Cross-Linguistic Influences in Writing: A Case Study of a Chinese International Student

Wenli Zhang
Department of Foreign Languages, University of Chinese Academy of Sciences, Beijing, China

Abstract—There has been a longstanding debate on the use of native language (L1) in second language acquisition (SLA). One common belief in SLA is that using L1 can significantly hinder the development of second language (L2) learners. In their book, Krashen and Terrell (1983) proposed an approach to L2 teaching known as the natural approach: they claimed that people learn their L2 much in the same way they learn their L1. Due to this well-known approach, many people believe that the L2 is best learned through extensive exposure to the target language with limited L1 usage. However, this belief has been challenged. Nation (1997) has put forward the idea that using the L1 systematically can be beneficial in L2 learning. Meanwhile, the pedagogical value and functions of the L1 have also been recognized. Cook (2001) maintains that the L1 is a useful resource in L2 classrooms in several ways, including conveying meaning, explaining grammar, organizing class tasks, and maintaining discipline.

In addition to the growing number of theoretical works advocating the use of the L1 to facilitate L2 learning, more empirical studies have also been involved in this field. Many studies have explored teachers’ attitudes toward using the L1 when teaching L2 (e.g., Copland & Neokleous, 2010; Flores & García, 2013; Kayaoğlu, 2012), and some have focused on students’ perspectives (e.g., Bartlett, 2007; Carson & Kashihara, 2012; DiCamilla & Antón, 2012; Nazary, 2008; Scott & De la Fuente, 2008; Storch & Wigglesworth, 2003). There are also studies considering both teachers’ and students’ perspectives (e.g., Afzal, 2013; Edstrom, 2006). Among these studies, most show strong support for the idea that using the L1 can bolster L2 development. However, different views of the issue exist, and the debate on whether the L1 should be welcomed in SLA remains active. L2 writing is one particular domain that has drawn scholars’ attention.

As one dominant field of exploration in L2 studies, the development of L2 writing has attracted increasing attention from scholars. In the last three decades, many studies have been dedicated to addressing various aspects of the issue of L1 usage in L2 writing. Some studies have explored the multiple purposes for which L2 writers use their L1 (e.g., van Weijen et al., 2009; Wang & Wen, 2002), revealing that it can be used to evaluate the proceeding texts, backtrack, and solve linguistic problems. Other scholars have studied how writers transfer L1 writing strategies to L2 writing (e.g., Beare & Bourages, 2007; Wolfsberger, 2003), indicating an L2 threshold for L2 writers to apply L1 writing strategies to writing in their L2. Still other scholars, however, have chosen to focus on one particular function of the L1 in L2 writing, such as using it to identify lexical items in Murphy and Roca de Larios’s (2010) study. These studies in the field of L2 writing have encompassed participants with various levels of L2 proficiency. They have found that L2 proficiency plays a vital role in affecting the extent of L1 usage in L2 writing; learners with lower L2 proficiency levels tend to rely more heavily on the L1 when composing in their L2.

The review of relevant studies has revealed some gaps in the research on the use of the L1 in L2 writing. First, the dominant methodological approach is the quantitative research approach. Researchers can provide clear comparisons and contrasts—either within-subject/task or cross-subjects/tasks—by adopting a quantitative research approach. Meanwhile, the amount of L1 used in L2 writing can be explicitly expressed using numbers. However, this complicated phenomenon cannot be explained profoundly enough without qualitative analysis, and many factors related to the issue...
are neglected, such as writing strategies. When investigating the strategies utilized by L2 writers, it is difficult to characterize them comprehensively by using numbers. Further descriptions and interpretations are needed in order to thoroughly discuss the results. Therefore, qualitative data sources, such as interviews and observations, can offer insights into the L2 writing process.

The second issue concerns the participants. Studies have focused on L2 learners with various proficiency levels, from beginners to those who are highly proficient. However, most have studied L2 writers in an English as a foreign language (EFL) setting, whereas international students have not yet attracted much attention from scholars, especially EFL learners who have just moved to an English as a second language (ESL) setting. These students have learned English as a foreign language in their home countries for years and have passed proficiency tests, such as TOEFL, before moving to an English-speaking country to study at a university. Usually, they have already obtained a high proficiency in English, but due to their EFL backgrounds, their L1 cannot be overlooked and may play an essential role in their L2 development. Considering their unique backgrounds, researchers can attain a more robust understanding of the challenges they face and their unique needs by thoroughly studying their English writing process and how they use their L1 when composing in English. This will provide implications for teachers, allowing them to serve this population more effectively and responsibly.

The third gap in the literature is that most studies have been experimental, and researchers have given participants designated topics to write about. Many researchers have also limited how much time participants had to write. Both limitations may have influenced the writing process to some extent. As a consequence, the findings and implications presented in these studies might only be applied to a time-constrained writing process.

In order to collect more authentic data and holistically explore L1 use in L2 writing, a qualitative case study approach has been adopted to explore the participant’s L1 use when completing a course assignment in English. This study has focused on an intermediate-to-advanced level female Chinese international student attending an American university. Drawing upon qualitative data sources, it investigates the ways in which this L2 writer used her L1. Rather than being assigned a topic to write about, the participant’s writing process was observed as she wrote a course paper. This study aims to unravel the various purposes that an L1 serves during L2 writing. It also provides implications for teachers working with English learners (ELs) with diverse backgrounds and proficiency levels so that they can provide contingent support in response to students’ needs.

II. METHODOLOGY

This study adopts a qualitative case study approach to explore how Dai, the participant, used her L1 when writing a course paper in her L2. This strategy of inquiry allowed the exploration of Dai’s language use as she wrote more profoundly and comprehensively. This approach also supported the examination of the oppression of individual participants (Creswell, 2009). Due to the purpose of this study, a qualitative case study approach is appropriate to apply.

A. Participant

The participant in this study is Dai (pseudonym), an international student from China. When this study was conducted, Dai was an eighteen-year-old freshman majoring in math at an American university. Originally from China with Chinese as her L1, Dai came to the United States for college after finishing high school in China.

Dai’s English scores in high school were 110–120/150 on average. She also received a 97 out of 120 on the TOEFL iBT test, with 28 out of 30 points on the writing section. According to the Test and Score Data Summary for TOEFL iBT Tests for 2013 (ETS, 2013), the year Dai took the test, the average score was 78, and the average writing score was 20.2. Accordingly, Dai’s score is comparatively high. Her average English scores in high school and her TOEFL writing score made Dai stand out from her peers as an English learner with intermediate to advanced proficiency.

Dai started learning English in the first grade of elementary school when the main purpose was to help students develop an interest in the language. Dai did not learn how to write in English until third grade, and she stated that English writing was informal and casual in elementary school. English teachers would provide information, and students needed to integrate the information in a short passage of 100-200 words. From Dai’s perspective, casual writing cannot be regarded as actual writing; rather, actual writing should be formal with logical thinking involved. Thus, Dai proclaimed that she learned to write in English when she took courses to prepare for the writing portion of the TOEFL test. Compared to her experience in English writing, Dai has more experience writing in Chinese. In elementary school, she started writing casually in Chinese and learned to write more formally in middle school. This suggests that Dai possesses a higher writing proficiency in her L1 than her L2.

B. Data Collection

This case study mainly draws upon interview and observational data. Throughout the course of the study, the researcher conducted two semi-structured interviews with Dai: one was held at the beginning of the study and the other one at the end of the data collection stage. The first interview aimed to help the researcher understand Dai’s language learning and academic background, particularly her writing experience in both her L1 and L2. The second interview was conducted toward the end of the study. It mainly focused on the researcher’s observations of Dai’s writing and a stimulated recall. A mix of Chinese and English was used in the interviews. The interview data were audio-recorded.
Another significant data source in this study was observations. During the study, Dai was working on a synthesis paper for a course about how the dissolution of a romantic relationship affects men and women differently. Instead of assigning her a new task, it was decided to use this writing assignment to obtain more authentic data. Dai’s writing process was observed and video-recorded. To comprehensively understand Dai’s language use throughout the writing process, the researcher adopted think-aloud protocols during observations and asked Dai to verbalize her thoughts while writing. Considering the time Dai needed to complete the paper, the researcher divided the think-aloud protocol collection process into two sessions. In the first session, Dai was observed writing a body paragraph in which she synthesized and paraphrased the original reading materials. In the second session, she was writing the concluding paragraph. Each session lasted approximately one hour. Although the use of think-aloud protocols has caused controversy in the past, Krapels (1990) has asserted that they provide useful data for L2 writing research. In line with Krapels, van Weijen et al. (2009) have also stated that using think-aloud protocols allows researchers to observe the “occurrence of conceptual activities” (p. 239) during the writing process. In this study, think-aloud protocols were used to access Dai’s thought process as she wrote, which provided insights into her language use. Dai chose the language she wanted to use when thinking aloud. All think-aloud protocols were video-recorded. In this paper, the protocols are displayed separately, and protocols in Chinese are translated into English. The content that Dai wrote in the paper is in italics.

A stimulated recall was conducted a few days after Dai had completed the think-aloud protocols. Mackey and Gass (2005) have stated that stimulated recalls promote participants to recall and report thoughts they have had when performing a task, allowing researchers to obtain participants’ interpretations of an event. At the same time, stimulated recalls also serve as a medium through which participants can explain what appear to be divergent results. When conducting the stimulated recall in this study, Dai and the researcher watched the think-aloud protocols together. While doing so, the researcher paused the video at salient points and asked Dai questions about her thinking and writing, through which a better grasp and more accurate comprehension of Dai’s interpretation and conceptualization of her writing and language use were obtained.

All interview and observational data were transcribed.

C. Data Analysis

In this study, thematic analysis was adopted to analyze the data. To identify thematic elements related to Dai’s language use when writing in English, the researcher adopted Riessman’s (2008) thematic analysis. The steps included familiarizing the data, identifying thematic elements at the coding stage, generating themes, defining and naming themes, and writing up the final report. After becoming familiar with the data that had been gathered, the researcher reviewed all of the think-aloud protocols and the transcript of the stimulated recall session, highlighting salient moments and focusing on Dai’s language use throughout the writing process, including choices she made at the syntax, lexical, and content levels. Then, the researcher reviewed the codes to identify patterns among them. For example, at the sentence level, Dai often used Chinese to organize and construct sentences. When selecting specific words, Dai stopped and first articulated the meaning she wanted to express in Chinese, especially when writing long sentences. Once she had formulated and developed the idea in Chinese, Dai then completed the sentence. For example, when writing a summary of the first main point of the essay, Dai thought aloud:

然后准备写几句话，首先浮现的是中文，就是说在一个relationship break-up以后的男人和女人都会有一
...些共同的情绪，但是我们可以看见对于不同感情观也好，不同性别的人也好，有很多，很大的，一些区别。
(I’m going to write down a couple of sentences, and what occurred [in my mind] first is in Chinese. [I want to] say that after a break-up, men and women share some common emotions, but we can see that for [people with] different values and personalities, there are a lot of big differences.)

After this exposition, Dai started constructing the sentences based on the Chinese meaning she expressed. As shown in this protocol, in the beginning, Dai had a general idea that she wanted to write a couple of sentences to summarize the aforementioned point. However, she had a vague idea of the specific content she would include. In this protocol, Dai articulated her thoughts in Chinese, through which she developed her idea and formed a clearer sense of the content of the sentence.

Another illustrative example is when Dai was writing the concluding paragraph. After reflecting on her thoughts, Dai started her sentence, There might be other factors. As presented in this think-aloud protocol, Dai initially only had an overall idea that she wanted to end her essay by expanding the content to a more general scope, whereas it was not clear to her what to include or how to develop the idea. When verbalizing her thoughts, Dai mentioned some alternative ideas for the following sentences. Some of her thoughts were not fully developed and were uttered in incomplete sentences, but Dai’s writing indicates that she became certain regarding what she should write in the following sentences. By negotiating with herself and verbalizing the different thoughts in her mind, she turned them into a complete and well-organized sentence. Although she thought aloud in Chinese, she expressed her idea effectively when writing in English. In the stimulated recall session, Dai reflected on those protocols, demonstrating that Chinese guided the organization of her thoughts, and verbalizing them in Chinese helped her develop the content of her English writing.

B. Sentence Structure

Another common scenario in which Dai used Chinese was to consider sentence structure. Throughout the study, the researcher observed that Dai sometimes paused in the middle of writing a sentence. Corresponding think-aloud protocols show that this happened when Dai noticed that she had used an inappropriate sentence structure and revised it.

It is evidenced in the observation of Dai’s writing of the first major point of her essay. By the beginning of the study, Dai had created an outline for the paper she was working on. When writing the first paragraph about the first major point, Dai began it with The secure, skittish, and uninterested schemas were. She then deleted the and thought aloud:

I'm done summarizing the two major points [of my essay]. Now I'm going to expand [my essay] to a more general scope, just expand it, or [I should say that] maybe there are other elements that cause… like different genders may have other different reactions. Or [I could directly write] there are other elements causing different genders to deal with emotion and others differently. Just to expand a little bit.)

After reflecting on her thoughts, Dai started her sentence, There might be other factors. As presented in this think-aloud protocol, Dai initially only had an overall idea that she wanted to end her essay by expanding the content to a more general scope, whereas it was not clear to her what to include or how to develop the idea. When verbalizing her thoughts, Dai mentioned some alternative ideas for the following sentences. Some of her thoughts were not fully developed and were uttered in incomplete sentences, but Dai’s writing indicates that she became certain regarding what she should write in the following sentences. By negotiating with herself and verbalizing the different thoughts in her mind, she turned them into a complete and well-organized sentence. Although she thought aloud in Chinese, she expressed her idea effectively when writing in English. In the stimulated recall session, Dai reflected on those protocols, demonstrating that Chinese guided the organization of her thoughts, and verbalizing them in Chinese helped her develop the content of her English writing.

Dai stated in this protocol that when she was initially writing the sentence, she wrote down the information she had retrieved from the reading materials; schemas was the subject of the original text. However, afterward, she became aware that the sentence was about emotions. After this protocol, Dai went back to the beginning of the sentence and added people who have. In this protocol, Dai rationalized in Chinese that it is people who feel emotions, which led her to change the subject of the sentence from schemas to people. Therefore, justification and validation in Chinese allowed her to revise the sentence structure accordingly.

Another example can be found toward the end of the first major point of the paper, when Dai decided to provide a summary of her first major point before moving on to the second. She started the summary with a transition and stopped as she was writing the second sentence:

I'm done summarizing the two major points [of my essay]. Now I'm going to expand [my essay] to a more general scope, just expand it, or [I should say that] maybe there are other elements that cause… like different genders may have other different reactions. Or [I could directly write] there are other elements causing different genders to deal with emotion and others differently. Just to expand a little bit.)

Then, Dai started the second sentence, There are some reasons. In this protocol, Dai expressed that she wanted to write about why women and men have different reactions after a break-up and had intuitively started the sentence with If we consider these reasons based on her thoughts, which were immensely dependent on her comprehension of the
reading materials through Chinese. While deliberating and articulating her ideas, Dai realized that she needed to reconstruct the sentence to better express her thoughts and conform to the rules of English grammar. Thus, in the protocol, she explained in Chinese how she would change the sentence structure to use appropriate grammar. To this end, Dai used *reasons* as the subject of the sentence, which resulted in a change in the sentence structure. Similar to the previous protocol, rationalizing in Chinese scaffolded Dai’s thinking in regard to the grammatically appropriate sentence structure. Dai’s use of Chinese to analyze sentence structure was restated in the stimulated recall session. Dai explicitly claimed that Chinese was a valuable resource that she used to outline the structure of a sentence before filling the blanks with concrete content in English. This, again, pinpoints one major function that Chinese served in Dai’s English writing process.

**C. Process Maintenance and Word Selection**

Aside from relying on Chinese for content development and sentence structure, Dai also depended on her L1 to maintain the writing process when writing in English. For example, in the concluding paragraph, Dai wanted to describe how men handle a romantic relationship and stopped in the middle of a sentence, saying: “分散, 忘了怎么拼 (decentralization, I forgot how to spell it).” She then wrote 分散, the Chinese word for decentralization, on the paper. Dai provided further exposition about this scenario in the stimulated recall session. When writing the initial draft, Dai often did not have high expectations, especially for wording. The main purpose of an initial draft, according to Dai, was to express meaning. For words that she did not know how to spell, she often wrote the word in Chinese and waited until she completed the draft to look up the spelling. She stated that looking words up while writing would interrupt the writing process, impeding her idea development and information delivery. In other words, Dai used Chinese to remind herself of the words she did not know how to spell so she could continue writing.

Another major way that Dai used Chinese was to select words for her writing. For example, when moving on to the second major point, Dai stopped for approximately 20 seconds while externalizing her thoughts: 我现在要引出discussion的分论点，我在想是用however还是用actually. 我用actually, 感觉however转折太大了。[我想写]可能会出乎我们的意料，但是中文上来说是事实上比较合理。如果用但是... 感觉还是actually好一点，事实上。(I’m going to start writing another major point of the discussion part. I’m thinking about starting with either however or actually. I want to use actually. [I feel] the transitional relation expressed by however is a little bit too much. [I want to write] it might be beyond our expectations. [If I say that] in Chinese, actually sounds relatively proper. If I use however... [I still] feel actually is better.)

Subsequently, she chose to start the sentence with actually. Dai said in this protocol that she wanted to use a transition word to shift to the second major point and identified two candidates: however and actually. When selecting the most appropriate word, Dai pondered the Chinese and English meanings of both words. She believed that the degree of transition carried by however was too strong. Based on the Chinese meaning of the content that she wanted to express in the sentence, she rationalized that actually could deliver the information more precisely, which made it a better choice than however. Although the English meanings of both words expressed her initial thoughts, Dai situated actually in a Chinese context to validate its appropriateness. In this case, Chinese helped Dai confirm the accuracy of her decision, indicating that Chinese was the dominant language that Dai used for word selection.

**D. Cases Where English was the Dominant Language**

Dai’s strong reliance on Chinese when writing in English manifested frequently during the study. She showed awareness of her dependence on Chinese in the second interview. Nevertheless, the researcher also noticed cases where Dai used English to make writing decisions. In other words, sometimes, English was the dominant language that Dai used to guide her writing.

One illustrative example is when Dai was describing something interesting. Dai started the sentence with, *There is something interesting we can find.* Then, she stopped and thought aloud: “我觉得后面应该加点儿什么，[比如] interesting blah blah (I think I need to write something after interesting... [like] interesting blah blah blah).” At first, she did not struggle to start the sentence, and she adopted Chinese to develop the content of the rest of the sentence. However, when reflecting on the situation, Dai claimed that initially, she thought in English to write this sentence. *There’s something interesting* was a familiar expression that Dai used frequently to describe interesting phenomena; accordingly, she used it to start the sentence based on her English knowledge and usage habits. During the debriefing about her use of English to write sentences, Dai claimed that she can write sentences without difficulties or problems when she uses familiar expressions. Nevertheless, she needed the assistance of Chinese to determine the sentence structure and content.

The observational data also showed that Dai used her English language knowledge and usage habits for wording purposes in some cases. For example, Dai decided to use however as the conjunction when choosing between however and but for a transition. After writing the sentence, she paused and reread it. When discussing the rationale behind this decision in the stimulated recall session, Dai explained that she chose however because it was more appropriate according to her knowledge of the English language. Although she often used Chinese to choose the words, as previously discussed, Dai noted that she relied on English to confirm her decisions. Once she had chosen an English
word, she read the entire sentence in English to verify its appropriateness. Otherwise indicated, Dai depended on Chinese to choose a word from several candidates with similar meanings but counted on her English language knowledge to confirm her decisions.

IV. DISCUSSION AND IMPLICATIONS

In this study, rather than asking Dai to complete a designated writing task, the researcher observed her writing a course paper in English, suggesting that the data collected are authentic. Also, the time that Dai had to write the paper was not constrained. Therefore, the study’s findings genuinely reflect Dai’s actual language use in English writing. This study indicates that Chinese, Dai’s L1, served multiple functions during the L2 writing process. For example, it helped with sentence structure and content development. As she struggled to figure out what she wanted her sentences to express and how to construct them, Dai verbalized her thoughts in Chinese. This helped her organize content and construct sentences. At the same time, she used Chinese to select appropriate words throughout the L2 writing process, as well as maintain the writing process. The findings of this study are in accordance with others (e.g., Murphy & de Larios, 2010; Wang & Wen, 2002), indicating that the purposes of using the L1 vary according to tasks and contexts.

Many studies have suggested that the tendency to rely on the L1 decreases when students’ L2 proficiency level increases; students with lower L2 proficiency levels rely heavily on their L1, whereas higher-level L2 learners do not (e.g., Beare & Bourdages, 2007; Carson & Kashinara, 2012; Woltersberger, 2003). Nonetheless, this study shows conflicting findings. As an intermediate-to-advanced L2 learner, Dai showed a strong dependence on her L1 during L2 writing, demonstrating that highly proficient L2 learners still face difficulties and struggles when composing in their L2 and rely on their L1 to overcome those challenges. The L1 of an L2 learner, regardless of their proficiency level, remains a pivotal resource and aid in L2 writing (Beeman & Urow, 2013; Gort, 2006; Shin, 2013).

In this study, Dai predominantly used Chinese to think-aloud protocols, as well as various other purposes throughout the L2 writing process. At the same time, she sometimes used English as her dominant language for sentence writing and confirming word choices. This observational finding aligns with Schrauf and Rubin’s (1998) finding that English–Spanish bilinguals might internally think in Spanish while writing in English, or vice versa. It is also in line with Orellana and Garcia’s (2014) statement that, among bilinguals, both languages are active when one language is being used, indicating that they think bilingually. Accordingly, bilinguals’ L1 should not be overlooked when exploring their L2 development.

The findings yielded by this study offer some practical implications for teachers working with ELs, especially in an ESL context. Teachers are suggested to develop a better understanding of students’ language use. Knowing that ELs’ L1 is a valuable resource that can facilitate their academic development, teachers can embrace students’ L1 and strategically encourage their use for academic purposes. Furthermore, the findings also reveal that many international college students with intermediate-to-advanced English proficiency levels who have moved from an EFL setting to an ESL context, like Dai, still need additional support and extra time to become proficient with academic language and succeed in school (Garcia, 2009). College instructors working with these international students are recommended to provide explicit instruction for students to help them acquire the academic language required for a specific field of study, as “every teacher is a language teacher” (Echevarria & Graves, 2015, p. 73).

REFERENCES


Wenli Zhang was born on December 24th, 1988, in China. After receiving her BA in English from Shandong Jianzhu University in China in 2011, Wenli majored in TESL at Pennsylvania State University and received an MA degree in 2013. She continued pursuing a doctoral degree and received her PhD in Foreign, Second, and Multilingual Language Education from the Ohio State University in 2020.

She has working experiences in K-12 and university educational settings in China and the United States. Before studying abroad, she worked as an English teacher in a cram school in China. She worked as an ESL lecturer at Pennsylvania State University for a year after receiving her MA degree. While doing her PhD at the Ohio State University, she worked as a writing consultant at the Writing Center. She is now a faculty member in the Department of Foreign Languages at University of Chinese Academy of Sciences in China. Her research interests include English language teaching, language teacher education, bilingualism, and English academic writing.

Dr. Wenli Zhang was a member of TESOL and AAAL. She has shared her work at various international conferences, including TESOL and AAAL. She has also published her works in multiple international journals, such as *Teacher Education and Research* and *US-China Education Review A*. Dr. Wenli Zhang served as a conference proposal reviewer for AERA, TESOL International Convention & English Language Expo, and Ohio TESOL. She works as a manuscript reviewer for the *Journal of Language and Literacy Education* since 2019.

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