Errors in Adjective-Noun Order by Thai and Chinese EFL Learners: Roles of L1 and Language Proficiency

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Abstract

Roles of first language transfer have been extensively researched during the past decades adopting Contrastive Analysis (CA). However, previous studies have shown that CA has failed to prove and find supports for language transfer. This present study examined language transfer from another perspective proposed by Jarvis and Odlin (2000) by examining adjective-noun order errors by Thai EFL learners. In previous studies, adjective-noun order errors by Thai EFL learners, which mainly used the CA, are often claimed to be caused by L1 interference. The present study aimed to examine this claim by adopting the proposed framework by Jarvis and Odlin by Thai and Chinese EFL learners and to investigate the relationship between the adjective-noun order errors and learners' proficiency levels. Two groups of Chinese and Thai participants were purposively selected due to the special characteristics of their first languages that met Jarvis and Odlin's L1 transfer framework. The results revealed that both Thai and Chinese EFL learners made similar errors in the adjective noun order. The statistical test showed no significant differences between the number of adjective-noun order errors produced by Thai and Chinese learners ($p > 0.05$). Therefore, the transfer position seemed not to be plausible. A negative correlation was found between language proficiency and the number of errors learners produced. This suggests that when learners' proficiency was higher, they tended to produce fewer errors in adjective-noun order errors

Keywords: *L1 transfer, word order, English as a Foreign Language*

1. Introduction

Previous studies in L1 transfer in Thai EFL learners repeatedly claimed that the adjective-noun order—where adjectives modify the head noun—was caused by L1 transfer (e.g. Bennui, 2008; Bootchuy, 2008; Chownahe, 2000; Khamput, 2004). However, these previous studies did not mainly examine L1 transfer. They were conducted to analyze types of errors learners produced. Based on the results of the studies, by looking at the inconsistency between Thai adjective-noun order and English adjective-noun order, they concluded that errors in adjective-noun order were caused by L1 transfer. For example, the misplacements of adjectives such as 'animal *small and big*' instead of 'small and

big animals' (Chownahe, 2000), 'time *enough*' instead of 'enough time' (Bootchuy, 2008), or 'knowledge *better*' instead of 'better knowledge' (Bennui, 2008) were found to be in a similar order to the Thai language, where adjectives are placed after the head nouns. Accordingly, it is possible for one to interpret that this feature of errors is caused by the influence of the Thai language.

In fact, in the area of L1 transfer study, Jarvis (2000) clearly stated that the identification of the transference of L1 requires more evidence than only a consistency or inconsistency of learner's L2 production and learners' L1 (or Contrastive Analysis). Simply relying on a comparison between a learner's L1-L2 performances would be misleading, since such errors could be made by speakers of other native languages as well (Odlin, 1989). For example, it was found in a study of Peck (1978) that the omission of '*is'* as a copula verb in sentence like *'That very simple'* is an error that is commonly made by speakers of different L1 backgrounds, regardless of the existence of such grammatical structures in their first languages, such as Chinese, Japanese, Spanish and other languages. Such errors may be caused by some other factors such as target language proficiency. Jarvis (2000, 246-247) mentioned that language proficiency may relate to language transfer in six possible ways: 1) L1 influence decreases with increasing L2 proficiency, 2) L1 influence increases with increasing L2 proficiency, 3) L1 influence remains constant with increasing L2 proficiency, 4) L1 influence decreases, but not linearly, 5) L1 influence ultimately increases, but nonlinearly, and 6) L1 influence ultimately never decreases nor increases but its presence continually fluctuates as L2 proficiency increase.

A few studies such as Taylor (1975) and Kellerman (1995) stated that when L2 proficiency increased, errors in L2 seemed to be less seen. However, Hadadi, Abbasi, and Goodarzi (2014) found that there were no correlation between the increasing proficiency and L1 transfer. Thus, this may lead to the question of whether the errors—including errors in adjective-noun order that were found in the past studies—are necessarily due to the influence of L1.

Concerning how L1 transfer should be more precisely identified, Odlin (1989) suggested a framework for the research in this area. He suggested that L1 influence is best determined through a comparison of the performances of speakers of at least two different native languages. Moreover, Odlin did highlight that statistical tests are required for determining the transference or non-transference of the learner's L1. Other language transfer scholars such as Gass (1983), Richards (1994), and Jarvis and Oldin (2000) also considered this comparison approach necessary before any incidences of cross-linguistic influences could be claimed.

In a recent study, Odlin's guideline was readjusted by Jarvis (2000) to a more rigorous framework for transfer study. Jarvis states that a transfer study must investigate at least three possible effects of L1 influence, namely *intra-L1-group similarity, inter—L1-group differences, and L1-IL performance similarity.* Firstly, *intra-L1-group similarity* is found when learners who speak the same L1 behave in the same manner when using L2. Secondly*, inter-L1-group differences* occur when comparable learners of the same target language who speak different L1s diverge in their L2 performance. Lastly, *intra- L1-performance similarity* be found when learners' use of some L2 features can

be shown to parallel their use of a corresponding L1 feature. Such investigation would unveil significant features which rarely occur in the production of speakers of other native languages.

Unfortunately, few studies, if any, have been conducted with Thai learners in which the L1 transfer errors in question have been compared with learners from other native language backgrounds. L1 transfer errors such as adjective-noun order have been examined solely through the claimed Error Analysis approach and Contrastive Analysis, which do not directly investigate the influence of L1. Therefore, this study aims to adopt a sound framework for the study of L1 influence to investigate L1 transfer on the adjectives-noun order errors of Thai EFL learners by making a comparison to Chinese EFL learners. It is expected that the results of the study, which adopts a more accurate framework and method, will lead to a better understanding of the types of errors learners produce, which in turn will elucidate how they should be guided and taught.

2. Language transfer

Roles of language transfer or cross-linguistic influence in learning a second language has been a field for extensive research in the past decades (Ellis, 1994; Gass & Selinker, 1994; Kellerman, 1995; Larsen-Freeman & Long, 1991; Odlin, 1989; Selinker, 1992). It is one of the first areas attempting to explain learners' difficulty in learning a second language. The notion is that second and third language learners use knowledge of their previous acquired language to learn the target language. The patterns of the L1 can have an effect on learning a sound or a word, or on the construction of a second language (Selinker, 1992).

The very first influential and inspiring method trying to explain language transfer is Contrastive Analysis Hypothesis (Lado, 1957; Stockwell, Bowen, & Martin, 1965). Contrastve analysis places emphasis on L1 as the main source of difficulty in second language acquisition (Bennui, 2008). Based on the similarities and differences between various aspects of L1 and L2, the Contrastive Analysis Hypothesis predicts the likelihood of linguistic transfer in second language acquisition. This hypothesis is based on very simple idea that when there are similarities in linguistic structures in two languages, the first language will facilitate learning a second language, known as positive transfer. However, when there are divergences between the two languages, the first language will inhibit learning a second language, known as negative transfer.

However, a collection of subsequent research revealed that this explanation was inadequate, as not all errors are correlated with the L1. Learning difficulties also arise from other factors apart from cross-linguistic differences. Some difficulties are unable to be predicted through contrastive analysis (Anderson, 1979; Lee, 1968; Richards, 1994; Schumann, 1978).

Currently, research on cross-linguistic influence and language learning is still widely conducted. Its objective, however, is no longer to predict errors but rather to understand how 'the languages a person knows interact in the mind' (Jarvis & Pavlenko, 2008, p. 11). To understand this phenomenon, or the ultimate goals as put by Jarvis and Crossley

(2012), four areas of L1 transfer research (or enabling goals) are examined; these include the pursuit of empirical discoveries, theoretical advances, methodological tools, and argumentation heuristics. This present study falls under the first area: The pursuit of empirical discoveries to advance the field by extending our knowledge on cross-linguistic influence in L2 learning.

2.1 L1 transfer in the previous studies on Thai learners

A number of studies have investigated errors on Thai learners' performance in English, aiming to identify errors learners produced and L1 transfer errors. These studies adopted similar research methodology (i.e. error analysis) and made claims on L1 transfer by examining the inconsistency between L1 (Thai) and L2 (English). For example, Rujikietgumjorn and Chiewkul (1987) studied errors produced by college freshmen. They found a number of errors and concluded that there were several errors claimed to be L1 interference errors. These included word order, copula verbs, articles, plural endings, omissions of subjects and objects, and meanings.

Similar to Rujikietgumjorn and Chiewkul, Chownahe (2000) analyzed errors in English compositions written by Grade 12 students. Adopting Richards's framework (1994), he classified errors into *'interlanguage errors*' and *'intralingual and developmental errors*'. Apart from the 'intralingual and developmental errors' category, Chownahe found that Thai students made interlanguage errors involving adjectives used as main verbs, and word-by-word translation including adjective-noun order.

Two studies adopted the same framework proposed by Richards (1994). The first study by Khamput (2004) was conducted to investigate L1 transfer on the second language writing of Grade 11 students. Khamput also claimed to adopt the Error Analysis approach by categorizing errors into three major types: interference errors, intralingual and developmental errors, and uncategorized errors. The methodology that Khamput employed in identifying L1 transfer errors was to exclude the intralingual and developmental errors by making a comparison to the six tables developed by Richards. Based on Richards's categories, Khamput concluded that errors such as '*I play game computer*' and '*party good bye*' are interference errors. The second study by Bootchuy (2008) investigated Thai graduate students' academic writing. She sought to examine how this group of students transferred their L1 or Thai (in terms of ill-formed sentences) when writing academic texts. Similar to Chownahe and Khamput, the errors were grouped into interference errors, intralingual errors, and developmental errors based on Richards's categories (1994). The results were similar to the previous studies. Learners made errors concerning word order, omissions, complex sentences, structures, fragments, run-on sentences, and word-by-word translations.

The last study by Bennui (2008) was conducted to investigate L1 transfer in the study through three approaches, namely contrastive analysis, error analysis, and contrastive rhetoric. The results were similar to those of the previous studies, as learners produced errors in grammatical structures, vocabulary items, and discourse markers. The errors were claimed to be caused by L1 interference.

In short, previous studies on Thai learners seem to suggest that there were several features of Thai language influence. Of course, these error analysis studies have brought light to how the Thai language may influence Thai EFL learners' linguistics performances. However, according to Jarvis (2000), the ability of these studies to address transfer is limited since they looked only at the inconsistency between two languages. Thus, it is still questionable whether the errors that occur in the adjective-noun order are caused by the influence of Thai language. The errors in question have not yet been investigated in parallel with learners of other native languages. It would be misleading to simply rely on a comparison between the Thai language and the learners' English performance. Therefore, it may be said that an empirical study on L1 influence requires a more rigorous framework. The results from a study employing a more accurate framework and method may lead to a better understanding of types of errors learners produce, which in turn may lead to how they should be guided and taught.

2.2 Framework for L1 transfer studies

According to Odlin (1989), a single comparison of learners' L1 and their target language performances does not show sufficient evidence of L1 transfer. The approach to identify and measure the transfer of L1 should be more reliable to strengthen the claim of transfer (Gass & Selinker, 1983). Therefore, one of the early frameworks, proposed by Odlin (1989), stated that before identifying a feature of native language influence, a comparison study between different native speakers should be conducted.

A number of studies comparing the grammar, vocabulary, and other linguistic properties of learners with different native languages indicate acquisition differences attributable to cross-linguistic influence (Odlin, 1989). For example, the spelling of *playing* as *blaying* is more likely to be a spelling error of an Arabic speaker than of a Spanish speaker. This occurs because Arabic speakers occasionally make ESL spelling errors that involve a substitution of the letter *b* for the letter *p* while speakers of other languages do not. Another example is the case of *resumptive pronouns* (Odlin, 1989). A contrastive analysis of Persian and English would suggest that this *resumptive pronoun* is a Persian speaker's error, as in the sentence *'I know the man that John gave the book to him'*. This is because *resumptive pronouns* exist in the Persian language. Surprisingly, other studies found that such errors are also made by speakers of languages that do not have *resumptive pronouns*. Thus, the *resumptive pronoun* error may or may not be attributed to the influence of the Persian language. These examples support Odlin's framework which states that in order to examine language transfer, a comparison between at least two different native languages is required.

Apart from the framework of Odlin, another common guideline for the study of transfer was also given by Gass and Selinker (1983), who claimed that transfer can be identified when "parallel frequencies in NL (L1) and learner behavior are found" (cited in Jarvis, 2000, p. 251). Both Odlin (1989) and Selinker (1983) emphasized the importance of statistical tests to determine the transference or non-transference of L1 (Jarvis, 2000). However, it is important to note that Selinker (1983) emphasized L1-IL comparisons while Odlin focused on IL-IL comparisons.

Given the fact that many transfer studies are based solely on IL-IL comparisons, and others are based on L1-IL comparisons, Jarvis (2000) mentioned in his study that L1 influence has not been investigated in a unitary way, which may be the cause of the contradictory findings of transfer studies. Therefore, Jarvis (2000) recently proposed a unified framework reflecting Odlin's (1989) and Selinker's (1983) recognitions. He prefers transfer studies investigate three potential effects of L1 influence, which are as follows:

1. *intra-L1-group homogeneity in learners' IL performance*: This is when learners with the same L1 behave in the same manner when producing the L2. For instance, Selinker (1983) found in his study that his Hebrew-speaking learners of English statistically demonstrated tendency to place an adverb string before an object string *(e.g. I like very much movies.)*
2. *inter-L1-group heterogeneity in learners' IL performance*: This evidence is found when comparable L2 learners who speak different L1s diverge in their IL performance. Ringbom (1992) reported in his studies that English articles and preposition are significantly more likely to be omitted by L1 Finnish learners than L1 Swedish learners.
3. *intra-L1-group congruity between learners' L1 and IL performance*: This evidence is found when some L2 features used by learners can be shown to parallel their use of a corresponding L1 feature. An example of this can be found in the study of Selinker (1983) showing that his Hebrew-speaking learners showed significant trends which were parallel in the L1 and L2 with respect to their sentence-level ordering of time, place, object, and adverb strings.

Jarvis (2000) also emphasized that the use of only one of the above criteria is not sufficient by itself to verify a convincing argument either for or against the presence of L1 influence. It may be caused by multiple factors such as L2 influence, L2 influence on L3 productions, as well as L2 proficiency. Thus, it must be considered in conjunction with the other two potential effects; additionally, any other possible factors that may influence a learner's use of L2 should also be recognized.

In summary, the study of transfer needs a more rigorous framework than a single comparison of the learners' L1 to their performance in the target language. Odlin (1989) suggests researchers compare the performances of different L1 learners in the common target language, while the congruity between the L1 and IL of the learners is also emphasized by Selinker (1983). Thus, in a recent study of transfer, Jarvis (2000) prefers to unify these frameworks and suggests that transfer studies consider at least three potential effects of L1 influence. According to this framework, some studies directed at L1 transfer have been done outside of Thailand.

2.3 Studies directed to L1 transfer

Although several research studies have investigated L1 influence, only a few have been conducted in a unitary framework. Following is a review studies adopting methodology that has effectively addressed L1 transfer. The first example was the study of '*morphological*

transfer' by Jarvis and Odlin (2000). In the study, the preferences in the spatial expressions of Finnish-speaking and Swedish-speaking adolescent learners of English were compared. The participants were 206 Finnish, 114 Finnish-Swedish, and 66 American learners. The data was analyzed after an 8-minute silent film, *Modern Times*, was shown to the participants to see their usage of prepositions with the verbs *take*, *sit*, and *put* in their narratives. The participants' use or nonuse of prepositions along with these verbs was compared to the lexical types of the participants' L1 backgrounds. Jarvis and Odlin (2000) applied the transfer study framework for the analysis and found that L1 influence was at play. The Finns and the Swedes showed different preferences for different prepositions in the same context, which seemed to arise from their L1 backgrounds. The omission of spatial prepositions was made by the Finns, but not by the Swedes. Also, the Finns showed a strong preference for '*on',* whereas the Swedes preferred '*in'*. Therefore, through the framework of this transfer study, Jarvis and Odlin (2000) discovered that these findings showed evidence of the transferability of bound morphology.

The second example can be seen in Jarvis' (2000) investigation of '*L1 influence on IL lexical reference*' of the Finnish and Finnish-Swedes. This study was designed in accordance with the methodological rigor he proposed, which is to consider the three effects of L1 influence, namely 1) intra-L1-group similarity, 2) inter-L1-group differences, and 3) L1-IL on performance similarity. In addition, other potential factors were controlled. The participants of the study consisted of Finnish speaking learners, Finnish-Swedish speaking learners, and American-English native speakers. The data were statistically analyzed according to the three types of framework criteria. The results provided evidence that the learners' referential word pattern choices were primarily due to L1 background than to other factors. For example, in reference to a film scene in which a woman accidentally runs into and knocks down Chaplin, the Finnish learner groups' commonly chose to use the verbs '*hit'* and '*crash'*, whereas the Swedes showed a preference for the phrasal verb '*run on'*. Jarvis noted that these differences reflected the differences in the conception of collision between the Finns and the Swedes.

Lastly, in the study entitled, *'Topic Continuity in L2 English Article Use'*, Jarvis (2002) studied the patterns of article use and non-use of Finnish-speaking and Swedish-speaking learners of English. Two focuses of the study were whether learners overtly marked the distinction between new, current, and known NP referents on the one hand, and topic and comment NP referents, on the other. Although the focuses were not directed to L1 influence, the study was designed to also investigate the effects of L1 on these distinctions. The methodology was quite similar to what Jarvis and Odlin (2000) and Jarvis (2000) did, but the analysis was subject to the learners' distinction. The participants were comprised of Finnish-speaking learners, Swedish-speaking learners, and native English speakers from America. The results showed that, although there were some doubts about the learners' sensitivity to the topic-comment distinction, it was clear that the tendency to mark the distinction between new, current, and known NP referents was influenced by the prominence of such a distinction in the L1.

In conclusion, the three sample studies by Jarvis and Odlin (2000), Jarvis (2000), and Jarvis (2002) have rigorously showed that to identify L1 transfer, three different aspects of evidence must be provided, namely 1) intra-L1-group similarity, 2) inter-L1-group differences, and 3) L1-IL on performance similarity. With such information, a position in regards to L1 transfer can be better made. Also, statistical analyses need to be conducted to identify actual differences. Despite the fact that the issue of L1 interference errors on Thai EFL learners' performances was largely investigated, there still may remain very few studies, if any, that have applied the framework for identifying L1 transfer in their research. Comparing the occurrence of errors with at least one group of other native language speakers would reveal the characteristics of these errors, and therefore, would better facilitate research to determine L1 transference from a particular native language.

3. Purposes of the study

This study aims to examine L1 transfer based on the reviewed transfer study framework focusing on the adjective-noun order errors in Thai EFL learners compared with those of Chinese learners whose L1 has different order of adjective-noun pattern, and to investigate the relationship between adjective-noun order errors and learners' proficiency level. As such, this study is guided by the following research questions.

1. Are adjective-noun order errors produced by both Thai and Chinese EFL learners? In other words, is there any evidence of intra-L1-group homogeneity in learners' IL performance?
2. Are there any differences between the number of errors made by Thai and Chinese EFL learners? In other words, is there any evidence of intra-L1-group homogeneity in learners' IL performance and intra-L1-group congruity between learners' L1 and IL performance?
3. Do the number of adjective-noun order errors vary according to learners' proficiency level?

4. Methodology

4.1 Participants of the study

Two groups of participants were included in this study: A group of Thai learners and a group of Chinese learners. These two groups of participants were purposively selected due to the special characteristics of their first languages that meet the L1 transfer framework of Jarvis and Odlin, which will be described in details in the selected target structure. Both Thai and Chinese learners were first year non-English major students. They volunteered to participate in the study; they were informed about the purposes of the study and that their names would be kept anonymous. The Thai learner group comprised of 18 freshmen undergraduate students at one public university located in the Northeast of Thailand – 15 males and 3 females between the ages of 18-19 years old. They had no experience living or studying in English speaking countries. The Chinese participant group consisted of 16 native Chinese learners – 8 males and 8 females between the ages

of 19-21 years old. They were exchange freshmen undergraduate students studying at the same university as the Thai learner group. The Chinese learners had lived in Thailand for one semester when the data were collected.

4.2 Research design

4.2.1 Target structure

This research attempts to investigate errors Thai learners make as compared to Chinese learners by focusing on one target structure: Adjective-noun order, which is the position where adjectives are placed to modify the head nouns. The selection of this target structure was based on two main criteria.

Firstly, previous studies conducted with Thai learners claimed that the misplacement of adjectives (*noun* + *adjective* instead of *adjective* + *noun*) is the result of L1 transfer errors. For example, "An elephant is *an animal very strong*" (Chownahe, 2000) and "*…hinder many working women to spend *time enough*…" (Bootchuy, 2008). Thai learners frequently placed the modifying adjective after the head noun, which is similar to the Thai structure. Accordingly, previous studies interpreted this feature of error as interference from the Thai language. However, previous studies did not make a comparison of such errors with learners of other languages. The assumption that this type of error is caused by L1 transfer in Thai learners is still questionable.

Secondly, to investigate whether the targeted errors are caused by L1 transfer in Thai students, this study was designed to compare such errors with Chinese learners, whose native language has similar adjective-noun order typology to that of the same target language, which is English. This is the main requirement for the adoption of Jarvis and Odlin's framework. The typology of placing adjectives to modify nouns of Thai, English, and Chinese is illustrated below;

		Example
Thai	noun + adjective	บ้าน ใหม่ *(house new)*
English	adjective + noun	new house
Chinese	adjective + noun	新 房子 *(new house)*

Thai language places adjectives after the noun, whereas English and Chinese similarly place adjectives before the noun that they modify. Hence, this study was designed to investigate L1 transfer by comparing the occurrence of the target structure in Thai and Chinese students' English production.

4.2.2 Task design

Since the present study focuses on measuring adjective-noun order, tasks were structurally designed to obtain the targeted errors. A pilot study, conducted before the tasks employed

in this study were constructed, adjusted two narrative writing tasks from past studies related to L1 transfer investigation (Jarvis, 2000, 2002; Jarvis & Odlin, 2000) to obtain the data. The first task was a free writing task under a given topic. The second one was a controlled composition which consisted of a picture and some suggested words. The two tasks were tried out by five Thai learners and three Chinese learners. The results from both tasks found that none of the learners produced the target structure, which was the use of an adjective to modify the head noun in a sentence. It seemed like the learners avoided using this type of structure in their sentences. These results showed that free writing and controlled writing could not elicit the target structure. Therefore, the two narrative writing tasks were found to be inappropriate for this study.

Consequently, the '*scrambled sentence task*' was constructed in a more structured way to focus on the productivity of the target structure. The task has been employed in several studies on a specific measure of the learner's ability in terms of syntax. Spada and Lightbown (1999) used a '*scrambled question task'* to investigate a learner's ability to recognize grammatical questions and found that the task can measure the learner's level of syntactic knowledge. Thus, the scrambled sentence task in the present study was designed to measure learners' use of adjective-noun order. The adjective-noun orders provided in the task were selected from the findings in the previous studies on the errors of Thai learners.

The scrambled sentence task was checked by an expert. Afterwards, it was piloted with five Thai undergraduate students, and it was found that four out of five students (80%) produced the targeted errors from the task. Therefore, the scrambled sentence task was found to be appropriate for obtaining the data in this study.

The instruments in this research include the following:

4.3 Research instruments

4.3.1 Proficiency test

The proficiency test was used to measure English proficiency levels of the two groups of participants to check whether they had comparable language ability. The proficiency test used in this study was a national educational test which was in a multiple choice format with 70 items assessing the abilities in writing, grammar usage, vocabulary usage, and reading comprehension. The test was used because it was freely available for the purposes of teaching and research. It was not possible to use existing proficiency tests such as TOEFL and IELTS because they were expensive.

4.3.2 Scrambled sentence task

The scrambled sentence task was designed to measure how learners place adjectives to modify the head nouns in English sentences. The task comprised of ten English sentences scrambled in a random order. In each item, the learners were required to rearrange the words into a meaningful sentence in writing. For example, 'dancer/is/very/good/she/a' should be rearranged to 'She is a very good dancer'. The scrambled sentences were selected from the findings in the previous studies on the errors of Thai learners. The task was

checked by an expert. Afterwards, it was piloted with five Thai undergraduate students, and it was found that four out of five students (80%) produced the targeted errors from the task. Therefore, the scrambled sentence task was found appropriate to obtain the data in this study. (See Appendix for the scrambled sentence test.)

4.4 Data collection

The data collection process was conducted in two different meetings. In the first meeting, the participants of both groups were informed about the purposes of the study. After they gave consents to participate in this study, they were given a proficiency test which lasted about one hour. The reason behind this two-meeting design was to prevent test fatigue that could have occurred and impacted the participants during the test. The second test lasted approximately 30 minutes.

4.5 Data analysis

The obtained data were analyzed through the following process:

1. After the implementation of the proficiency test, the participants' tests were scored with a full score of one hundred. To compare the proficiency scores of the two groups, a *t*-test was used instead of a non-parametric analysis despite the small number of participants. This was due to the fact that based on the results from the preliminary analysis, the data set was normally distributed, demonstrating by an appropriate ratio of a Skewness value and Standard error which did not exceed +/- 3.29 (Tabachnick & Fidell, 2006).
2. The scrambled sentence task papers were analyzed for the targeted errors. Any recognizable forms of a 'noun-before-adjective' order that appeared in meaningful sentences were counted as targeted errors. However, the errors that appeared in meaningless sentences as well as other types of errors were excluded. For example, the re-ordered sentence 'Want I get to *grades better*.' from the scrambled sentence 'grades / better / I / to / want / get', the instance of '*grades better'* in this case was not counted because it could reveal learner's inability to understand the sentence and simply put the words in any order.
3. After that, in order to examine the intra-L1-group similarity, the number of learners making errors was calculated in percentages. The number of errors in each group, as well as the number of correct orders, were totaled and calculated for the mean score.
4. In order to trace the inter-L1- group differences, the numbers of errors in each group were calculated for statistical significance by using a *t*-test (due to an appropriate ratio of a Skewness value and Standard error as mentioned in the first step).
5. Finally, a Pearson's correlation test was run to examine the relationship between the participants' proficiency levels and the number of errors they made.

5. Findings

5.1 Preliminary analysis of the intergroup proficiency levels

Before further analysis of the task results could be performed, it was important to compare whether learners of the two groups had comparable language ability. According to Table 1, the overall proficiency levels of the Thai group (*Mean* = 36.61, *SD* = 14.03) and the Chinese group (*Mean* = 35.63, *SD* = 10.53) were not significantly different at the 0.05 level, indicated by $t(32) = .232$, $p > 0.05$. Therefore, it can be said that both groups of participants had comparable proficiency levels.

Table 1 A comparison of the proficiency levels of the learner groups

Learner Groups	***Mean***	***SD***	***T***	***df***	***p***
Thai	36.61	14.03			
Chinese	35.63	10.53			

5.2 Results of the adjective-noun order found by Thai and Chinese EFL learners

5.2.1 Results of the adjective-noun order found by Thai and Chinese EFL learners

The results show that both groups produced the correct order of adjective and noun—111 correct orders (61.67%) in the Thai learners group and 118 correct order (73.75) in the Chinese learner group. As expected the Thai learner group made a high number of errors (i.e. 54 errors). Surprisingly, the Chinese learner group also produced similar errors by putting the adjective after the head noun it modifies, a total of 28 (e.g. *uniform university*, *grade better,* and *key house*) (see Table 2). The Thai learner group produced on average 3 errors (*SD* = 2.14) per person, while the Chinese learner group produced approximately 1.75 per person (*SD*= 1.70). In regards to the correct orders, it was found that the Chinese participants produced 7.38 correct orders per person (*SD.* = 2.00), and the Thai participants produced 6.17 (*SD* = 2.85). It can, therefore, be concluded that even though the Chinese participants produced a high number of correct order of adjective and noun, they surprisingly also produced errors similar to the Thai participants.

Table 2 Number of correct use and errors in adjective noun order

Learner Groups		**Number of Correct Order**			**Number of Errors**		
		Total	**Per person**		**Total**	**Per person**	
			Mean	*SD*		*Mean*	*SD*
Thai learners	18	111	7.38	2.00	54	3	2.14
Chinese learners	16	118	6.17	2.85	28	1.75	1.70

5.2.2 Comparison of the number of errors made by Thai and Chinese EFL learners

The number of targeted errors produced by the Thai and the Chinese learner groups were compared using a *t*-test. The results showed that there was no significant difference in errors produced by the two groups at the 0.05 level, indicated by $t(32) = 1.871$, $p > 0.05$ (see Table 3). Thus, it could be concluded that the two groups of learners made a similar number of errors.

Table 3 Comparisons of errors of the Thai and Chinese EFL learners

Learner Groups	N	Mean	SD	t	df	p
Thai	18	3	2.14	-1.871	32	0.71
Chinese	16	1.75	1.70			

5.3 Relationship between proficiency and errors

This section reports on the relationship between proficiency scores and the numbers of errors made by the participants. The relationship between the proficiency scores and the numbers of errors were analyzed using Pearson's correlation. The results are shown in Table 4.

Table 4 Correlations of proficiency levels and numbers of errors

Learner groups	Pearson's correlations	*p*
Thai	-0.62	.007*
Chinese	-0.65	.006*
Both groups	-0.54	.000*

* $p < .001$

According to Table 4, Pearson's correlations between the learners' proficiency scores and the number of errors were moderately strong: -0.62 for the Thai group, -0.65 for the Chinese group, and -0.54 for both groups; all were significant at a 0.001 level ($p < .001$). These negative figures reveal that the proficiency levels are inversely correlated with the numbers of errors. This illustrates that when learners have a higher English proficiency, they tend to produce fewer errors in adjective-noun order.

6. Conclusion and discussion of the results

Based on the results of the study, errors in adjective-noun order were produced by both Thai and Chinese learners. Also, the results revealed that both Thai and Chinese EFL learners produced a similar number of adjective noun order errors. A negative correlation between the number of errors in adjective-noun order and learners' proficiency level was found. That means, when their higher English proficiency increases, they tend to produce fewer errors in adjective-noun order. The results of the study seem to support previous

views (e.g. Taylor, 1975; Kellerman, 1995) on the role a first language plays when learning a second language. At the initial phase of learning, L1 helps mediate L2 learning. Once L2 proficiency is higher, L2 learners are less dependent on their L1 and L1 features occurring in L2 begin disappearing (see e.g. Spada & Lightbown, 2002).

As mentioned earlier, before making any decision as to whether there is any incidence of L1 transfer, it is important to consider three elements of evidence. These include 1) intra-L1-group similarity, 2) inter-L1-group differences, and 3) L1-IL performance similarities. The following is the discussion of each element using the findings from the study.

6.1 Intra-L1-group similarity

According to Jarvis (2000), *intra-L1-group similarity* is found when learners who speak the same L1 behave in the same manner when using L2. Based on the results of the study, it was found that Thai learners performed similarly on the errors they made in the adjective-noun order.

Based on the results of the study, it was found that both the Thai and the Chinese groups presented high percentages of similarity when producing errors in adjective-noun order within the group. In addition, it was also found that the orders of adjective and noun were placed correctly by both learner groups. No learner was found to produce all ten items with the targeted errors; each individual learner produced at least some items correctly. This is likely to show that learners in both the Thai and Chinese groups have some understanding as well as some problems with the use of adjectives to modify the head nouns. This demonstrates that the errors in adjective-noun order may not be caused by the influence of L1. Perhaps it could be said that no prominent transfer evidence of intra-L1-group similarity was found.

6.2 Intra-L1-group difference

Secondly, conjunction evidence of L1 transfer could be examined through the effect of *inter-L1-group differences*, or when comparable learners of a common L2 who speak different L1s diverge in their IL performance (Jarvis, 2000). The statistical test in this study revealed that with comparable English proficiency levels, there was no statistical difference between the number of the targeted errors made by the Thai learners and the Chinese learners. Therefore, this possibly indicates that no significant evidence of inter-L1-group differences was found as well.

6.3 L1-IL performance similarity

The last L1 transfer evidence to be considered in conjunction with the first two is the *L1-IL performance similarities*, which is found when a learner's use of the L2 feature can be shown to parallel their use of a corresponding L1 feature (Jarvis, 2000). This effect can be discussed in relation to the primary decision of selecting the target structure of adjective-noun order. If it is analyzed in isolation, the Thai learners' behavior of placing adjectives after the nouns would be considered parallel to the use of adjectives to modify nouns in the Thai language, because the Thai language puts adjectives after head nouns.

When considering the Chinese language, adjectives have a grammatical placement similar to English. However, Chinese learners also performed the same behavior as the Thai learners. Thus, this might be further evidence to support the non-transference of L1 in adjective-noun order.

As can be seen, it can be concluded that based on Jarvis's (2000) framework, the transfer position of adjective-noun order repeatedly claimed in the previous literature as L1 interference seems not to be plausible.

Despite the fact that the results of the present study seem to provide no evidence of L1 transfer in the adjective-noun order errors, the conclusion that there is a complete absence of transference does not necessarily need to be drawn. Jarvis (2000) mentioned that it is important to recognize other potential factors that could affect learners' L2 behavior, such as age, personality, motivation, language aptitude, social and educational backgrounds, language backgrounds, L2 proficiency, and the distances between the L1 and L2 languages. With the limited recruited samples in this study, the only factor that was directly controlled was the comparable L2 proficiency levels of the learner groups. Other factors not investigated in this study could probably influence the results. More importantly, it is noteworthy that the Chinese learners in this study were also learners of Thai as a Foreign Language (TFL). Their exposure to the Thai language as a third language could perhaps account for their productions of errors in adjective-noun order (Murphy, 2003). Therefore, these potential effects should also be recognized together with the findings of the present study.

7. Recommendations

The results of this study show that errors in adjective-noun orders may not be a consequence of L1 influence, and it is more related with overall language proficiency. As such, this type of errors should be treated differently. The alteration of the L1-L2 language learning process or mere explicit explanation of different positions (e.g. the explanation of the different positions of adjective in Thai and English) may not be sufficient. Learners may be needed to be exposed to more input or examples, receive opportunity to use this linguistic feature in meaningful interaction, and receive feedback when appropriate before they are able to internalize the rules and correctly use them in their production. This study, however, has some limitations. Due to a small sample size, with a larger sample size the validity of the findings may be strengthened. Future studies should also examine other features using this framework to gain more insight into roles of first language transfer in order to better enhance learners' second language development.

Acknowledgements

We would like to thank The Graduate School, Khon Kaen University for funding this research. Also, we would like to thank all students who participated in this study and two reviewers for their invaluable comments and suggestions during the preparation of this paper.

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