Current Psychology (2020) 39:1438–1444
https://doi.org/10.1007/s12144-018-9850-6

The differential role of domain-specific anxiety in learners' narrative and argumentative L2 written task performances

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Published online: 18 April 2018

Abstract
Learner individual differences can play differential roles in learners' performance on different task types of different complexity levels. This study investigates the differential role of domain-specific anxiety in second language (L2) learners' performances on narrative and argumentative writing tasks. For this purpose, a group of 102 upper-intermediate L2 learners in Iran were asked to perform either a narrative or an argumentative writing task. The study also involved the measurement of learners' L2 writing anxiety using the Second Language Writing Anxiety Inventory (SLWAI) that represents somatic anxiety (negative feelings such as tension), cognitive anxiety (negative expectations, preoccupation with performance) and avoidance behavior (avoidance in writing). Moreover, the quality of learners' writings was assessed by eliciting three measures of task performance, i.e. Complexity (clauses per T-unit and dependent clauses percentage), Accuracy (error-free clauses and T-units percentage) and Fluency (average number of words, T-units and clauses per text). Regarding the narrative task, negative relationships were found between cognitive anxiety and both accuracy measures; further, a significant negative correlation was found between somatic anxiety and an accuracy measure of narrations. On the contrary, the effect of writing anxiety on argumentative task performance was more extensive: negative correlations were observed between cognitive anxiety and all three measures of fluency, one complexity measure and one accuracy measure; avoidance behavior was also negatively associated with two fluency measures and one complexity measure. The implications of the study are discussed.

Keywords Domain-specific anxiety · L2 written task performance · CAF · Task type · Argumentative writing · Narrative writing

Introduction

Anxiety is one of the individual differences that influence the process of learning. Researchers have contended that when learners perform tasks that require productive skills, they experience considerable amount of anxiety (Hilleson 1996; Zhang 2001). In the past three decades, the speaking skill has been considered to be the most anxiety-inducing of the four language skills, setting the scene for numerous studies on the role of anxiety in learners' oral performance (e.g., Hewitt and Stephenson 2011; Horwitz 2001; Liu 2007; Phillip 1992; Young 1986). This is partly because research on anxiety started in the 1980s, a time when communicative language teaching (CLT) and its focus on the oral dimensions of language use were in vogue. However, granted the fact that writing is an individual and product-oriented task, learning to write may involve as much anxiety as does learning to speak (Tsui 1996), causing learners to suffer from a "distress associated with writing" and to develop "a profound distaste for the process" (Madigan et al. 1996, p. 295). In this connection, several researchers have regarded writing anxiety as a particular type of anxiety which belongs to the language-particular skill of writing (Bline et al. 2001; Cheng 2004; Daly et al. 1988).

Such anxiety can be even greater when we consider writing in a second language (L2) context where learners are required to think and write in a less-familiar language than their mother

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tongue (Lee 2005). In view of this, while low apprehensive writers may tend to enjoy writing more frequently, and may have more confidence in their capabilities to write (Faigley et al. 1981), writers with higher levels of anxiety may view writing as an unrewarding task; therefore, they sometimes avoid the situations in which they are required to write (Daly and Miller 1975). Along similar lines, research in the area of first language (L1) writing (e.g., Cheng et al. 1999; Daly and Miller 1975; Faigley et al. 1981) has shown that writing apprehension has detrimental effects on individuals' writing performance. These studies have indicated that highly anxious writers tend to produce texts with lower quality. In one study, for instance, writing anxiety was found to reduce willingness to write among high apprehensive learners (Daly and Miller 1975). Moreover, Faigley et al. (1981) found that highly apprehensive learners tended to produce shorter and less fluent texts than learners with low anxiety. Further, Horwitz (2000) contended that anxiety can impede learning and that the weaker performance of anxious learners is partly because of their difficulties in retrieving information. Although the importance of writing anxiety in determining the quality of L1 writing performance has been well-established by research, only a few number of studies (Choi 2014; Hassan 2001; Lee 2005; Zabihi 2018), to the researchers' best knowledge, have specifically examined the role of writing anxiety in an L2 learning context.

Putting aside for the moment the extent to which writing anxiety can affect writing outcomes, it seems that the role of writing anxiety in learners' writing performance depends on several other variables, as well. Some of these variables pertain to learners' own characteristics. For example, in a writing anxiety study with L2 learners in Egypt, Hassan (2001) found that low anxious learners wrote better quality essays than high anxious learners whose anxiety was found to be affected by their lack of self-esteem. Moreover, Pajares and Johnson (1994) have contended that writing anxiety cannot function as an independent variable, and that it can affect learners' outcomes only indirectly through learners' self-efficacy; to test this hypothesis, in a study on the role of cognitive and affective factors in Iranian L2 learners' writing performance, Zabihi (2018) showed how high apprehensive writers, due to their lack of self-efficacy, obtained lower scores in their compositions regarding complexity, accuracy and fluency. However, there are some other variables that relate not to learners' characteristics, but to the features of the task itself. For example, it has been found that the role of writing anxiety is most likely to be manifested when anxious writers perform under time pressure (Kean et al. 1987). In addition, Faigley et al. (1981) suggested that the role of writing anxiety in written task performance can be observed when learners write about narrative and descriptive topics that require learners to disclose their personal feelings, experiences and attitudes. In view of this, one may hypothesize that writing anxiety can play differential roles in learners' performance on different writing task types.

As a productive language skill, writing has been viewed as a challenging task. Therefore, one factor that distinguishes a task from another is the degree of complexity of that task (Robinson 2001). In this connection, task complexity becomes a factor that explains why some tasks are more demanding than others for a particular learner. Based on previous research (Bruning and Horn 2000; Schweiker-Marra and Marra 2000), it can be said that writing anxiety takes place partly due to the complexity of language, in general, and the complexity of the writing task, in particular. In view of this, one can hypothesize that, in comparison with learners doing simple writing tasks, learners who perform complex tasks may be more susceptible to writing anxiety and, consequently, produce poorer compositions.

In this connection, two tasks which seem to differ in terms of complexity level are narrative and argumentative essay writings. Due to its open-ended nature, a narrative writing task usually requires that writers use their imagination to reconstruct a story in written form in response to some visual stimuli (e.g., picture strips) (Justice et al. 2010). On the other hand, argumentative writing is a more cognitively-demanding task which involves learners in a process of powerful reasoning, negotiation and persuasion. To successfully complete this process, learners needs to develop their own argument and arrive at valid conclusions about a phenomenon and support them with reliable and relevant pieces of evidence (van Eemeren et al. 1996). Therefore, there seems to be a need for research on the role of writing anxiety in L2 writing performance across different task types with varying degrees of complexity.

Taken together, granted that most of the studies on writing anxiety have considered the role of this construct in oral task performance, and that its potential role in learners' written task performance has not received well-deserved attention, especially when it comes to the more anxiety-inducing task of L2 writing (in comparison to L1 writing) as well as the lack of research on the role of L2 writing anxiety with task types of different complexity levels, in this study the researchers have tried to fill these lacunae by exploring the differential effect of domain-specific L2 writing anxiety on English learners' performance on narrative and argumentative writing task types. Put another way, this study aimed to investigate the relationship between written narrative and argumentative task performance (in terms of the complexity, accuracy and fluency of L2 writings) and the features of L2 writing anxiety (i.e. somatic anxiety, cognitive anxiety, and avoidance behavior). In view of the above, the authors attempted to answer the following two research questions:

1. Does writing anxiety have any role in the CAF of upper-intermediate L2 learners' argumentative writings?
2. Does writing anxiety have any role in the CAF of upper-intermediate L2 learners' narrative writings?
3. Which genre (narrative vs. argumentative) has the greater effect on the CAF of L2 learner's essays?

Method

Setting and Participants

Departed from a pool of 126 English learners, 102 learners with an upper-intermediate level of proficiency took part in this study. The sample involved 61 females (59.8%), 37 males (36.3%), and 4 (3.9%) individuals who did not disclose their gender. The reason for recruiting upper-intermediate English learners was twofold: (a) the participants were prompted to produce texts of at least 200 words, either defending their own viewpoint on a given issue (the argumentative writing task) or narrating a whole story (the narrative writing task); (b) the researchers had lack of accessibility to advanced learners of English. Before participating in the study all learners provided the researchers with an informed consent for extra course credit. They were selected from two private language institutes in Neyshabur, a city in the northeast of Iran. All learners were native speakers of Persian (or Farsi) and were studying English as part of their extracurricular schedule. They were informed that the data for this research would be collected anonymously and kept confidential. Participants ranged in age from 15 to 24, with a mean age of 19 (SD = 2.3). Age information was missing for 3 participants.

Instrumentation

Second Language Writing Anxiety Inventory

In order to measure the learners' level of writing anxiety, Cheng's (2004) Second Language Writing Anxiety Inventory (SLWAI) was used. This questionnaire consists of 22 items that are scored on a Likert scale of 5 points ranging from 1 (strongly disagree) to 5 (strongly agree). The SLWAI encompasses three subcomponents: (a) somatic anxiety, as manifested in negative feelings such as tension; (b) cognitive anxiety, as depicted in negative expectations and preoccupation with performance; and (c) avoidance behavior, as reflected in avoidance in writing. Sample items from the questionnaire are: "While writing in English, I often worry that the ways I express and organize my ideas do not conform to the norm of English writing"; "I tremble or perspire when I write English compositions under time pressure"; "My mind often goes blank when I start to work on an English composition." The internal consistency of the questionnaire as measured by the Cronbach's α internal consistency reliability coefficient is high (i.e. .89) (Cheng 2004).

Narrative Writing Task

The participants in Group 1 ($N = 52$) were asked to complete a narrative task. The narrative task involved learners in writing a story based on a sequence of pictures in the form of a cartoon strip and what they perceived was happening in those pictures. The researchers piloted the task with 10 upper-intermediate learners who were asked to complete the same task the fastest they could; an average time of 32 min was stipulated for the learners to do the task. The task involved participants in narrating the story of a couple driving on a road at night when they suddenly came across a spaceship; they hid behind a tree, but the aliens could find them.

From one point of view, the use of a picture strip story for upper-intermediate L2 learners may seem questionable. However, writing a coherent narrative is difficult even for native speakers of English; therefore, there is no wonder that such a task can become much more demanding when it comes to writing in a second language (Nunan 2001). We used a picture strip story in this study because picture series can provide a stimulating focus for learners' attention (e.g., Raimes 1983) and can help them create more compelling stories (Alidoost et al. 2014). Moreover, given that learners in our study had to perform under time pressure, using picture cues could reduce cognitive load that would help learners organize their writings more effectively (Alidoost et al. 2014; Zabihi 2018).

Argumentative Writing Task

The participants in Group 2 ($N = 50$) were asked to write an argumentative essay. An argumentative writing task was adopted in this study because the researchers needed to ensure that the task would be challenging enough for the learners and would use up learners' linguistic resources fully. It is widely acknowledged that argumentation is a cognitively-demanding task by prompting learners to develop their own arguments for or against a particular issue. Specifically, the learners in this group were required to give their opinions on the utility or futility of capital punishment. Based on a pilot study with 10 upper-intermediate learners, an average time of 36 min was allotted to the completion of this task.

Procedure

Data collection for the present study took place between April and May 2017. The participants, all voluntarily taking part in this study, were contacted during class time and were briefly informed about the purpose of the research project. First, a version of Oxford Placement Test (OPT) was used to ensure that the group recruited for this study was relatively homogeneous with regard to L2 proficiency. Out of a pool of 126 learners who took the OPT, 24 learners were excluded from the investigation because their scores were below or above the designated (i.e. upper-intermediate) level. Therefore, a homogeneous group of 102 s language learners were retained for data collection.

Subsequently, the L2 writing anxiety questionnaire was administered to these participants. One of the teachers read the directions for answering the questionnaire out loud, emphasizing the fact that there was no correct or incorrect answer to any particular item and that the participants could raise their hands if they had any questions. Feedback received from the teachers showed that participants completed the anxiety scale comfortably within the 15-min time frame.

In order to assess the quality of L2 learners' written productions, nearly half of the participants were assigned with the narrative writing task, while the other half were given the argumentative writing task. Next, to examine the underlying components of L2 writing proficiency, we adopted the three measures of Complexity, Accuracy and Fluency (CAF). These measures were used at different linguistic levels because, following Lu (2011), only in this way we could obtain a relatively comprehensive picture of language development in second language writing.

To carry out this analysis, learners' written productions were primarily coded for T-units and clauses. A T-unit refers to "one main clause plus whatever subordinate clauses happen to be attached to or embedded within it" (Hunt 1966, p. 735). To measure complexity and accuracy, we needed to analyze the writings for clauses in which independent and dependent clauses were distinguished. It is worth mentioning that in the present study, nonfinite clauses were not considered as embedded clauses. Moreover, a coordinated subordinate clause such as "I know you like me and he likes me" was considered as two subordinate clauses. In addition, a sentence with multiple levels of subordination like "She knows that you know that he likes you," was considered as two subordinate clauses.

Complexity Several measures have been used to capture the construct of syntactic complexity at different levels of L2 development. In this connection, it is widely accepted that while coordination is a good index of complexity at elementary levels, subordination can be a reliable indicator of complexity at inter/upper-intermediate levels, and subclausal complexity can best represent syntactic complexity at advanced levels (Norris and Ortega 2009). Considering the fact that the participants of the present research were upper-intermediate L2 learners of English, we adopted subordination as a powerful index of syntactic complexity. More specifically, following Foster and Skehan (1996), we measured subordination by assessing the proportion of clauses to T-units. In addition, following Wolfe-Quintero et al. (1998), we examined the proportion of dependent clauses to clauses (DC/C) as another way of measuring complexity.

Accuracy Contrary to complexity and fluency, there is much more unanimity on what measures are more appropriate for capturing writing accuracy (Tavakoli and Skehan 2005). In this study, two indicators of writing accuracy were adopted: the proportion of error-free T-units to all T-units (EFT/T) and the proportion of error-free clauses to all clauses (EFC/C). Moreover, following Kroll (1990), we selected two types of error (i.e. syntactic errors and morphological errors) as indicators of inaccuracy in learners' writings. However, other inaccuracies such as spelling errors and errors related to mechanics of writing were ignored.

Fluency To assess learners' writing fluency, researchers have adopted several measures such as the number of syllables per minute and number of dysfluencies (Ellis and Yuan 2004), mean number of words per T-unit (Larsen-Freeman 2006), average number of words per minute (Ong and Zhang 2011), and number of words, T-units and clauses per text (Wigglesworth and Storch 2009). In the present study, following Wigglesworth and Storch (2009), fluency of written data was examined in terms of the average number of words, T-units and clauses per text.

Further, the reliability of the CAF of L2 writing performances was examined by two trained raters who coded the written outputs for the all the participants in both group and ultimately judged the CAF of all texts by following the above-mentioned criteria. Reliability was measured by calculating the degree of agreement (in terms of percentages) between the two raters. An inter-rater reliability check on the two raters showed that the coefficients were all above .81 for all measures (with a mean of .85). Finally, the two raters discussed all the disagreements and resolved them.

Results

We used the Statistical Package for Social Sciences (SPSS 22) for inputting data and running the statistical analyses. A Pearson product-moment correlation coefficient was computed to examine the relationship between writing anxiety components and the CAF of narrative writing task performance. As can be seen in Table 1, negative relationships were found between cognitive anxiety and both accuracy measures used in this study (error-free clauses percentage $r = -.38$, $p < 0.01$; error-free T-units percentage $r = -.29$, $p < 0.05$). Moreover, a significant negative correlation was observed between somatic anxiety and an accuracy measure of the narrative task (error-free clauses percentage $r = -.17$, $p < 0.05$). However, no significant (negative nor positive) correlations were found between writing anxiety subcomponents and the complexity and fluency measures of L2 narratives (i.e. $p > 0.05$).

The relationship between writing anxiety components and the CAF of argumentative writing task performance was examined by computing a Pearson product-moment correlation coefficient. As shown in Table 2, significant negative correlations were observed between cognitive anxiety and all fluency measures of the argumentative task (number of words $r = -.42$,

Table 1 Correlations between writing anxiety components and the CAF of narrative writing

Narrative Task ($N = 52$)	Somatic Anxiety	Cognitive Anxiety	Avoidance Behavior
No. of words	−.143	−.127	−.061
No. of T-units	−.039	−.084	−.101
No. of clauses	.033	.052	−.008
Clauses per T-unit	−.121	−.133	−.109
Dep. Clauses percentage	−.099	−.105	−.131
Error-free clauses percentage	−.173*	−.384**	−.091
Error-free T-units percentage	−.125	−.290*	−.029

*$p < .05$

**$p < .01$

$p < 0.01$; number of T-units $r = -.31$, $p < 0.01$; number of clauses $r = -.33$, $p < 0.01$). Moreover, a negative relationship was found between cognitive anxiety and one complexity measure (clauses per T-unit $r = -.26$, $p < 0.05$) and one accuracy measure (error-free clauses $r = -.22$, $p < 0.05$). Furthermore, avoidance behavior was negatively associated with two fluency measures (number of T-units $r = -.30$, $p < 0.01$; number of clauses $r = -.28$, $p < 0.01$) and one complexity measure (dependent clauses percentage $r = -.24$, $p < 0.05$).

Discussion

The study reported in this paper aimed to investigate the differential role of domain-specific anxiety in L2 learners' performances on narrative and argumentative writing tasks. With regard to learners' performance on the narrative task, negative relationships were found between cognitive anxiety and both accuracy measures used in this study. Further, a significant negative correlation was found between somatic anxiety and an accuracy measure of narrations. Put another way, among the L2 learners performing the narrative writing task, those who had higher levels of cognitive anxiety (i.e. learners who held negative expectations of their own performance and were preoccupied with how they would complete the task of writing) and somatic anxiety (i.e. learners who had negative feelings such as tension) were more likely to produce erroneous clauses and/or T-units in their narratives.

This finding can be explained from two perspectives. For one thing, the learners were required to complete the task under time pressure which might have led to less accurate narratives. Secondly, this study was carried out in the English as a Foreign Language (EFL) context of Iran, where there is no use of English in real-life situation. As Dastjerdi and Samian (2011) have pointed out, Iranian L2 learners have frequent cohesion anomalies in their writings because of lack of syntactic and semantic awareness and knowledge of English cohesion rules. This is in line with the deficit model which states that learners with high levels of anxiety tend to display poorer performances due to deficiency in learning; consequently, they are more anxious (Naveh-Benjamin 1991). Similarly, Sparks et al. (2000) argue that learners' cognitive-linguistic disability leads to low performance and this in turn causes anxiety. Therefore, generally, the significant role of writing anxiety in the inaccuracy of narrative writings can be partly explained when we consider the nature of the assigned task as well as the features of the setting and knowledge of the participants.

However, no significant relationship was found between writing anxiety subcomponents and the complexity and fluency measures of L2 narratives. This finding is significant because free writing tasks (e.g., a narrative task) have been perceived as the least anxiety-inducing genre of writing (Choi 2014). Therefore, it would be safe to assume that because a narrative writing task is less demanding and involves lower stakes than an argumentative writing, even some learners with a high level of writing anxiety could perform well on the narrative task. Be that as it may, some people might argue that narrative writing tasks can be more anxiety-provoking that they seem to be, because in order to complete these tasks learners are often required to make reference to their own experiences and to disclose their personal feelings and attitudes (Faigley et al. 1981). However, considering the fact that the narrative writing task in our study involved learners in objectively narrating a story based on a sequence of pictures, there was no need for learners to reveal their own experiences, feelings and attitudes. In other words, these learners were already provided with some hints in terms of visual cues; so they were merely supposed to verbally re-create what has already been created for them in visual form. As a result,

Table 2 Correlations between writing anxiety components and the CAF of argumentative writing

Argumentative Task ($N = 50$)	Somatic Anxiety	Cognitive Anxiety	Avoidance Behavior
No. of words	−.106	−.425**	−.119
No. of T-units	.007	−.310**	−.308**
No. of clauses	−.079	−.334**	−.286*
Clauses per T-unit	−.011	−.269*	−.136
Dep. Clauses percentage	.060	−.093	−.245*
Error-free clauses percentage	−.144	−.222*	.122
Error-free T-units percentage	−.100	−.113	.037

*$p < .05$

**$p < .01$

writing anxiety does not seem to have prevented learners from writing fluent and complex narratives.

On the contrary, the effect of writing anxiety on argumentative task performance was more extensive: One of the accuracy measures was negatively related to cognitive anxiety. Moreover, negative correlations were observed between cognitive anxiety and all three measures of fluency. This indicates that the learners with higher levels of cognitive anxiety were likely to produce shorter argumentative texts than those with lower anxiety levels in terms of the number of words, T-units and clauses they used in their writings. Similarly, avoidance behavior was negatively associated with two fluency measures. That is to say, learners with higher scores on the avoidance behavior component of writing anxiety tended to produce shorter texts regarding number of T-units and clauses per text. Moreover, cognitive anxiety and avoidance behavior were each found to be negatively correlated with either of the two complexity measures. These findings are interesting because the results from the analyses of narrative task performances showed that the fluency and complexity of texts did not bear any significant relationship with any of the writing anxiety subscales.

These findings support the hypothesis that writing anxiety plays a differential role in the completion of two tasks that vary in terms of level of complexity. This may partly be due to the limited functional capacity of working memory on the part of learners who worked on the argumentative task. As Eysenck (1992) has pointed out, learners' poorer performance originating from high anxiety levels reflects an underlying limitation in the functional capacity of working memory. Moreover, research (e.g., Zabihi 2018) has shown that students with lower working memory spans are less able to write fluent sentences. In view of this, and given that argumentative writing is a more cognitively demanding task than the narrative writing, it can make learners more susceptible to working memory deficits and hence, more exposed to writing anxiety. In other words, it can be concluded that a learner with a higher level of writing anxiety may incur a higher cognitive load while doing a more challenging task than when they are performing a less complex task.

While this paper can only speculate about the relationship between domain-specific anxiety and learners' written performances on two task types, the practical implications of this research might awaken an interest among language teachers, teacher trainers, and testing professionals to make appropriate use of different writing tasks. One recommendation for teacher educators would be to make foreign language teachers enabled to choose the right task according to the purpose of writing and the areas that are more susceptible to writing anxiety. For example, if the quantity (fluency and complexity) of learners' writings is to be assessed, teachers need to use more cognitively-demanding tasks such as argumentations because, as our results revealed, writing anxiety has a more detrimental effect on the fluency and complexity of learners' argumentations. Conversely, if testing the accuracy of learners' writings has some sort of priority over measuring fluency and complexity, it is better to use free writing tasks such as narratives, since anxiety tends to affect accuracy more in narrative writing than in argumentative writing. Moreover, given the differential effects of writing anxiety on learners' performance on tasks with different complexity levels, it is suggested that language testing professionals make use of tasks that are generally less-anxiety-inducing, especially for high-stakes tests which can have important consequences for the test-taker's educational and/or vocational career.

However, it is worth noting that the findings of the present study need to be interpreted with some caution. For one thing, considering the length of time the participants spent on completing the tasks in one session (a test of placement for language proficiency, a test of writing anxiety, and a narrative/argumentative writing task), then the authors of the present study might have been oblivious of the critical anxiety-inducing factor, namely fatigue. Other researchers might be given enough flexibility to prevent this confounding variable by administering their tests in two or more consecutive sessions rather than in one single session. In addition, with regard to the accuracy of writings, it is not clear in the present study if writing anxiety may affect one kind of error but not another. With that in mind, future researches can examine, for instance, whether writing anxiety tends to cause, say, morphological errors, but not syntactic errors.

Compliance with Ethical Standards

Conflict of Interest Authors declare that they have no conflict of interest.

Animal Studies This article does not contain any studies with animals performed by any of the authors.

Human Participants All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Informed Consent Informed consent was obtained from all individual participants included in the study.

References

Alidoost, Y., Tabatabaei, S., & Bakhtiarvand, M. (2014). The effect of picture story in creating textual coherence in narrative genre. *Theory and Practice in Language Studies, 4*(2), 359–365.

Bline, D., Lowe, D. R., Meixner, W. F., Nouri, H., & Pearce, K. (2001). A research note on the dimensionality of Daly and Miller's writing apprehension scale. *Written Communication, 18*, 61–79.

Bruning, R., & Horn, C. (2000). Developing motivation to write. *Educational Psychologist, 35*(1), 25–37.

Cheng, Y. S. (2004). A measure of second language writing anxiety: Scale development and preliminary validation. *Journal of Second Language Writing, 13*, 313–335.

Cheng, Y. S., Horwitz, E. K., & Schallert, D. (1999). Language anxiety: Differentiating writing and speaking components. *Language Learning, 49*, 417–446.

Choi, S. (2014). Language anxiety in second language learning: Is it really a stumbling block? *Second Language Studies, 31*(2), 1–42.

Daly, J. A., & Miller, M. D. (1975). The empirical development of an instrument to measure writing apprehension. *Research in the Teaching of English, 9*(3), 242–249.

Daly, J. A., Vangelisti, A., & Witte, S. P. (1988). Writing apprehension in the classroom context. In B. A. Rafoth & D. L. Rubin (Eds.), *The social construction of written communication* (pp. 147–171). Norwood: Ablex Publishing.

Dastjerdi, H., & Samian, H. S. (2011). Quality of Iranian EFL learners' Argumentative Essays: Cohesive Devices in Focus. *Mediterranean Journal of Social Sciences, 2*(2), 65–76.

Ellis, R., & Yuan, F. (2004). The effects of planning on fluency, complexity, and accuracy in second language narrative writing. *Studies in Second Language Acquisition, 26*(1), 59–84.

Eysenck, M. (1992). *Anxiety: The cognitive perspective*. Hillsdale: Erlbaum.

Faigley, L., Daly, J. A., & Witte, S. P. (1981). The role of writing apprehension in writing performance and competence. *Journal of Educational Research, 75*(1), 16–21.

Foster, P., & Skehan, P. (1996). The influence of planning and task type on second language performance. *Studies in Second Language Acquisition, 18*(3), 299–323.

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, 39*, 1–36.

Hewitt, E., & Stephenson, J. (2011). Foreign language anxiety and oral exam performance: A replication of Phillips's *MLJ* study. *The Modern Language Journal, 96*, 170–189.

Hilleson, M. (1996). I want to talk with them, but I don't want them to hear. In K. M. Bailey & D. Nunan (Eds.), *Voices from the Language Classroom* (pp. 248–277). Cambridge: Cambridge University Press.

Horwitz, E. K. (2001). Language anxiety and achievement. *Annual Review of Applied Linguistics, 21*, 112–126.

Hunt, K. (1966). Recent measures in syntactic development. *Elementary English, 43*, 732–739.

Justice, L. M., Bowles, R., Pence, K., & Gosse, C. (2010). A scalable tool for assessing children's language abilities within a narrative context The NAP (Narrative Assessment Protocol). *Early Childhood Research Quarterly, 25*, 218–234.

Kean, D., Gylnn, S., & Britton, B. (1987). Writing persuasive documents: The role of students' verbal aptitude and evaluation anxiety. *Journal of Experimental Education, 55*, 95–102.

Kroll, B. (1990). What does time buy? ESL student performance on home versus class compositions. In B. Kroll (Ed.), *Second language writing: Research insights from the classroom* (pp. 140–154). New York: Cambridge University Press.

Larsen-Freeman, D. (2006). The emergence of complexity, fluency and accuracy in the oral and written production of five Chinese learners of English. *Applied Linguistics, 27*(4), 590–619.

Lee, S. Y. (2005). Facilitating and inhibiting factors on EFL writing: A model testing with SEM. *Language Learning, 55*, 335–374.

Liu, M. (2007). Anxiety in oral English classrooms: A case study in China. *Indonesian Journal of English Language Teaching, 3*(1), 119–137.

Lu, X. (2011). A corpus-based evaluation of syntactic complexity measures as indices of college-level ESL writers' language development. *TESOL Quarterly, 45*(1), 36–62.

Madigan, R., Linton, P., & Johnson, S. (1996). The paradox of writing apprehension. In L. W. Gregg & E. R. Steinberg (Eds.), *Cognitive processes in writing* (pp. 295–307). Hillsdale: Lawrence Erlbaum.

Naveh-Benjamin, M. (1991). A comparison of training programs intended for different types of test-anxious students: Further support for an information-processing model. *Journal of Educational Psychology, 83*, 134–139.

Norris, J. M., & Ortega, L. (2009). Towards an organic approach to investigating CAF in instructed SLA: The case of complexity. *Applied Linguistics, 30*, 555–578.

Nunan, D. (2001). *Second language learning and teaching*. Boston: Thompson Publishing Company.

Ong, J., & Zhang, L. J. (2011). Effects of task complexity on the fluency and lexical complexity in EFL students' argumentative writing. *Journal of Second Language Writing, 19*(4), 218–233.

Pajares, F., & Johnson, M. J. (1994). Confidence and competence in writing: The role of writing self-efficacy, outcome expectancy and apprehension. *Research in the Teaching of English, 28*, 313–331.

Phillip, E. M. (1992). The effects of language anxiety on students' oral test performance and attitudes. *The Modern Language Journal, 76*, 14–26.

Raimes, A. (1983). *Techniques in teaching writing*. New York: Oxford University Press.

Robinson, P. (2001). Task complexity, task difficulty, and task production: Exploring interaction in a componential framework. *Applied Linguistics, 22*, 27–57.

Schweiker-Marra, K. E., & Marra, W. T. (2000). Investigating the effects of prewriting activities on writing performance and anxiety of at-risk students. *Reading Psychology, 21*, 99–114.

Sparks, R. L., Ganschow, L., & Javorsky, J. (2000). Déjà vu all over again: A response to Saito, Horwitz, and Garza. *The Modern Language Journal, 84*, 251–255.

Tavakoli, P., & Skehan, P. (2005). Strategic planning, task structure and performance testing. In R. Ellis (Ed.), *Planning and task performance in a second language* (pp. 239–277). Amsterdam: John Benjamins.

Tsui, A. B. M. (1996). Reticence and anxiety in second language learning. In K. M. Bailey & D. Nunan (Eds.), *Voices from the language classroom* (pp. 145–168). Cambridge: Cambridge University Press.

van Eemeren, F. H., Grootendorst, R., Henkenmans, F. S., Blair, J. A., Johnson, R. H., Krabb, E. C., Plantin, C., Walton, D. N., Willard, C. A., Woods, J., & Zarefsky, D. (1996). *Fundamentals of Argumentation theory: A handbook of historical background and contemporary developments*. Hillsdale: Lawrence Erlbaum Associates, Inc..

Wigglesworth, G., & Storch, N. (2009). Pair versus individual writing: Effects on fluency, complexity and accuracy. *Language Testing, 26*(3), 445–466.

Wolfe-Quintero, K., Inagaki, S., & Kim, H. Y. (1998). *Second language development in writing: Measures of fluency, accuracy, and complexity*. Honolulu: Second Language Teaching and Curriculum Center, University of Hawaii at Manoa.

Young, D. J. (1986). The relationship between anxiety and foreign language oral proficiency ratings. *Foreign Language Annals, 19*, 439–445.

Zabihi, R. (2018). The role of cognitive and affective factors in measures of L2 writing. *Written Communication, 35*(1), 32–57.

Zhang, L. J. (2001). Exploring variability in language anxiety: Two groups of PRC students learning ESL in Singapore. *RELC Journal, 32*(1), 73–91.