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A Comparative Study on the Impact of Native Language Negative Transfer on College Students' English Writing

Yuwei Jiang
Nanning Normal University, Nanning 530100, China

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Abstract

Native language transfer has a significant impact on second language acquisition, particularly evident in English writing. To investigate how the native language influences foreign language use, this study compared the timed writing tasks of 12 English majors and 12 non-English majors, analyzing the differential effects of negative L1 transfer across proficiency levels. Results showed that while both groups were affected by native language interference at lexical, syntactic, discursive, and cultural levels, there were differences in error types, frequency, and linguistic complexity. The study confirmed that higher language proficiency correlates with weaker negative L1 transfer and revealed interference patterns across learning stages, providing a basis for tiered instruction. Accordingly, this paper proposes differentiated teaching strategies to mitigate native language interference and enhance writing instruction effectiveness.

Keywords

Native Language Negative Transfer; Second Language Acquisition; English Writing

1. Introduction

Writing ability is a crucial measure of language competency, and the significance of English as a worldwide lingua franca has grown in the setting of globalization. Writing in English is still a constant struggle for Chinese university students, and negative transfer from their native language (L1) is a major barrier. The psycholinguistic phenomenon known as "negative L1 transfer" occurs when learners unintentionally apply the linguistic norms, cognitive processes, and cultural practices of their mother tongue to the target language, resulting in linguistic output problems. Since Chinese and English are two very distinct language systems, this issue is particularly noticeable between them and has grown to be a significant obstacle to Chinese students' ability to write in English.

However, existing research has predominantly focused on homogeneous learner

groups, lacking systematic comparative analyses of how L1 negative transfer affects learners with different proficiency levels. In reality, English majors and non-majors differ significantly in learning environments, language input exposure, and instructional emphases, which may lead to distinct patterns and manifestations of L1 negative transfer in their writing. While Wang Li (2013) suggested an inverse relationship between English proficiency and the frequency of L1-induced errors, this finding has yet to be thoroughly validated across diverse student populations.

To address this gap, this study selects 12 English majors and 12 non-English majors as participants, collecting data through timed writing tasks. Employing error analysis and comparative analysis methods, it investigates the following research questions: First, how does L1 negative transfer manifest similarly or differently in the English writing of these two groups? Second, are there variations in the distribution of L1-induced errors across lexical, syntactic, discursive, and cultural dimensions? Third, how can tailored pedagogical strategies be designed to address the distinct needs of each group?

Theoretical contributions of this study lie in expanding the dimensions of L1 transfer research and elucidating the dynamic relationship between language proficiency and native language interference. Practically, it offers evidence-based guidance for differentiated instruction in college English writing, enabling educators to develop targeted strategies that mitigate the adverse effects of L1 transfer and enhance students' writing competence.

2. Literature Review

Selinker (1972) was the first to explore the transfer of the native language (L1) to a second language (L2), while the term “transfer” was formally introduced by Corder (1981), who regarded it as a communicative strategy. Ellis (1994) further argued that transfer functions not only as a communicative strategy but also as a learning strategy.

Language transfer can be categorized into positive transfer and negative transfer. Positive transfer occurs when L1 rules align with L2 rules, facilitating second language acquisition (Ellis, 1994). In contrast, negative transfer arises when learners encounter differences between the two languages, leading to L1-induced errors (Odlin, 1989).

Research on negative language transfer has proliferated over time. American linguist Lado (1957) first proposed the “Contrastive Analysis Hypothesis”, positing that systematic comparison between native and target languages could predict learning difficulties - with greater linguistic differences leading to more learning challenges. This theory laid the foundation for early studies on negative L1 transfer, though its overemphasis on formal linguistic comparisons while neglecting learners’cognitive processes gradually revealed limitations. Subsequently, Corder’s (1967) “Error Analysis Theory” shifted research focus to learners' actual errors,

distinguishing between interlingual errors (caused by L1 interference) and intralingual errors (stemming from target language rule misapplication). Notably, in Chinese students' English writing, interlingual errors significantly outnumber intralingual ones, providing empirical evidence for the prevalence of negative L1 transfer effects.

Scholars worldwide have conducted multidimensional explorations of negative L1 transfer manifestations in English writing. At the lexical level, researchers consistently observe that Chinese learners frequently misuse words due to semantic asymmetry between Chinese and English. Part-of-speech confusion is another prevalent issue - the absence of morphological inflection in Chinese often leads learners to neglect English grammatical requirements, such as misusing adjectives as verbs or employing adjectives where adverbs are required (Pan, 2012) . Regarding syntactic transfer, predominant manifestations include tense errors, subject-verb disagreement, and disorganized sentence structures (Wu, 2020). The discourse level reveals particularly striking contrasts: while English relies heavily on explicit cohesive devices to achieve textual coherence, Chinese depends more on implicit semantic connections (L. Wang 2013). This fundamental difference frequently results in Chinese learners'compositions exhibiting accumulations of simple sentences lacking necessary transitional markers. In terms of cultural negative transfer, the Chinese cultural emphasis on collectivism and implicit expression often results in English compositions that lack clear viewpoints and insufficient argumentation (S. Wang 2011).

While substantial achievements have been made in negative L1 transfer research, comparative studies targeting students from different academic disciplines remain relatively scarce. Building upon existing literature, this study systematically compares the performance differences between English majors and non-English majors in identical writing tasks by controlling for writing conditions and assessment criteria. This approach aims to reveal the differential impacts of negative L1 transfer across student groups, thereby providing empirical evidence for tiered writing instruction.

3. Method

This study employs a comparative research design to systematically examine the differential effects of native language (L1) negative transfer on English writing between English majors and non-English majors at the undergraduate level. The participant pool consists of 24 undergraduates from a comprehensive university, selected through stratified sampling - including 12 English majors (mean age=20.3 years, SD=0.8) and 12 non-English majors (mean age=20.6 years, SD=0.7).

All participants began English learning from their freshman year with at least seven years of English education, excluding individuals with extended overseas residence or study experience to ensure relative homogeneity in L1 environment. English

majors had all passed the Test for English Majors-Band 4 (TEM-4), while non-majors had passed College English Test Band 4 (CET-4), with statistically significant between-group differences in English proficiency ($t=4.32$, $p<0.01$) - establishing ideal conditions for examining disciplinary influences on L1 negative transfer. To ensure sample representativeness, the English major group comprised 4 males and 8 females, compared to 5 males and 7 females in the non-major group, with no significant gender distribution difference ($\chi^2=0.17$, $p=0.68$).

The primary data collection instrument was a timed writing task requiring participants to complete an argumentative essay titled "The Impact of Social Media on Interpersonal Communication" within 50 minutes. This theme was selected for its relevance to college life, ensuring all participants could engage meaningfully while providing sufficient scope to demonstrate linguistic competence. The task was administered uniformly in a computer lab using standard word processing software to eliminate handwriting variability in assessment. Consistent testing conditions were maintained by prohibiting dictionary use or other aids.

Error analysis and contrastive analysis methods were applied to systematically evaluate collected essays. Initially, errors were identified and categorized into four primary types: lexical, syntactic, discursive, and cultural errors. Subsequently, each error was further classified by origin - whether stemming from L1 negative transfer (interlingual errors) or target language rule overgeneralization (intralingual errors).

4. Results

4.1 Overall Analysis of Error Distribution

This study analyzed 24 English essays and identified a total of 342 valid language errors, among which 146 were attributed to negative L1 transfer (i.e., interlingual errors caused by Chinese interference), accounting for 42.7% of all errors. Further analysis revealed significant differences between English majors and non-English majors in both total error counts and the proportion of negative L1 transfer errors.

The results of overall analysis of error distribution by two groups were shown in the Table 1.

Table 1. Overall Analysis of Error Distribution by Two Groups

Error Type	English Majors	Non-English Majors	Total
Interlingual errors	41 (28.5%)	105 (48.2%)	146 (42.7%)
Intralingual Errors	68 (46.5%)	48 (33.1%)	116 (33.9%)
Other Errors	35 (25.0%)	45 (18.7%)	80 (23.4%)
Total	144 (100%)	198 (100%)	342 (100%)

In particular, English majors made 12.5 mistakes on average per essay, which was significantly less than the average of 15.8 errors made by non-English majors ($p < 0.05$). The distribution of error types showed that among English majors, Interlingual errors made up 28.5% of all errors, whereas among non-English majors,

the percentage was significantly greater at 48.2% ($p < 0.05$). These results support Wang Li's (2013) finding that the percentage of negative L1 transfer errors is inversely correlated with English competency, suggesting that learners'dependence on L1 rules diminishes with increasing language skill.

Notably, English majors showed a significantly higher proportion of intralingual errors (46.5%) compared to non-English majors (33.1%) ($p < 0.05$), while no significant difference was found between the two groups in mechanical errors ($p > 0.05$). These findings further confirm systematic differences in error type distribution among learners with different English proficiency levels.

4.2. Lexical Level

At the lexical level, non-English majors exhibited more pronounced manifestations of literal translation and semantic confusion, such as equating "consider" with "think" (e.g., "I consider that..."). While English majors also demonstrated lexical transfer errors, their mistakes primarily involved insufficient differentiation of near-synonyms and inappropriate register usage, such as confusing the pragmatic nuances between "assert" and "claim", or employing overly formal vocabulary in informal contexts.

Comparative adjective errors were observed in both groups but manifested differently. Non-majors frequently omitted comparative form modifications (e.g., "more big"), whereas majors tended to produce double comparative errors (e.g., "more bigger"), reflecting their overapplication of grammatical rules.

4.3. Syntactic Level

The syntactic level represents the most severely affected domain for non-English majors regarding L1 negative transfer, with errors predominantly concentrated in tense consistency and basic syntactic structures. Influenced by Chinese's tenseless nature, they frequently neglect English verbal tense markers and often commit subject-verb agreement errors due to Chinese's flexible agreement rules. Additionally, Chinese syntactic flexibility leads to disorganized English sentence patterns, manifesting as: multiple verb juxtaposition and conjunction misuse.

In contrast, English majors' syntactic errors primarily occur in complex sentence structures and voice selection. While they demonstrate correct usage of basic tenses and subject-verb agreement, their handling of sophisticated sentences still reflects Chinese paratactic features, such as: misplaced relative clauses and underuse of passive voice even in contexts requiring passive constructions, corresponding to the lower frequency of passive sentences in Chinese.

4.4. Discursive Level

The research findings reveal distinct patterns of discourse-level negative transfer between English majors and non-English majors. English majors demonstrate more

sophisticated yet persistent discourse transfer issues, primarily characterized by Chinese-style organizational patterns. Their writing often features delayed thesis statements, absent topic sentences, and circular argumentation structures. While they employ more transitional devices, logical connectors are frequently used inappropriately, with basic coordinators predominating(e.g., “and” and “so”).

Non-English majors exhibit more fundamental discourse competence deficiencies. Their writing shows significant coherence problems, with paragraphs frequently lacking explicit cohesive devices. Their compositions are dominated by simple sentence chains and display minimal subordination. The quantitative analysis reveals statistically significant differences between the groups across all measured discourse error types.

4.5. Cultural Level

The study reveals distinct manifestations of cultural negative transfer between the two student groups, reflecting their varying levels of intercultural competence. Non-English majors predominantly exhibited literal translation errors leading to cultural image misalignment, primarily stemming from insufficient understanding of culturally-loaded vocabulary. Their compositions frequently contained direct translations of Chinese cultural concepts that lack equivalent cultural connotations in English.

English majors demonstrated more sophisticated cultural transfer issues, particularly in rhetorical style and value expression. Influenced by Chinese writing conventions that emphasize ornate language, they often employed redundant modifiers (e.g., “absolutely necessary”, “very unique”) or tautological expressions (e.g., "In my personal opinion"). Their argumentative essays showed distinct organizational patterns: excessive background description delaying thesis presentation, and overuse of hedging strategies weakening argumentative force. These patterns reflect deep-rooted differences between Chinese communication norms valuing indirectness and Western rhetorical traditions privileging directness.

5. Conclusion

This study systematically investigated the differential impact of negative L1 transfer on English writing between English majors and non-English majors through a comparative analysis of 12 undergraduate English majors and 12 non-English majors in a timed English writing task. The key findings can be summarized as follows:

First, negative L1 transfer universally affects Chinese university students’ English writing but shows significant variation between majors. Non-English majors demonstrated substantially higher proportions of L1 transfer errors than English majors, confirming an inverse relationship between English proficiency and L1 interference. This indicates that learners gradually reduce reliance on L1 rules as

their English proficiency improves.

Second, negative L1 transfer manifests differently across language levels. Non-English majors' errors primarily occurred at lexical and basic syntactic levels (e.g., word misuse, tense errors, subject-verb disagreement), while English majors faced greater challenges in discourse organization and cultural appropriateness (e.g., non-linear paragraph development, inappropriate connectors, excessive modifiers). This reflects different interlanguage developmental stages, showing how L1 influence shifts from surface forms to deeper cognitive patterns with increasing proficiency.

Third, lexical-level differences emerged clearly: non-English majors exhibited more literal translation and basic semantic confusion, whereas English majors struggled more with synonym discrimination and register appropriateness. This distinction indicates their different vocabulary acquisition stages - establishing basic L1-L2 correspondences versus refining nuanced meanings and pragmatic functions.

Fourth, syntactic comparisons revealed that non-English majors frequently erred in tense, voice and basic structures due to Chinese's non-inflectional nature, while English majors, despite mastering basic syntax, still showed L1 interference in complex sentence processing and voice selection. This highlights the gradual syntactic acquisition process from mastering morphological markers to internalizing deep structural rules.

Finally, cultural transfer affected both groups differently: non-English majors tended toward literal translation of cultural images, while English majors displayed more cultural differences in rhetorical style and value expression. This suggests cultural transfer's particular persistence, requiring special pedagogical attention.

The pedagogical implications suggest differentiated instructional approaches. For developing writers, emphasis should be placed on core language components and contrastive analysis. More advanced learners require targeted training in discourse organization and intercultural communication strategies. This progression mirrors the natural acquisition process from basic linguistic competence to higher-level communicative proficiency.

This study has several limitations that should be acknowledged. Firstly, the relatively small sample size (only 12 participants per group) may limit the generalizability of the findings. Therefore, future research could expand the participant pool and combine with different dimensions.

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