

A study on the impact of collaborative writing on English writing anxiety among non-English major college students

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Abstract: This study examines the impact of collaborative writing on English writing anxiety among non-English major college students. 56 students participated in the experiment, and the data showed that collaborative writing contributed to reducing learners' English writing anxiety, especially their avoidance behavior. The reason why students' anxiety in the dimension of avoidance behavior is reduced is that students' confidence in writing is enhanced due to increased emotional connections with peers, enhanced language skills and extended ideas. The study provides inspiration for teacher' writing teaching and the cultivation of positive emotions in students' writing.

1. Introduction

Writing anxiety is a learning disorder that causes students to become nervous, anxious, and uneasy when writing, leading to a loss of motivation, frustration, and negative self-efficacy in writing (Kırmızı Ö & Kırmızı G D, 2015)^[1], which is significantly negatively correlated with writing performance (Li & Liu, 2013)^[2]. Therefore, scholars explore the use of effective teaching methods to stimulate students' positive learning emotions and overcome psychological barriers in English writing (Zhang, 2005)^[3]. As a specific form of cooperative learning, collaborative writing emphasizes peer interaction and joint knowledge construction with peers. It not only helps improve the writing skills of second language learners (Xu, 2022)^[4], but also enhances their confidence (Shehadeh, 2011)^[5]. As a positive emotion, confidence can help students reduce writing anxiety. Considering all this, this study attempts to adopt the teaching method of collaborative writing, aiming to explore the impact of cooperative writing on English writing anxiety among non English major college students.

2. Literature review

Foreign language writing anxiety is a relatively persistent negative emotion that occurs during the process of foreign language writing, usually manifested as obstructed thinking activities, increased physiological reactions, and uncomfortable behavior. Generally, studies on foreign language (FL) writing anxiety follow three strands, as follows. The first focuses on the measurement of non-English major college students' foreign language writing anxiety. Yan Guo and Jinfen Xu (2014) found that foreign language writing anxiety is at a moderate level^[6], significantly

lower than foreign language classroom anxiety; The second aspect is the impact of foreign language writing anxiety on writing performance. Numerous studies have shown a negative correlation between writing anxiety and writing performance (Guo, Qin, 2010; Li, 2015)^[7]; The third aspect is the related factors of foreign language writing anxiety, especially the relationship with internal factors of learners. Foreign language writing anxiety is positively correlated with native language use (Zhou, Tang, 2010) and significantly negatively correlated with writing self-efficacy (Li & Liu, 2013)^[8].

Some scholars focus on exploring new teaching methods for empirical research on alleviating FL writing anxiety. Peer assessment (Kai Gu, 2009) and “The Length Approach” (Yan Guo, 2011) can significantly reduce students’ writing anxiety and improve their English writing proficiency^[9-10]; Collaborative learning can reduce English writing anxiety among non-English major college students (Wu & Gu, 2011; Wu & He, 2014)^[11]; Project-Based Learning Approach has a positive effect on reducing academic English writing anxiety (Haiying Chen, 2017)^[12]; Continuation tasks can help to reduce EFL learners’ writing anxiety, especially avoidance behaviors and anxiety of writing planning, thus to cultivate learner’s positive emotions on SL writing (Zhang & Qin, 2020)^[13]; The cloud writing community significantly reduces postgraduates’ thesis writing anxiety, among which cognitive anxiety is most significantly reduced, followed by avoidance behavior (Wang & Lu, 2024).^[14]

In summary, scholars have conducted extensive research on FL writing anxiety, and many have explored the use of different effective teaching methods to alleviate FL writing anxiety. Collaborative writing, a specific form of cooperative learning, refers to two or more writers working together to complete an article. More precisely, it is an activity in which writers collectively negotiate, make decisions, and take joint responsibility for their writing (Storch, 2013)^[15]. Previous studies have shown that collaborative writing is more accurate and improves text quality compared to writing alone (Wigglesworth & Storch, 2009; Dobao, 2012; Bikowski, D. & R. Vithanage, 2016; Lian, 2018)^[16]; In addition, studies have found that most learners believe that collaborative writing not only enhances their confidence, but also improves their writing and speaking abilities (Shehadeh, 2011). Given the advantages of collaborative writing, this study adopts methods of quantitative and qualitative to explore the impact of collaborative writing on English writing anxiety. Two research questions are proposed to be answered: (1) What is the current situation of English writing anxiety among non-English major college students? (2) What are the impacts of collaborative writing on English writing anxiety among non-English major college students? (3) How do non-English major college students evaluate the impact of collaborative writing on English writing anxiety?

3. Method

3.1 Participants

56 freshmen were selected randomly as participants who were from the School of Biological Science and Technology at a university, China. Control group (N=58) were from the School of Integrated Media at the same university. Both experiment and control group were native Chinese speakers who had learned English as their only FL for ten years. In this study, they had the same English teacher, writing task and English proficiency level.

3.2 Instruments

This study employed the “Second Language Writing Anxiety Scale” developed by Cheng (2004)^[17], which has high reliability and validity through testing by scholars. To facilitate the reading and responding processes, the questionnaire was translated into Chinese. The questionnaire adopted a 5-point Likert response format (1 = strongly disagree; 2 = disagree; 3 = no strong feelings either way; 4 = agree; 5 = strongly agree). It is comprised of total 22 items loaded on three factors,

namely somatic anxiety, cognitive anxiety and avoidance behavior. The following items 1, 4, 7, 17, 18, 21, and 22 are reversed-coded. 56 freshmen of non-English major (experiment group) and 58 freshmen of non-English major (control group) were recruited to fill out the questionnaire. The results were presented through paired sample t-test and independent sample t-test using software SPSS 29.0.

3.3 Experimental Process

Participants self-formed two-member groups and were free to complete the task that was to finish an essay of more than 120 words based on themes on CET-4 test essay from 2021-2023 within one week. They were required to discuss their ideas, structure of the essay and language use with their peers face-to-face in English, and recorded the entire discussion process. The teacher listened carefully to the recordings of participants, reviewed their compositions, summarized problems, and provided timely feedback to them. The control group had the same writing task and time as those of the experiment group. Differently, the control group completed their essay independently every week and submitted it to the Iwrite English Writing and Review System that could automatically evaluate their essay.

3.4 Data Collection

In the first teaching week of the summer semester of the 2023-2024 academic year in early March 2023, both the control group and the experiment group completed a writing task with the same theme on CET-4 test in class, and then filled out the “Second Language Writing Anxiety Scale” (Cheng, 2004), which was used as pre-test data. In the 12th teaching week, the post-test data were collected based on the same step as that of collecting pre-test data. Additionally, semi-structured interviews were conducted with all participants as post-test data.

4. Data analysis

4.1 Level of English writing anxiety among non-English major college students

Table 1: Independent sample t-test for pre-test of English writing anxiety in experiment and control groups

Dimension	Group	Mean	Standard deviation	T-value	Sig
Somatic anxiety	EG	2.55	0.694	-0.607	0.546
	CG	2.65	0.778		
Cognitive anxiety	EG	2.84	0.719	-1.08	0.283
	CG	3.03	0.901		
Avoidance behavior	EG	3.22	0.678	-1.846	0.069
	CG	3.51	0.74		
Note: EG: Experimental group; CG :Control group; EG=56 students; CG =58 students;					

Independent sample t-test was adopted to analyze the level of English writing anxiety among participants in both the experiment and control groups during pre-test. Table 1 presents that there is no significant difference in writing anxiety between the two groups across all dimensions ($P > .05$). According to Oxford & Burry Stock's (1995) mean scoring method, an average between 3.5 and 5.0 indicates a high level of anxiety, between 2.5 and 3.4 indicates a moderate level of anxiety, and less than or equal to 2.4 indicates a low level of anxiety. The writing anxiety in the pre-test of the experiment group ($M=2.55/2.84/3.22$) was at a moderate level. The pre-test means of “somatic

anxiety” and “cognitive anxiety” in the control group (M=2.65/3.03) were both at a moderate level of anxiety, but the pre-test mean of “avoidance behavior” (M=3.51) was at a high level of anxiety, indicating that students in the control group were more afraid and even resistant to English writing.^[18]

4.2 The impact of collaborative writing on English writing anxiety among non- English major college students

Paired sample t-tests were conducted for pre-test and post-test English writing anxiety in the experiment and control groups respectively. As shown in Table 2, only the post-test means of “avoidance behavior” in the control group were slightly lower than those in the pre-test, while the post-test means of “somatic anxiety” and “avoidance behavior” in the experiment group were slightly lower than those in the pre-test, but did not reach a significant difference ($P=0.686/0.935>.05$), indicating that the writing anxiety in the experiment group decreased in the dimensions of “somatic anxiety” and “avoidance behavior”. The pre-test mean of “cognitive anxiety” in the experiment group was 2.84, and the post-test one was 2.85, an increase of 0.01, but did not reach a significant difference. Although cognitive anxiety has shown a slight upward trend, it is generally lower than average level of anxiety. The increased writing anxiety among participants during this period may have a positive impact on their writing performance (Li, 2015). The reason for this may be that participants were more concerned about peer and teacher evaluations as well as writing performance in the process of collaborative writing, and this moderate anxiety may promote their engagement in English writing.

Table 2: Paired sample t-test for pre-test and post-test of English writing anxiety in experiment and control groups

Dimension	Before or after experiment	Mean		Standard deviation		T-value		Sig	
		EG	CG	EG	CG	EG	CG	EG	CG
Somatic anxiety	Before	2.55	2.65	0.694	0.778	0.407	-	0.686	
	After	2.49	2.67	0.671	0.773	0.107		0.916	
Cognitive anxiety	Before	2.84	3.03	0.719	0.901	-0.079	-	0.938	
	After	2.85	3.05	0.735	0.736	0.07		0.945	
Avoidance behavior	Before	3.22	3.51	0.678	0.74	0.082		0.935	
	After	3.18	3.50	0.584	0.71	0.266		0.791	

Note: EG: Experimental group;CG :Control group; EG=56 students; CG =58 students;

As shown in Table 3, the independent sample t-test of the post-test of English writing anxiety between the experiment group and the control group showed that the post-test mean of the “avoidance behavior” dimension in the experiment group was 3.18, while the post-test mean of the control group in this dimension was 3.50. The experiment group and the control group reached a significant difference level in the “avoidance behavior” dimension ($p=0.028<.05$). The finding is consistent with Guo Yan’s (2011) result, which significantly reduces avoidance behavior. This indicates that collaborative writing alleviates students’ anxiety and reduces their resistance or avoidance towards writing in English.

The reason why collaborative writing could reduce students’ avoidance behavior could be found from semi-structured interview, which showed that 21% of students believed that collaborative writing was a relatively novel teaching mode that they were curious about it. Students looked forward to participating in the task and full of confidence. Writing interest has a predictive effect on avoidance behavior (Li, 2012). Therefore, students can freely create a relaxed psychological environment as well as maintain writing enthusiasm and confidence, which helps regulate students’ avoidance psychology in English writing.

Table 3: Independent sample t-test of post-test English writing anxiety in experiment and control groups

Dimension	Group	Mean	Standard deviation	T-value	Sig
Somatic anxiety	EG	2.49	0.671	-1.159	0.25
	CG	2.67	0.773		
Cognitive anxiety	EG	2.85	0.735	-1.197	0.235
	CG	3.05	0.736		
Avoidance behavior	EG	3.18	0.584	-2.237*	0.028
	CG	3.50	0.71		

Note: EG: Experimental group; CG :Control group; EG=56 students; CG =58 students;

* $p < .05$

4.3 Positive effects of collaborative writing

Interview data showed that 92% of the participants clearly expressed their willingness to actively participate in collaborative writing, affirming the role of collaborative writing in regulating avoidance psychology. The positive effects are mainly manifested in the following aspects.

Firstly, collaborative writing facilitates peer communication and enhances emotional connections with peers. 38% of the participants believe that collaborative writing enhanced their emotional connection with peers by learning to communicate better with them, and cultivated a spirit of unity and cooperation. Participants had a sense of belonging in the team by supporting each other, thus leading to reducing anxiety.

Secondly, collaborative writing is beneficial to improving language skills. If the selected vocabulary or sentence structures were inappropriate during their joint discussion of language use, peers could provide corrective feedback based on their own knowledge. 28% of the participants reported that they accumulated more advanced vocabulary, phrases, and sentence patterns during the process of collaborative writing; 30% of the participants believed that collaborative writing provided an opportunity to express viewpoints in English and improved English speaking skills. In a word, students' advanced English skills, increased confidence and enthusiasm for writing contributed to the reduction of negative avoidance behaviors.

Thirdly, collaborative writing contributes to expanding ideas and enriching writing content. It can activate students' thinking by stimulating their brains. 23% of the participants believed that collaborative writing expanded their thinking and improved their ability to organize their essays by taking in peers' novel and diversified perspectives and ideas; 20% of the participants thought that collaborative writing enabled them to clarify writing ideas, so as to make their composition more logical.

5. Implications

Currently, some universities reduced specialized English writing teaching courses due to limited class hours. However, writing ability is an important component of English skills, and the contradiction between the two is an urgent problem that needs to be solved. Therefore, teachers and students should work together to improve students' enthusiasm for English writing and alleviate writing anxiety.

Firstly, teachers should adopt diverse writing modes to stimulate student' interest in writing. Previous studies have shown that "the continuation task", collaborative learning, Project-Based Learning Approach, and "cloud writing community" contribute to enhancing students' interest in writing and improving their writing abilities. The above writing methods, emphasizing teachers' effective guidance and students' active engagement, is beneficial to creating a relaxed and harmonious learning environment, which is a guarantee for alleviating writing anxiety.

Secondly, teachers should help students build their confidence in writing. Some students are very afraid of writing, resistant and even have a serious negative avoidance mentality due to lacking interest and enthusiasm in English writing. Teachers should guide students to build writing confidence through specific methods, such as regular evaluations, providing specific revision suggestions, guiding students to correct errors in their compositions, or organizing peer evaluations. Establishing writing confidence is an intrinsic motivational mechanism for alleviating students' writing anxiety (Wu & Gu, 2011).

Finally, students should be encouraged to actively seek opportunities to write in English. It can be seen from students' survey that they were unwilling to actively seek opportunities to practice English writing. If students do not write for a long time, they will become more afraid of writing and have a strong avoidance mentality, leading to a decline in writing ability. Therefore, it is necessary to cultivate students' habit of writing in English, such as recording their peers' opinions in class, recording their thoughts and ideas in English, writing diaries and weekly journals, etc.

6. Conclusion

This study investigated the impact of collaborative writing on English writing anxiety among non-English major college students. The pre-test data of writing anxiety in the experiment and control groups showed that the English writing anxiety of the experiment group was at a moderate level in the dimensions of "somatic anxiety" "cognitive anxiety" and "avoidance behavior", while the English writing anxiety of the control group was at a moderate level in the dimensions of "somatic anxiety" and "cognitive anxiety", but at a high level in the dimension of "avoidance behavior". After the collaborative writing experiment, paired sample t-tests were conducted on the pre-test and post-test of the experiment group and the control group, and the results showed no significant difference between the pre-test and post-test of the two groups. However, the independent sample t-test results of the two groups' post-test showed that there was a significant difference in "avoidance behavior" between the two groups, indicating that the avoidance behavior of the experiment group was significantly reduced.

In the process of collaborative writing, students communicated in a friendly manner to create a relaxed and pleasant writing environment; Students enhanced emotions with peers and improved ability to negotiate with target language; Students break through thinking patterns and enrich content; In a word, collaborative writing improved students' confidence and self-efficacy in English writing, thereby reducing writing anxiety. Finally, the following teaching implications are proposed based on findings of the study: teachers should adopt diverse writing modes to stimulate students' interest in writing; Help students build writing confidence and encourage them to actively seek opportunities to write in English.

7. Note

"The Length Approach": This approach, proposed by Wang Chuming in 2005, focuses on designing tasks that stimulate writing impulse. At a certain stage of learning, the length of the composition will be adjusted and gradually the amount of words of the essay will be increased. Therefore, students can release their potential for FL learning by breaking through the bottleneck of it, thus enhancing their sense of achievement and confidence in learning and accelerating the transformation of FL knowledge into abilities to apply it.

The continuation task: The task combines reading with writing, builds creative use of language on imitation and enables learners to immediately use what are learned.

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