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Foreign Language Writing Emotions and Writing Strategy Use: Levels and Learner Differences among Chinese Undergraduate Students

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Abstract: Writing emotional experiences and strategy use are two important parts in the field of Second Language Acquisition (SLA). The present research investigated foreign language writing boredom (FLWB), foreign language writing enjoyment (FLWE), and the application of L2 writing strategies. The study first explored the levels of L2 writing emotions and frequency of L2 writing strategy use. Furthermore, the study examined how learner variables were related to learner variables. Data were collected through a questionnaire administered to 150 Chinese undergraduates serving English as a foreign language. Firstly, descriptive statistics showed that the levels of FLWB, FLWE and EWS use among Chinese undergraduates are moderate overall, while social writing enjoyment (SWE) reached a high level. Secondly, findings from independent samples t-tests, one-way ANOVA, and subsequent post hoc analyses indicated that English majors and students with higher levels of self-perceived English proficiency reported significantly greater FLWE, lower FLWB, and more frequent use of EWS. In contrast, neither gender nor grade exerted significant effects on these variables. We also recommend universities to promote enjoyment, reduce boredom and boost strategy use by influencing these learner variables in L2 writing environment.

Keywords: foreign language writing boredom; foreign language writing enjoyment; L2 writing strategy; leaner variables; Chinese undergraduate students

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1. Introduction

1.1. Research Background and Aims

In the field of Second Language Acquisition (SLA), earlier mainstream research tended to serve the process as largely devoid of emotional involvement [1]. Subsequently, increasing attention has been directed toward the role and significance of emotions in this field. However, earlier research predominantly concentrated on foreign language anxiety (FLA) [2]. Building on theoretical advances in positive psychology, SLA researchers have progressively emphasized the role of positive emotions, such as foreign language enjoyment (FLE), in language learning [3]. Later studies emphasized the need to examine a broader range of emotions, including boredom, in SLA [4,5]. Foreign language learning boredom (FLLB) receives increasing attention recently because of Li et al.'s research [5]. Emotions have also begun to attract scholarly attention in the domain of foreign language

writing. Li et al. argued that while emotions play a crucial role in L2 writing, they remain insufficiently investigated [6]. Subsequently, Li et al. designed measurement instruments to assess foreign language writing enjoyment (FLWE) and foreign language writing boredom (FLWB) [6]. According to Pekrun, individual learner characteristics may shape achievement-related emotions including enjoyment and boredom [7].

Language learning strategy (LLS) refers to a specific approach or technique that learners employ to facilitate the acquisition of a foreign language [8,9]. In SLA, investigations into L2 writing commonly focus on the deployment of writing strategies [10]. As purposeful and conscious actions, L2 writing strategies can be classified within the broader category of language learning strategies [11]. Several studies have demonstrated that the use of writing strategies contributes to improvements in learners' writing performance [12-14]. The use of L2 writing strategies can be shaped by a range of learner-related variables, including gender, age, personality, and other demographic factors [8,11].

This study focused on Chinese undergraduate students who learn English as a foreign language. It first examined the levels of L2 writing emotions and strategy use. Then, it further explored the effects of learner variables (gender, major, grade, and self-perceived English proficiency) on L2 writing emotions as well as on the use of English writing strategies (EWS).

1.2. Literature Review

1.2.1. Foreign Language Enjoyment (FLE) and Foreign Language Writing Enjoyment (FLWE)

Pekrun's theory has contributed to integrating positive psychology into the field of SLA [7,15]. MacIntyre and Gregersen indicated that it was time to emphasize the role of positive emotions [2]. Subsequently, some scholars began to focus on positive emotions such as enjoyment in SLA. Dewaele and MacIntyre reviewed the viewpoints of positive psychology and emphasized the importance of investigating enjoyment in SLA [3,16]. Enjoyment represents a positive affective state that emerges when learners experience the fulfillment of their internal needs [17]. It is also a core component of joy-related emotions and flow [3]. Enjoyment has two main sources: the development of interpersonal relationships and the progress made for the purpose [17]. Dewaele and MacIntyre developed corresponding scale to measure L2 enjoyment [3].

FLWE has recently begun to attract scholarly attention. Earlier studies have largely focused on examining anxiety within the context of L2 writing [6]. Han and Hyland examined L2 learners' emotional reactions to written corrective feedback (WCF) in foreign language writing, finding that students reported positive emotions such as curiosity and contentment [18]. Li et al. argued that L2 writers draw on emotions and motivation, with positive ones sustaining interest, effort, and cognitive engagement [6]. Li et al. proposed that greater scholarly attention should be directed toward the distinctive emotions involved in foreign language writing [6]. In the context of L2 writing, enjoyment is conceptualized as a positive, activating, and enduring trait-like achievement emotion [6]. Within the Chinese context, Li et al. investigated the role of FLWE in L2 writing achievement and confirmed its positive impact [6]. In terms of the measurement of FLWE, Li et al. developed and validated the Foreign Language Writing Enjoyment Scale (FLWES), which comprises two subscales: Private Writing Enjoyment (PWE), reflecting enjoyment derived from personal experiences, and Social Writing Enjoyment (SWE), capturing enjoyment arising from interpersonal factors such as teacher feedback and encouragement [6]. Jin developed the English Writing Enjoyment Scale (EWES), which emphasized the private dimension of language enjoyment; however, unlike the FLWES, it was not validated through invariance testing [6].

1.2.2. FLE and FLWE and Learner Variables

Several studies have examined the correlations between FLE and learner variables, including demographic factors, across diverse contexts. Dewaele and Maclntyre indicated that FLE increased with age and educational level, and that females reported significantly higher FLE than males in a global context [3]. Dewaele et al. found that among British secondary students, FLE was significantly influenced by age, gender, FL proficiency, learning attitudes, teacher-related attitudes, and the frequency of teacher-required FL use, whereas the amount of language mastered had no effect [20]. Jiang and Dewaele found gender did not significantly affect FLE among Chinese undergraduates [21]. Li found that attitudes toward the FL, attitudes toward the teacher, and English proficiency significantly influenced FLE, whereas gender showed no effect in the Chinese context [1]. At present, limited research has examined the link between FLWE and learner variables. Evidence from a doctoral dissertation suggested that students with higher English proficiency reported greater FLE, whereas those with lower proficiency often felt embarrassed and confused during writing [22]. Moreover, the study's sample consisted of non-English major freshmen in China, limiting its representativeness for Chinese EFL learners. Previous research focused on enjoyment in general L2 learning environment, which leaves room for further exploration of the relationships between foreign language writing emotions in more specific skill areas and learner factors.

1.2.3. Foreign Language Learning Boredom (FLLB) and Foreign Language Writing Boredom (FLWB)

In foreign language learning, boredom has received little scholarly attention [23]. Students may experience boredom when faced with tasks perceived as lacking value or challenge [7]. Li found that perceived control and value appraisals negatively predicted boredom in L2 learning contexts [24]. Boredom can be conceptualized as either a trait or a state emotion, with state boredom being particularly prevalent in learning environments [25]. It is a detrimental emotion that may weaken learners' motivation, engagement, performance, and strategy use in educational contexts [5]. Early research on boredom in foreign language contexts was conducted primarily in Poland [26]. Pawlak et al. investigated 11 Polish English majors and found that students tended to experience boredom in practical English classes [27]. Li et al. developed and validated corresponding scale to measure foreign language boredom (FLB) [5]. Li et al. refined this tool, naming it as foreign language learning boredom scale (FLLBS) and validated it within a Chinese context [28].

Some scholars have turned their attention to domain-specific forms of boredom, such as FLWB. Han and Hyland [18] found students' negative responses to WCF in L2 writing included anxiety, disappointment, and hopelessness, highlighting the need to examine negative emotions beyond anxiety. Drawing on Pekrun's control-value theory, Li et al. conceptualized boredom in L2 writing as a negative, activity-related achievement emotion [6,7]. Solhi et al. described FLWB as a negative emotional state emerging in L2 writing tasks, potentially impeding development and prompting some learners to abandon writing [29]. Li et al. investigated FLWE in relation to L2 writing achievement in the Chinese context, with results indicating that FLWB strongly and negatively predicted achievement [6]. In terms of the measurement of FLWB, Li et al. identified boredom as the most common negative emotion in L2 writing and subsequently developed and validated a single-factor FLWB scale [6]. Solhi et al. examined the interplay among FLWB, L2 writing motivation, and boredom-coping strategies, measuring FLWB with the first subscale of the FLLB scale, adapted by replacing "English class" with "L2 writing class" [29].

1.2.4. FLLB and FLWB and Leaner Variables

Several studies have examined the relationship between FLLB and learner variables across different contexts. In Turkey, FLB among high school EFL learners was unaffected

by gender but significantly influenced by grade and academic trajectory, with elevated levels observed among final-year and science-course students [30]. Li et al. found that FLLB negatively affected both overall and specific foreign language performance, while longitudinal data indicated that L2 scores negatively predicted FLLB [28]. Research indicated that FLLB had a significant negative predictive effect on the academic achievement of rural Chinese learners [31]. Li found that FLLB was negatively correlated with self-perceived proficiency and attitudes toward English and its teachers, but positively correlated with age and age of onset, while gender showed no significant effect among Chinese EFL learners [1]. At present, limited research has examined the link between FLWB and learner variables. Preliminary evidence comes from a doctoral dissertation, where qualitative data indicated that higher-proficiency learners often felt bored with frequently encountered English writing genres [22] Previous research has largely examined boredom in general L2 learning contexts, leaving the room for exploring the correlations between foreign language writing emotions in specific skills and learner variables.

1.2.5. L2 Writing Strategy

As noted by Rubin, learning strategies denote the techniques or tools available to learners for enhancing their knowledge acquisition [9]. L2 writing strategies, viewed as a subset of language learning strategies, are deliberate and goal-oriented, reflecting the cognitive and purposeful nature of the writing process in which learners engage in various actions to accomplish writing tasks [11]. The writing process has traditionally been conceptualized in terms of writing strategies, and within SLA, L2 writing research largely centers on these strategies [10]. Following the development of Sun and Wang's questionnaire, some scholars have examined L2 writing self-regulated learning (SRL) strategies, which emphasize self-regulated behaviors and are closely linked to self-efficacy [32]. Regarding measurement, Petrić and Czárl were the first to design and validate a questionnaire assessing EFL learners' frequency of L2 writing strategy use [10]. Hwang and Lee developed the English Writing Strategy Inventory (EWSI) to measure the frequency of English writing strategy use and, through EFA, identified eight dimensions, confirming its validity in the Korean context [11]. Sun and Wang developed the Questionnaire of English Writing Self-Regulated Learning Strategies (QEWSRLS), which emphasizes self-motivation and comprises three dimensions—environment, behavior, and person—each further divided into sub-dimensions such as self-monitoring strategies [32].

1.2.6. L2 Writing Strategy and Learner Variables

Some studies have examined the relationship between L2 writing strategies and learner variables, particularly self-efficacy. Firstly, L2 writing strategies have been linked to self-efficacy. For example, linguistic self-efficacy predicted discourse synthesis and source-use strategies, whereas self-regulation and performance efficacy predicted metacognitive strategies for undergraduate students in Iran [33]. Zhang and Zhang investigated how different levels of self-efficacy predicted the use of L2 SRL writing strategies for Chinese freshmen, sophomores and juniors [34]. Secondly, regarding gender, female students at the primary level demonstrated more frequent use of L2 SRL writing strategies than their male peers [35]. With respect to grade, fifth graders used L2 SRL writing strategies significantly less than fourth and sixth graders [35]. In terms of L2 writing performance, Chen demonstrated that L2 writing performance benefited from the use of writing strategies for Chinese freshmen [12]. Teng et al. reported that L2 writing performance could be predicted by learners' use of metacognitive academic strategies for Chinese juniors students [13]. Zhang found that the translation method enhanced students' L2 writing performance for Chinese freshmen [14]. Although prior studies have shown that L2 writing strategies are related to learner variables such as self-efficacy, grade level,

gender and L2 writing performance. Nevertheless, other factors, such as major type, remain underexplored. Moreover, the learner factors of L2 writing strategies among the broader population of general Chinese undergraduates have not yet been sufficiently investigated and thus warrants further research.

1.2.7. Research Question

Building on the constructs outlined above and prior empirical evidence, this study addresses the following research questions:

1. What are the levels of FLWB, FLWE, and English writing strategy (EWS) use among Chinese undergraduates?
2. To what extent do learner variables (gender, major types, grade and self-perceived English proficiency) affect FLWB, FLWE and English Writing Strategy (EWS) use?

2. Methodology

2.1. Participants

Participant information is presented in Table 1. Data was collected through a combination of convenience and snowball sampling. All participants were undergraduates enrolled at a comprehensive university in southern China. According to the Chinese syllabus, non-English-major undergraduates must complete College English Teaching (CET) courses [36]. They are required to attend one or two CET classes per week and are encouraged to practice English writing to prepare for exams such as the College English Test Band 4 (CET-4). In contrast, English majors receive intensive language training throughout their undergraduate studies, with classes scheduled almost daily, and are likewise encouraged to practice writing for tests such as the Test for English Majors Band 4 (TEM-4). Participants were informed of the study's purpose and completed the questionnaire once eligibility was confirmed—that is, being over 18, enrolled as undergraduates, and recently engaged in English writing courses or practice. A total of 150 EFL learners were recruited. Adequate sub-sample sizes were obtained for each learner-variable group, ensuring the validity of subsequent statistical analyses.

Table 1. Background Information of Participants Attending Questionnaire Survey (N = 150).

Variables	Category	Number	Percentage
Gender	Male	70	46.70%
	Female	80	53.30%
Major type	English-related major	49	32.70%
	Non-English major	101	67.30%
Grade	Year 1	29	19.30%
	Year 2	50	33.30%
	Year 3	35	23.30%
	Year 4	36	24.00%
Self-perceived English proficiency	High	18	12.00%
	Intermediate	100	66.70%
	Low	32	21.30%

2.2. Instruments

The online questionnaire began with a demographic section collecting information on gender, major type, grade level, and self-perceived English proficiency. Participants were then asked to complete three scales:

a. Foreign language boredom writing scale. The Chinese version of the Foreign Language Writing Boredom Scale (FLWBS) developed by Li et al. was employed [6]. This unidimensional 5-point Likert scale consists of five items measuring learners' trait

boredom in L2 writing tasks. For each item, participants indicated their response on a scale ranging from "strongly disagree" to "strongly agree". In Li et al.'s study, the scale demonstrated acceptable reliability with a Cronbach's alpha of .78 [6]. In the present study, the Cronbach's alpha was .89, indicating good internal consistency.

b. Foreign language enjoyment writing scale. The Chinese version of the Foreign Language Writing Enjoyment Scale (FLWES) developed by Li et al. was adopted [6]. This 5-point Likert scale consists of nine items grouped into two subscales: Private Writing Enjoyment (PWES; 6 items) and Social Writing Enjoyment (SWES; 3 items). Since a Chinese version was created during the scale's development, it was directly applicable for measuring foreign language writing enjoyment among Chinese undergraduates. In Li et al.'s study, the two subscales of the FLEWS demonstrated reliability coefficients of α = .89 and α = .89 [6]. Participants rated each item on a 5-point scale ranging from "strongly disagree" to "strongly agree". In the present study, the corresponding alphas were α = .92 and α = .71, indicating acceptable internal consistency.

c. English writing strategy inventory. The Chinese version of the English Writing Strategy Inventory (EWSI) developed by Hwang and Lee was employed [11]. This 5-point Likert scale consists of 24 items across eight subscales: (1) metacognitive (4 items), (2) memory (4 items), (3) cognitive (4 items), (4) L1 use (3 items), (5) revision (3 items), (6) L2 use (2 items), (7) social (2 items), and (8) compensatory/search strategies (2 items). In the present study, several items were adapted by replacing "Korean" with "Chinese" to fit the context of Chinese undergraduates. As no official Chinese version of the inventory existed, it was translated into Chinese and reviewed by a highly proficient EFL learner. Participants responded to each item on a 5-point scale ranging from "never true" to "always true". In Hwang and Lee's study, the subscales of the EWSI reported Cronbach's alpha coefficients of .82, .76, .71, .75, .72, .76, .69, and .73, respectively [11]. In the present study, the corresponding values were .80, .77, .79, .73, .77, .74, .84, and .76, all of which indicate acceptable internal consistency.

2.3. Data Collection

The online questionnaire was designed and administered via the Qualtrics platform to undergraduates at the comprehensive university. Informed consent was obtained prior to participation, and students were informed that they could withdraw at any time if they felt unwell. All responses were collected anonymously and treated confidentially. Data were gathered using a combination of convenience and snowball sampling. First, questionnaires were distributed to college students via the university's social platforms to obtain an initial sample through convenience sampling. Participants were then encouraged to share the questionnaire with their classmates, thereby expanding the sample through snowball sampling. Data collection was completed within two days, yielding a total of 150 responses.

2.4. Data Analysis

Data were analyzed using SPSS 30.0. To address research question 1, We performed descriptive statistics analyses to calculate the mean and standard deviation of each dimension and overall levels of FLWB, FLWE and EWS use. Theoretical interval method was adopted to interpret the 5-point Likert scale: 1.00-2.33 (low), 2.34-3.67 (moderate), 3.68-5.00 (high) according to Alkharusi [37].

To cope with research question 2, independent-samples t-tests and one-way ANOVAs were conducted to examine the effects of learner variables on FLWB, FLWE, and EWS use. For ANOVAs, Least Significant Difference (LSD) post hoc tests were employed to identify specific group differences when main effects were significant.

3. Results

Descriptive results are presented in Table 2. With regard to normality tests, the z-scores of skewness ranged from -2.85 to 0.35, which was within an acceptable range (±3.29) when the sample size was in the range of 50 < n < 300 [38]. In terms of kurtosis, the z-scores of kurtosis ranged from -2.92 to 1.08, which was within an acceptable range (±3.29) when the sample size was in the range of 50 < n < 300 [38]. Thus, the data was normally distributed.

Table 2. Descriptive statistics of observed variables in FLWB, FLWE and EWS use (N = 150).

Variables	Possible range		Observed					
	Min.	Max.	Mean	SD	Min.	Max.	Skewness(SE)	Kurtosis(SE)
FLWB	1	5	3.24	0.95	1	5	-0.27(0.20)	-0.77(0.39)
FLWE-PWE	1	5	3.22	0.91	1.17	5	-0.09(0.20)	-0.83(0.39)
FLWE-SWE	1	5	3.76	0.77	2	5	-0.53(0.20)	-0.27(0.39)
FLWE	1	5	3.49	0.78	1.67	5	-0.32(0.20)	-0.54(0.39)
EWS-MCS	1	5	3.45	0.73	1	5	-0.40(0.20)	0.40(0.39)
EWS-MS	1	5	3.46	0.81	1	5	-0.48(0.20)	0.20(0.39)
EWS-CS	1	5	3.61	0.80	1	5	-0.46(0.20)	-0.03(0.39)
EWS-L1S	1	5	3.63	0.79	1	5	-0.57(0.20)	0.42(0.39)
EWS-RS	1	5	3.47	0.84	1	5	-0.45(0.20)	0.07(0.39)
EWS-L2S	1	5	3.22	1.00	1	5	-0.19(0.20)	-0.48(0.39)
EWS-SS	1	5	2.82	1.18	1	5	0.07(0.20)	-1.14(0.39)
EWS-CSS	1	5	3.34	0.96	1	5	-0.47(0.20)	-0.26(0.39)
EWS	1	5	3.37	0.68	1	5	-0.26(0.20)	0.07(0.39)

Note: FLWB: overall foreign language writing boredom; FLWE-PWE: private writing enjoyment in FLWE; FLWE-SWE: social writing enjoyment in FLWE; FLWE: overall foreign language writing enjoyment; EWS: overall usage of English writing strategy; EWS-MCS: metacognitive strategy in EWS; EWS-MS: memory strategy in EWS; EWS-CS: cognitive strategy in EWS; EWS-L1S: L1 use strategy in EWS; EWS-RS: revision strategy in EWS; EWS-L2S: L2 use strategy in EWS; EWS-SS: social strategy in EWS; EWS-CSS: compensatory/search strategy in EWS.

3.1. The levels of FLWB, FLWE, and EWS use

As shown in Table 2, the mean FLWB score was 3.24 (SD = 0.95), indicating a moderate level of boredom. For FLWE, the means for Private Writing Enjoyment (PWE) and Social Writing Enjoyment (SWE) were 3.22 (SD = 0.91) and 3.76 (SD = 0.77), respectively. PWE was moderate, whereas SWE reached a high level. The overall FLWE score was 3.49 (SD = 0.78), showing that enjoyment exceeded boredom and that students experienced greater SWE than PWE.

Regarding EWS use, the mean scores across strategy dimensions ranged from 2.82 to 3.63, reflecting moderate usage. L1 Use was the most frequently used strategy (M = 3.63, SD = 0.79), while Social Strategies were the least used (M = 2.82, SD = 1.18). Overall strategy use averaged 3.37 (SD = 0.68), with relatively high dispersion indicating noticeable individual differences.

3.2. Learner Variables of FLWB, FLWE and EWS Use

As shown in Table 3, independent-samples t-tests were conducted to examine gender differences in foreign language writing boredom, foreign language writing enjoyment, and English writing strategy use.

Table 3. Independent samples t-tests comparing FLWB, FLWE and EWS scores between male and female EFL learners (N = 150).

Variables	Gender	M	SD	t	df	p	Cohen's d	r
FLWB	Female	3.29	0.89	0.65	148	0.514	0.10	0.05
	Male	3.19	1.02					
FLWE	Female	3.39	0.69	-1.73	148	0.090	0.28	0.14
	Male	3.61	0.86					
EWS	Female	3.34	0.59	-0.70	148	0.491	0.12	0.06
	Male	3.42	0.78					

Note. FLWB: overall foreign language writing boredom; FLWE: overall foreign language writing enjoyment; EWS: overall usage of English writing strategy

As shown in Table 4, independent-samples t-tests were also conducted to examine differences based on major type.

Table 4. Independent samples t-tests comparing FLWB, FLWE and EWS scores between non-English majors and English-related majors (N = 150).

Variables	Major type	M	SD	t	df	p	Cohen's d	r
FLWB	Non-English major	3.43	0.91	3.62	148	<.001	0.63	0.30
	English-related major	2.85	0.92					
FLWE	Non-English major	3.40	0.73	-2.06	148	0.042	0.35	0.17
	English-related major	3.68	0.85					
EWS	Non-English major	3.26	0.67	-3.02	148	0.003	0.52	0.25
	English-related major	3.61	0.66					

Note. FLWB: overall foreign language writing boredom; FLWE: overall foreign language writing enjoyment; EWS: overall usage of English writing strategy.

The independent samples t-test results about gender and major type are shown in Table 3 and Table 4.

The results showed that the differences between male students and female students on FLWB ($t = 0.65$, $df = 148$, $p = 0.514 > 0.05$), FLWE ($t = -1.73$, $df = 148$, $p = 0.090 > 0.05$) and EWS use ($t = -0.70$, $df = 148$, $p = 0.491 > 0.05$) were not significant. All effect sizes were negligible or small according to Cohen [39].

The results showed that the differences between English-related majors and non-English majors on FLWB ($t = 3.62$, $df = 148$, $p < .001$), FLWE ($t = -2.06$, $df = 148$, $p = 0.042 < 0.05$) and EWS use ($t = -3.02$, $df = 148$, $p = 0.003 < 0.01$) were statistically significant, with a medium-to-large effect size, a small-to-medium effect size and a medium-to-large effect size respectively according to Cohen [39].

As shown in Table 5, one-way analyses of variance were conducted to examine the effects of grade level on foreign language writing boredom, foreign language writing enjoyment, and English writing strategy use.

Table 5. One-way ANOVA results for grade in FLWB, FLWE and EWS use (N = 150).

Variables	Source	SS	df	MS	F	p	eta^2/η^2
FLWB	Between groups	1.79	3	0.596	0.66	0.580	0.01
	Within groups	132.45	146	0.907			
	Total	134.24	149				
FLWE	Between groups	2.86	3	0.953	1.60	0.192	0.03
	Within groups	87.00	146	0.596			
	Total	89.86	149				
EWS	Between groups	1.04	3	0.346	0.74	0.532	0.02
	Within groups	68.72	146	0.471			
	Total	69.76	149				

Note. FLWB: overall foreign language writing boredom; FLWE: overall foreign language writing enjoyment; EWS: overall usage of English writing strategy.

The One-way ANOVA results for grade are shown in Table 5. The results indicated that grade had no significant effect on FLWB (df (3, 146), $F = 0.66$, $p > 0.05$, $eta^2/\eta^2 = 0.01$), FLWE (df (3, 146), $F = 1.60$, $p > 0.05$, $eta^2/\eta^2 = 0.03$) and EWS use (df (3, 146), $F = 0.74$, $p > 0.05$, $eta^2/\eta^2 = 0.02$), with a small effect size, a small-to-medium effect size and a small-to-medium effect size respectively according to Cohen [39].

As shown in Table 6, one-way analyses of variance were conducted to examine the effects of self-perceived English proficiency.

Table 6. One-way ANOVA results for self-perceived English proficiency in FLWB, FLWE and EWS use (N = 150).

Variables	Source	SS	df	MS	F	p	eta^2/η^2
FLWB	Between groups	18.47	2	9.236	11.73	<.001	0.14
	Within groups	115.77	147	0.788			
	Total	134.24	149				
FLWE	Between groups	11.56	2	5.782	10.86	<.001	0.13
	Within groups	78.29	147	0.533			
	Total	89.86	149				
EWS	Between groups	14.44	2	7.218	19.18	<.001	0.21
	Within groups	55.32	147	0.376			
	Total	69.76	149				

Note. FLWB: overall foreign language writing boredom; FLWE: overall foreign language writing enjoyment; EWS: overall usage of English writing strategy.

As shown in Table 7, Least Significant Difference post hoc tests were conducted to further examine group differences.

Table 7. Post-hoc comparisons for different self-perceived English proficiency on FLWB, FLWE and EWS use (LSD) (N = 150).

Variables	Self-perceived English proficiency	M	SD	LSD
FLWB	1. High	2.31	0.93	1<2 (p<.001); 1<3 (p<.001)
	2. Intermediate	3.32	0.87	
	3. Low	3.51	0.93	
FLWE	1. High	4.04	0.99	1>2 (p=0.007); 1>3 (p<.001)
	2. Intermediate	3.53	0.72	2>3 (p=0.002)
	3. Low	3.06	0.58	
EWS	1. High	4.01	0.74	1>2 (p<.001); 1>3(p<.001)
	2. Intermediate	3.41	0.62	2>3 (p<.001)
	3. Low	2.90	0.49	

Note. FLWB: overall foreign language writing boredom; FLWE: overall foreign language writing enjoyment; EWS: overall usage of English writing strategy.

One-way ANOVA results and LSD post hoc test results for self-perceived English proficiency are shown in Table 6 and Table 7 respectively.

The one-way ANOVA results indicated that self-perceived English proficiency had a significant effect on FLWB (df (2, 147), $F = 11.73$, $p < 0.001$, $eta^2/\eta^2 = 0.14$), FLWB (df (2, 147), $F = 10.86$, $p < 0.001$, $eta^2/\eta^2 = 0.13$) and EWS use (df (2, 147), $F = 19.18$, $p < 0.001$, $eta^2/\eta^2 = 0.21$), with a large effect size, a medium-to-large effect size and an extremely large effect size respectively according to Cohen [39].

The LSD post hoc test results indicated that the FLWB of students with a high self-perceived English proficiency were significantly lower than that of those with an

intermediate proficiency ($p < 0.001$) and those with a low proficiency ($p < 0.001$). Regarding FLWE, it exhibited a significant upward trend with the promotion of self-perceived English proficiency, with all pairwise differences reaching statistical significance (all p-values < 0.05). In addition, EWS use increased significantly with the improvement of self-perceived English proficiency, with all pairwise differences reaching statistical significance (all p-values < 0.05).

4. Discussion

4.1. The levels of FLWB, FLWE, and EWS use

Descriptive statistics were used to address the first research question, examining the levels of FLWE, FLWB, and EWS use among Chinese undergraduate students. The level of FLWB was moderate, consistent with prior findings on foreign language learning boredom. For instance, Li reported that Chinese students typically experience moderate boredom in language learning [1]. The present study suggests that this pattern also holds in the writing domain. Kruk argued that boredom often arises when task difficulty is either too high or too low [40]. A similar mechanism may apply here: students are frequently encouraged to pass standardized English tests and have repeatedly practiced common exam-related writing topics. Such familiarity may reduce the perceived cognitive challenge of writing tasks, leading to a medium level of FLWB rather than high levels of disengagement or frustration.

The overall level of FLWE was also moderate. Previous studies on general foreign language enjoyment (FLE) showed mixed results: Jiang and Dewaele identified high levels of FLE among first-year Chinese undergraduates, whereas Li found a moderate level [1,21]. These discrepancies may stem from differences in sample characteristics and, importantly, from the focus of the present study on writing-specific enjoyment rather than general FLE. According to Pekrun's control-value theory, prolonged exposure to writing practice aimed at passing exams may strengthen learners' perceived control and the value they attach to writing tasks, thereby contributing to a moderate but not exceptionally high level of writing enjoyment [7].

At the sub-dimensional level, students reported higher Social Writing Enjoyment (SWE) than Private Writing Enjoyment (PWE), with SWE reaching a high level. SWE emphasizes enjoyment derived from teacher-related factors such as praise, encouragement, and feedback [6]. This suggests that Chinese undergraduates tend to experience stronger enjoyment through interpersonal interactions in writing contexts. Previous research on general FLE has consistently highlighted the central role of teachers. Dewaele and MacIntyre found that teacher-related variables were the strongest predictors of FLE, while Zhang et al. showed that students with higher FLE were more motivated to engage with teacher-provided written corrective feedback [41,42]. The present findings indicate that this teacher-driven pattern also persists in L2 writing settings. Pekrun noted that social factors, such as autonomy support, value induction, and feedback, shape emotions through their influence on perceived control and value [7]. Teacher engagement has been shown to foster positive academic emotions, thereby supporting learning outcomes [43]. In writing classrooms, teacher participation and interaction may strengthen students' sense of belonging and meaningful engagement, enhancing their positive emotional experiences toward foreign language writing.

Regarding EWS use, learners reported a moderate overall frequency of strategy use, echoing the findings of Hu's research [44]. This may relate to the prominence of national English assessments in China, such as the CET, which often require explicit instruction in writing strategies [36]. Among all strategy types, L1 use was the most frequently reported, whereas social strategies were used least often. L1 use strategies typically involve generating ideas or writing outlines in Chinese, while social strategies require interacting with native speakers [11]. The prominence of L1 use reflects the facilitative role of learners' first language in L2 writing. L1-based planning and translation can support Chinese

students' L2 writing performance by helping them activate relevant knowledge and structure their ideas more efficiently [14]. In contrast, the limited use of social strategies may relate to cultural and contextual characteristics of Chinese learners. Students often rely on teachers for structured instruction and may have limited access to authentic communication with native speakers.

4.2. Learner Variables of FLWB, FLWE and EWS Use

The second research question investigated how learner variables (gender, major, grade, and self-perceived English proficiency) influenced FLWB, FLWE, and EWS use.

First, gender was not found to exert a statistically significant effect on FLWB or FLWE. Although relatively few empirical studies have addressed emotions in foreign language writing, comparable patterns have been reported in research on FLE and FLLB [1,21]. The present findings extend and reinforce earlier conclusions, indicating that even within specific skills such as writing, gender is unlikely to be a primary factor shaping emotions in foreign language learning in the Chinese EFL context. Moreover, gender was not found to significantly influence EWS use, which was a result that contrasted with some previous studies such as Bai et al.'s research and Raoofi et al.'s research [35,45]. Contextual and population factors may account for these inconsistencies, potentially moderating the link between gender and foreign language writing strategy use. According to Carter's gender socialization and identity theory, family and societal expectations for males and females can shape students' cognition and behavior [46]. Cognition and emotion are reciprocally regulated, and socio-cognitive perceptions play a role in shaping the range of emotions learners experience [47]. In the Chinese context, families and society may hold comparable expectations for male and female students in developing foreign language writing skills, which may result in similar attitudes toward learning engagement. In addition, students generally have access to relatively equal educational opportunities in English classes regardless of gender. As a result, male and female learners tend to show little variation in classroom participation, responsiveness to teacher feedback, and engagement in writing practice, which may explain the consistency observed in both emotional dimensions and strategy use. Gender showed a small effect on FLWE, indicating a slight tendency that may emerge more clearly in studies with larger samples.

Secondly, the findings revealed that major significantly influenced FLWB, FLWE, and EWS use among Chinese undergraduates. Compared with non-English majors, English majors exhibited higher levels of FLWE, lower levels of FLWB, and more frequent use in EWS. According to Kaplan, contrastive rhetoric refers to the ways in which one's first language shapes writing in a second language [48]. Students majoring in English typically engage with more language courses and writing tasks, receiving greater feedback and strategic guidance from instructors. Consequently, they may develop greater familiarity with English rhetorical conventions, such as paragraph organization and logical development, and employ a wider range of English writing strategies, whereas non-English majors may continue to rely more heavily on native-language thought patterns. When undertaking foreign language writing tasks, English majors are more likely to draw on their knowledge base and employ a wider range of L2 writing strategies to ease cognitive load. According to Pekrun's control-value theory, these factors may foster a stronger sense of interest and control, thereby generating greater enjoyment and reducing boredom in English writing [7]. In addition, major type exerted medium-to-large effects on FLWB and EWS use, pointing to meaningful practical implications, but only a small-to-medium effect on FLWE, suggesting limited practical impact.

Thirdly, results indicated that students' grade level did not significantly influence FLWB, FLWE, or EWS use. The results concerning EWS use contrast with Bai et al.'s study, which investigated L2 writing strategies among primary students [35]. This difference may be caused by different academic levels of participants and learning motivation. According to Pekrun's control-value theory, learners' academic emotions are primarily

shaped by their perceived control over tasks and the value they assign to them, rather than by grade level alone [7]. At the undergraduate level, students may be exposed to similar course content and assessment systems in English writing. Such uniformity in teaching and evaluation may limit changes in learners' perceived control, value, and strategy use across grade levels, thereby contributing to the absence of significant differences in FLWE, FLWB, and EWS use. Although the differences were not statistically significant, all effect sizes were small, suggesting a minor tendency that may become apparent with a larger sample.

Finally, the study revealed that self-perceived English proficiency significantly affected both FLWB and FLWE. As self-perceived English proficiency increased, FLWB decreased significantly, whereas FLWE increased significantly. According to Pekrun's control-value theory, students with higher self-perceived language proficiency may possess a stronger sense of control and a clearer recognition of the value of learning English [7]. Consequently, they are more likely to experience positive emotions such as enjoyment and less likely to experience negative emotions such as boredom. However, no significant difference in FLWB was observed between students with intermediate and low self-perceived proficiency, which may be attributable to their similarly limited sense of control and comparable perceptions of the importance of English writing. Moreover, self-perceived English proficiency was shown to have a significant impact on learners' EWS use. According to Bandura's self-efficacy theory, self-perceived English proficiency shares similarities with self-efficacy, as both represent subjective self-assessments of one's abilities [49]. Existing research have explored the relationship between self-efficacy and L2 writing strategies [33,34]. Students with higher self-perceived English proficiency may be more likely to employ behaviors such as L2 writing strategies when undertaking writing tasks. The medium-to-large effect sizes observed indicate that self-perceived proficiency is a key variable influencing FLWB, FLWE, and EWS use, with considerable practical significance.

4.3. Implications

Firstly, teachers' praise, encouragement and feedback are important sources for stimulating FLWE. In teaching practice, teachers should be aware that their own emotional expression and feedback have a profound impact on students' writing experience, and they should convey more positive expectations and encouraging words to students. Secondly, the social strategies used by undergraduates to communicate with native speakers are the least frequently employed in English writing strategy. Chinese universities need to provide more occasions or opportunities for the use of real language, such as introducing foreign teacher collaborative writing programs to assist students. Thirdly, universities should enhance the authenticity of writing tasks, provide timely feedback, and offer explicit strategy instruction, especially for non-English majors, to reduce major-related disparities in writing emotions and strategy use. Finally, since self-perceived English proficiency significantly shapes learners' emotional experiences and strategic behaviors, teachers should design appropriately challenging tasks, deliver supportive feedback, and help students build confidence in their writing ability. Strengthening learners' perceived competence can enhance positive emotions, reduce negative ones, and promote more frequent use of effective strategies. These measures can foster more adaptive emotional and strategic engagement in foreign language writing.

4.4. Limitations and Recommendations

This study has several limitations. First, the sample was drawn from a single university, which limits the representativeness of the findings; future studies should include more diverse institutions to enhance generalizability. Second, the study relied solely on self-report questionnaires, which may be subject to response bias; subsequent research could incorporate mixed methods such as observations or think-aloud protocols.

Third, the subdimensions of foreign language writing emotions and writing strategies were not examined in sufficient depth; future work should investigate specific emotional facets and strategy types to provide a more fine-grained understanding of learners' writing processes.

5. Conclusion

Overall, the current study explored the levels of FLWB, FLWE and EWS use for Chinese undergraduates firstly. Then it explored the influence of learner variables including gender, major type, grades and self-perceived English proficiency on FLWE, FLWB and EWS use. The levels of FLWE, FLWB and EWS use reported by Chinese undergraduate students were all moderate levels. Among the sub-dimensions of FLWE, the teacher-related SWE in FLWE was the main source. Regarding EWS use, the writing strategy most frequently used by students was the L1 use strategy, and the one with the lowest usage frequency was the social strategy. In terms of learner variables, gender and grades had no statistically significant impacts on FLWE, FLWB, and EWS use. Both major type and self-perceived English proficiency had statistically significant impacts on FLWE, FLWB and EWS use. In other words, students in English-related majors and those with higher self-perceived English proficiency have higher FLWE, lower FLWB and more frequent EWS use. This study offers several theoretical contributions. First, by documenting the levels of foreign language writing emotions (FLWE, FLWB) and writing strategy use among Chinese undergraduates, it enriches the limited context-specific evidence on L2 writing affect and strategic behavior in Chinese higher educational settings. Second, the findings highlight the significant role of learner variables, specifically major type and self-perceived English proficiency, in shaping students' emotional experiences and strategy-use patterns. This extends individual-difference research in L2 writing by demonstrating how structural (major-related) and psychological (self-perceived competence) factors contribute to variability in writing-related emotions and behaviors. Third, the study provides an updated empirical profile of Chinese university students' writing experiences, offering a foundation for future theoretical refinement of L2 writing emotion and strategy frameworks. At the end of the study, the teaching implications and limitations based on the research findings were also discussed. Teachers and educational institutions should adopt corresponding actions to promote FLWE, FLWB and EWS use. Future research could further expand sample size and explore more details based on this research.

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