

The Effects of L2 Chinese Learners' Perceived Writing Anxiety on Their L1 Use within L2 Writing Performance among English Major Students in a Chinese University

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Abstract

Learning to write fluently and expressively in English is widely proved to be one of the most difficult skills for Chinese EFL learners to master due to their L2 writing processes are impeded by various obstacles, among which L2 writing anxiety and their L1 use are two indispensable factors that should be accounted. Hence, the purpose of this study was to explore the relations among L2 learners' perceived writing anxiety and the use of L1 Chinese learners within their L2 writing performance of English major students. 226 L1-Chinese sophomores of English major students enrolled in Department of Applied English at a university in China participated. A mixed methodology of (Quantitative +qualitative) approaches was employed to collect data through SLWAI (Second Language Writing Anxiety Inventory), think-aloud protocol and semi-structured interview so as to elicit the dynamic thinking process of L2 Chinese learners' perceived writing anxiety and their L1 use within L2 writing performance on an English argumentative writing task. The findings revealed that L2 Chinese learners' perceived writing anxiety was positively correlated with their L1 use amount but negatively correlated with L2 writing performance. However, in terms of a minor part of the participants, L2 Chinese learners' perceived writing anxiety and their L1 use amount were positively correlated with L2 writing performance. Implications are that the study not only investigated the relations among L2 English major students' perceived writing anxiety and their L1 use within L2 writing performance, but shed lights on the pedagogical field of L2 writing by proposing some effective measures to improve students' L2 writing performance based on their different anxiety sources.

Keywords: L2 writing anxiety, L1 use, think-aloud protocol, English majors

1. Introduction

Second language (L2) learning is a universal but extremely complex process which is affected by various internal factors of individual's language learning (Li & Lin, 2007). The traditional attention has been drawn to the cognitive issues (Wen, 1995; Gu & Zhao, 2015), giving rise to emotional illiteracy. Along with the development of humanistic psychology and related theories in other disciplines (Brown, 1973; Li & Lin, 2007), researchers have become aware of the vital role of affective variables in individual's L2 learning process, one of which is anxiety, regarded as the principal element impeding effective L2 learning (Oxford, 1999). According to Spielberger (1983), anxiety is an unpleasant emotional state which is characterized by the subjective feelings of tension, worry and apprehension, and by activation or arousal of the automatic nervous system. Since 1970s, volumes of anxiety research has been done to explore the correlation between foreign language (FL) anxiety and various aspects of language achievement, which were measured by course grade, task performance (Aida, 1994; Onwuegbuzie, Bailey & Daley, 1999), as well as the specific skills of language learning including listening (Elkhafaifi, 2005; Zhou, 2003; Chen, 2004; Shi & Fan, 2013), reading (Sellers, 2000; Shi & Liu, 2006; Qiu & Liao, 2007) and writing achievements (Cheng, Horwitz & Schallert, 1999; Cheng, 2004; Guo & Qin, 2010), from most of which has been proved by having the negative correlation with anxiety. In China, L2 learning is widely acknowledged as English learning, meanwhile, become further regarded as one of the most important mandatory courses in the national education system. In China, English learning ability is consisted of diverse language skills

involving listening, speaking, reading and writing, among which writing comes last as the most significant and difficult part (Tang, 2005). However, challenging and frustrating as English writing skill acquisition is, it is not only regarded as a vital criteria for qualified personnel in the 21st century (Wen, 2003), but remains as the most frequently evaluated skill of L2 learning in the present Chinese English education system (Tang, 2005). Hence, students often feel deficient and apprehensive in writing English compositions, racking their brains searching for what to write and how to write to meet the requirement of the minimum number of words.

As a result, it is common to see students muttering Chinese words, writing “Chinglish” sentences, or even writing English composition by means of direct translation, particularly, in view of the fact that when retrieving the appropriate English vocabulary, grammar or syntax in vain. The key reason lies in that learning to write fluently and expressively is a tough skill for L2 learners because they are made to demonstrate a master command of not only the related language knowledge but also a series of writing skills simultaneously (Tang, 2005). Nevertheless, due to their limited L2 writing proficiency being in the process of L2 writing, they would naturally or unconsciously turn to their first language (L1) for help from time to time, resulting in the prevailing phenomenon of L1-Chinese use in L2 writing (Cumming, 1981). All these have indicated that a clear understanding of L1 use within L2 writing would bring insightful implications to L2 writing instruction. Previous research focused on that the impact of L2 writing anxiety or L1 use on L2 writing, respectively, with the participants among EFL students who do not major in English or the ones in other disciplines. Given that, it has been recognized as two parallel branches.

Although much effort has been done to examine issues of L2 writing anxiety and L1 use within L2 writing, few was exploratory enough to combine the two parallel branches together to investigate their interacted effects in L2 writing performance of English major students. Therefore, addressing the effects of L2 writing anxiety and L1 use within L2 writing performance of English major students merits more concern. Moreover, the results of which benefit in English writing instruction in Chinese or abroad L2-English classroom. The present study is to explore the effects of L2 writing anxiety on L1 Chinese use within L2 writing performance of English major students, following a new dichotomy of combining the two branches relatively independent but deeply interacted together. Thus, in detail, the study aims to examine the influences of L2 writing anxiety and L1 use amount on L2 writing performance of English major students from the product-oriented perspective, and implicitly probe into the possible relation between L2 writing anxiety and L1 use amount within L2 writing performance process.

In association with the purposes, the research questions will be as followings;

- (1) Does L2 Chinese learners' perceived writing anxiety negatively correlate with English major students' L2 writing performance?
- (2) Is English major Chinese learners' L2 writing performance influenced by their L1 use amount in L2 writing process? If the answer is affirmative, what influences have on L2 writing performance?
- (3) What are the relations between English major Chinese learners' perceived L2 writing anxiety and their L1 use amount in L2 writing process?

2. Literature Review

2.1 Studies on L2 Writing Anxiety among L2 Writers

The past decades have witnessed increasing studies on anxiety in language learning around the world, proving that anxiety is possibly one of the most significant affective factors that pervasively obstruct the learning process (Arnold, 2000). In addition, Foreign language anxiety, conceptualized as “a distinct complex of self-perception, beliefs, feelings, and behaviors related to classroom language learning arising from the uniqueness of the language learning process” (Horwitz et al, 1986, p.128), was put forward firstly by Horwitz (1986). Since the birth of Foreign Language Classroom Anxiety Scale (FLCAS) (Horwitz, 1986), widespread research attention in abroad has been attracted to this issue. Basing on FLCAS, early research dating back to 1980s and 1990s mainly focus on the general foreign language learning anxiety in classroom and the findings have revealed that it is not only commonly exist among foreign language learners, but negatively correlated with the course achievements of language learners (Aida, 1994; Onwuegbuzie, Bailey & Daley, 1999). Nevertheless, FLCAS has been consistently questioned by some insightful researchers for it mainly targets at oral anxiety, which makes anxiety relating to other specific language skills involving listening, reading and writing ignored greatly (Cheng, Horwitz & Schallert, 1999). The 1990s has seen a shift from the general foreign language anxiety to other specific language skill anxieties including listening anxiety (Elkhafafi, 2005; Zhou, 2003; Chen, 2004; Shi & Fan, 2013), reading anxiety (Sellers, 2000; Shi & Liu, 2006; Qiu & Liao, 2007) and writing anxiety (Cheng et al, 1999; Cheng, 2004; Guo & Qin, 2010), among which writing anxiety has gained volumes of research attention

around the world. Writing anxiety, the specific anxiety that L2 learners experience in writing, is also called “writing apprehension” coined by Daly and Miller (1975a). It has been conceived of as “a situation and subject-specific individual difference that is concerned with a person’s general tendency to approach or avoid writing accompanied by some amount of evaluation” (Daly, 1975a), which is considered as the most widely adopted definition of writing anxiety. After Daly and Miller (1975a) introduced the construct of writing anxiety and demonstrated that it could be measured validly and reliably, numerous research have increasingly emerged, investigating how to measure writing anxiety scientifically as well as what impacts it would exert on the writing performance or composition products of L2 learners. In 1975, Daly and Miller, through a systematic research, developed the first instrument, namely, Writing Apprehension Test (WAT), to measure the writing anxiety condition of language learners. WAT is a 26-item self-report five-point Likert scale, which investigates the general state of writing anxiety involving writing assessment, writing feedback, writing pressure as well as writing confidence. What’s more, WAT has been as a milestone in the research field of writing anxiety since it was the first systematic attempt to assess the writing anxiety state of language learners. Gradually, it has been widely used across time on various groups of respondents in the following research.

On the other hand, with the intensive and extensive development of writing anxiety research, WAT has been questioned by some researchers and its underlying deficiencies have been uncovered (Cheng, 2004; Dickson, 1985; McKain, 1991). Firstly, the internal validity of WAT has been questioned. Mckain (1991) proposed that WAT measured some other affective factors irrelevant with writing anxiety. Richmond and Dickson (1985) warned that WAT was more appropriate to measure language learners’ writing confidence rather than writing anxiety. Furthermore, the reliability of WAT was also queried by some researchers, with Cheng (2004) emphasizing that WAT was developed for L1 learners, which led to the vital elements or characteristics of L2 writing anxiety being uncovered. In light of them, Cheng (2004) developed a more scientific and systematic instrument to measure L2 learners’ writing anxiety more accurately and precisely, that is, Second Language Writing Anxiety Inventory (SLWAI). SLWAI is a 22-item five-point Likert instrument and it is specifically designed for L2 learners, English learners in particular. Compared with the one-dimensional WAT, SLWAI proposes a three-dimensional conception of writing anxiety involving somatic anxiety, cognitive anxiety and avoidance behavior. SLWAI has not only been testified to have higher internal validity and reliability than WAT and but also proved to be a more scientific instrument to measure L2 writers’ writing anxiety (Cheng, 2004; Guo & Fan, 2009; Guo & Qin, 2010). In China, there was also much interest from researchers to explore the quantitative measurement of writing apprehension, with Guo and Qin (2010) who were exploratory enough to translate SLWAI into a Chinese version and further employed it in their research until now.

2.2 Relation between L2 Writing Anxiety and L2 Writing Performance

Researchers have revolved the relationship between L2 writing anxiety and L2 writing performance achievement by adopting a standardized scale and employing quantitative or qualitative research methods. Quantitatively, a negative correlation between L2 writing anxiety and writing performance has been constantly proved in terms of writing scores, writing length and the amount of qualified sentences (Daly et al, 1975a). Qualitatively, compositions written by low-anxiety learners tend to be evaluated significantly better in both writing quality and skills than those by high-anxiety writers (Daly et al, 1975a; Guo & Fan, 2009; Guo & Qin, 2010; Zheng, 2005). Later, another study examining L2 writing anxiety’s impacts on writing competence and writing performance was conducted by Daly, Faigley and Witte (1981). While conducting the survey, 110 undergraduates were firstly divided into two groups which were consisted of high-apprehension group and low-apprehension group according to their writing performance and WAT scores. Then eight standardized measurements of writing competence were tested on the two distinct groups. The former results were once again confirmed, particularly in view of the finding that the low-anxiety group has a better command of language usage and written conventions than the high-anxiety group. What’s more, it also manifested that compositions produced by high-anxiety writers were significantly shorter, more simplified and less fluent than that by low-anxiety counterparts. Inspired by the insightful findings of Daud and Kassim (2005); Faigley and Witte (1981), sought to make a further investigation to clarify the possible cause-effect relation between L2 writing anxiety and writing performance. Results showed that as for low proficiency writers, there was a significant positive correlation between writing anxiety and writing competence in terms of language usage. However, no significant relation was found between these two elements among high proficiency writers. Daud and Kassim (2005) claimed that poor writing performance would cause L2 learners’ high level of writing anxiety, but not vice-verse, which failed to lend support to the findings of previous research.

Considering that the previous studies were generally conducted among European foreign language learners, a great body of research of anxiety-achievement correlation of L2 writing has increasingly emerged in China,

which focused on the Asian foreign language learners, particularly the Chinese English learners. Zheng (2005) explored the relationship between English writing apprehension and writing scores, fluency, complexity of T-unit and writing error rate in 60 undergraduate students. The findings revealed that subjects experienced a relatively high level of writing anxiety in the process of writing. It also manifested that low-anxiety writers gained significantly better writing scores and higher rate of fluency than high-anxiety writers, whereas, no significant correlation between the complexity of T-unit, rate of error and writing anxiety was found. Accordingly, Guo and Qin (2010) investigated a large research sample of 453 EFL students in a Chinese university by employing writing tests, interview and SLWAI which has been proved to be a more reliable and valid measurement designed for English learners specifically. This study aimed to figure out the general writing anxiety state of Chinese EFL learners of college students and the correlation between writing apprehension and writing performance. They reported that Chinese EFL learners experienced foreign language writing anxiety to a medium degree and there was a significant correlation between writing apprehension and writing performance, which supported the findings of Zheng (2005). Meanwhile, in view of the fact that the previous research almost focused on students of the same proficiency level, from which the possible differences of writing anxiety states among EFL learners at various proficiency levels could not be fully discovered (Guo & Fan, 2009). Thereupon, Guo and Fan (2009) conducted an empirical study of college students of three different levels including the basic, intermediate and advanced requirement by means of SLWAI (Cheng, 2004), revealing that writing anxiety existed commonly in students of the three levels and a significant negative correlation between cognitive anxiety and writing performance among basic requirement-level undergraduates was found.

2.3 L1 Use within L2 Writing

L1 use is an indispensable factor that must be accounted in any Second Language Acquisition (SLA) research (Tang, 2003), which has long been a controversial topic in applied linguistics, SLA and language teaching for many years (Dai & Wang, 2002). It was originated from language transfer (Wen & Guo, 1998) and has attracted the attention of numerous researchers in the field of L2 writing since 1950s. L1 use is acknowledged as a phenomenon that could be hardly avoided in L2 writing process (Wang, 2002; Wen & Guo, 1998). Whereas, considered as a significant obstacle in L2 writing development, it would interfere negatively with L2 writing (Cumming, 1990; Grabe & Kaplan, 1996; Wen & Guo, 1998). Recently, the main concern is the existence of L1 use in L2 writing. And much research effort has been invested in revolving this key issue, revealing that L1 use is widely exist in the composing processes of L2 learners at different L2 proficiency levels (Bosher, 1998; Cumming, 1990; Raimes, 1985). Raimes (1985) investigated the L2 writing habits and writing experiences of eight primary-level EFL learners by means of questionnaire, reporting that seven of them turned to their mother tongue constantly in their L2 writing process. However, Raimes' research instrument of questionnaire was strongly criticized because it was too subjective and superficial to uncover the real situation of L1 use in L2 learners' dynamic composing processes (Cumming, 1989; Uzawa & Cumming, 1989). Therefore, researchers were promoted to employ more objective and scientific instruments in the following research. A verbalizing thinking method was adopted by Cumming (1989) to explore the whole L2 composing process of 23 intermediate EFL learners, reflecting obvious transfers of L1 to L2 among all the subjects. In addition, Uzawa and Cumming (1989) conducted a similar study among American L2 learners. Both the results of questionnaire and think-aloud data from their subjects also revealed an extensive use of L1 to "search for", "generate and organize" ideas or information during the L2 writing process. Later, Bosher (1998) pointed out that most of the previous studies on this issue were carried out among learners at the same L2 proficiency level, which could not fully reflect the truthful situation of L1 use among EFL learners of different L2 proficiency levels. Accordingly, an empirical study focusing on EFL learners at different L2 proficiency levels was conducted by Bosher (1998), findings indicated a wide use of L1 in L2 composing process in expanding ideas, comparing equivalents, and even in producing pretext in L1. What's more, the translation-oriented writing method was not only applied by the low-proficiency L2 writers, but also by the high-proficiency L2 writers, which further proved the common existence of L1 use in L2 writing process.

The next concern focusing on the amount of L1 use in L2 writing has come into thriving. Kobayashi and Rinnert (1992) investigated the amount of L1 use in English composing process by choosing 48 undergraduate students in Japan as their subjects. And self-estimate data from the research indicated that as to the percentage of L1 use amount in every participant's English writing processes, eight of them amounted to over 75%, 23 ranged from 50% to 75%, 13 were between 25% and 50%, while merely four of them were less than 25%. In contrast, some researchers presented that self-estimation was too subjective to measure the L1 use of L2 writers (Wang & Wen, 2002a). Guo and Fan (2009) adopted a think-aloud protocol to record their subjects' English writing process of a picture composition. Basing on the collected data, a statistical analysis was carried out with findings revealing

that 92% of the participants utilized L1 to facilitate their cognition and processing stages. What's more, in the content-organizing stage of L2 writers' English writing processes, as much as 60% of the total information was generated from L1 use. Later, Wang and Wen (2002) also reported a degree of 30% usage of L1 in terms of the total verbalizing thinking process among their subjects.

The last concern deals with the effects of L1 use on L2 writing. Volumes of research have investigated the impacts of L1 use on L2 writing performance or L2 writing products. However, findings ended up with great differences and controversies. L1 use was found to exert a positive influence on L2 learners' writing process and writing performance in some research (Friedlander, 1991; Kobayashi & Rinnert, 1992; Lay, 1982). Lay (1988) reported a detailed analysis of her subjects' English writing process and their composition products, manifesting that participants with more L1 use performed significantly better than those with less L1 use in terms of their L2 writing content, structure and details. However, L1 use was also found to have a negative influence on L2 writing performance and L2 writing products by other language experts (Wen & Guo, 1998; Wang & Wen, 2002), which was not in accordance with the aforementioned findings. Wen and Guo (1998) investigated the interrelation between L1 use and L2 writing performance with the application of think-aloud method, reporting that in the process of English picture-writing task, students with higher writing scores used far less L1 than those with lower scores. It triggers the ambiguity in the studies.

2.4 Relation between L2 Writing Anxiety and L1 Use

L2 writing anxiety and L1 use have been viewed as two indispensable factors interfering with Chinese EFL learners' L2 writing process for the last decades (Zhou & Tang, 2010). What's more, the interactions between these two elements have received an increasing amount of research attention in current years (Macintyre & Gardner, 1989; Zhou & Tang, 2010). The complex issue of L2 writing anxiety and their L1 use in L2 writing was presented and clarified in the Model of Anxiety Development and Maintenance (MADM) that was proposed by Macintyre and Gardner (1989). This model proposes that at the beginning stage of L2 writing process, writing anxiety hasn't formed, hardly functions as a hinder in L2 writing processes. Because in this period, it is L2 writers' learning motivation and language cognition that make them feel apprehensive in L2 writing process. However, it does take shape when the deficient writing experiences frequently happened, giving rise to negative attitudes towards L2 writing. If the same situation continues, L2 writing anxiety will be strengthened, resulting in cognitive interference which would in turn become a vital hinder in the development of L2 writers' writing proficiency. According to MADM (Macintyre & Gardner, 1989), L2 writing anxiety would result in an increasing amount of L1 use in L2 writing process. Zhou and Tang (2010) was exploratory enough to do this and investigated the issue of L2 writing anxiety and L1 use in L2 writing process of Chinese EFL students who do not major in English but in other disciplines. Their study adopted the think-aloud protocol and retrospective interview to record the dynamic inner thoughts of 15 highly composition writers and 15 lowly composition writers in a timed English picture-writing task. Findings of the study revealed that as to Chinese EFL students, L2 writing anxiety was negatively correlated with their L2 writing performance, but positively correlated with L1 use in the L2 composing process.

The aforementioned findings contribute to an insightful understanding of how L2 writing is affected by L2 writing anxiety and L1 use. Whereas, Zhou and Tang's study was conducted among Chinese EFL students who do not major in English but in other disciplines, while the real situation of English major students on this issue has not been covered. Accordingly, the present study aims to explore the effects of L2 Chinese learners' perceived writing anxiety and their L1 use in L2 writing performance among English major students by adopting a multi-method approach involving qualitative instruments of think-aloud protocol and semi-structured interview, the results of which benefit in English writing instruction in L2-English classroom.

3. Methodology

3.1 Participants

Because of the significance of English major students' selection, 226 sophomores of English major students were selected from Department of Applied English of a Chinese University in Oct, 2022. They have mastered quite well in English language as well as have taken English language as their occupational tool in the future. In addition, at the end of their first year in English major, they have almost achieved GPA (4.0) in the final exam, which indicates their academic levels are considerable to be rationally selected in the study. In this study, the Chinese translated version of SLWAI used by Guo and Qin (2010) was provided to all the students so that significant points in this questionnaire could be fully grasped. Furthermore, some misunderstandings or extra anxiety evoked by the unfamiliar words could be avoided. At the beginning of the study, 226 pieces of SLWAI questionnaire were distributed to the participants in class by our English teachers in the university. Participants

were told to complete the questionnaires within 15 minutes. After collecting all the questionnaires, the scoring procedure was conducted by the researcher. The SLWAI scores were calculated by means of a formula which was proposed by Cheng (2004). Specifically, according to Cheng (2004), this formula: Writing Apprehension Score = Positive Score + Negative Score, would produce a single score representing a respondent's L2 writing anxiety level. The score ranges from 22 to 110 points, among which high score is index of high writing anxiety level, while low score is index of low writing anxiety level.

Particularly, among the 226 collected questionnaires of SLWAI, 11 pieces were invalid because 4 students gave up answering their questionnaires because of their personal issues and 7 students missed some items under time pressure in their questionnaires. Hence, the total valid number of SLWAI was 215. After the calculation of the 215 SLWAI scores, ten whose scores were among the top five and the bottom five of the total 215 students were selected as the appropriate participants taking part in the following English argumentative writing test, think-aloud protocol and semi-structured interview. In light of the purpose of the study, the comparative analysis samples in groups between the top five in high-anxiety and the bottom five in low-anxiety were supposed to demonstrate a clear data in statistical distribution through T-test analysis to testify if there existed significant differences between them. T-test of their SLWAI scores was conducted (see Table 1 and Table 2). Results showed that there indeed was a significant difference of L2 writing anxiety level between these two groups ($p < .05$) (see Table 2). The ten appropriate participants were therefore selected, with the top 5 as the high-anxiety group and the bottom 5 as the low-anxiety group.

Table 1. SLWAI Scores of the High-anxiety Group and the Low-anxiety Group

Group	N	Min	Max	M	SD
High Anxiety	5	88	97	92.80	3.83
Low Anxiety	5	36	52	47.20	6.68

(Notes: Min: Minimum; Max: Maximum; M: Mean; SD: Standard Deviation)

Table 2. T-test of SLWAI Scores of High-anxiety Group and Low-anxiety Group

	Levene's Test for EO		T-test for Equality of Means			95% CIOD			
	F	Sig.	t	Df	Sig.(2-tailed)	MD	SED	Lower	Upper
SLWAI(EVA)	1.07	.329	13.23	8	.01	45.60	3.45	37.65	53.54
SLWAI(EVNA)			13.23	6.37	.01	45.60	3.45	37.28	53.91

(Notes: EO: Equality of Variances; EVA: Equal Variances Assumed; EVNA: Equal Variances Not Assumed; MD: Mean Difference; SED: Std. Error Difference; CIOD: Confidence Interval of the Difference)

3.2 Research Instrument

3.2.1 Second Language Writing Anxiety Inventory (SLWAI)

The questionnaire (see Appendix A) used in this study was composed of two sections: Background Information and Second Language Writing Anxiety Inventory (SLWAI) (Cheng, 2004). Background Information collected basic demographic information concerning the participants (name, class and telephone number). On the other hand, SLWAI (Cheng, 2004) was employed with the intention that participants' anxiety conditions in L2 writing can be measured accurately. Specifically, SLWAI adopted in this study is grounded in both L2 learners' self-reports of writing anxiety experiences and the multidimensional conceptualization of anxiety. It aims to measure L2 learners' writing apprehension states in English writing. According to Cheng (2004), SLWAI falls into three sub-scales involving Somatic Anxiety, Avoidance Behavior and Cognitive Anxiety. And it shows great internal consistency with a reported Cronbach alpha coefficient of 0.91. The questionnaire of SLWAI consists of 22 items with 15 statements (item 2, 3, 5, 6, 8, 9, 10, 11, 12, 13, 14, 15, 16, 19, 20) positively worded, and 7 items (item 1, 4, 7, 17, 18, 21, 22) negatively worded, all of which are scored on a five-point Likert scale (1=strongly disagree; 2=disagree; 3=neither agree nor disagree; 4=agree; 5=strongly agree). The total scores of the 22 items range from 22 to 110 points, representing L2 writer's writing anxiety condition. The higher the score is, the more writing anxiety the learner experiences in L2 writing. SLWAI deals with the problem of writing anxiety in the three sub-scales. Somatic Anxiety (item 2, 6, 8, 11, 13, 15, 19) is defined by items relating to the increased uncomfortable physiological arousal including trembling, perspiring or heart pounding when students are confronting with L2 writing task; Avoidance Behavior (item 4, 5, 12, 10, 16, 22, 18) is composed of

items indicating subjects' avoidance behavior or negative attitudes towards L2 writing; Cognitive Anxiety (item 1, 3, 7, 9, 17, 14, 20, 21) is a subjective component that concerns with perception of arousal and, particularly, fear of actual or potential negative evaluation of their L2 writings.

3.2.2 English Writing Test

In the present research, an English writing argumentative test lasted for about 30 minutes. An English argumentation task "Should English Majors Study Math?" was adopted. This English argumentative writing task was slightly revised on the basis of the writing composition in TEM-4 (Test for English Majors) in 2014, that (The test (2014) has been randomly chosen to avoid the participants who have already experienced on it before) (see Appendix B). During the English writing test, all the appropriate 10 participants involving the five high-anxiety English major students in Group A and the five low-anxiety English major students in Group B were required to write an English composition on this topic of about 200 words within 30 minutes.

3.2.3 Think-aloud Protocol

Through analyzing think-aloud protocol in the empirical studies, it's found that among which the insightful suggestions and guidelines of Uzawa (1996) were significantly helpful. Specifically, some important points were proposed by Uzawa (1996).

First of all, they need guidance before some L2 students who were not good at verbalizing their inner thoughts in the writing process they need guidance and practice. Second, interviews performed right in the silent process of the writing test that was of great value in fully grasping students' thinking and cognitive strategies that were expressed clearly in the think-aloud protocol. Taking Uzawa's (1996) suggestions into consideration, each of the 10 appropriate participants individually was arranged in a quiet office room where distraction and interruption were out of question. Participants were instructed by guidance of think-aloud protocol and then asked to complete the 30-minute English argumentative writing task. While writing, a verbalized thinking process mirroring what was going on in their minds was required as well. In another word, during the whole English composing process, all the participants were required to fully express their dynamic writing thoughts in either Chinese or English depending on which language they were thinking in at that particular time by interview that offered to make them being in the think-aloud writing process. Each participant's verbalized thinking process of this English writing task was audio-recorded. Besides, taking notes of the key points in the think-aloud process of interviewing with each participant was also necessary. Later on, transcribing all the think-aloud recordings into written materials by the researcher as all the collected data can be well-prepared for the further analysis.

3.2.4 Semi-structured Interview

As soon as the English writing test was being in the process, the think-aloud recording was played on the spot at once to make the each test-taker have an introspective review of his or her English composing process now. The semi-structured interviews were conducted as well concerning each of the appropriate participants' writing attitudes, composing habits and writing anxiety in English writing and studying. The aim was to have a better understanding of the appropriate participants' general English writing anxiety condition. The all participants' verbalizing contents in the process of English writing test were transcribed into both Chinese and English for data collection in the study. Interview questions employed were partially based on the contents of the SLWAI (Cheng, 2004) and partially adapted from Zhou and Tang's (2010) retrospective interview questions. The interview questions are as follows;

- (1) I noticed that you paused here, what did you think at that moment?
- (2) Here, you were trying to use the word 'mandatory', but you forgot how to spell it, right?
- (3) While writing this sentence, I noticed that you haven't finished it, what did you want to express at that moment?
- (4) I noticed that you write many words in Chinese on the test paper. Do you usually write the English composition in a translated method? If so, do you think it is helpful, why?
- (5) Why did you pause from time to time while you were writing this English composition?
- (6) Did you feel anxious during this writing task? If so, what did you worry about?
- (7) What were the major difficulties you have come across in this writing task?
- (8) When composing in English, do you prefer to think in Chinese or in English? Why?
- (9) Do you usually like practicing English writing in your spare time? Why or why not?

(10) Do you often feel worry that your English composition would receive negative feedback you're your teachers or peers? Why or why not?

3.3 Data Collection

The present study lasted for nearly two month, starting from October and ending at the end of December. The procedures of data collection include the collecting the questionnaires of SLWAI (Cheng, 2004), the English writing test, think-aloud protocol and the semi-structured interview.

All the 30 appropriate participants' essays were evaluated independently by two experienced TEM-4 instructors who are working at Higher Education English Test Team. According to the essays rating criteria in TEM-4 (see Appendix C), the essays were scored in terms of the four major components of writing involving content, organization, grammar and language use. The final composition score ranges from two to fifteen points, representing four different levels of English writing quality, namely, A (14-15 points), B (11-13 points), C (6-10 points), D (2-5 points). Ratings were consisted of judgments on ten analytic sub-components making up the four major constructs including content: thesis, development of ideas, overall clarity; organization: introduction, logical cohesion and conclusion; grammar: accuracy of syntax, language: vocabulary and form variety. For the criteria of scoring, if one essay was rated greatly different, it would be discussed and re-evaluated until an agreement was achieved. All the scores were computed and ranked according to the means.

The think-aloud data were analyzed qualitatively, aiming to explore the possible relation between L2 Chinese learners' perceived writing anxiety and their L1 use in the L2 writing process of English major students. The recordings of the appropriate participants' think-aloud protocol were transcribed rigorously with their silence, pause and repeating behavior in the English writing test being marked faithfully. The transcripts of recording were then summarized to calculate the amount of Chinese words and English words used in the think-aloud protocol. In other words, each participant's L1-Chinese use amount, namely, they employed in the process of completing the English writing test, was identified and computerized. In detail, it was calculated in the way that the number of Chinese words was divided by the total number of words involving each subject written on the test paper and verbalized in the think-aloud protocol. The Chinese words were calculated with the criteria of the sixth edition of Modern Chinese Dictionary (6th edition of MCD) and the English words were calculated in accordance with the criteria of the seventh edition of Oxford English-Chinese Dictionary (7th edition of OECD).

4. Results and Discussion

4.1 Analytical Results among SLWAI, L2 Writing Performance and L1 Use Amount

As shown in Figure 1, the quantitative results indicated the trend that the more anxious English major students were, the more L1 use they employed in L2 writing process and the lower scores they got for their L2 writing, which supported the previous findings. Subsequently, from Table 3 to Table 5 by providing the results of seven students (S1 to S7), involving five low-anxiety writers (S3, S4, S5, S6, and S7, named as Group B) and two high-anxiety writers (S1 and S2, named as Group A). However, there were three students (S8, S9 and S10) who experienced high L2 writing anxiety, their L1 use amounts were also high, but they got high scores for their L2 writing products in Figure 1. This finding was quite different from the results of previous research conducted on non-English major students (Zhou & Tang, 2010). In terms of this situation, the particularity of the three high-anxiety writers (S8, S9 and S10, named as Group C) was discussed and clarified later.

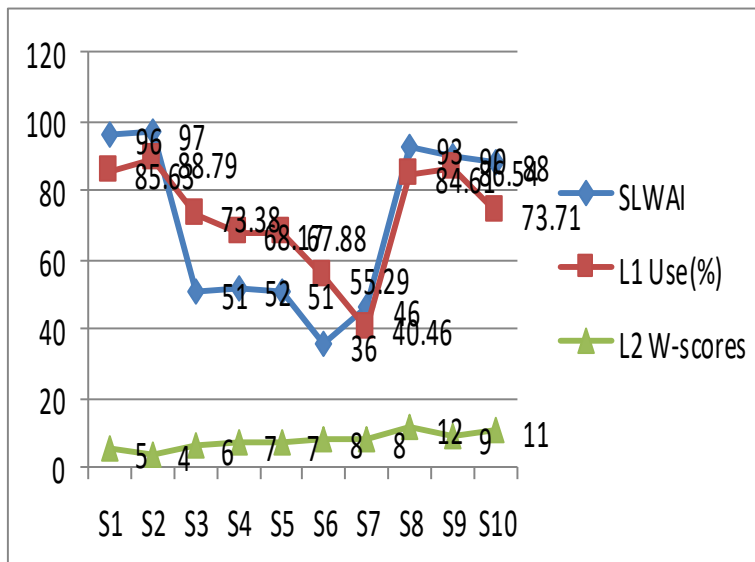


Figure 1. SLWAI, L1 Use Amount and L2 Writing Performance Scores

(Notes: L2 W-scores: L2 writing performance scores; SLWAI: L2 Writing Anxiety Inventory Scores; L1 Use (%): L1 use amount; S1-S10: Student 1-10)

4.1.1 Analytical Results of L2 Writing Anxiety and L2 Writing Performance

One obvious finding was the significant negative correlation between L2 Chinese learners’ perceived writing anxiety and their L2 writing performance. As predicted, the more anxious L2 writers were, the shorter their essays were and the lower writing scores they got, which was in complete support of the previous findings. From Table 3, it could be easily seen that the shortest essays in Group A had merely 94 words, while the low-anxiety Group B wrote 152 words at least. The longest article in Group A contained only 102 words, however, as to the low-anxiety Group B, it reached up to 219 words, nearly two times as much as that of Group A. On average, the high-anxiety L2 writers (Group A) wrote 98 words, while members in the low-anxiety Group B wrote about 194 words, with a gap of 96 words. Therefore, the result could be achieved that high-anxiety writers tend to write far less words than the low-anxiety writers ($r = -.649, p < .05$), (see Table 5).

Table 3. Comparison of the Average L2 Writing Length between Group A and Group B

Group	N	Min	Max	M	SD
High Anxiety (Group A)	2	94	102	98	5.66
Low Anxiety (Group B)	5	152	219	194.20	20.17

(Notes: Min: Minimum; Max: Maximum; M: Mean; SD: Standard Deviation)

Table 4. Comparison of the Average L2 Writing Performance Scores

Group	N	Min	Max	M	SD
High Anxiety (Group A)	2	4	5	4.50	0.71
Low Anxiety (Group B)	5	6	8	7.20	0.84

(Notes: Min: Minimum; Max: Maximum; M: Mean; SD: Standard Deviation)

Table 5. Correlation among SLWAI Scores, L2 Writing Performance Scores and L2 Writing Length

Spearman's rho		L2 W-Scores	L2 W-Length
SLWAI (N=7)	Correlation Coefficient	-.908**	-.649
	Sig.(2-tailed)	.004	.015

(Notes: L2 W-scores: L2 Writing Scores; SLWAI: L2 Writing Anxiety Inventory Scores; L2 W-Length: L2 Writing Length)

As shown in Table 4, the highest writing performance mark of Group A was merely five points, which was even one point lower than the lowest writing score of the low-anxiety Group B, as much as three points lower than the highest writing score of the lowly apprehensive writers. What's more, the lowest writing performance score of Group A was only four points, which was still two points lower than that of the low-anxiety Group B. Besides, the mean score for the highly anxious L2 writers in Group A was merely 4.5 points, denoting a failure while the low-anxiety group got a pass in this English writing test with the average score of 7.2 points. According to Table 5, the results of this study demonstrated that L2 Chinese learners' perceived writing anxiety correlated negatively with the L2 writing performance of English major students, which was a further confirmation of the previous findings ($r = -.908, p < .05$) (see Table 5).

4.1.2 Analytical Results of L1 Use and L2 Writing Performance

Another significant finding to emerge was that L1 use amount correlated negatively with L2 writing performance. As predicted, the more Chinese thinking L2 writers applied in their composing processes, the shorter their writing products were and the lower marks they got for their essays, which lent support to the findings of Zhou and Tang (2010). In the present study, each writer's L1-Chinese use amount, namely, they employed in the process of completing the English writing test, was identified and computerized. In detail, it was calculated in the way that the number of Chinese words was divided by the total number of words involving each subject written on the test paper and verbalized in the think-aloud protocol. As was shown in Table 6 and Table 7, in terms of the minimum percentage of L1 use in L2 writing process, the L1 use amount of Group A amounted to 85.63% at least, while the low-anxiety Group B accounted for only 40.46%. As to the maximum percentage of L1 use, L2 writers in Group A employed as much as 88.79% of L1 thinking, still much higher than that of the low-anxiety Group B, which was 73.38%. However, the high-anxiety Group A with high L1 use amount wrote merely 102 words at most, while the low-anxiety Group B with low L1 use amount wrote as much as 219 words in their composition, which indicated a significant gap as wide as 117 words. In addition, for the high-anxiety Group A whose L1 use amount was very high, their shortest composition contained only 94 words, still 58 words lesser than that of the low-anxiety Group B whose L1 use amount was relatively low. On average, the percentage of L1 use in the whole L2 writing process was 86.35% for Group A, in contrast to 61.03% for the low-anxiety Group B. However, the average writing length of Group A was only 98 words, much less than that of low-anxiety Group B, which were about 194 words. Hence, it could be clearly concluded that L2 writers with high L1 use amount in L2 composing process tend to write far less words than the low L1 use amount writers'.

Table 6. Comparison of the Percentage of L1 Use in L2 Writing Process between Group A and Group B

Group	N	Min	Max	M	SD
High Anxiety (Group A)	2	85.63%	87.07%	86.35%	8.23
Low Anxiety (Group B)	5	40.46%	73.38%	61.04%	13.29

(Notes: Min: Minimum; Max: Maximum; M: Mean; SD: Standard Deviation)

Table 7. Comparison of the Average L2 Writing Length between Group A and Group B

Group	N	Min	Max	M	SD
High Anxiety (Group A)	2	94	102	98	5.66
Low Anxiety (Group B)	5	152	219	194.20	20.17

(Notes: Min: Minimum; Max: Maximum; M: Mean; SD: Standard Deviation)

It could be seen from Table 8 as well, among the L2 writers in Group A whose L1 use amount was high, the highest essay mark was only five, lower than the highest score of the low-anxiety Group B whose L1 use amount was low. Similarly, the lowest writing score of Group A with high L1 use amount was merely four, still much

lower than that of the low-anxiety Group B. In addition, in terms of the average writing score, the high L1 use amount writers (Group A) got an extremely low average score of 4.5 points, indicating a failure of this essay test. While the low L1 use amount writers in the low-anxiety Group B, successfully passed this writing test with the average score of 7.2 points. Thus, the statistical results of the current study proved that L1 use amount in L2 composing process was negatively correlated with L2 writers' writing performance. ($r = -.951, p < .05$), (see Table 9)

Table 8. Comparison of the Average L2 Writing Performance Scores between Group A and Group B

Group	N	Min	Max	M	SD
High Anxiety (Group A)	2	4	5	4.50	0.71
Low Anxiety (Group B)	5	6	8	7.20	0.84

(Notes: Min: Minimum; Max: Maximum; M: Mean; SD: Standard Deviation)

Table 9. Correlation among L1 Use Amount, L2 Writing Performance Scores and L2 Writing Length

Kendall's tau-b		L2 W-Scores	L2 W-Length
L1 Use (N=7)	Correlation Coefficient	-.951**	-.624
	Sig.(2-tailed)	.003	.049

(Notes: L1 Use: L1 Use Amount; L2 W-Scores: L2 Writing Scores; L2 W-Length: L2 Writing Length)

4.1.3 Analytical Results of L2 Writing Anxiety and L1 Use

As indicated in Table 10, the highly apprehensive writers (Group A) utilized at least 715 Chinese words in the composing process, while the lowly apprehensive writers employed only 248 words. Besides, the average number of L1 use in L2 composing process was 820 words for Group A and 424 words for the low-anxiety Group B. L1 use amount, that is, the percentage of L1 use employed in L2 writing process was also calculated to further reveal the degree to which L1 was utilized in L2 writing process.

Table 10. Comparison of L1 Use Amount (Number of Chinese Words Used) in L2 Writing Process between Group A and Group B

Group	N	Min	Max	M	SD
High Anxiety (Group A)	2	715	926	820.50	149.19
Low Anxiety (Group B)	5	248	598	463.60	134.16

(Notes: Min: Minimum; Max: Maximum; M: Mean; SD: Standard Deviation)

According to Table 11, it could be easily seen that among the high-anxiety writers (Group A), the minimum percentage of L1 use employed in the whole L2 writing process amounted to 85.63%, in contrast to 40.46% among the low-anxiety group. As to the maximum percentage of L1 use, it accounted for 87.07% for Group A, in comparison with 73.38% for the low-anxiety Group C. On average, the percentage of L1 use amount in L2 composing process was 86.35% for the high-anxiety writers (Group A) and 61.04% for the low-anxiety writers respectively (see Figure 2). Therefore, it was easy to conclude that high-anxiety writers would employ more L1 in their L2 writing process than the low-anxiety writers did ($r = .901, p < .05$), (see Table 12).

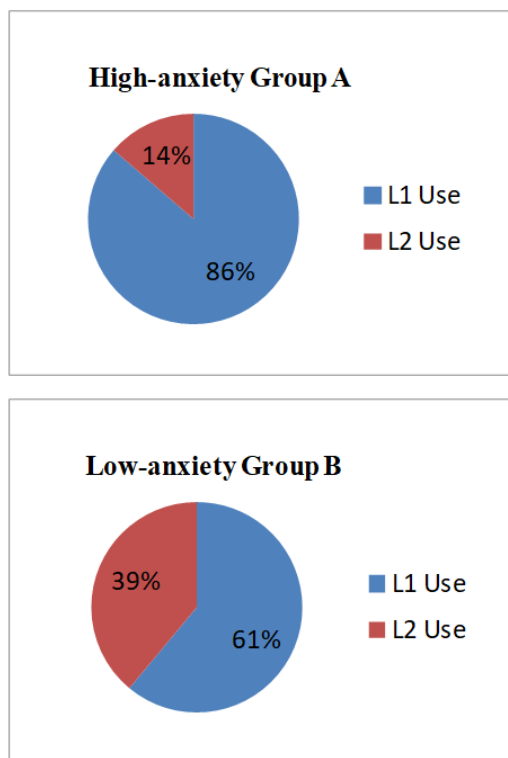


Figure 2. The Percentage of L1 Use and L2 Use in L2 Writing Performance Scores

Table 11. Comparison of the Percentage of L1 Use (%) in L2 Writing Process between Group A and Group B

Group	N	Min	Max	M	SD
High Anxiety (Group A)	2	85.63%	87.07%	86.35%	8.23
Low Anxiety (Group B)	5	40.46%	73.38%	61.04%	13.29

(Notes: Min: Minimum; Max: Maximum; M: Mean; SD: Standard Deviation)

Table 12. Correlation of SLWAI Scores and L1 Use Amount

Spearman’s rho		L1 Use
SLWAI (N=7)	Correlation Coefficient	.901**
	Sig.(2-tailed)	.006

(Notes: SLWAI: Second Language Writing Anxiety Inventory Score; L1 Use: L1 Use Amount)

4.2 Analytical Results of the Minor Part of High-anxiety English Major Chinese Learners Group C (S8, S9, and S10)

The above results demonstrated in Figure 1 that for a minor part of high-anxiety English major writers in the Group C, the more L1 use they applied in their L2 writing process, the longer their essays were and the higher scores they got for their L2 writing. This finding was different from the results of the previous research conducted on non-English major students (Zhou & Tang, 2010). The underlying reasons could be found from the following aspects. Zhou and Tang (2010) selected students who do not major in English but in other disciplines as their research participants, while the present study focused on English major students. On the one hand, compared with non-English major students, the appropriate participants of this study have more serious attitudes upon L2 writing because it is one of their mandatory courses that play a significant role in their major. Hence, writing anxiety would also be caused by their strong desire and internal learning motivation coming from their high expectation and rigorous attitudes towards English writing. To some extent, it may function in a positive way to benefit English major writers’ L2 writing performance, which could be evidenced by SLWAI questionnaire and semi-structured interviews of the think-aloud protocol reporting that the three high-anxiety English major writers (Group C) were not only “be fond of English writing”, “practice English writing as much as possible in their daily life” but also “have a strong motivation to achieve L2 writing success”.

Another aspect of it, the participants in Zhou and Tang's (2010) research were freshmen of non-English major students with CET-4 (College English Test) writing test, while participants in the present study were sophomores of English major students with the professional English writing proficiency test of TEM-4 (Test for English Majors). Given that, L1 use could benefit L2 writers' writing performance for some English major students.

4.3 Analytical Results of Interview

For the processing stage, anxiety would further impair the effective processing of writing material, especially on the English argumentation task which was more logic-demanding. Due to the insufficient input and the overloaded L2 writing apprehension, high-anxiety writers performed less efficiently in processing and organizing information. Accordingly, it was reasonable to find that in recordings of the think-aloud protocol. The high-anxiety writers in the Group A reported "my brain was totally a mess"; "I just want to meet the requirement of the minimum number of words". In addition, as shown in the interview, when the researcher asked "Did you feel anxious in the writing process?" The writers in the low-anxiety Group B and in the high-anxiety Group C expressed "anxiety was out of question", "I can come up with some ideas but they were not convincing enough", however, the two high-anxiety writers (Group A) answered "I felt anxious and I didn't know what to write"; "organizing ideas in English was too hard for me". Good performance at the output stage can be even harder for anxious L2 writers because they had to retrieve not only the writing material processed in the previous stages but the related writing knowledge accumulated in their memory. In the think-aloud protocol, the low-anxiety writers thought and wrote more smoothly. Yet, the two high-anxiety writers in Group A paused from time to time. Therefore, in the interview, the two high-anxiety writers were asked "Why did you pause from time to time while you were writing this essay?", they expressed that "sometimes the word was on the tip, but I just can't remember how to spell it"; "I frequently forgot the sentences that I have learned", "I tried my best to search for some essays material, but all in vain." All these could be well explained by the negative roles that anxiety plays in the retrieval and output process.

Given that, the negative L1 use and L2 writing performance correlation could be well explained by L2 writers' negative writing attitudes and essays habits. When they were asked in the interview "Do you usually like practicing English writing in your spare time? Why or why not?", as to the five low-anxiety writers in Group B and the two high-anxiety writers in Group C, two students answered "not so bad" and expressed "my mother usually tells me to read and write in English", and the other six answered "I like it" and explained "because I like my English teacher", "it's not so hard, I usually read some English magazines" or "I want to speak and write as good as my stars in English movies". However, the two high-anxiety writers (Group A) expressed "I dislike English writing"; "I avoid English writing whenever possible" Hence, it could be understandable why high-anxiety writers (Group A) reported "I turn to L1 for help from time to time"; "I am willing to translate from word to word" when they were inquired about their usual ways of completing the English writing tasks. There would be no question to understand why high-anxiety writers (Group A) ended up with poor writing performance with short writing length, simplified contents and structure, while the low-anxiety writers performed much better than the high-anxiety writers did.

Macintyre and Garder (1989) suggested that at the beginning stage of L2 writing, L2 writing anxiety hasn't formed and doesn't function as a hinder in L2 writing process. Because in this period, it's L2 writers' passive learning motivation and poor communication proficiency that make them feel apprehensive. However, L2 writing anxiety will take shape gradually when the deficient experiences of L2 writers frequently happened, resulting in writers' negative attitudes towards L2 writing. Therefore, when confronting with L2 writing task, especially the timed L2 writing tasks, L2 writers would turn to the mastered language L1 and writing knowledge that have already been well-accumulated in their mother language L1 for help. As asked "when composing in English, do you prefer to think in Chinese (L1) or in English (L2)?" The two high-anxiety writers (Group A) answered "Because I was too anxious to think in L2" and expressed "L1 is more helpful", "thinking in L2 is too difficult and time-consuming". From the point of view, it was understandable to find that high-anxiety writers (Group A) were searching for L1 from time to time during the whole think-aloud protocol that they were likely to use simple English words and sentences to translate their ideas in the most Chinglish way. However, in the low-anxiety writers Group B and the high-anxiety Group C expressed that "I prefer to think in L2", "I am used to think in L2" and thought that "L2 thinking is more helpful in English writing". Therefore, it could be understandable to find that the five low-anxiety writers Group B and the three high-anxiety ones in Group C employed less L1 use in their writing processes than the high-anxiety writers did.

5. Conclusion

5.1 Major Findings

According to the research questions, in terms of RQ 1, findings demonstrated a negative correlation between L2 Chinese learners' perceived writing anxiety and their L2 writing performance of English major students, which confirmed the findings of previous research. As to RQ 2, findings revealed that L1 use amount existed negative influence on L2 writing performance of English major students. That is, the more L1 use English major students employed in their L2 writing processes, the shorter their essays were and the lower scores they got for their L2 writing products. For RQ 3, a positive correlation between L2 Chinese learners' perceived writing anxiety and their L1 use amount in L2 writing process was revealed. Besides, another significant finding mirroring the particularity of a minor part of English major students in this study was also revealed, demonstrating that as to the minor part of the students in Group C, L2 writing anxiety and their L1 use amount were positively correlated within L2 writing performance. This finding was quite different from the results of the previous research on non-English major students (Zhou & Tang, 2010), which manifested that L2 writing anxiety and L1 use amount were negatively correlated with L2 writing performance.

The present study constituted a step forward in exploring the possible relations among L2 Chinese learners' perceived writing anxiety and their L1 use amount within L2 writing process of English major students by adopting a multi-method approach involving SLWAI, think-aloud protocol as well as interviews, the current research has shed great lights on the dynamic nature of L2 writing anxiety and their L1 use in English major students' L2 writing process, which opened up some interesting avenues for future L2 writing study.

Until now, it has been clear that the positive or negative effects of L2 writing anxiety and L1 use in L2 writing performance would depend on the specific causing factors of students' writing apprehension, the writing attitudes as well as the writing habits. Thus, what EFL teachers should do first is to identify the specific writing anxiety sources of the students as effective teaching measures could be taken accordingly to improve students' L2 writing performance. L2 writing anxiety should be reduced or eliminated through the joint efforts of teachers and students by providing a relaxed learning or writing environment, developing students' good daily habits of L2 writing, organizing various activities of L2 writing (ex. L2 writing outline design competition), and promoting a positive attitudes or feedback towards students' L2 writing.

5.2 Limitations and Suggestions for the Future Study

Insightful as the present study is, there is still much space for improvement. Further research with a big sample size and a more systematic think-aloud protocol training course are desirable before a study begins. In the present study, whether the correlated impact of the English major participants' personalities on between the L2 writing anxiety, L2 performance and their L1 use amount have not been analyzed yet. Given that, it would potentially lead to the result differently. For the future study, more enlightening research involving the comparison between English major students and non-English major students' personalities on this issue is greatly hoped of the underlying sources, which result in their different L2 writing performances that can be gleaned.

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Appendix A

Chinese Translated Version of SLWAI

(Second Language Writing Analysis Inventory)

Name:

Class:

Mobile Phone:

The questionnaire is only used for empirical research and has nothing to do with students' academic performance. Please fill it out according to your real situation. Thank you for your participation and cooperation (该问卷调查仅用于实证研究, 与同学们的各门学业成绩均无关, 请各位同学根据自己的真实情况, 如实填写, 感谢您的参与和合作, 祝您学习进步, 生活愉快!)

Instructions(说明):

The following are 22 items about the SLWAI (Second Language Writing Anxiety Inventory). We only care about your true feelings about English writing Anxiety in these 22 items. Please answer each question according to your true feelings: 1 Strongly agree; 2 Agree; 3 Not sure (neither, I have no objection); 4 Disagree; 5 Strongly disagree. In these 22 items, it may appear that the statements in some projects are duplicated, just answer patiently and seriously. We would like to express our sincere thanks to you for your cooperation.

(以下是 22 条是有关英语作文的叙述(项目 1 到 22)。没有对错之分, 我们只关心您对英语写作的真实感受关于这 22 条项目, 请根据您的真实感受回答每一个问题, 并圈出所选答案的编号: 1 非常同意; 2 同意; 3 不确定(既不意也不反对); 4 不同意; 5 非常不同意。在这 22 条项中, 可能某些项目中的叙述看起来会有所重复, 请您不疑虑, 只需耐心、认真的作答, 体现出您对英语写作最实的感受即可。我们对您的积极配合表示最真诚的感谢)

(1) I'm not nervous at all when writing my English composition.

1. Strongly agree 2. Agree 3. Not sure 4. Disagree 5. Strongly disagree

(2) When I write English compositions with a time limit, my heart beats faster.

1. Strongly agree 2. Agree 3. Not sure 4. Disagree 5. Strongly disagree

(3) When writing an English composition, if I know in advance that the teacher will review it, I will feel nervous and uneasy.

1. Strongly agree 2. Agree 3. Not sure 4. Disagree 5. Strongly disagree

(4) I often record my thoughts and feelings in English, such as keeping a diary or weekly journal in English.

1. Strongly agree 2. Agree 3. Not sure 4. Disagree 5. Strongly disagree

(5) Usually, I try my best to avoid writing in English.

1. Strongly agree 2. Agree 3. Not sure 4. Disagree 5. Strongly disagree

(6) My mind often goes blank when I start to write an English composition.

1. Strongly agree 2. Agree 3. Not sure 4. Disagree 5. Strongly disagree

(7) I am not at all worried that my English composition will be much worse than others.

1. Strongly agree 2. Agree 3. Not sure 4. Disagree 5. Strongly disagree

(8) When I write my English composition within the time limit, I get nervous and shake or break out in a cold sweat.

1. Strongly agree 2. Agree 3. Not sure 4. Disagree 5. Strongly disagree

(9) When my English composition is to be corrected by the teacher, I often worry that my score will be low.

1. Strongly agree 2. Agree 3. Not sure 4. Disagree 5. Strongly disagree

(10) I try my best to avoid writing my composition in English.

1. Strongly agree 2. Agree 3. Not sure 4. Disagree 5. Strongly disagree

(11) When I write my English composition within the prescribed time, my thinking becomes very confused.

1. Strongly agree 2. Agree 3. Not sure 4. Disagree 5. Strongly disagree

- (12) I don't usually write in English unless I have no other choice.
1. Strongly agree 2. Agree 3. Not sure 4. Disagree 5. Strongly disagree
- (13) I often feel panicky when I have to write my English composition within the time limit.
1. Strongly agree 2. Agree 3. Not sure 4. Disagree 5. Strongly disagree
- (14) I am so worried that other students will laugh at me if they see my English composition.
1. Strongly agree 2. Agree 3. Not sure 4. Disagree 5. Strongly disagree
- (15) When I was asked to write a timed English essay without preparation, it was as if my brain shut down.
1. Strongly agree 2. Agree 3. Not sure 4. Disagree 5. Strongly disagree
- (16) If someone asks me to write an English composition, I will find an excuse to avoid it.
1. Strongly agree 2. Agree 3. Not sure 4. Disagree 5. Strongly disagree
- (17) I'm not the least bit worried about what others will say about my English composition.
1. Strongly agree 2. Agree 3. Not sure 4. Disagree 5. Strongly disagree
- (18) I always look for any possible opportunity to practice English writing outside of class.
1. Strongly agree 2. Agree 3. Not sure 4. Disagree 5. Strongly disagree
- (19) When writing English compositions, I often feel my whole body become tense and stiff.
1. Strongly agree 2. Agree 3. Not sure 4. Disagree 5. Strongly disagree
- (20) I am afraid that my English essay will be chosen as a model for class discussion or commentary.
1. Strongly agree 2. Agree 3. Not sure 4. Disagree 5. Strongly disagree
- (21) I'm not at all worried about getting a low mark on my English composition.
1. Strongly agree 2. Agree 3. Not sure 4. Disagree 5. Strongly disagree
- (22) I will write in English whenever I have the chance.
1. Strongly agree 2. Agree 3. Not sure 4. Disagree 5. Strongly disagree

- (1) 写英语写作文时，我一点儿也不紧张。
1.非常同意 2.同意 3.不确定 4.不同意 5.非常不同意
- (2) 在有时间限制的情况下写英语作文时，我会心跳加速。
1.非常同意 2.同意 3.不确定 4.不同意 5.非常不同意
- (3) 写英语作文时，如果事先知道老师要批阅，我会觉得紧张、不安。
1.非常同意 2.同意 3.不确定 4.不同意 5.非常不同意
- (4) 我经常用英语记录我的所想所感，如：用英语写日记、周记等。
1.非常同意 2.同意 3.不确定 4.不同意 5.非常不同意
- (5) 通常情况下，我会尽可能避免用英语写文章。
1.非常同意 2.同意 3.不确定 4.不同意 5.非常不同意
- (6) 每当开始写英语作文时，我的大脑常常一片空白。
1.非常同意 2.同意 3.不确定 4.不同意 5.非常不同意
- (7) 我一点也不担心我的英语作文会比别人差很多。
1.非常同意 2.同意 3.不确定 4.不同意 5.非常不同意
- (8) 在规定时间内写英语作文时，我会紧张得发抖或冒冷汗。
1.非常同意 2.同意 3.不确定 4.不同意 5.非常不同意
- (9) 当我的英语作文要被老师批改时，我常常担心我的作文得分会很低。
1.非常同意 2.同意 3.不确定 4.不同意 5.非常不同意

(10) 我尽可能避免用英语写作文的情况。

1.非常同意 2.同意 3.不确定 4.不同意 5.非常不同意

(11) 在规定时间内写英语作文时，我的思路会变得很混乱。

1.非常同意 2.同意 3.不确定 4.不同意 5.非常不同意

(12) 除非别无选择，否则我一般不会用英语写作文。

1.非常同意 2.同意 3.不确定 4.不同意 5.非常不同意

(13) 在规定时间内写英语作文时，我经常感到很恐慌。

1.非常同意 2.同意 3.不确定 4.不同意 5.非常不同意

(14) 我很担心如果其他同学看到我写的英语作文，他们会嘲笑我。

1.非常同意 2.同意 3.不确定 4.不同意 5.非常不同意

(15) 在毫无准备的情况下被要求写限时英语作文时，我的大脑就像停止运转了一样。

1.非常同意 2.同意 3.不确定 4.不同意 5.非常不同意

(16) 如果有人让我写英语作文，我会找借口回避。

1.非常同意 2.同意 3.不确定 4.不同意 5.非常不同意

(17) 我丝毫不担心别人会如何评价我的英语作文。

1.非常同意 2.同意 3.不确定 4.不同意 5.非常不同意

(18) 我在课外总是寻找任何可能的机会练习英语写作。

1.非常同意 2.同意 3.不确定 4.不同意 5.非常不同意

(19) 写英语作文时，我常常觉得自己全身变得紧张、僵硬。

1.非常同意 2.同意 3.不确定 4.不同意 5.非常不同意

(20) 我很害怕自己的英语作文会被选作课堂讨论或讲评的范文。

1.非常同意 2.同意 3.不确定 4.不同意 5.非常不同意

(21) 我丝毫不担心自己的英语作文得分会很低。

1.非常同意 2.同意 3.不确定 4.不同意 5.非常不同意

(22) 无论什么时候，只要有机会，我都会用英语写作。

1.非常同意 2.同意 3.不确定 4.不同意 5.非常不同意

Appendix B

TEM-4 English Writing Test

An undergraduate of English at a university, in a recent letter to the university's president, complained about the mandatory math classes he has to take. He said that because a language major has little use for math, he would forget all of his math lessons soon after taking the required exams. What do you think of his opinion?

Write a composition of about 200 words on the following topic:

Should English majors study math?

You are to write in 3 parts;

In the first part, state specifically what your opinion is.

In the second part, provide one or two reasons to support your opinion.

In the third part, bring what you have written to a natural conclusion or make a summary.

(Marks will be awarded for content, organization, language and appropriateness)

Appendix C

Chinese Translated Version of TEM-4 Scoring Criteria

英语专业四级作文评分标准

- (1) Content: The content is relevant, complete and clear;
- (2) Structure: The structure of the article is rigorous and logical;
- (3) Grammar: Correct grammar and syntactic structure;
- (4) Language: The language is smooth and appropriate, the sentence pattern is rich and diverse, and the words are appropriate and appropriate

- (1) 内容: 内容切题、完整, 条理清楚;
- (2) 结构: 文章结构严谨, 逻辑性强;
- (3) 语法: 语法、句法结构正确;
- (4) 语言: 语言通顺恰当, 句式丰富多样, 用词得体恰当。

英语专业四级作文评分细则:

1) 14-15 points, the content is relevant and complete; The structure of the article is rigorous and clear; Correct grammar; The language is smooth and appropriate, the sentence pattern and words are full of changes, there are "shining points", basically relevant and complete; The structure of the article is basically rigorous, and the order is basically clear; The grammar is basically correct; Basic language surplus, confused thinking; Lots of grammatical errors,

The traces of mother tongue are very obvious, the sentences are incomplete, only a few sentences can be understood; The language is not smooth, and the vocabulary is badly misspelled.

1) 14-15 分, 内容切题、完整; 文章结构严谨, 条理清楚; 语法正确; 语言通顺恰当, 句式、用词富有变化, 有“闪光点”, 基本切题、完整; 文章结构基本严谨, 条理基本清楚; 语法基本正确; 语言基本通顺, 思路混乱; 语法错误多, 母语痕迹非常明显, 语句不完整, 只有少数句子可以理解; 语言不通顺, 词汇拼写错误严重。无语言错误。

2) 11-13 points, the content is relevant and complete; The structure of the article is appropriate.

2) 11-13 分, 内容切题、完整; 文章结构恰当。

3) 6-10 points, the content base is basically complete, clear, correct grammar, rigorous structure group, clear organization; Correct grammar; the language is fluent and appropriate, with fewer language errors.

3) 6-10 分, 内容基 基本完整, 条理清晰, 语法正确, 结构组严谨, 条理清楚; 语法正确; 语言通顺恰当, 语言错误较少。

4) 2-5 points, the content is off-topic and incomplete.

4) 2-5 分, 内容偏题、不完整。

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