1986). As a result, foreign language anxiety is viewed as a negative critical emotional reaction to language acquisition (Horwitz, 2001). Anxiety in the second language is characterized as a state of negative emotions that is quite distinctly connected with second language settings such as speaking, listening, and writing (MacIntyre and Gardner, 1991).

## 2.2 Writing anxiety and learners' writing performance

Writing apprehension and writing anxiety had been used interchangeably by Daly and Miller (1975). The phrase "writing anxiety" was also featured in earlier published writing apprehension studies (e.g., Daly and Miller, 1975; Daly, 1978; Daly and Wilson, 1983; Bloom, 1981; Book, 1976; Buley-Meissner, 1989; Faigley, Daly, and Witte, 1981; Horwitz et al., 1986). When extremely apprehensive authors are required to write, they feel greater than average levels of anxiety and their anxiousness is mirrored in the behaviors they exhibit when writing (Faigley et al., 1981). When offered the choice, apprehensive writers prevent writing as much as practically possible, and when compelled to do so, they experience significant levels of anxiety (Daly and Miller, 1975). When extremely apprehensive writers are required to write, they feel higher than average levels of anxiety (Faigley et al., 1981).

### 2.3 Avoidance Behavior

Mainly two hypotheses have been proposed in an attempt to describe the avoidance behavior of L2 learners (Barekat and Baniasad, 2014). First, when structural disparities exist between L1 and L2, avoidance ensues, which may be predicted using contrastive investigation (Schachter, 1974; Kleinman, 1977; Daught and Laufer, 1985). Second, avoidance follows universal rules and may be predicted based on the semantic complexity of the L2 forms in question (Hulstijn and Marchena, 1989). Furthermore, some students exhibit behavioral anxiety in the form of avoidance, disengagement, and delay when it comes to finishing writing projects (Cheng, 2004). In longitudinal research, Rechten and Dizinno (1998) discovered that students who exhibited higher avoidance behavior predicted greater writing anxiety over time. Pazhakh (2006) looked at the phenomenon of avoidance in English writing among intermediate and advanced Iranian EFL students. He discovered that avoidance is negatively connected to one's degree of English competence. Moreover, avoidance anxiety was revealed to be the second leading cause of writing anxiety (Nugroho and Ena, 2021). Besides that, there was a strong association between pupils' avoidance behavior and their writing ability (Fitriana, Loeneto, and Fiftinova, 2018). Secondly, there was a moderately significant negative association between avoidance behavior and writing performance (Fitriana et al., 2018). In particular, worry or nervousness may create aversion to completing the writing assignment (Yastibas and Yastibas, 2015). Anxiety seems to have a twofold influence on students' writing performance since it leads them to believe that they lack English language skills and are so deterred from completing the English writing project (Rodriguez and Abreu, 2003).

In respect of academic writing, those who suffer from writing anxiety have a greater problem coming up with arguments, using simpler language, and having trouble with grammar use and mechanics (Reeves, 1997). The resulting worry causes pupils to become demotivated and discouraged, and as a direct consequence, they may acquire unfavorable attitudes regarding writing (Gere, 1987). Anxiety has been scrutinized as well as studied as a significant element across a diverse population of language learners, specifically foreign language students, in a variety of situations during the last three decades (Na, 2007). Anxiety is significant in the area of language development mostly because quantitative research has indicated that somehow anxiety is an emotional key factor that inhibits foreign language learning (Horwitz et al., 2010). Foreign language anxiety is said to be the most significant issue impeding individuals' ability to write in English, particularly in scientific papers (e.g., Sabti, Rashid, and Hummadi, 2019b; Sivaci, 2020) and has a substantial effect for learners in adversely affecting their writing development and learning (Nugroho and Ena, 2021). Despite the fact that different studies have defined the origins and reasons of anxiety in different ways, the available literature argues that anxiety, together with

negative sentiment, may manifest and constitute a barrier to language development (e.g., Atay and Kurt, 2006; Cheng, 2004; Kurt and Atay, 2007).

Therefore, we suggest the following hypotheses:

H1: Writing anxiety will have a negative effect on writing performance.

H1a: Avoidance Behavior will significantly contribute to writing anxiety.

H1b: Somatic Anxiety will significantly contribute to writing anxiety.

H1c: Cognitive Anxiety will significantly contribute to writing anxiety.

### 2.3 Previous empirical studies

Countless studies have been done over the last four decades to examine the complexities of writing anxiety in EFL and ESL context. For instance, Rezaei, Jafari, and Younas (2014) in their study found that students' competence suffers as a result of writing anxiety. Daly (1978) reported that elevated writing anxiety results in inadequate signals, such as shorter and simpler structures in learners' writing tasks. Hassan (2001) observed that those with less anxiety produced higher-quality writings than students with high anxiety. Furthermore, Cheng's (2002) in his study revealed that writing classes are avoided by students who have a high level of anxiety. Kitano (2001) noticed that foreign language anxiety was shown to be negatively associated with language performance. In addition, anxiety levels in students were substantially and strongly linked with their considerably lower perception of their very own proficiency in the target language. Besides, Lee (2002) and Lee and Krashen (1997) uncovered that writing anxiety and real EFL writing performance have a minor but persistent association. In another study conducted by Daly (1985) he observed that high anxiety students performed worse on standardized writing examinations and wrote essays that obtained lesser scores.

In the context of anxiety and assessment, Daly and Miller's (1975) revealed that the fear of being judged was only weakly related to grades in English writing class. In another research when Shang (2012) asked learners to compose an English essay in a classroom, they felt apprehensive since they were afraid of committing grammatical errors. Fowler and Kroll (1980) unveiled that in a college writing course, there was no link seen between writing anxiety and scores. Consequently, there's no point in denying that anxiety has an impact on L2 productivity; the majority of people have seen how our L2 knowledge worsens in an anxious environment (Dörnyei, 2005). In a recent study, Nugroho and Ena (2021) noticed that the individuals exhibited high and moderate levels of anxiety when it came to writing. Similarly, Turnuk and Aydin's (2020) findings revealed that EFL students with more interlanguage mistakes have increased level of writing anxiety. Also, Solaimaini, Hamasaid, and Saheb (2020) results showed that writing self-efficacy and motivation have a significant positive association with students' writing performance, whereas second language anxiety has a significant but negative association with second language writing performance.

### 2.4 Research Gaps and Theoretical Contribution

The available literature on writing anxiety has so far been restricted to metacognitive awareness, writing self-efficacy, lexical knowledge, contrastive linguistics, reading attitudes, reading strategies, sentence-making practice, writing achievement motivation, writing goal orientation, teacher and peer feedback, metacognition only to mention a few (Aglina et al., 2020; Aytac-Demircivi, 2020; El-Dakhs, 2016; Fuertes et al., 2019; Liu, 2020; Martinez et al., 2011; Sabti et al., 2019a; Soleimani et al., 2020; Tsao et al., 2017; Tsiriotakis et al., 2017).

In the majority of the aforementioned studies and in reviewed literature, anxiety dimensions were analyzed and reported in descriptive studies, as well as measuring the level of writing anxiety among EFL/ESL learners and few studies merely reported a bivariate correlation between the aforementioned variables. However, the aspects of writing anxiety dimensions such as 'cognitive', 'somatic', and 'behavioral anxiety' have yet to be explained further and empirically studied. Cheng's (2004) scale of writing anxiety has been used in very few predictive investigations. To be more specific, the effect of writing anxiety dimensions on EFL learners' writing performance has yet to be determined and clarified. Secondly, Cheng's (2004) SLWAI scale needs further validation in an EFL context to ascertain the scale's accuracy in measuring what it is supposed to measure. Consequently, the dimensions need to be verified and tested in a new EFL population setting. Moreover, it was not empirically verified earlier whether avoidance behavior, somatic anxiety, and cognitive anxiety are the three dimensions of writing anxiety. Besides, the effect of writing anxiety (higher-order) on test-based writing performance among ESL learners was also not tested. Finally, it was also not substantiated whether the effect of writing anxiety on writing performance differs in public and private sector universities in an ESL context.

This study mainly contributes to our knowledge by arguing that foreign language writing anxiety is a three-dimensional latent construct that inhibits ESL/EFL writing performance of learners in higher education.

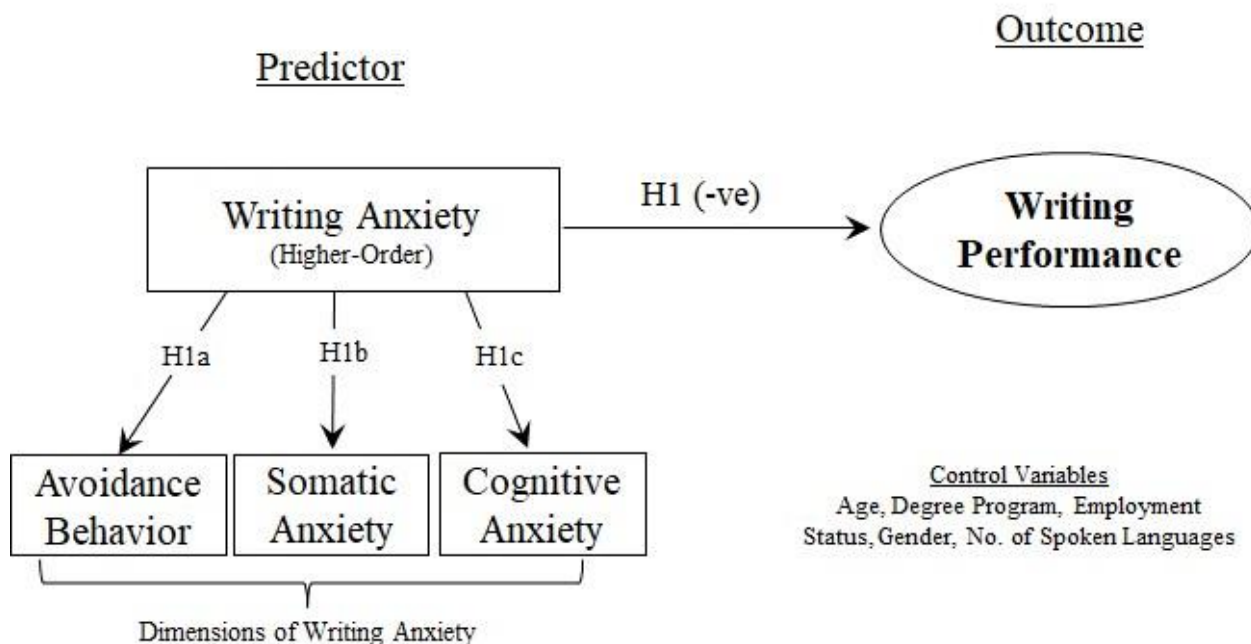


Figure 1: Hypothesized Framework

### 3. Methods

#### 3.1 Sample and procedures

A sample of 418 responses was drawn from the undergraduate students of public and private sector universities of Karachi, Pakistan on a survey questionnaire. These students were enrolled in Bachelor of Engineering (BE), Bachelor of Science (BS) and Bachelor of Business Administration (BBA) degree programs. All of these universities were recognized by the Higher Education Commission (HEC) of Pakistan. Anonymity and confidentiality were maintained during the entire phase of data collection (Babbie 2019). With the established procedure of 'informed consent', respondents were intimated that their responses are voluntary and would only be used for academic purposes. After removing six multivariate outliers at 99.99% CI (Tabachnick and Fidell, 2014), the usable sample was 412 for data analysis. All of the students were enrolled in Functional English/ Business Communication course at the time of data collection.

The usable sample consisted of 323 (78.4%) male and 89 female students, 406 students (98.6%) were less than or equal to 23 years of age. Besides, approximately half of the respondents i.e., 204 (49.5%) were enrolled in the Bachelor of Science program. A total of 214 respondents (51.9%) were pursuing their undergraduate degrees from private universities. In addition, the sample included only 48 respondents (11.7%) who were also employed and over 260 respondents (63.1%) were bilingual. Table 1 provides a detailed account of the respondents' profile.

Table 1. Composition of Data (N = 412)

Demographic	Characteristics	Frequency	Percent
<b>Gender</b>	Male	323	78.4
	Female	89	21.6
<b>Age</b>	Under 20 Years	264	64.1
	20-23 Years	142	34.5
	24-27 Years	5	1.2
	36 Years or above	1	0.2
<b>Degree Program</b>	BE	128	31.1
	BS	204	49.5
	BBA	80	19.4
<b>University Type</b>	Public university	198	48.1
	Private university	214	51.9
<b>Are you employed?</b>	Yes	48	11.7
	No	364	88.3
<b>No. of languages you can speak</b>	Two	260	63.1
	Three	98	23.8
	Four	31	7.5
	Five	23	5.6

### 3.2 Measure

The Second Language Writing Anxiety Inventory (SLWAI) was used in this study developed by Cheng (2004). The research instrument uses a total of 22 indicator items that are reflectively measured on a five-point Likert scale anchoring from 1 (strongly disagree) to 5 (strongly agree). All items were adapted from past studies with good psychometric properties. The accumulated first-stage Cronbach alpha of all 22 items was 0.871. This tool was translated in Urdu language (national language of Pakistan) for respondents' convenience. The Urdu translation was had validated with five raters for inter-rater validity with an agreement of 0.88%. The instrument with Urdu translation was piloted with 50 students before data collect for this research study.

#### 3.2.1 Avoidance behavior

. The variable 'avoidance behavior' was measured by seven items. One sample item reads "I usually do my best to avoid writing English compositions". A higher scale point represents the higher level of avoidance behavior of students. Three indicator items were reverse coded. First-stage Cronbach's alpha was 0.671.

#### 3.2.2 Cognitive Anxiety

It was measured by eight reflective items adopted from Cheng (2004). One sample item reads "While writing English compositions, I feel worried and uneasy if I know they will be evaluated". A higher scale point indicates a higher level of cognitive anxiety each student faced. Four items were reverse scored. Cronbach's alpha was 0.739.

#### 3.2.3 Somatic Anxiety

It was measured by seven items adopted from Cheng (2004). The sample item includes "I feel my heart pounding when I write English compositions under time constraint". Cronbach's alpha was 0.813.

#### 3.2.4 Writing performance test

The criterion variable writing performance has been measured using students' essay score. Undergraduate students were given the option of writing an essay on one of five descriptive and argumentative topics. Students were allowed a maximum of forty minutes to prepare a 250-word essay. Three English language teachers graded the essays who had previously taught English at the university level. The participants' final performance was determined by the average of the three examiners. Three of the examiners followed the same marking scheme used which covers 'Content', 'organization', 'mechanics', 'grammar', and 'writing style' The marking scheme's

content relates to a thorough grasp and analysis of the subject, as well as awareness of the purpose and audience, the use of suitable quotes, the novelty of ideas and language, and appropriate evidence of reading and research.

Three considerations led to the selection of the aforementioned marking scheme. The legitimacy of the marking scheme was the initial reason for its adoption. The grading system is based on research from several universities and colleges. Second, the researchers desired that three of the examiners follow identical criteria. Before the marking began, three of the examiners discussed the marking methodology. Finally, while the grading method offered basic parameters for three of the examiners, it also allowed for some individual discretion.

### 3.2.5 Control Variables

We controlled for five individual characteristics of respondents including their age, degree program, employment status, gender, and number of spoken languages.

## 4. Analysis and Findings

### 4.1 Common Method Variance (CMV) Bias

CMV bias was assessed using the conventional Harman's single factor test in SPSS. It tests the assumptions whether the majority of the variance (i.e., more than 50) is explained by one single unrotated factor (Podsakoff and Organ, 1986). The results show that the first factor accounted for merely 29.53% of the total variance that is less than the threshold limit of 50% (Chaubey, Sahoo, and Khatri, 2019). It confirms that the usable data is not affected by CMV bias (Podsakoff, MacKenzie, Lee, and Podsakoff, 2003). Besides, Table 2 shows the zero-order bivariate correlations among observed variables. It indicates that all of the three dimensions of 'Writing Anxiety' i.e., Avoidance Behavior, Somatic Anxiety, and Cognitive Anxiety have a significant and negative bivariate correlation with Writing Performance.

Table 2. Means, standard deviations and correlations of the variables (N = 412)

Variable	Mean	SD	1	2	3	4
Writing Performance	5.18	1.95	1			
Avoidance Behavior	2.33	0.61	-.190**	(0.67)		
Somatic Anxiety	2.58	0.74	-.273**	.503**	(0.81)	
Cognitive Anxiety	2.85	0.70	-.120*	.502**	.644**	(0.74)

Notes: \*\* 99% CI (p<0.01); \* 95% CI (p<0.05)

First-stage Cronbach alpha is shown in parenthesis on the diagonal.

### 4.2 Cross-Tabulation Analysis

Table 3 provides a cross-tabulation analysis between gender and the three-degree programs (BE, BS, and BBA), employment status, and number of languages students speak. It was found that over 50.5% male and 46.1% female respondents were registered in the BS program that cumulatively accounted for over 49.5% in the BS program alone, however, the least number of respondents (i.e., 20.1% Male and 16.9% female) were found to be registered in the BBA program. Moreover, 87% male and 93.3% female respondents were full-time students without doing any parttime job. Besides, 61.3% and 23.8% male respondents, and 69.7% and 23.6% female respondents could speak two and three languages respectively.

Table 3. Crosstabulation Analysis of Gender with Degree Program, Employment Status, and No. of Languages

		Employment										
		Degree Program			Status		No. of Languages					Total
		BE	BS	BBA	Yes	No	Two	Three	Four	Five		
Gender Male	Count	95	163	65	42	281	198	77	28	20	323	
	% within Gender	29.4%	50.5%	20.1%	13.0%	87.0%	61.3%	23.8%	8.7%	6.2%	100.0%	
Female	Count	33	41	15	6	83	62	21	3	3	89	
	% within Gender	37.1%	46.1%	16.9%	6.7%	93.3%	69.7%	23.6%	3.4%	3.4%	100.0%	
Total	Count	128	204	80	48	364	260	98	31	23	412	
	% within Gender	31.1%	49.5%	19.4%	11.7%	88.3%	63.1%	23.8%	7.5%	5.6%	100.0%	

Table 4 provides a cross-tabulation analysis between the degree program and employment status, number of languages respondents speak, and their age. It was found that most of the respondents in each degree program (96.1% in BE, 82.8% in BS and 90% in BBA) were full-time students. Similarly, the results show that most of the respondents in each degree program could speak either two (67.2% in BE, 65.7% in BS and 50% in BBA) or three languages (18% in BE, 23.5% in BS, and 33.8% in BBA). In terms of age, most of the BE and BS students were under 20 years (96.1% in BE and 62.7% in BS) except the BBA program in which over 81.3% respondents were between the age of 20 and 23 years. Notably, the total usable responses did not include any respondents who were 24 years or above in the BE sample (N=128) and 36 years or above in the BBA sample (N=80).

Table 4. Cross-tabulation Analysis of Degree Program with Employment Status, No. of Languages, and Age

		Employment												
				Status		No. of Languages					Age (Years)			Total
				Yes	No	Two	Three	Four	Five	under 20	20-23	24-27	36 or above	
Degree Program	BE	Count	5	123	86	23	13	6	123	5	0	0	128	
		% within Degree Program	3.9%	96.1%	67.2%	18.0%	10.2%	4.7%	96.1%	3.9%	0.0%	0.0%	100.0%	
	BS	Count	35	169	134	48	11	11	128	72	3	1	204	
		% within Degree Program	17.2%	82.8%	65.7%	23.5%	5.4%	5.4%	62.7%	35.3%	1.5%	.5%	100.0%	
	BBA	Count	8	72	40	27	7	6	13	65	2	0	80	
		% within Degree Program	10.0%	90.0%	50.0%	33.8%	8.8%	7.5%	16.3%	81.3%	2.5%	0.0%	100.0%	
Total		Count	48	364	260	98	31	23	264	142	5	1	412	
		% within Degree Program	11.7%	88.3%	63.1%	23.8%	7.5%	5.6%	64.1%	34.5%	1.2%	.2%	100.0%	



### 4.3 Measurement model

It is a prerequisite to build a measurement model to ensure that all observed variables are valid and reliable before hypothesis testing (Anderson and Gerbing, 1982). It includes the assessment of convergent validity using outer loadings and average variance explained (AVE) and construct reliability using Cronbach alpha, roh\_A and composite reliability (CR). Finally, the discriminant validity is analyzed using hetrotrait-monotrait (HTMT) ratio of correlations. The threshold limit of outer loadings and AVE should be in excess of 0.708 and 0.50 respectively (Hair, Hult, Ringle, and Sarstedt, 2017). Similarly, a construct is said to be reliable if its Cronbach alpha, roh\_A and CR values are greater than 0.70 (Hair et al., 2017).

We built the measurement model (Figure 2) for the total sample (N=412) as well as separately for the sample received from the private (N=214) and public universities (N=198) which accounted for 51.90% and 48.10% respectively (Table 5). The outer loadings of most of the 14 loaded items were greater than 0.708 in all three samples, however, loadings less than 0.708 were also retained in the measurement model since they were greater than 0.40 and the CR and AVE of their latent variable sufficiently met their respective threshold limits (Hair et al., 2017). All factor loadings were statistically significant at 99.99% CI. The convergent validity was also established since the AVE value for all three observed variables in full sample as well as in the sub-sample of private and public universities were greater than 0.50. Similarly, the construct reliability was also met because Cronbach alpha, roh\_A and CR were greater than 0.70. Besides, there was no manifestation of multicollinearity since the VIF value for each item and observed variables was less than 3.3 (Kock and Lynn, 2012).

Table 5. Measurement Model: Construct Reliability and Convergent Validity

% of Total Sample	Full Sample (N = 412)						Private Universities (N = 214)					Public Universities (N = 198)						
	Loadings	Alpha	roh_A	CR	AVE	VIF	Loadings	Alpha	roh_A	CR	AVE	VIF	Loadings	Alpha	roh_A	CR	AVE	VIF
Latent Variables/Items																		
<u>Avoidance Behavior</u>		0.71	0.73	0.82	0.54	1.00	0.72	0.73	0.83	0.55	1.00		0.70	0.72	0.82	0.53	1.00	
AvoAnx19_5	0.755***					1.41	0.763***				1.47	0.735***					1.38	
AvoBeh12_3	0.828***					1.62	0.833***				1.70	0.826***					1.61	
AvoBeh14_4	0.697***					1.31	0.677***				1.26	0.723***					1.41	
AvoBeh6_2	0.650***					1.24	0.680***				1.28	0.609***					1.23	
<u>Cognitive Anxiety</u>		0.77	0.77	0.84	0.52	1.00	0.77	0.78	0.85	0.53	1.00		0.76	0.77	0.84	0.51	1.00	
CogAnx10_4	0.768***					1.56	0.783***				1.68	0.755***					1.50	
CogAnx17_5	0.753***					1.49	0.767***				1.58	0.737***					1.44	
CogAnx1_1R	0.640***					1.29	0.613***				1.27	0.689***					1.35	
CogAnx24_7	0.692***					1.36	0.714***				1.41	0.667***					1.32	
CogAnx3_2	0.740***					1.49	0.743***				1.52	0.735***					1.50	
<u>Somatic Anxiety</u>		0.77	0.78	0.85	0.52	1.00	0.77	0.78	0.85	0.53	1.00		0.77	0.78	0.84	0.52	1.00	
SomAnx15_5	0.789***					1.69	0.792***				1.66	0.793***					1.81	
SomAnx18_6	0.734***					1.50	0.742***				1.52	0.726***					1.49	
SomAnx23_7	0.755***					1.51	0.770***				1.56	0.736***					1.48	
SomAnx7_2	0.701***					1.36	0.695***				1.37	0.709***					1.37	
SomAnx9_3	0.629***					1.38	0.616***				1.31	0.637***					1.50	

Notes: CR = Composite Reliability; AVE = Average Variance Explained; VIF = Variance Inflation Factor; \*\*\* 99.99% CI (p<.001)

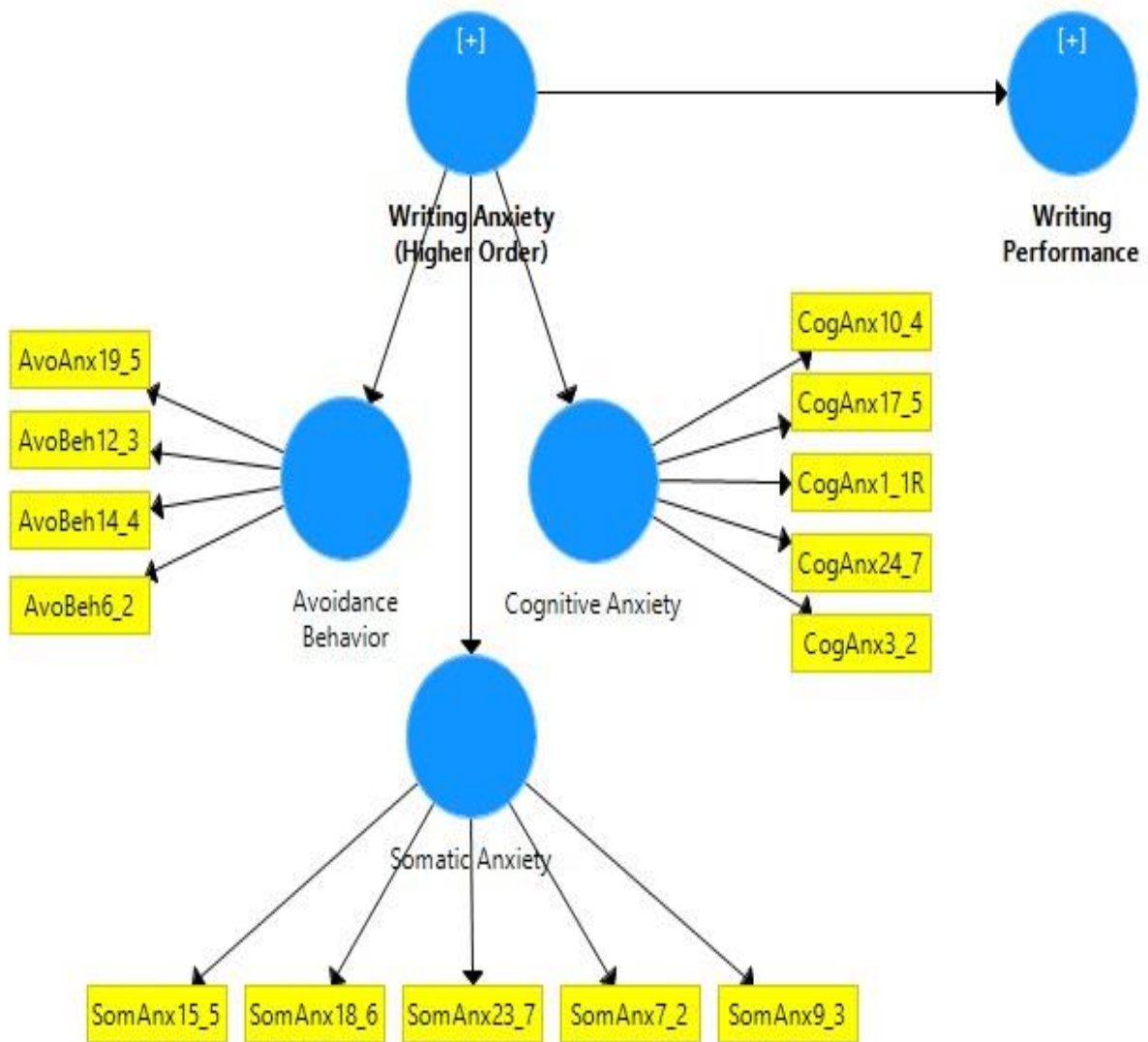


Figure 2: Measurement Model

#### 4.4 Discriminant Validity

We assessed the HTMT matrix (Table 6) to ascertain the evidence of discriminant validity (Henseler, Ringle, and Sarstedt, 2015). It shows that the ratio of correlations between the observed variables was less than the cut-off value of 0.90 in the full sample and in the sub-samples of private and public universities. Thus, the discriminant validity has also been established in the present study. It concludes that the measurement model is valid and reliable for testing hypotheses.

Table 6. Discriminant Validity using HTMT

Full Sample (N = 412)				
	Avoidance Behavior	Cognitive Anxiety	Somatic Anxiety	Writing Performance
Avoidance Behavior				
Cognitive Anxiety	0.729			
Somatic Anxiety	0.818	0.892		
Writing Performance	0.296	0.203	0.339	
Private Universities (N = 214)				
	Avoidance Behavior	Cognitive Anxiety	Somatic Anxiety	Writing Performance
Avoidance Behavior				
Cognitive Anxiety	0.791			
Somatic Anxiety	0.859	0.875		
Writing Performance	0.279	0.233	0.361	
Public Universities (N = 198)				
	Avoidance Behavior	Cognitive Anxiety	Somatic Anxiety	Writing Performance
Avoidance Behavior				
Cognitive Anxiety	0.670			
Somatic Anxiety	0.770	0.862		
Writing Performance	0.293	0.219	0.305	

#### 4.5 Writing Anxiety: Analysis of Dimensionality

Before testing the direct effect of writing anxiety (higher-order) on writing performance (H1), we firstly assessed whether the three dimensions namely, avoidance behavior, cognitive anxiety and somatic anxiety were significantly related to its higher-order variable. Table 7 clearly shows that the three dimensions significantly and reflectively loaded on to its higher-order latent variable (we called it ‘Writing Anxiety’) at 99.99% CI ( $p < .001$ ). Moreover, all estimates are stable too since each sample estimate lies within the lower and upper limits of CIBC (Ramayah et al., 2017). In short, our results confirm that avoidance behavior, cognitive anxiety and somatic anxiety are the three dimensions of writing anxiety, thus H1a, H1b, and H1c are supported.

Table 7. Analysis of Dimensionality

	Writing Anxiety	Estimate	SE	T Value	Sig	CIBC (95% CI)
Full Sample (N = 412):						
H1a	Avoidance Behavior	0.805	0.020	39.574	0.000***	[0.760, 0.841]
H1b	Cognitive Anxiety	0.877	0.012	73.731	0.000***	[0.846, 0.896]
H1c	Somatic Anxiety	0.906	0.009	100.037	0.000***	[0.885, 0.921]
Private Universities (N = 214):						
H1a	Avoidance Behavior	0.827	0.025	33.383	0.000***	[0.776, 0.872]
H1b	Cognitive Anxiety	0.891	0.014	63.576	0.000***	[0.863, 0.916]
H1c	Somatic Anxiety	0.912	0.013	71.445	0.000***	[0.889, 0.935]
Public Universities (N = 198):						
H1a	Avoidance Behavior	0.779	0.029	27.014	0.000***	[0.708, 0.829]
H1b	Cognitive Anxiety	0.869	0.019	46.374	0.000***	[0.826, 0.902]
H1c	Somatic Anxiety	0.900	0.013	66.959	0.000***	[0.870, 0.922]

Notes: CIBC = Confidence Interval Bias Corrected; \*\*\* 99.99% CI ( $p < .001$ )

#### 4.6 Reason for Applying PLS Method for Hypothesis Testing

We initially assessed Mardia’s multivariate skewness and kurtosis coefficients (Web Power 2019) to confirm the statistical assumption of multivariate normality. We found that the Skewness ( $\beta=116.58$ ) and Kurtosis ( $\beta=1104.65$ ) were statistically significant at 99.99% CI ( $p < .001$ ) indicating that the data violates the assumption of multivariate normality. Therefore, we applied a non-parametric partial least square (PLS) method with a recommended 5,000 bootstrapping technique (Sarstedt, Ringle, and Hair, 2021) in SmartPLS version 3.3.3 (Ringle, Wende, and Becker, 2015) for testing H1 when controlled for age, degree program, employment status, gender, and number of spoken languages

Table 8. Hypothesis Testing with 5,000 Bootstrapping

	<i>Outcome: Writing Performance</i>					<i>Model Quality Criteria</i>			
	Estimate	SE	T Value	P Value	CIBC (95% CI)	Decision	R <sup>2</sup>	Adj. R <sup>2</sup>	Q <sup>2</sup>
<b>Full Sample (N = 412):</b>									
<i>Control Variables:</i>									
Age	0.040	0.055	0.727	0.467	[-0.058, 0.155]				
Degree Program	-0.154	0.049	3.116	0.002**	[-0.242, -0.062]				
Employment Status	0.110	0.040	2.766	0.006**	[0.037, 0.199]				
Gender	0.275	0.039	6.953	0.000***	[0.195, 0.348]				
No. of Languages	0.032	0.040	0.786	0.432	[-0.042, 0.114]				
<i>Independent Variable:</i>									
Writing Anxiety	-0.269	0.045	5.952	0.000***	[-0.359, -0.184]	Supported	0.19	0.18	0.169
<b>H1</b>									
<b>Private Universities (N = 214):</b>									
<i>Control Variables:</i>									
Age	0.067	0.060	1.132	0.258	[-0.045, 0.185]				
Degree Program	0.451	0.049	9.264	0.000***	[0.340, 0.541]				
Employment Status	0.074	0.054	1.372	0.171	[-0.036, 0.172]				
Gender	0.169	0.056	3.005	0.003**	[0.060, 0.278]				
No. of Languages	0.042	0.048	0.873	0.383	[-0.040, 0.135]				
<i>Independent Variable:</i>									
Writing Anxiety	-0.258	0.062	4.134	0.000***	[-0.375, -0.129]	Supported	0.36	0.35	0.319
<b>H1</b>									
<b>Public Universities (N = 198):</b>									
<i>Control Variables:</i>									
Age	-0.089	0.079	1.123	0.262	[-0.255, 0.058]				
Degree Program	-0.438	0.076	5.781	0.000***	[-0.598, -0.300]				
Employment Status	0.000	0.062	0.001	0.999	[-0.106, 0.132]				
Gender	0.333	0.055	6.104	0.000***	[0.219, 0.442]				
No. of Languages	-0.032	0.051	0.623	0.533	[-0.131, 0.072]				
<i>Independent Variable:</i>									
Writing Anxiety	-0.231	0.060	3.847	0.000***	[-0.338, -0.104]	Supported	0.39	0.37	0.349
<b>H1</b>									

Notes: SE = Standard Error; CIBC = Confidence Interval Bias Corrected; \*\*\* 99.99% CI (p<.001); \*\* 99% CI (p<.01)

#### 4.7 Hypothesis Testing

Table 8 shows that writing anxiety has significant negative effect on writing performance in full sample ( $\beta = -0.269$ ,  $p = .000$ ) as well as in the sub-sample of private universities ( $\beta = -0.258$ ,  $p = .000$ ) and public universities ( $\beta = -0.231$ ,  $p = .000$ ). These estimates are found to be stable too since they fall within the lower and upper bound limits of 95% CIBC values. Therefore, H1 was supported. Besides, the adjusted  $R^2$  value suggests that writing anxiety explained over 18% of the total variance in the full sample, however, substantially higher in private and public universities (i.e. 35% and 37% respectively). Finally, the positive and greater than zero value of Stone-Geisser  $Q^2$  coefficient is the indicative of good predictive relevance of the model (Geisser, 1974; Stone, 1974).

#### 5. Discussion and Implications

The main research objective of this study was to analyze the direct effect of writing anxiety on writing performance of students in higher education institutions. It was initially confirmed that avoidance behavior, cognitive anxiety and somatic anxiety are the three dimensions of writing anxiety which in turn, as hypothesized, is found to have a significant negative effect on writing performance, as also concluded by (Fitriana et al., 2018) for avoidance behavior. The same result has been found consistent in the sub-samples of private and public universities too. Therefore, H1 is supported with stable parameter estimates and high predictive relevance.

The negative effect of writing anxiety on writing performance is attributed to the fact that avoidance behavior, cognitive anxiety and somatic anxiety collectively contribute in producing writing anxiety which inhibits them to perform as per the expectations of different stakeholders such as parents, self and teachers. More precisely, students tend to exhibit their avoidance behavior due to various personal, social and institutional boundary conditions. For instance, when expectations are violated, people tend to choose one of the two possible but quite distinct behavior: either performance or perversion (Lachmann, 2006). The central tenet of this philosophy may be easily applied in the context of education where the avoidance behavior of students reflects their perversion behavior due to the violations of their expectations they have experienced in the past. Simply put, they tend to reconcile and assimilate the present situation with their similar past observation/experiences. If they witness that their expectations were violated in the past, they tend to exhibit avoidance behavior that ultimately contribute in developing writing anxiety for them.

Therefore, we suggest that those writing teaching approaches should be used for teaching writing skills which can help reduce ESL /EFL learners' writing anxiety. We propose process-genre approach to teaching writing skills should be followed in ESL/ EFL contexts, because the approach offers sample genre and steps of writing process. Secondly, ESL/ EFL teachers should focus more on positive feedback, however the negative feedback on the learners' writing skills should also be given only when it is unavoidable. Thirdly, the classroom size for writing classes should be small so that teacher can give individual feedback to students. Furthermore, a number of factors that cause writing anxiety among ESL learners identified by A lico, (2016), Al-shboul and Huwari (2015), Fareed, Khan and Akhtar (2021), and Ni & Liu (2015) should be considered. In addition, violations of expectations (Demos, 2019) could be one of the major reasons of students' avoidance behavior in the higher education context.

#### 6. Limitations and Directions for Future Studies

It would be worthwhile to investigate a suitable moderating variable between writing anxiety and writing performance such as student's self-efficacy, self-interest, parental support and sufficient amount of sleep that may reduce the negative effect of writing anxiety on writing performance. Besides, we used cross-sectional data which preclude its ability to explain cause-and-effect relationship between writing anxiety and writing performance. Therefore, future studies may draw longitudinal samples to investigate writing performance at two different time points e.g., in the beginning and at the end of a semester.

## 7. Conclusion

Effective writing is one of the important skills that students also learn in their higher education. It not only improves their communication prowess but also enables them to report their creative ideas in black and white with all stakeholders. Therefore, writing performance continues to be a very important necessary skill in their professional career too. The primary objective of this study was to analyze the effect of writing anxiety on writing performance of learners in higher education. As hypothesized, this study finds that writing anxiety inhibits the writing performance of undergraduate students. The very same conclusion has been shown to be fairly consistent in sub-samples of both private and public universities. As a result of the stable and consistent parameter estimates followed by strong predictive relevance, hypothesis one is supported. Moreover, writing anxiety is found to be a latent reflective construct of three dimensions including avoidance behavior, cognitive anxiety, and somatic anxiety. The findings support Cheng's (2004) conclusion and other recent empirical studies, inter alia, Sabti et al., (2019a); Sivaci (2020); Kurt and Atay (2007); Rezaei et al., (2014) etc. This study is intended to give inferences for both theory and pedagogy in interpreting anxiety in relation to writing performance among EFL and ESL students in higher education settings. Besides, this study also echoes a research call of testing a few suggested moderating variables to further explain the theoretical mechanism through which the negative effect of writing anxiety of a foreign language on writing performance may be dampened.

## References

- Abdurahman, N.H., Rizqi, M.A. (2020). "Indonesian students' strategies to cope with foreign language anxiety". *Best of TESOL Affiliates*, Vol.31, No.1, pp-1-12. DOI: 10.1002/tesj.571
- Aglina, E.F., Rohmatillah, and Nur Syamsiah, N. (2020). "The Correlation between Students' Metacognitive Awareness and Their Anxiety in Writing Performance", *English Education: Journal Tadris Bahasa Inggris* Vol. 13 No. 1, pp. 63-74.
- Alico, J. C. (2016). "Writing Anxiety and Language Learning Motivation: Examining Causes, Indicators, and Relationship". *Communication and Linguistics Studies*. Vol. 2, No. 1, 2016, pp. 6-12. doi: 10.11648/j.cls.20160201.12
- Al-Shboul, Y., Huwari, I. F. (2015). "The Causes of Writing Apprehension through Students' Perspective". *Journal of Language Teaching and Research*, Vol. 6, No. 3, pp. 535-544. DOI: <http://dx.doi.org/10.17507/jltr.0603.08>
- Anderson, J.C., and Gerbing, D.W. (1982). "Some methods for respecifying measurement models to obtain unidimensional construct measurement", *Journal of Marketing Research*, Vol. 19, No. 4, pp. 453-460.
- Atay, D., and Kurt, G. (2006). "Prospective teachers and L2 writing anxiety", *Asian EFL Journal*, Vol. 8 No. 4, pp. 100–118.
- Aytaç-Demirçivi, K. (2020). "Personal factors predicting EFL learners' writing anxiety. *Global Journal of Foreign Language Teaching*", Vol. 10, No. 4, pp. 257-267. <https://doi.org/10.18844/gjflt.v10i4.5104>
- Babbie, E. (2019). "The practice of social research", (14th edition). Boston, MA: Cengage Learning, Inc.
- Bacha, N.N., (2002). "Developing learners' academic writing skills in higher education: A study for educational reform", *Language and Education*, Vol. 16. No. 3, pp. 163-173.
- Barekat, B. and Baniasady, B. (2014). "The impact of phrasal verb avoidance on the writing ability of the university EFL learners". Paper presented in the International Conference on Current Trends in ELT. *Procedia - Social and Behavioral Sciences* 98 (2014) pp. 343 – 352.
- Basturkmen, H., and Lewis, M. (2002). "Learner perspectives of success in an EAP writing course", *Assessing Writing*, Vol. 8, No. 1, pp. 31-46.
- Berninger, V.W. (Ed.). (2012). *Past, Present, and Future Contributions of Cognitive Writing Research to Cognitive Psychology*. New York: Psychology Press.
- Blakeley, M. G. D., Ford, R., Casey, L. (2015). "Second language anxiety among Latino American immigrants in Australia". *International Journal of Bilingual Education and Bilingualism*, Vol.20, No.7, PP. 759-722. DOI: 10.1080/13670050.2015.1083533



- Bloom, L. Z. (1981). Why Graduate Students Can't Write: Implications of Research on Writing Anxiety for Graduate Education. Paper presented at the annual meeting of the conference on college composition and composition. Retrieved from ERIC database. (ED199710)
- Book, V. (1976). Some effects of apprehension on writing performance. Retrieved from ERIC database. (ED 132595)
- Buley-Meissner, M.L. (1989). "Am I really that bad? Writing Apprehension and Basic Writers", *Journal of Basic Writing*, Vol. 8 No. 2, pp. 3-20.
- Chaubey, A., Sahoo, C.K., and Khatri, N. (2019). "Relationship of transformational leadership with employee creativity and organizational innovation: A study of mediating and moderating influences", *Journal of Strategy and Management*, Vol. 12, No. 1, pp. 61-82.
- Cheng, Y.S. (2002). "Factors associated with foreign language writing anxiety", *Foreign Language Annuals*, Vol. 35, No. 5, pp. 647-56.  
<http://dx.doi.org/10.1111/j.1944-9720.2002.tb01903.x>
- Cheng, Y.S. (2004). "A measure of second language writing anxiety: scale development and preliminary validation", *Journal of Second Language Writing*, Vol. 13, pp. 313–335.  
doi: 10.1016/j.jslw.2004.07.001
- Dagut, M., and Laufer, B. (1985). "Avoidance of phrasal verbs: A case for contrastive analysis", *Studies in Second Language Acquisition*, Vol. 7, pp. 73-80.
- Dar, M.F. and Khan, I. (2015). "Writing anxiety among public and private sectors Pakistani undergraduate university students", *Pakistan Journal of Gender Studies*, Vol. 10, No. 1, pp. 157-172. <https://doi.org/10.46568/pjgs.v10i1.232>
- Dörnyei, Z. (2005). "The Psychology of the Language Learner: Individual Differences in Second Language Acquisition", Lawrence Erlbaum Associates Publishers Mahwah, New Jersey.
- Daly, J. (1978). "Writing apprehension and writing competency. *Journal of Educational Research*", Vol. 72, pp. 10-12. <http://dx.doi.org/10.1080/00220671.1978.10885110>
- Daly, J.A. and Miller, M.D., (1975). "The empirical development of an instrument of writing apprehension", *Research in the Teaching of English*, Vol. 9, pp. 242-249.
- Daly, J., and Wilson, D. (1983). "Writing apprehension, self-esteem, and personality", *Research in the Teaching of English*, Vol. 17, pp. 327–342.
- Daly, J.A., (1985). Writing apprehension. In M. Rose (Ed.). *When a writer can't write*. New York: Guilford.

- Demos, E.V. (2019). *The affect theory of Silvan Tomkins for psychoanalysis and psychotherapy: Recasting the Essentials*. New York, NY: Routledge.
- El-Dakhs, D.B.S. (2016). "The Lexical Knowledge and Avoidance of Phrasal Verbs: The Case of Egyptian Learners of English", *International Journal of Applied Linguistics & English Literature*, Vol. 5, No. 1, pp. 132-144. URL: <http://dx.doi.org/10.7575/aiac.ijalel.v.5n.1p.132>
- Erkan, D.Y., and Saban, A.İ. (2011). "Writing performance relative to writing apprehension, self-efficacy in writing, and attitudes towards writing: A correlational study in Turkish tertiary-level EFL", *The Asian EFL Journal Quarterly*, Vol. 13, No. 1, pp. 164-192.
- Eysenck, M.W., and Calvo, M.G. (1992). "Anxiety and Performance: The Processing Efficiency Theory", *Cognition and Emotion*, Vol. 6, No. 6, pp. 409-434.  
DOI:10.1080/02699939208409696
- Faigley, L., Daly, J., and Witte, S. (1981). "The role of writing apprehension in writing performance and competence", *The Journal of Educational Research*, Vol. 75, No. 1, pp. 16–21.
- Fareed, M. Jamal, U., Zai, R. A. Y. (2021). "Peer feedback on writing skills: perceptions of Pakistani ESL postgraduate students". *PJER*. Vol. 4, No. 1, PP. 399-415.
- Fareed, M., Khan, I. and Akhtar, H. (2021). "The causes of English writing anxiety among Pakistani ESL students: Perceptions of teachers and students", *Pakistan Journal of Humanities and Social Sciences*, Vol. 9, No. 1, pp. 21-27.  
DOI: <https://doi.org/10.52131/pjhss.2021.0901.0109>
- Fareed, M., Ashraf, A., and Bilal, M. (2016). "ESL Learners' Writing Skills: Problems, Factors and Suggestions", *Journal of Education and Social Sciences* Vol. 4, No. 2, pp.81-92.  
DOI: 10.20547/jess0421604201
- Fitriada, D.M., Loeneto, B.A., and Fiftinova. (2018). "Students' writing anxiety and its correlation with writing performance", *The Journal of English Literacy Education*, Vol. 5, No. 2, pp. 194–207.
- Fowler, B. and Kroll, B.M. (1980). "Relationship of apprehension about writing to performance as measured by grades in a college course on composition", *Psychological Reports*, Vol. 46, pp. 583-586.
- Fuertes, M.C.M., Jose, B.M.D., Singh, M.A.A.N., Rubio, P.E., and Guzman, A.B. (2019). "The moderating effects of information overload and academic procrastination on the information avoidance behavior among Filipino undergraduate thesis writers", *Journal of Librarianship and Information Science*, pp. 1–19 DOI:  
10.1177/0961000619871608
- Geisser, S. (1974). "A predictive approach to the random effect model", *Biometrika*, Vol. 61, No. 1, pp. 101-107.

- Gere, A.R. (1987). *Writing groups: History, theory and implications*. Carbondale: Southern Illinois University Press.
- Graham, S., MacArthur, C.A., and Fitzgerald, J. (Eds.). (2013). *Best Practices in Writing Instruction*. New York: Guilford Press.
- Hair, J.F., Hult, G.T. M., Ringle, C.M., and Sarstedt, M. (2017b). *A primer on partial least squares structural equation modeling (PLS-SEM) (Second edition)*. CA: Sage, Thousand Oaks.
- Hassan, B. (2001). "The Relationship of Writing Apprehension and Self-Esteem to the Writing Quality and Quantity of EFL University Students", *Mansoura Faculty of Education Journal*, Vol. 39, pp. 1-36.
- Henseler, J., Ringle, C.M., and Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variancebased structural equation modeling. *Journal of the Academy of Marketing Science*, Vol. 43, No. 1, pp. 115135.
- Horwitz, E.K., Horwitz, M.B., and Cope, J. (1986). "Foreign Language Classroom Anxiety", *The Modern Language Journal*, Vol. 70, No. 2, pp. 125-132, doi:10.2307/327317
- Horwitz, E.K. (2001). "Language anxiety and achievement", *Annual Review of Applied Linguistics* Vol. 21, No. 1, pp. 112–126. doi:10.1017/s0267190501000071
- Horwitz, E.K., Tallon, M., and Luo, H. (2010). "Foreign language anxiety," in *Anxiety in Schools: The Causes, Consequences and Solutions for Academic Anxieties*, ed J. C. Cassady (New York, NY: Peter Lang), pp. 96118.
- Hulstijn, J.H., and Marchena, E. (1989). "Avoidance: Grammatical or semantic causes?", *Studies in Second Language Acquisition*, Vol. 11, pp. 241-255.
- Hyland, K. (2003). *Second Language Writing (Cambridge Language Education)*. Cambridge: Cambridge University Press.
- Jones, E. (2008). "Predicting performance in first-semester college basic writers: Revisiting the role of self-beliefs", *Contemporary Educational Psychology*, Vol. 33, No. 2, pp. 209-238.
- Khan, T. R. (2009). "Common Errors made by Pakistani students in written English at college level". *SPELT Quarterly*, Vol. 24, No.3, PP.11-18.
- Kim, Y., and Kim, J. (2005). "Teaching Korean university writing class: balancing the process and the genre approach", *Asian EFL Journal*, Vol. 7, No. 2, pp. 2-15.
- Kitano, K., (2001). "Anxiety in the college Japanese language classroom", *The Modern Language Journal*, Vol. 85, pp. 549-566.
- Kleinmann, H.H. (1977). "Avoidance behavior in adult second language acquisition", *Language Learning*, Vol. 27, pp. 93-107.

- Kock, N., and Lynn, G.S. (2012). "Lateral collinearity and misleading results in variance-based SEM: An illustration and recommendations", *Journal of the Association for Information Systems*, Vol. 13, No. 7, pp. 546-580.
- Kurt, G., and Atay, D. (2007). "The effects of peer feedback on the writing anxiety of perspective Turkish teachers of EFL", *Journal of Theory and Practice in Education*. Vol. 3, No. 1, pp. 12–23.
- Lachmann, F.M. (2006). "Violations of expectations in creativity and perversion", *Psychoanalytic Inquiry*, Vol. 26, No. 3, pp. 362-385.
- Lee, S., (2002). "The influence of cognitive/affective factors on literacy transfer", *Studies in English Language and Literature*, Vol. 8, No. 10, pp. 17-32.
- Lee, S. and Krashen, S. (1997). "Writing apprehension in Chinese as a first language", *Review of Applied Linguistics*, Vol. 115, No. 116, pp. 27-35.
- Lee, S. (2005). "Facilitating and inhibiting factors in English as a foreign language writing performance: a model testing with structural equation modeling", *Language Learning*, Vol. 55, No. 2, pp. 335-374.
- Liu, Y. (2020). "The Effect of Sentence-Making Practice on Adult EFL Learners' Writing Anxiety a Comparative Study", *English Language Teaching*, Vol. 13, No. 6, pp. 34-47. URL: <https://doi.org/10.5539/elt.v13n6p34>
- MacIntyre, P. and Gardner, R.C. (1991). "Investigating Language Class Anxiety Using the Focused Essay Technique", *The Modern Language Journal*, Vol. 75, pp. 296-304. <http://dx.doi.org/10.1111/j.1540-4781.1991.tb05358.x>
- Mashori, G.M., & Iqbal Z. (2007). "Teaching the writing of English: Exploring the impact of process approach on the undergraduate students of Shah Abdullatif University Khair Pur". *English Language & Literary Forum*, Vol. 7, pp. 1-26.
- Martinez, C.T., Kock, N., and Cass, J. (2011). "Pain and Pleasure in Short Essay Writing: Factors Predicting University Students' Writing Anxiety and Writing Self-Efficacy", *Journal of Adolescent and Adult Literacy*, Vol. 54, No. 5, pp. 351–360. doi:10.1598/JAAL.54.5.5
- Moon, B.R. (2012). "Remembering rhetoric: Recalling a tradition of explicit instruction in writing", *English in Australia*, Vol. 47, No. 1, pp. 37-52.
- Na, Z., (2007). "A study of high school students' English language anxiety", *Asian EFL Journal*, Vol. 9, No. 3, pp. 22-34.
- Naghadeh, M.A., Naghadeh, N.A., Kasraey, S., Maghdour, H. and Kasraie, S. (2014). "The relationship between anxiety and Iranian EFL learners' narrative writing performance", *International Journal of Psychology and Behavioral Research*, Vol. 3, No. 6, pp. 602-609.

- Nunan, D. (1989). *Designing Tasks for the Communicative Classroom*. Cambridge: Cambridge University Press.
- Nugroho, A.A. and Ena, O.T. (2021). "Writing Anxiety among EFL Students of John Senior High School", *Journal of Language Teaching and Learning, Linguistics and Literature*. Vol. 9, No.1, pp. 245 – 259.
- Kırmızı, O. and Kırmızı, G.D. (2015). "An Investigation of L2 Learners' Writing Self-Efficacy, Writing Anxiety and Its Causes at Higher Education in Turkey", *International Journal of Higher Education*, Vol. 4, No. 2, pp. 5766.
- Ni, H., and Liu, M. (2015). Chinese University EFL Learners' Foreign Language Writing Anxiety: Pattern, Effect and Causes. *English Language Teaching*, Vol. 8, No. 3, pp 46-58.
- Pajares, F. and Valiante, G. (1997). "Influence of self-efficacy on elementary students' writing", *The Journal of Educational Research*, Vol. 90, No. 6, pp. 353-360.
- Pazhakh, A. (2006). "An investigation on Iranian EFL learners' application of avoidance strategies in their writings" *Iranian Journal of Language Studies*, Vol. 1, No. 1, pp. 1-12.
- Podsakoff, P.M., MacKenzie, S.B., Lee, J.Y., and Podsakoff, N.P. (2003). "Common method biases in behavioral research: A critical review of the literature and recommended remedies", *Journal of Applied Psychology*, Vol. 88, No. 5, pp. 879-903.
- Podsakoff, P.M., and Organ, D.W. (1986). "Self-reports in organizational research: Problems and prospects", *Journal of Management*, Vol. 12, No. 4, pp. 531-544.
- Ramayah, T., Cheah, K., Chuah, F., Ting, H., and Memon, M.A. (2017). "Partial least squares structural equation modeling (PLS-SEM) using SmartPLS 3.0", (1st edition). Kuala Lumpur, Malaysia: Pearson Malaysia SDN BHD.
- Rechtien, J.G., and Dizinno, G. (1998). "Apprehension about writing: Further results", *Psychological Reports*, Vol. 82, No. 1, pp. 221–222. doi:10 .2466 /PR0.82.1.221-222
- Rezaei, M.M., Jafari, S.M., and Younas, M. (2014). "Iranian EFL students' writing anxiety: levels, causes and implications", *English for Specific Purposes World*, Vol. 42, No. 15, pp. 1-10.
- Ringle, C.M., Wende, S., and Becker, J.M. (2015). *SmartPLS 3*. Boenningstedt: SmartPLS GmbH, <http://www.smartpls.com>.
- Rodriguez, M., and Abreu, O. (2003). "The Stability of General Foreign Language Classroom Anxiety Across English and French", *The Modern Language Journal*, Vol. 87, No. 3, pp. 365–374.
- Reeves, L.L. (1997). "Minimizing writing apprehension in the learner-centered classroom", *The English Journal*, Vol. 86, No. 6, pp. 38-45. <http://dx.doi.org/10.2307/820367>

- Sarstedt M., Ringle C.M., Hair J.F. (2021). Partial Least Squares Structural Equation Modeling. In: Homburg C., Klarmann M., Vomberg A.E. (eds) Handbook of Market Research (pp. 1-47). Springer, Cham.  
[https://doi.org/10.1007/978-3-319-05542-8\\_15-2](https://doi.org/10.1007/978-3-319-05542-8_15-2)
- Schachter, J. (1974). "An error in error analysis", *Language Learning*, Vol. 24, pp. 205-214.
- Sabti, A.A., Rashid, S.M. Nimehchisalem, V. and Darmi, R. (2019). "The Impact of Writing Anxiety, Writing Achievement Motivation, and Writing Self-Efficacy on Writing Performance: A Correlational Study of Iraqi Tertiary EFL Learners", *Sage Open*, Vol 9, No. 4, <https://doi.org/10.1177/215824401989428>
- Sabti, A.A., Rashid, S.M., and Hummadi, A.S. (2019). "Interrelationships between writing anxiety dimensions and writing goal orientation among Iraqi EFL undergraduates", *International Journal of Instruction*, Vol. 12, No. 4, pp. 529–544. <https://doi.org/10.29333/iji.2019.12434a>
- Shang, H.F. (2012). The relationship between writing anxiety and EFL university students' writing proficiency. Manuscript presented in the 19th International Conference on Learning, London, UK.
- Shang, H. (2013). "Factors associated with English as a foreign language university student writing anxiety", *International Journal of English Language Teaching*, Vol. 1, No. 1, pp. 1-12.
- Salah Alfarwn, (2021). "Is it all bad? Saudi EFL student perceptions of the role of anxiety when writing". *Saudi Journal of Language Studies*, Vol. ahead-of-print, No. ahead-of print. <https://doi.org/10.1108/SJLS-10-2021-0019>
- Soleimani, H., Hamasaid, H.H., and Saheb, B.M. (2020). "L2 Writing Anxiety, Writing Self efficacy and Writing Motivation as Correlates of Global L2 Writing Performanc", *Koya University Journal of Humanities and Social Sciences*, Vol. 3, No. 1, pp. 156-165.
- Sivaci, S. (2020). "The Effects of Peer Feedback on Writing Anxiety Levels of Pre-Service English Teachers", *Reading Matrix: An International Online Journal*, Vol. 20, No. 2, pp. 131–139.
- Stone, M. (1974). "Cross-validation and multinomial prediction", *Biometrika*, Vol. 61, No. 3, pp. 509-515.
- Tabachnick, B.G., and Fidell, L.S. (2014). *Using multivariate statistics (Sixth Edition)*. Harlow, Essex, Pearson Education Limited.
- Tom, B. (1997). Improving ESL learners' writing skills. Retrieved from ERIC database. (ED409746).
- Tsao, J., Tseng, W., and Wang, C. (2017). "The Effects of Writing Anxiety and Motivation on EFL College Students' Self-Evaluative Judgments of Corrective Feedback", *Psychological Reports*, Vol. 120, No. 2, pp. 219-241.

- Tsiriotakis, I.K., Vassilaki, E., Spantidakis, I. and Stavrou, N.A.M. (2017). “The Examination of the Effects of Writing Strategy-Based Procedural Facilitative Environments on Students’ English Foreign Language Writing Anxiety Levels”, *Frontiers in Psychology*, Vol 7, pp. 1-14.
- Turnuk, T., and Aydin, S. (2020). “Interlanguage effect on writing anxiety in a foreign language context”, *The Literacy Trek*, Vol. 6, No. 1, pp. 1-19.
- Tuan, L.T. (2010). “Enhancing EFL learners’ writing skill via journal writing”, *English Language Teaching*, Vol. 3, No. 3, pp. 81-88.
- Web Power (2019). Univariate and multivariate skewness and kurtosis calculation. Retrieved from <https://webpower.psychstat.org/models/kurtosis/>
- Widodo, H.P. (2006). “Designing a genre-based lesson plan for an academic writing course”, *English Teaching: Practice and Critique*, Vol. 5, No. 3, pp. 173-199.
- Yastibas, G.C., and Yastibas, A.E. (2015). “The Effect of Peer Feedback on Writing Anxiety in Turkish EFL (English as a Foreign Language) Students”, *Procedia - Social and Behavioral Sciences*, Vol. 199, pp. 530 – 538.
- Zang, H. (2011). Chinese English majors - Causes, effects and coping strategies for ESL writing anxiety.