

A Study on the Influence of Negative Transfer of Mother Tongue on College English Writing

Wei Guo*

School of Foreign Languages, Dalian University of Technology, Dalian, Liaoning, China

**Corresponding author: Wei Guo.*

Abstract

English writing is widely viewed as the most critical component among the four basic English skills. While college students command foundational vocabulary and grammar, they often fail to produce natural, idiomatic English writing, indicating the necessity of further research into English writing pedagogy. Guided by Language Transfer Theory and Error Analysis, this study randomly selected 372 students from Nanjing Forestry University, collected questionnaires and writing assignments, and quantitatively and qualitatively analyzed 163 valid samples, classifying errors into morphological, lexical, syntactic and discourse levels. The results show that college English writing errors are closely related to negative mother tongue transfer: 82% of students outline and revise in Chinese, showing strong reliance on their mother tongue; morphological errors account for the highest proportion (31.1%), followed by lexical (24.89%), syntactic (23.89%) and discourse errors (14.03%), with articles, noun number and verb misuse being the most frequent mistakes, mainly caused by linguistic and thinking differences between Chinese and English. This empirical study enriches relevant research on negative transfer and aims to provide pedagogical implications for college English writing teaching, helping students reduce the influence of mother tongue transfer and improve their English competence through joint efforts of teachers and students.

Keywords

negative transfer, error analysis, mother tongue interference

1. Introduction

From a historical perspective, research on language transfer has generally undergone three major developmental phases. The first phase, from the 1950s to the 1960s, was closely associated with behaviorist theories and laid the foundation for the Contrastive Analysis Hypothesis (CAH), which holds that second language (L2) learning is systematically influenced by the learner's first language (L1), and that differences between languages determine learning difficulty [1].

The second phase, emerging in the late 1960s and 1970s, witnessed increasing criticism of this view under the influence of generative linguistics. Scholars argued that learner errors cannot be explained solely by L1 transfer, but are also shaped by intralingual processes such as overgeneralization and developmental factors [2].

Since the late 1970s, language transfer has been reconceptualized as a complex cognitive and contextual process. It is now widely understood as a dynamic phenomenon that can either facilitate or hinder language learning depending on multiple factors) [3]. Empirical research has shown that transfer frequently occurs at the morphological and syntactic levels, where learners tend to rely on L1 as a compensatory strategy when facing difficulties in L2 production [4]. Such influence is particularly evident in writing, where linguistic limitations are more likely to surface [5]. In particular, negative transfer may lead to persistent grammatical and lexical errors, which significantly affect the accuracy and quality of L2 writing, especially in EFL contexts such as China.

However, despite extensive research on language transfer, relatively limited attention has been paid to how negative transfer specifically manifests in college English writing and what factors contribute to such errors in actual learner production [6]. Therefore, based on authentic samples of students' writing, this study aims to examine errors in college English writing and explore the factors contributing to these errors, with particular attention to language transfer. It is expected that the findings will provide pedagogical insights for improving writing instruction and help reduce the negative impact of L1 transfer.

2. Research hypotheses

Previous studies have shown that negative transfer of mother tongue is closely associated with learners' English writing errors, and students' over-reliance on their native language in writing preparation further exacerbates such errors. Meanwhile, linguistic and thinking differences between Chinese and English lead to uneven distribution of error types across different linguistic levels. Thus, this study proposes the following hypotheses:

Hypothesis 1: In college English writing, errors caused by negative mother tongue transfer can be categorized into four basic types: morphological errors, lexical errors, syntactic errors, and discourse errors, with morphological errors being the most frequent.

Hypothesis 2: The primary causes of errors resulting from negative mother tongue transfer are the linguistic differences (e.g., grammar, vocabulary systems) and cognitive/thinking pattern differences between Chinese and English, which lead to learners' inappropriate transfer of L1 rules to L2 writing.

3. Methodology

3.1 Research questions:

Based on the theories of negative transfer, employing the methods of Error Analysis, the study aims to answer the under-mentioned questions.

- 1) In college English writing, what are the basic types of errors caused by negative transfer?
- 2) What are the probable reasons of the errors caused by the negative transfer?

3.2 Participants

The participants in this study consisted of 372 students from Nanjing Forestry University, including 278 freshmen and 94 sophomores ($M = 18.51$, $SD = 0.58$). They were drawn from a range of academic disciplines, including the School of Forestry, School of Finance and Management, School of Mechanical and Electronic Engineering, School of Humanities and Social Sciences, School of Information Science and Technology, and School of Landscape Architecture. Participants from diverse academic backgrounds were intentionally selected to enhance the representativeness of the sample, as these majors cover a wide range of disciplinary orientations. Overall, the sampling design ensures the representativeness and validity of the data, allowing the findings to better reflect the general situation of college English writing among non-English majors.

3.3 Writing task

In this study, participants were required to complete a timed writing task on the topic The Importance of Waste Sorting. Specifically, they were instructed to produce a coherent essay of approximately 350 words

within 30 minutes. These written texts served as the primary data corpus, providing authentic samples for subsequent analysis of students' writing performance and linguistic features.

3.4 Questionnaire

This study employed a questionnaire consisting of 15 items. The first 13 items were designed to investigate the extent to which students rely on their first language (L1) during English writing, while the final two items focused on their attitudes and strategic choices in the writing process. The questionnaire was administered to all participants, who were given 10 minutes to complete it. After collection, only valid responses were retained for further analysis.

The design of the questionnaire was informed by recent studies on second language writing and cross-linguistic influence, particularly those examining learners' writing processes, strategies, and difficulties [7, 8]. The questionnaire covered aspects such as writing procedures, habitual strategies, challenges encountered during writing, and the solutions learners tend to adopt subconsciously. This design enabled the researcher to capture the extent and nature of L1 transfer in students' English writing, as well as to explore the underlying causes of learner errors.

4. Empirical analysis

4.1 The analysis of questionnaire

From the feedback of the questionnaires, we can find that students' writing are apparently interfered by mother tongue transfer. The statistic data of questionnaire are as follows.

Figure 1: The percentage of learners organizing structure in Chinese in advance



Based on these statistics, it is easy to find that most of students resort to mother tongue to organize the writing. Only a few prefer to design the composition in English. From the above depicted pie chart, we are able to notice that the percentage of learners always and often adopting Chinese mode to conceive English writing account for 41.67% and 41.4% respectively, which indicate the relatively highest. In rough contrast, only 4.84% of the total seldom write down their composition with the assistance of Chinese thinking, while lots of English learners never applying Chinese thinking is the lowest, being 1.61%. The statistics reveals that the vast majority of English learners are apt to conceive their English composition through their mother tongue thinking before their writing.

Figure 2: The percentage of learners revising the writing by translating the English into Chinese



The above Figure 2 reflects that the percentage of learners always and often revising their English writing by translating English into Chinese account for 35.75% and 27.42% respectively, indicating strongly that English learners are inclined to seek help towards their mother tongue during the language learning process.

Among the 15 questions, the first two questions focus on the impact of negative transfer on English writing. By virtue of the data collection and further analysis, the author has drawn the conclusion that only a small part of the research subjects would apply the English strategies and thinking mode to handle their English writing assignments, while, to a large degree, most of the participants would tend to derive support from their mother tongue to provide some expression and production. Moreover, the design of question 3 aims at exploring the impact on vocabulary; question 4 to 5 concentrate on the impact on discourse; question 6 to 9 target on the impact on the syntax, question 10 to 14 focus on the revising habits in writing process. And the last question is designed to figure out the attitude towards the mother tongue negative transfer on English writing. The data collection about these questions left are as follows:

Table 1: Data collection on the negative transfer of mother tongue

	Always	Often	Sometimes	Seldom	Never
1	41.67%	41.4%	10.48%	4.84%	1.61%
2	13.48%	23.18%	38.01%	22.1%	3.23%
3	3.49%	7.26%	32.53%	46.51%	10.22%
4	14.29%	29.65%	25.88%	26.15%	4.04%
5	18.06%	42.59%	32.35%	5.39%	1.62%
6	5.12%	23.99%	43.13%	22.37%	5.39%
7	10.78%	29.65%	35.31%	21.02%	3.23%
8	11.59%	37.74%	37.2%	11.05%	2.43%
9	9.7%	23.18%	31%	31.54%	4.58%
10	25.07%	38.27%	22.64%	12.13%	1.89%
11	15.63%	35.85%	27.49%	18.33%	2.7%
12	9.97%	23.72%	34.5%	28.57%	3.23%
13	11.05%	26.42%	37.2%	21.29%	4.04%
14	12.67%	32.08%	31.81%	19.68%	3.77%

Table 1 has shown the proportion and contrast at length, which has obviously reflected that the mother tongue negative transfer has, in deed, exert far-reaching impacts on the English writing errors for non-English majors. The answers of the question 3 reveal that only 3.49% of the total think that they have built extensive vocabulary system. Meanwhile, when expressing their own ideas and views, there are the ignorance of the use of the conjunctions between any two sentences, which violates the rule of grammar——39.36% of the total samples fail to pay attention to the coherence among sentences under the help of conjunction. From the above tables, it is apparent that most of the students are used to apply Chinese thinking to organize the English composition before writing. At last, after fulfilling one writing task, 51.2%

of the total tend to translate the article into Chinese to secure they have achieved clarity, which is sometimes a regular Chinglish style, being unfavorable for their second language acquisition.

Although the students are aware of the negative influence on English learning, they still consciously resort to the mother tongue. With limited vocabulary, students tend to use mother tongue to create the content and make an outline in Chinese in mind and then translate them into English. Finally, revise the writing instead by translating the English into Chinese to examine the fluency and meaning, leading to the consequences of errors in the level of morphology, lexical, syntax and discourse.

4.2 Writing Samples

A total of 163 writing samples were selected from 372 English learners across three academic majors to analyze their writing errors from morphological, lexical, syntactic, and discourse perspectives, with the aim of clarifying the impact of negative transfer. These samples, consisting of online assignments, were collected via Pigai Website—a pedagogical platform that provides automated essay correction through corpus-based and cloud computing technologies. The platform is widely adopted by approximately 20 million users, including students from prestigious Chinese universities such as Tsinghua University, Nanjing University, and Fudan University. Through this platform, instructors can access detailed statistical reports on students' writing performance, enabling more precise and objective assessment and feedback. Timely scoring and error identification are also provided, which enhance the efficiency of teacher correction and support students' writing development. Following data collection, the author classified the errors and performed quantitative analysis using appropriate statistical tools.

The statistics are as follows.

Table 2: The proportion of linguistics errors in students' writing

	Category	Frequency	Percentage
Linguistics Errors	Morphology Level	82	31.10%
	Lexical Level	55	24.89%
	Syntax Level	53	23.98%
	Discourse Level	31	14.03%

Various errors of each level is detected from students' online assignments from Pigai Website, as previously mentioned. Tasks of errors classification are fulfilled by the author herself with the help of abacus.

The statistics are as follows.

Table 3: Errors from various linguistics level

Morphology Level	Article	42	19%
	The number of nouns	31	14.03%
	Non-finite verb	9	4.07%
Lexical Level	Misuse of adjective	5	2.26%
	Misuse of verb	26	11.76%
	Errors in preposition	17	7.69%
	Misuse of noun	7	3.17%
Syntax Level	Errors in word order	6	2.71%
	Errors in accordance	21	9.5%
	Sentence pattern	3	1.36%
	Negation	3	1.36%
	Tense	4	1.8%
	Subject	4	1.8%
	Subordinating and coordinating conjunctions	12	5.43%
Discourse Level	Lack of cohesive devices	6	2.71%
	Discourse pattern	4	1.8%
	Personal pronoun	21	9.5%
Total		221	100%

The table 3 has explicitly revealed the diverse percentage of that various kinds of errors caused by mother tongue negative transfer may make up. From the above data, almost all categories of the errors are listed respectively in the table 2-5. It is obvious to find that errors in article, the number of nouns and the misuse of

verb are most frequently occurred, respectively accounting for 19%, 14.03%, 11.76%. Meanwhile, it cannot be neglected that errors in word order at syntax level and errors in personal pronoun at discourse level comprise relatively high percentage of the total, respectively accounting for 9.5%. In addition, it is also worthwhile to notice that errors in preposition make up relatively high among lexical level, accounting for 7.69%, due to the differences between the Chinese and English.

In a nutshell, errors caused by negative transfer of mother tongue comprise the main part in students' English writing, mirroring that the influence of mother tongue negative transfer is, to a large extent, adverse to college English writing as well as English learning.

4.3 Error analysis in negative transfer

4.3.1 Morphology level

(1) Articles

In English, article serves as an indispensable linguistic element, but it is quite different in Chinese. The absent article in Chinese makes students rarely understand, let alone employ it. More often than not, it's hard for students to distinguish whether or not to use it and how to use it. Therefore, errors related to article emerge in writing.

- (1) To sum up, waste sorting is really a urgent task which we need to take immediately. ×

To sum up, waste sorting is really an urgent task which we need to take immediately. √

One of the most ubiquitous errors can be identified as the overuse of the article. For example:

- (2) Only in this way can we be harmonious with the nature and the environment. ×

Only in this way can we be harmonious with nature and the environment. √

What's more, the omission of the article has become another prevailing errors in writing. To put it another way, the indefinite article "a" and "an" is normally used before the singular countable noun, representing "a certain, anyone, everyone", while the definite article "the" expresses a kind of definiteness. For example:

- (3) So far, waste sorting hasn't been a prevailing lifestyle, in spite of the effort that government has put into it. ×

So far, waste sorting hasn't been a prevailing lifestyle, in spite of the effort that the government has put into it. √

- (4) It's beneficial to sustainable development of globe. ×

It's beneficial to sustainable development of the globe. √

Some English language habits find ultimate expression in fixed collocation and are often flexible. The accumulation in daily learning process entails. For example:

- (5) Waste sorting could be based on the different ingredients to dispose the large number of garbage. ×

Waste sorting could be based on the different ingredients to dispose a large number of garbage. √

- (6) Under this circumstances, there will be lots of harm if we don't classify garbage. ×

Under the circumstances, there will be lots of harm if we don't classify garbage. √

From Examples (5) and (6), it can be observed that insufficient attention has been paid to the acquisition of fixed collocations in students' learning process. However, the mastery of such collocations requires sustained exposure and practice rather than simple memorization.

Taking Sentence (6) as an example, learners tend to translate directly from their first language (L1) Chinese into English, resulting in the non-native-like expression *under this circumstances*. This form does not conform to standard English collocation rules, as the grammatically accurate, conventionalized expression should be *under these circumstances*.

This example illustrates that negative transfer from the mother tongue can lead to inappropriate collocational usage, thereby affecting the accuracy of second language (L2) production.

(2) The number of nouns

Morphological changes in Chinese are relatively simple and limited, whereas such changes are far more abundant in English. Although both Chinese and English encode the grammatical category of number in nouns, Chinese marks plurality explicitly only on nouns referring to human referents by attaching a plural suffix. For inanimate nouns, plurality is typically indicated through modifiers or quantifiers rather than through nominal inflection.

In English, by contrast, nouns are distinguished as countable or uncountable, and their plural forms are further divided into regular and irregular patterns. It is therefore necessary to analyze errors related to noun number in learners' writing.

The omission of suffix -s or -es.

(7) Firstly, resource can be recycled and reused by efficient measure. ×

Firstly, resources can be recycled and reused by efficient measures. ✓

(8) Recyclable materials mainly include waste paper, plastic, glass, metal and cloth. ×

Recyclable materials mainly include waste paper, plastics, glasses, metals and cloths. ✓

From Examples (7) and (8), it is evident that errors involving the omission of inflectional affixes are primarily attributed to learners' inadequate focus on morphological inflections. Unlike English, where noun plurality is grammatically marked by the addition of suffixes (-s/-es), L1 Chinese does not employ morphological changes to distinguish between singular and plural noun forms—for instance, a single lexical item is used to convey both “adolescent” (singular) and “adolescents” (plural). Specifically, Sentence (7) exhibits a typical error derived from this cross-linguistic difference: when translating the L1 Chinese equivalent of “efficient measures” into English, learners failed to add the required plural suffix, as the source language does not require such inflectional marking. Additionally, learners' reliance on L1-based sentence construction, organizing thoughts in Chinese first before translating them into English, exacerbates these errors, as they often overlook the necessity of English suffixes for number marking. Countable and uncountable nouns.

Abstract noun is a type of noun, which focus on action, condition, quality or other abstract concepts and most of them cannot be seen. They are normally uncountable. For example:

(9) So it's time for us to call on all the people around to pay attention to waste sorting and take actions. ×

So it's time for us to call on all the people around to pay attention to waste sorting and take action. ✓

(10) Our government made these regulations to control this thorny problem×

Our government made this regulation to control this thorny problem. ✓

(11) This is a serious problem where more attentions should be paid. ×

This is a serious problem where more attention should be paid. ✓

The above examples clearly indicate that students lack a clear understanding of uncountable nouns, which are typically abstract in nature and do not take plural forms such as -s or -es. This suggests that negative transfer from the mother tongue may create difficulties in distinguishing between countable and uncountable nouns. Taking Sentence (11) as an example, the modifier in the L1 Chinese expression corresponding to this sentence may lead students to treat the word “attention” as a countable noun, resulting in the incorrect form “attentions”. However, “attention” is an uncountable noun in English and should not be pluralized in this context. This example further demonstrates that negative transfer from the first language can influence learners' grammatical choices, thereby affecting the accuracy of English writing.

(3) Non-finite verb

At the same time, English verbs can be divided into two types: the first one is finite ones as well as the second one is non-finite ones. As for non-finite verbs, it could be divided into the following three parts,

namely, the infinitive form, -ing participle and -ed participle. In Chinese, there are few inflectional changes, laying bare differences between finite-verbs and non-finite verbs. Conversely, in English, only single finite verb is required in a sentence to represent the predicate verb, with other verbs inflected into the non-finite ones.

For example:

(12) We could make great influence by put efforts to waste sorting. ×

We could make great influence by putting efforts to waste sorting.√

(13) Firstly, in our daily life, we often produce a lot of garbage, throw them without sorting is not only good for environment protection, but also bring inconvenience to our life. ×

Firstly, in our daily life, we often produce a lot of garbage, throwing them without sorting is not only good for environment protection, but also bring inconvenience to our life. √

(14) First of all, it will cause a great amount of waste of recyclable resources which can be made into other projects without use brand new resources. ×

First of all, it will cause a great amount of waste of recyclable resources which can be made into other projects without using brand new resources. √

(15) In recent years, although the government of many cities has introduced the waste sorting policy, waste sorting is still ignore by many people.×

In recent years, although the government of many cities has introduced the waste sorting policy, waste sorting is still ignored by many people. √

Another typical error caused by L1 negative transfer is reflected in the incorrect use of verb forms after prepositions, as shown in Sentence (12). In L1 Chinese, the verb following a preposition (equivalent to the preposition “by” in English) does not require any affix modification. This linguistic feature may mislead learners when constructing English sentences: in English, a verb must take the -ing form if it follows a preposition. Specifically, when translating the L1 Chinese expression conveying the meaning of “by striving to carry out garbage classification, we can have a great impact on the environment” into English, learners often fail to add the -ing affix to the verb after the preposition, resulting in ungrammatical errors in Sentence (12). This further confirms that L1 negative transfer can interfere with learners’ grasp of English grammatical rules, leading to inaccuracies in writing.

4.3.2 Lexical Level

(1) Misuse of adjective

In English, the adjective must be placed after the linking verb to construct the S+V+Cs. It represents the predicate in a sentence. In Chinese, however, the adjective can be simply placed after the subject, which is similar to the usage of verb. Due to the influence of mother tongue thinking, it is often the case that students misuse the adjective as the verb and directly use the adjective as a predicate. What’s more, they cannot distinguish whether it is the appropriate adjective to specify the following nouns.

(16) However, people seldom have such environmental conscious.×

However, people seldom have such environmental consciousness.√

(17) Besides, there are many recyclable waste in our daily life, such as, metal, paper, plastic.×

Besides, there are much recyclable waste in our daily life, such as, metal, paper, plastic.√

(18) I uphold that it is more easy to create an environmentally friendly atmosphere. ×

I uphold that it’s easier to create an environmentally friendly atmosphere.√

(19) Most of people aware of the seriousness of the environmental issues. ×

Most of people are aware of the seriousness of the environmental issues. √

Sentence (19) illustrates a common interlingual error: participants mistakenly use an adjective as a verb, a deviation rooted in fundamental grammatical differences between L1 Chinese and English. Specifically, L1 Chinese allows a single lexical item (corresponding to the semantic field of "awareness") to operate as a verbal predicate, whereas English restricts the term "aware" to adjectival function, which prohibits its use as a predicate. To conform to English grammatical norms, the collocational pattern "be aware of" must be employed to convey the intended meaning.

Furthermore, learners lack a clear grasp of English comparative degree formation rules for adjectives and adverbs: multi-syllabic adjectives/adverbs (i.e., those with more than two syllables) generally rely on the intensifier "more" to express comparison, as opposed to the inflectional suffix "-er"; the reverse applies to monosyllabic and disyllabic items. For instance, Sentence (18) contains the disyllabic adjective "easy", which does not require the intensifier "more" to form its comparative degree. In contrast, L1 Chinese employs a single grammatical morpheme (semantically equivalent to "more") to mark comparison universally, irrespective of the syllable count of the adjective. This cross-linguistic discrepancy further confirms that L1 negative transfer is a primary contributor to errors in learners' English writing.

(2) Misuse of verb

In English, the verb fall into transitive verb and intransitive verb. A transitive verb is a verb that takes one or more objects, such as buy, catch, invent, found, like, offer, prevent, receive, select, etc. This contrasts with intransitive verbs, which do not have objects, such as agree, go, work, listen, come, belong, exist, etc. However some verbs can be used as both transitive verb and intransitive verb. Therefore, it is hard for students to fully command the usage of verbs, hence the emergence of errors. For example,

(20) With the development of science and the improve of the quality of life, there are more and more pestering problems in our living environment. ×

With the development of science and the improvement of the quality of life, there are more and more pestering problems in our living environment. √

(21) As is known to all, our country has launched on waste sorting. ×

As is known to all, our country has launched waste sorting. √

(22) Identifying the dry refuse and wet garbage and then put them into the appropriate bin. ×

Identifying the dry refusal and wet garbage and then put them into the appropriate bin. √

(23) In addition, by these measures we can improve our awareness of protect the environment. ×

In addition, by these measures we can improve our awareness of protection the environment. √

(24) Everyone should join in the garbage classification team! ×

Everyone should join the garbage classification team! √

From the previous data collection of questionnaire, it is easy to find that around 78% of the total participants showed that they have difficulty in distinguishing the transitive verb from intransitive verb. Taking sentence (21) as an example, the participant may mistook the transitive verb "launch" as an intransitive verb for some reason. So as the sentence (24). When "join" is used as an intransitive verb, it has to be employed together with the preposition "in" to express the behavior to take part in an activity. However, when it comes to being used as a transitive verb, it has to be used alone to express the behavior to become a member of an organization. In one word, due to the various usage of the verb in English, the misuse of the verb seems to be frequent in college English writing.

Moreover, students often mistakenly use nouns as verbs, another interlingual error driven by L1 interference. Specifically, L1 Chinese permits a single lexical item (corresponding to the semantic field of "improvement/improve") to serve as both a noun and a verb without morphological modification, as demonstrated in Sentence (20). English, however, imposes strict morphological distinctions: "improve" is exclusively a verb, and its nominal counterpart must be formed by adding the derivational suffix "-ment" to form "improvement". It is therefore evident that such errors are, to a significant extent, attributed to the impact of L1 negative transfer.

(3) Errors in preposition

An analysis of errors in the writing samples reveals that prepositional errors account for 7.69% of the total, representing a relatively high proportion. Students often find it challenging to master the collocations and usage of English prepositions. Furthermore, second language learning is inevitably affected by learners' first language.

In Chinese, certain expressions corresponding to prepositional meanings in English may function as verbal elements in a sentence. As a result, learners frequently fail to distinguish between prepositions and verbs in English, leading to inappropriate usage in their writing.

(25) Because of the imitation of ear resources, ignoring waste sorting will have a negative effect to the earth.×

Because of the imitation of ear resources, ignoring waste sorting will have a negative effect on the earth.√

(26) It is beneficial for our society.×

It is beneficial to our society.√

(27) For example, government and officials can put up some signs to inform people to sort out the rubbish they throw in advance.×

For example, government and officials can put up some signs to inform people of sorting out the rubbish they throw in advance.√

(28) When we deal with garbage, it will do harm for our environment without waste classification.×

When we deal with garbage, it will do harm to our environment without waste classification.√

(29) In the same time, we have the duty to remind others. ×

At the same time, we have the duty to remind others. √

Due to the extensive use of prepositions, Chinese learners struggle to follow the habitual or idiomatic usage of certain English words, resulting in prepositional errors. Sentence (28) shows that participants were confused about the difference between “be harmful to” and “do harm to”. Additionally, Sentence (25) illustrates the incorrect use of the preposition “to”; the grammatically correct one is “on”. Chinese structures meaning “causing harm to” or “bringing negative impacts to” are similar to “do harm to”, making students mistakenly think “to” should follow words with negative meanings. However, English is different: it has numerous collocations, and different words may not match the same preposition. Correct examples are “cause negative effects on”, “be beneficial to”, “inform sb. of sth.” and “at the same time”. Clearly, English learning involves more than just memorization for students.

(4) Misuse of noun

Apart from the errors in the number of nouns in 2.4.1.2, misuse of noun is also a common type of errors in English writing, which accounts for 3.17% of the total errors. Specifically, misuse refers to the fact that students may use the nouns incorrectly, affecting the unity or meaning of the sentence. However, in rough contrast, the verbs and nouns in English are quite different from each other distinctly. Due to the distinction between the two languages, the research subjects would combine the character of Chinese nouns with the usage of English words; as a consequence, students may get confused and make errors. For example:

(30) It is importance for humans to sort waste.×

It is important for humans to sort waste.√

(31) From what above-mentioned words, I would advice people to make joint efforts to protect the environment.×

From what above-mentioned words, I would advise people to make joint efforts to protect the environment.√

(32) Therefore, the government should make the most of devises to strengthen the popularity of waste sorting.×

Therefore, the government should make the most of devices to strengthen the popularity of waste sorting.√

As a matter of fact, there is no straightforward equivalence between two languages. In Chinese, a single lexical item can serve multiple parts of speech without morphological changes. Nevertheless, English differs distinctly in this regard, as it requires affixes to be added to the root word to alter its part of speech. Chinese learners often neglect the changes in parts of speech during English acquisition, leading to the frequent occurrence of such errors. This phenomenon is thus referred to as the negative transfer of mother tongue. Taking Sentence (32) as an illustration, “devise” functions as a verb, and a derivational affix must be added to it to form its nominal counterpart, namely “device”.

4.3.3 Syntax Level

For lack of proficiency in English and the great gap between English and the mother tongue, students are inclined to conceive and design the English writing by mother tongue in advance. However, the differences of sentence structure between mother tongue and English raise the possibility of committing errors in syntax.

(1) Errors in word order

Due to the diversity of the cultural background, different nationalities always have their own ways of thinking so that the language sequence differ when people describe one objective fact. The basic word order of English and Chinese are, to some extent, similar with each other, for both two languages adopt the sentence structure of “SVO”. However, the occurrence of inverted sentences of English is relatively more frequent than Chinese, for example, it is required to put all the predicate in front of subject to create the structure of fully inverted when prepositional phrase is used as the adverbial at the beginning of the sentence. For the absence of this situation in Chinese, hence, errors often emerge in English writing.

For example:

(33) It can save the money and the time for a country to deal with waste and it also can enhance the quality of people.×

It can save the money and the time for a country to deal with waste and it can also enhance the quality of people.√

(34) Finally, it also is harmful to people’s health.×

Finally, it is also harmful to people’s health.√

(35) A few people already have this awareness, but most of them are not used to sorting waste.×

A few people have already this awareness, but most of them are not used to sorting waste.√

Due to the fact that L1 thinking patterns have been firmly established in second language learners’ cognition, it is inevitable that their L2 production sometimes follows the word order of their mother tongue, which is neither semantically natural nor grammatically acceptable in English. Sentence (33) serves as a typical illustration of this issue, as the sentence structure adheres to L1 word order conventions rather than those of English.

In the corresponding L1 expression, a connective item equivalent to “also” typically precedes the modal marker, which leads Chinese learners to unconsciously transfer this ordering into English by placing “also” before “can”. This arrangement differs considerably from conventional and idiomatic English usage. Accordingly, the negative transfer of the mother tongue inevitably exerts adverse effects on second language acquisition.

(2) Errors in agreement

Agreement may be defined as requirement that the forms of two or more words of specific word classes that stand in specific syntactic relationship with one another shall be characterized by the same paradigmatically marked category of categories, e.g. “Woman runs.” In Chinese, however, people don’t

have to pay attention to changes of inflectional morpheme “-s” or “-es” after the predicate when the subject of the sentence is the third-person singular. Thus, students are possible to commit errors in agreement.

For example:

(36) In this way, our country and our environment is bound to be better.×

In this way, our country and our environment are bound to be better.√

(37) Some cities has issued some laws and regulation to encourage people to participate in it.×

Some cities have issued some laws and regulation to encourage people to participate in it.√

(38) Waste may also produce harmful substances, which not only pollute the environment, but also damage human health.×

Waste may also produce harmful substances, which not only pollutes the environment, but also damage human health.√

(39) Nowadays, waste sorting are not commonplace.×

Nowadays, waste sorting is not commonplace.√

(40) People is supposed to throw different kind rubbish into different bins.×

People are supposed to throw different kind rubbish into different bins.√

In English, predicate verbs are required to agree with their subjects in person and number. This grammatical feature, however, differs significantly from Chinese, which lacks a strict subject-verb agreement system. In Chinese, few morphological changes are made to predicate verbs to mark such agreement.

Taking Sentence (41) as an illustration, the corresponding expression in the learners' first language does not involve any inflectional changes in the modal or verbal element to agree with the subject. This stands in sharp contrast to English, where the copula verb *be* must be inflected as *are* to agree with the plural subject *people*.

Such errors therefore arise from entrenched L1 thinking patterns. In other words, they are caused by the negative transfer of the mother tongue.

(3) Sentence pattern

Languages serve as a mirror of thinking. In English, passive voice is frequently employed in both daily communication and academic writing, especially when the agent of an action is unspecified or irrelevant. In contrast, Chinese tends to emphasize the agent explicitly, and passive markers are overtly expressed. Apart from difficulties in distinguishing between active and passive constructions, learners also experience L1 interference with the *there be* structure. In English, both *have* and *there be* may convey the idea of existence or possession, which correspond to a single expression in Chinese. Consequently, students tend to confuse the use of *is* and *has* in such structures.

(41) waste sorting regard as a crucial measure to promote the quality of life.×

waste sorting is regard as a crucial measure to promote the quality of life.√

(42) The benefits of garbage classification are many.×

There are many benefits of garbage classification.√

(43) It has a long way to go to undertake waste sorting completely.×

It is a long way to go to undertake waste sorting completely.√

Taking Sentence (42) as an example, Chinese learners tend to translate the utterance literally according to their L1 syntactic patterns, which often results in non-idiomatic English expressions. The conventional English structure should be “There are many benefits of garbage classification.”

Similarly, the errors in Sentence (43) also arise from literal translation. Learners directly map the L1 existential meaning onto the English verb *have*, producing ungrammatical output that does not follow the fixed English pattern “it is a long way to go to...”.

It can therefore be concluded that such errors are clearly attributed to the negative transfer of the mother tongue.

(4) Negation

In English, the negation fall into full and partial negation, such as *all*, *both*, *everyone*, *everything*, *whole*, *always*, *altogether*. If these words appear with “not” to express negation, it is the phenomenon of full negation rather than partial negation. The marking words like *none*, *no one*, *neither*, *nobody*, *nowhere* and *never* are used to express full negation. This thinking is far different from Chinese. Therefore, the sentence they translated are likely to exist errors, if students do not try to cast off the Chinese thinking in English writing.

For example,

(44) Everyone of us cannot discount the importance of environmental protection.×

Anyone of us cannot discount the importance of environmental protection.√

(45) In other words, everyone cannot be blind to the polluted water.×

In other words, no one can be blind to the polluted water.√

(46) If most people ignore the protection of the environment, any creature would not exist in the end.×

If most people ignore the protection of the environment, every creature would not exist in the end. √

(47) People think it is not important to classify the garbage. ×

People don't think it is important to classify the garbage.√

Generally speaking, when main clause predicates such as *suppose*, *believe*, and *think* are used to express psychological states including belief, speculation, and intention, the negative marker in the object clause is typically transferred to the main clause predicate in standard English. In the learners' L1, however, the negative element is conventionally placed within the object clause, which constitutes a salient cross-linguistic difference. Due to L1 negative transfer, the writer of Sentence (47) failed to shift the negation to the main clause predicate, resulting in non-idiomatic usage. It is thus evident that college English writing is significantly affected by mother tongue negative transfer with regard to negation errors.

In addition, as illustrated in Sentence (45), learners often produce deviant output owing to insufficient mastery of English full negation rules. Many learners remain unclear about the use of negative items such as *none*, *no one*, *neither*, *nobody*, *nowhere*, and *never* to express complete negation in English. Combined with their tendency to translate utterances word-for-word from L1 to L2, such insufficient knowledge leads to typical negation errors. Therefore, it can be concluded that second language acquisition is notably impeded by the negative transfer of the mother tongue.

(5) Tense

Tense refers to the verb forms that indicate the time of an action or state expressed by the predicate. In English, tense distinctions are typically realized through inflectional morphemes such as *-s*, *-ed*, or perfect constructions like *have + past* participle. In Chinese, by contrast, tense is rarely marked by verbal inflections; instead, it is usually indicated by functional particles. Given these differences between Chinese and English, learners frequently fail to use appropriate inflectional morphology when marking tense in English.

For example,

(48) People eat fish which lived in polluted water.×

People eat fish which live in polluted water.√

- (49) When the energy crisis affected Germany in the 1970s, they realized that garbage recycling can contribute to the survival of the society, so they began to classify garbage and studied the classification principle.×

When the energy crisis affected Germany in the 1970s, they realized that garbage recycling could contribute to the survival of the society, so they began to classify garbage and studied the classification principle.√

In fact, Chinese lacks verbal morphological inflections, and tense is primarily expressed through functional particles following the verb. To refer to an action occurring in the past or future, the verb form itself remains unchanged; instead, temporal expressions are used to convey time reference.

In English, by contrast, tense is encoded via a complex system of morphological changes, which learners frequently neglect in their writing. Taking Sentence (50) as an example, the necessary morphological modification of the modal verb can was overlooked. Evidently, the influence of L1 transfer exerts a negative impact on second language acquisition.

(6) Subject

Since we have started to learn English, we have been taught that when we write down the English sentences, the subject cannot be omitted except in the situation of the imperative sentence. The reason why the subject should be added is that English has always been identified as a kind of language aiming at subject prominent. That is to say, apart from the imperative sentence, almost all of what is called independent complete sentences ought to possess its own corresponding subject. Even though the subject has been omitted in some sentences, the “it” or “there” should come out to be the formal subject.

For example,

- (50) From my perspective, that's high time that we should classify waste according to different kinds of them.×

From my perspective, it is high time that we should classify waste according to different kinds of them.√

- (51) With the development of the living standard and social productive forces,there are also produce a lot of waste.×

With the development of the living standard and social productive forces, people also produce a lot of waste.√

- (52) Shanghai has implemented waste sorting.×

Waste sorting has been implemented in Shanghai.√

Take Sentence (52) as an example. Learners tend to translate the corresponding L1 utterance word for word into English, which results in ungrammatical or non-native-like structures. In idiomatic English, the locative expression should function as an adverbial rather than the grammatical subject, a pattern that differs fundamentally from Chinese. The appropriate and natural English version should be “Waste sorting has been implemented in Shanghai.”

Therefore, the interference of L1 thinking patterns should be reduced or even eliminated in the process of English writing.

(7) Subordinating and coordinating conjunctions

As for the proportion of errors involving subordinating and coordinating conjunctions, it can be readily observed that such errors account for 5.43% of the total errors, representing a relatively high frequency.

In Chinese, paired conjunctions conveying cause–effect or concession relations are commonly used together. In English, by contrast, subordinating conjunctions such as although cannot co-occur with coordinating conjunctions such as but, since although introduces a subordinate concessive clause, while but links main clauses.

Nevertheless, influenced by L1 thinking patterns and usage habits, students tend to overlook these grammatical constraints on conjunctions in English.

For example,

(53) Although waste sorting is essential, but it is still not commonly implemented. ×

Although waste sorting is essential, it is still not commonly implemented.√

(54) At present, garbage transfer stations and transportation vehicles only compress and transfer life which can not be completely and effectively classified transportation.×

At present, garbage transfer stations and transportation vehicles only compress and transfer life which can not be completely or effectively classified transportation.√

The error in Sentence (53) ultimately reflects the influence of L1 thinking patterns. As the corresponding concessive structure in the learners' mother tongue is deeply entrenched, they tend to use but in the main clause even when the subordinate clause is introduced by although. This practice violates the grammatical rule that although and but cannot coexist in the same complex sentence.

Hence, it is essential that learners consciously reduce the interference of L1 thinking during the outlining and writing process, and strive to think in English as much as possible.

4.3.4 Discourse level

(1) Lack of cohesive devices

When something such as a piece of writing is easy to understand because its parts are connected in a clear and reasonable way. That is the coherence. Therefore, the transitional words are integral part of the article, which enable readers to understand the content smoothly and even experience the context. However, few students give one thirds seconds of notice towards the transitional words. Taking a part of writing from one of the participants as an example.

(55) For example, newspaper belong to recyclable garbage, waste batteries belong to hazardous garbage, leftovers belong to kitchen garbage, and toilet paper belongs to other garbage. Garbage classification is the way of cyclic development, everyone has the obligation to carry out this plan.×

After being revised:

For example, newspapers belong to recyclable garbage, while waste batteries belong to hazardous garbage. Moreover, leftovers belong to kitchen garbage, however toilet paper belongs to other garbage.

All in all, Garbage classification is conducive to cycling development, hence, everyone has the obligation to carry out the decision of waste sorting.√

In example (55), the participant failed to organize the content and summarize them. In Chinese writing, people prefer to paragraph the words to make the statement more logical instead of employing the marked coherence words, which is slightly different in English. Obviously, in English, the appropriate coherence words enable the content of an article more methodical, logical and telling.

(2) Discourse pattern

It is believed that a sentence contains a Theme and a Rheme. The former is a point of departure, the ground where the speaker proceeds, which is equally present to the speaker and to the hearer; the latter is the goal of the discourse, the information that is imparted to the hearer by the speaker. In brief, theme is old or known information and rheme is the new or unknown information. The discourse thinking mode of Chinese is always around the periphery of the subject, from whole to individual and language is often from point to surface. But the thinking mode of English just like a linear, they like to express their view directly and put forward own view in the topic sentence. In the aspect of expression, English native speakers are usually regarded straight as the regulation; they like to directly point out the conclusion and key points. Chinese pay more attention to implication in expression; they always don't directly demonstrate the theme of the passage. College students go through native language writing training for a long time so as to shape the thinking of Chinese writing.

The example:

(56) On the one hand, water is the source of life. If we keep blind towards the littering garbage in the river, the animals, even human beings will die from the water pollution. So it is urgent to legislate to implement the garbage classification. ×

After being revised,

On the one hand, people should realize the urgent needs of garbage classification in terms of the importance of water. As the proverb goes, water is the source of life. If people keep blind towards the littering garbage in the river, the lives of creature will face the tremendous threaten, even the death. √

In Chinese writing, people tend to state the argument first rather than the points. So dose the sentence (56), which against the idiomatic English expression. Influenced by mother tongue thinking, combined with the “translation habits” in English writing, students are likely to make errors in terms of discourse pattern.

(3) Errors in personal pronoun

As previously noted, there are no direct one-to-one correspondences between Chinese and English. In Chinese, personal pronouns such as *we* or *you* are frequently used to refer to generic or nonspecific interlocutors in both writing and real-time communication, conveying politeness and a sense of rapport with the audience. Such usage, however, is not conventional in standard English, where writers and speakers typically employ indefinite forms such as *one* or *people* to denote nonspecific referents. Given these striking cross-linguistic differences, errors involving personal pronoun use frequently occur in learners’ English writing.

For example,

(57) If we ignore garbage classification, the living standards will be undermined. ×

If people ignore garbage classification, the living standards will be undermined. √

(58) We may easily find that the environment is getting worsen day by day.×

It may easy to find that the environment is getting worsen day by day.√

Taking Sentence (57) as an example, the corresponding expression in Chinese uses the first-person plural pronoun to create a sense of closeness and rapport with the reader. In standard English, however, this is not conventional; generic reference is typically achieved using indefinite expressions such as *people* or *one*.

Influenced by L1 thinking patterns, students often directly translate the subject into *we*, which results in non-idiomatic English. Thus, negative transfer from the mother tongue inevitably affects college English writing. Greater attention should be paid to reducing the influence of the first language in daily writing practice.

5. Conclusion

5.1 Findings

Based on the theories of negative transfer and the method of Error Analysis, the present study aims to further explore the possible causes of learner errors from the perspectives of morphology, lexis, syntax, and discourse.

To begin with, the questionnaire results indicate that learners exhibit a noticeable reliance on their first language (L1) during English writing. In particular, many students reported that they tend to plan their ideas in Chinese and then translate them into English, suggesting a strong dependence on L1 in the writing process. This finding is consistent with previous studies, which have shown that L2 learners often rely on their mother tongue as a cognitive strategy when facing difficulties in language production [9].

Furthermore, the analysis of writing samples reveals that a considerable proportion of errors may be associated with negative transfer from the mother tongue. The identified errors are mainly categorized into four levels: morphological, lexical, syntactic, and discourse. Among these, morphological, lexical, and syntactic errors account for the largest proportions, representing 31.1%, 24.89%, and 23.98%, respectively.

Common issues include misuse of articles, incorrect noun number, and inappropriate verb forms. This distribution is in line with previous research, which suggests that lower-level linguistic features (e.g., grammar and vocabulary) are more susceptible to transfer-related errors in EFL writing.

In addition, although students have acquired a basic command of English, they still find it difficult to avoid L1-based thinking patterns in the learning process. This suggests that learners may lack sufficient awareness of the structural differences between Chinese and English. Similar observations have been reported in earlier studies, where learners' reliance on L1 conceptual structures was found to influence their L2 writing performance [10]. As a result, they tend to rely on their first language when encountering difficulties in expression.

While negative transfer is to some extent inevitable in second language acquisition, its impact can be mitigated through increased awareness of linguistic differences, systematic practice, and the adoption of effective learning strategies.

5.2 Implications

According to data collection and analysis, errors emerge due to the factors firstly in terms of cultural differences between English and Chinese, secondly in terms of interference from mother tongue thinking. Several implications can be drawn out.

Firstly, students should take the initiative to increase the input through reading the classic article with moderate difficulty and reciting some excerpts that they favor. Literature has high literary as well as ideology view, which helps students come into contact with the authentic English context and culture and receive the effective input that they can convert into the output.

Above all, students should be acquainted with the usage of the English dictionary such as the Oxford English Dictionary, Longman Dictionary of Contemporary English, etc. Dictionary is the best tool to help students tell the differences between two languages and figure out the proper usage of the words and expression in different context.

Last but not least, teachers should strictly check the students writings. Errors should be marked and the correct expression should be revealed along with the errors. To put in another way, Contrastive analysis should be employed. It is also crucial to analyze the reason of the errors and get the crux of errors across the students.

5.3 Limitations

The author has to concede that this thesis is not an all-around one in terms of firstly the limited variety of the subjects. Secondly, this thesis fails to detect the learners' errors of production in various stages of acquisition in view of the fact that the writing samples selected in this thesis are partially able to mirror the competence at the fixed point instead of an extended period.

References

- [1] Lado, R. *Linguistics across cultures: Applied linguistics for language teachers*. Ann Arbor: University of Michigan Press; 1957.
- [2] Corder, S. P. The significance of learners' errors. *International Review of Applied Linguistics*. 1967;5(1-4):161-170.
- [3] Odlin, T. *Language transfer: Cross-linguistic influence in language learning*. Cambridge: Cambridge University Press; 1989.
- [4] Ellis, R. *The study of second language acquisition*. Oxford: Oxford University Press; 1994.
- [5] Bi, Y., & Tan, H. Language transfer in L2 academic writings: a dependency grammar approach. *Frontiers in Psychology*. 2024;15:1384629.
- [6] Zhu, X., Guan, Y., & Yao, Y. Transfer of ideal L1 and L2 writing selves and their impacts on L2 writing enjoyment and integrated writing performance. *Assessing Writing*. 2022;54:100674.

- [7] Tian, L., Liu, Q., & Zhang, X. Self-regulated writing strategy use when revising upon automated, peer, and teacher feedback in an online EFL writing course. *Frontiers in Psychology*. 2022;13:873170.
- [8] Zhang, Y., Li, M., Chieh, Y. T., & Han, S. On a path to becoming more self-regulated: Reflective journals' impact on Chinese EFL students' writing strategy use. *Frontiers in Psychology*. 2022;13:1042031.
- [9] Wang, W., & Wen, Q. L1 use in the L2 composing process: An exploratory study of 16 Chinese EFL writers. *Journal of Second Language Writing*. 2002;11(3):225-246.
- [10] Wei, X. Assessing the metacognitive awareness relevant to L1-to-L2 rhetorical transfer in L2 writing: The cases of Chinese EFL writers across proficiency levels. *Assessing Writing*. 2020;44:100452.

Funding

This research received no external funding.

Conflicts of Interest

The authors declare no conflict of interest.

Acknowledgment

This paper is an output of the science project.

Copyrights

Copyright for this article is retained by the author (s), with first publication rights granted to the journal. This is an open-access article distributed under the terms and conditions of the Creative Commons Attribution license (<http://creativecommons.org/licenses/by/4.0/>).