L1 Influence on ESL Learners’ Acquisition of English Ditransitive Constructions

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This study attempts to present clearer evidence for L1 influence by attending to the fact that semantically comparable English and Chinese ditransitive verbs do not always behave similarly. Thirty Korean and 30 Chinese ESL learners participated in an acceptability judgment test and an elicited production task. The two L1 backgrounds were chosen because Korean allows only the adpositional construction (AC) while Chinese allows both the AC and the double object construction (DC). For the tasks, three different types of English ditransitive verbs were selected based on how their translations are used in Chinese: verbs whose Chinese counterparts occur with the DC only (D-type); verbs whose Chinese counterparts occur with the AC only (A-type); and verbs whose Chinese counterparts occur with both the AC and the DC (B-type). The results indicate that: (a) regardless of verb types, the Korean group more favorably accepted and more frequently produced AC sentences than DC sentences; (b) verb types influenced the Chinese group’s acceptability ratings and production; and (c) the two groups showed the biggest inter-group difference when they were given DC sentences with the D-type verbs, and the smallest inter-group difference when they were given AC sentences with the A-type verbs.

I. INTRODUCTION

Acquisition of English ditransitive constructions has attracted considerable attention in first language (L1) and second language (L2) research. According to Inagaki (1997), English ditransitive constructions are “the first argument structure to receive attention in the L2 literature” (p. 638), and remain a linguistic phenomenon that continues to be well-studied, yet still not fully understood linguistic phenomenon (Hollmann, 2007). The current study attends to this challenging phenomenon by investigating the L1 influence on
adult Korean and Chinese ESL learners’ acquisition of English verbs that can occur with two English ditransitive constructions.

A ditransitive construction refers to a construction consisting of an agent argument (A), a verb, a recipient argument (R), and a theme argument (T). English allows two ditransitive constructions: the adpositional construction (AC) in (1a) and the double object construction (DC) in (1b).

(1) a. Mary gave a book to Tom. AC (A+V+T+to/adpositional marker+R)
    b. Mary gave Tom a book. DC (A+V+R+T)

English ditransitive constructions include to- and for-constructions. As Levin (1993) suggests, the two types can be treated differently on the basis that to is a goal-oriented preposition, whereas for is a benefactive-oriented preposition. Moreover, Mazurkerwich (1984) reports that children might feel for-ditransitive alignment alternation (or dative alternation) more difficult to process than to-counterpart. Thus, although the two types are similar in many respects, this study focuses on the to-ditransitive construction.

With regard to L1 acquisition of English ditransitive constructions, the key question has been how children come to know that give can occur with both the AC and the DC as in (1a) and (1b), whereas report can occur only with the AC as in (2a).

(2) a. Mary reported the accident to the police.
    b. *Mary reported the police the accident.

This question has often been addressed in terms of the learnability problem, and English ditransitive constructions have served as the “paradigm case” of the learnability problem (Gropen, Pinker, Hollander, Goldberg, & Wilson, 1989, p. 204): from a limited set of data in input and in the absence of negative evidence, how children come to know which English verbs can occur with either the AC or the DC or both.

English ditransitive constructions have also drawn much attention in the L2 research area. Part of the reason for such an attention is that the constructions have been identified as one of the most problematic areas for L2 learners (DeKeyser, 2005; Radwan, 2005). L2 learners frequently experience difficulty with learning and acquiring the target language, and several factors contribute to L2 learner difficulties. Toth (2000) holds that the development of L2 grammar is affected by various independent, yet cooperating, knowledge sources such as input frequency, instruction, Universal Grammar (UG), and L1 influence. Among these factors, L1 influence has drawn much attention in research on L2 acquisition of English ditransitive constructions.

Researchers who have studied L1 influence assume that adult L2 acquisition is
fundamentally different from L1 acquisition in that adult L2 learners bring the knowledge of their L1 grammar to L2 learning tasks (Odlin, 1989). Because of this, inter-language differences (or similarities) are a key factor in determining the relative difficulty (or easiness) in L2 acquisition. Previous studies have shown L1 influence at the initial stage of L2 acquisition of English ditransitive constructions. However, consensus has not been reached on the properties and extent of L1 influence. One influential perspective in L1 influence research is the UG-based lexicosemantic approach. This approach argues that the L2 learner of English ditransitive constructions must acquire the broad range rule relating the semantic structures underlying the AC and the DC, the narrow range rules that further narrow by class which verbs can occur with both constructions, and the morphophonological rule (Gropen et al., 1989; Levin, 1993; Pinker, 1989). The questions are whether the L2 learner can acquire those rules and, if so, how he/she does acquire them. Researchers in various theoretical and methodological positions have suggested different, even incongruous, answers to these questions.

The incongruity is due in part to the lack of agreement on differences (or similarities) of ditransitive constructions in two comparing languages. For example, Bley-Vroman and Yoshinaga (1992) argue that the Japanese DC and the English DC are similar in that both have a possession constraint (the broad range rule), but the Japanese DC does not allow the alternation with the AC. Inagaki (1997) assumes that some Japanese ditransitive verbs share some properties of narrow range rules with their English counterparts, whereas Sawyer (1996) argues that no narrow range rule operates in Japanese. These different assumptions about differences in ditransitive constructions of the two languages have led to different conclusions about L1 influence on Japanese learners’ acquisition of English ditransitive constructions. Another cause for this incongruity is different perspectives on L2 learners’ accessibility to DO. Bley-Vroman and Yoshinaga (1992) suggest the Fundamental Difference Hypothesis (FDH), which argues that UG is not available to L2 learners except as instantiated in their L1 knowledge. However, Sawyer (1996) simply refutes the FDH and argues that L2 learners’ have full access to DO. These different perspectives on L2 learners’ access to DO have also led to different accounts for L1 influence.

Differing assumptions and conclusions are also observed in studies on Korean learners’ acquisition of English ditransitive constructions. Korean allows only the AC, whereas English allows both the AC and the DC. Because of difference (and similarity), Korean learners’ acquisition of English ditransitive constructions can be a good testing ground from which L1 influence is clearly observed. Despite such a benefit, research on Korean learners is scarce. Moreover, the few studies available suggest incongruous assumptions and, thus, different conclusions about L1 influence. Among these studies are Dong Han Lee (1997) and Eunjeong Oh (2010). Dong Han Lee argues that Korean allows only a
construction which is analogous to the English AC, and, the unmarkedness of the English AC explains why adult Korean learners initially prefer English AC sentences to DC sentences. The access to UG, Dong Han Lee also claims, explains their overcoming of the initial preference. In contrast, Eunjeong Oh assumes that Korean allows only a construction which is analogous to the English DC and that the Korean goal DC is comparable to the English goal DC, whereas the Korean benefactive DC is not comparable to the English benefactive DC. Eunjeong Oh then argues that adult Korean learners acquire the English goal DC earlier than the English benefactive DC and that they use their knowledge of the properties of the English DC in their acquisition of the English benefactive DC. In short, these two studies hold different assumptions about similarities between Korean and English in terms of ditransitive constructions, and provide different arguments for the factors that influence the initial stage of Korean learners’ acquisition of English ditransitive constructions.

More importantly, the two studies on ditransitive constructions reveal methodological limits. Dong Han Lee (1997), for example, draws on the markedness theory in his explanation for adult Korean learners’ initial preference for English AC sentences: “Although low proficiency Korean learners’ initial preference for [AC sentences] can be explained by the influence of their L1, I believe that their initial preference for [AC sentences] was affected by the internal unmarkedness of [the AC]” (p. 185). As Kellerman (1985) points out, when we argue that Korean learners’ preference of the English AC is due to the construction’s unmarkedness, we need to show inter-group homogeneity, that there is no significant difference in the acquisition of the English AC by learners with different L1 backgrounds. However, Dong Han Lee’s participants consisted of all adult Korean ESL learners. Similarly, Eunjeong Oh’s (2010) argument for L1 influence on adult Korean learners’ acquisition of the English goal DC is based on the results from an experiment with all Korean participants. However, convincing evidence for L1 influence must demonstrate, among others, inter-group heterogeneity, which in turn requires participants with different L1 backgrounds (Jarvis, 2000). That is, a limitation of Eunjeong Oh’s study is that it does not provide evidence for inter-group heterogeneity.

The current study, therefore, revisits the topic of L1 influence on L2 acquisition of English ditransitive constructions, addressing the two issues raised by the review of Dong Han Lee (1997) and Eunjeong Oh (2010). In order to provide evidence for inter-group heterogeneity, this study introduces Chinese, which, unlike Korean, is known to allow both the AC and the DC. Moreover, this study draws on contemporary typological accounts for ditransitive constructions in order to determine properties of L1 influence in relation to Korean, Chinese, and English. This study aims to answer the following question: Does Korean and Chinese ESL learners’ L1 grammars influence their acquisition of English verbs occurring with English ditransitive constructions?
II. THEORETICAL BACKGROUND

Typological accounts suggest three ditransitive alignment types: indirective, secundative, and neutral alignment types (Haspelmath, 2005; Hollmann, 2007). Among the three alignment types, indirective and neutral alignment types are related to ditransitive constructions in Korean, Chinese, and English. Typological work on ditransitive constructions focuses mostly on the variation in the encoding of two objects. The indirective alignment type (which is the AC) refers to a situation where the T is encoded like the monotransitive patient (P) and the R is encoded differently. On the other hand, the neutral alignment type (which is the DC) refers to a situation in which both T and R are encoded like the monotransitive P.

English belongs to both indirective and neutral alignment types. In the English indirective alignment (i.e., the AC), the T is encoded in the same way as the monotransitive P, with no overt marker, but the R is encoded differently by attaching an adpositional marker to, as in (3).

(3) monotransitive: Mary ate an apple.
    indirective alignment (AC): T = P
                              Mary gave an apple to Tom.
                              T  adp  R

In contrast, in the English neutral alignment (i.e., the DC), both the R and the T are encoded in the same way as the monotransitive P, with no overt marker (or with word order as an argument encoding method) as in (4).

(4) monotransitive: Mary ate an apple.
    neutral alignment (DC): R, T = P
                          Mary gave Tom an apple.
                          R     T

Some English ditransitive verbs can occur with the AC only; others, with the DC only; and still others, with both constructions. For example, give can occur with both AC and DC, report can occur only with the AC, and tip can occur only with the DC (Levin, 1993). Malchukov, Haspelmath, and Comrie (2007) explain this characteristic in terms of construction split and alternation: Split is the situation where “under a specific set of grammatical and lexical conditions, only one or the other construction is possible,” while alternation is the situation where “one and the same verb can occur with different constructions with roughly the same meaning” (pp. 16, 13). Thus, English ditransitive
verbs show both split and alternation.

Chinese is similar to English: Like English, Chinese belongs to both indirective and neutral alignment types. In the indirective alignment (i.e., the AC), the T is encoded in the same way as the monotransitive P, with no overt marker, and the R is encoded differently by attaching an adpositional marker gei. In the neutral alignment (i.e., the DC), both R and T are encoded in the same way as the monotransitive P, with no overt marker (or with the word order of R-T as an encoding method), as shown in (5).

(5) monotransitive: Wo zhanoshang ji le yifeng xin.
I morning mail asp one P (letter)
“I mailed a letter this morning.”

indirective alignment:
Zhangsan song le yiben shu gei Lisi.
Zhangsan send asp T (one book) to R (Lisi)
“Zhangsan sent a book to Lisi.”

neutral alignment:
Zhangsan song Lisi yiben shu.
Zhangsan send R (Lisi) T (one book)
“Zhangsan sent Lisi a book.”

(5) is: (Yang, 1991, pp. 18, 22)

It has been agreed that the Chinese DC (Zhangsan song Lisi yiben shu) is equivalent to the English DC (Zhangsan sent Lisi a book). However, there has been a debate on whether or not the Chinese AC with gei (Zhangsan song le yiben shu gei Lisi) is equivalent to the English AC. Gei can occur in two positions, as shown in (6).

(6) a. Wo xie le yifeng xin gei Zhangsan.
I write asp one letter ? Zhangsan
b. Wo xie gei Zhangsan yifeng xin.
I write ? Zhangsan one letter (Yang, 1991, p. 18)

Largely because of the two possible post-verbal positions in which gei can occur, there has been a controversy over its underlying status. Some researchers consider gei as a co-verb (e.g., Chung & Gordon, 1998), others argue that gei is a verb and combined with other verbs to produce serial verbs or compound verbs (e.g., Zhang, 1998). Still others take gei as a preposition (e.g., Liu, 2006; Yang, 1991). If gei is viewed as a preposition or a co-verb, both (6a) and (6b) would be AC sentences, although the order of the T and the R would be different. In contrast, if gei is understood as a verb, gei in (6b) combines with the verb xie to create a compound/serial verb meaning “write and give.” If this is the case, (6b) is a DC sentence. However, we can avoid the controversy by not making a classificatory decision.
dependent on the exact status of \textit{gei}, and that is what contemporary typology does (Malchukov et al., 2007). That is, the debate on the exact status of \textit{gei} becomes superfluous if we adopt the typological accounts for ditransitive constructions.

Like English ditransitive verbs, Chinese ditransitive verbs exhibit split and alternation. For example, a Chinese \textit{kick} verb, \textit{ti}, occurs with the AC only, whereas a Chinese \textit{teach} verb, \textit{jiau}, occurs with the DC only. In contrast, one of Chinese \textit{send} verbs, \textit{song}, occurs with both the AC and the DC (Malchukov et al., 2007). However, semantically comparable English and Chinese ditransitive verbs do not always behave similarly. For example, the Chinese verb \textit{gausu} and the English verb \textit{tell} are semantically comparable, but \textit{gausu} occurs with the DC only, whereas \textit{tell} occurs with both the AC and the DC, as shown in (7).

\begin{enumerate}
\item[(7)]
\begin{enumerate}
\item a. \textit{Wo gausu yige gushi gei Zhangsan.}
\hfill I tell one story adp Zhangsan
\hfill \textquotedblleft I told a story to Zhangsan.\textquotedblright \\
\item b. \textit{Wo gausu Zhangsan yige gushi.}
\hfill I tell Zhangsan one story
\hfill \textquotedblleft I told Zhangsan a story.\textquotedblright \\
\hfill \textit{(Yang, 1991, p. 26)}
\end{enumerate}
\end{enumerate}

Another example is \textit{dIU} in Chinese and \textit{throw} in English. These verbs are semantically comparable, but the Chinese verb occurs with the AC only, while the English verb occurs with both the AC and the DC, as shown in (8).

\begin{enumerate}
\item[(8)]
\begin{enumerate}
\item a. \textit{John diu yi-ge qui gei Mary.}
\hfill John throw one ball adp Mary
\hfill \textquotedblleft John threw a ball to Mary.\textquotedblright \\
\item b. \textit{*John diu Mary yi-ge qiu.}
\hfill John throw Mary one ball
\hfill \textquotedblleft John threw Mary a ball.\textquotedblright \\
\hfill \textit{(Inagaki, 1997, p. 645)}
\end{enumerate}
\end{enumerate}

Unlike English and Chinese, Korean only belongs to the indirective alignment type (i.e., the AC). The T is encoded in the same way as the monotransitive P, but the R is encoded differently from the P as in (9).

\begin{enumerate}
\item[(9)]
\end{enumerate}

\begin{enumerate}
\item monotransitive \textit{Nae-ka sagua-lul meok-ess-ta.}
\hfill I-nom P (apple)-acc eat-past-decl
\hfill \textquotedblleft I ate an apple.\textquotedblright 
\end{enumerate}
The Korean ditransitive construction uses an encoding method of overt flagging in which the T is encoded by an accusative case marker -ul/lul and the R, by an adpositional marker -eykey.

As with the Chinese adpositional marker gei, there has been a debate over the exact status of -eykey. Some researchers view it as a postposition (e.g., Yong-Bum Kim, 1989; O'Grady, 1991), but others consider it to be a case marker (e.g., Dong Han Lee 1997; Eunjeong Oh, 2010).

Mary-nom Tom-goal postposition pencil-acc give-past-decl
“Mary gave the pencil to Tom.”
b. Mary-ka Tom-eykey yenpil-ul cwu-ess-ta.
Mary-nom Tom-dative case marker pencil-acc give-past-decl
“Mary gave Tom the pencil.”

If -eykey is considered as a postposition as in (10a), it corresponds to the preposition to in the English AC, and hence the construction in (10a) is be considered analogous to the English AC. On the other hand, if -eykey is considered to be a case marker as in (10b), the construction in (10b) is analogous to the English DC even though the English DC does not use a case marker. These different assumptions about the status of -eykey lead to different assumptions about the properties of L1 influence, which in turn lead to different findings and conclusions. As with the case of gei again, this debate over the exact status of -eykey becomes superfluous if contemporary typological accounts of ditransitive constructions are adopted (Malchukov et al., 2007).

Another related issue is whether, in addition to the AC in (11a), Korean allows a double accusative form with two accusative -ul/lul markers in (11b).

Jane-nom John-postposition book-acc give-past-decl
“Jane gave a book to John.”
Jane-nom John-acc chaek-acc give-past-decl
“Jane gave John a book.”
This issue is important because if we accept the double accusative form in (11b) as a licit form, then we come to assume that it is analogous to the English DC and hypothesize that such similarity may facilitate adult Korean learners’ acquisition of the English DC.

Several researchers accept the double accusative form as a licit form in Korean (e.g., Incheol Choi & Kyung-Sup Lim, 2004; O’Grady, 1991; Siewierska, 1998; Whong-Barr & Schwartz, 2002). However, these researchers agree that Korean verbs occurring with the double accusative construction is very limited, in fact, limited to three verbs: cwuta (give), karuchita (teach), and meokita (feed). This argument, however, has been challenged. Many other researchers argue that Korean does not allow the double accusative form (e.g., Dong Han Lee, 1997; Keon Soo Lee, 1989; Eun-Joo Moon, 2004; Eunjeong Oh, 2010; Hyungsun Ryu, 2001). These researchers base their argument on the fact that the majority of Koreans find the double accusative form not simply awkward but unacceptable. To explore this controversy, the author of this study conducted an experiment with 103 Korean university students. They were asked to judge the acceptability of 13 Korean sentences given in the double accusative form. The sentences consisted of three double accusative sentences created with the three verbs presented by Jung and Miyagawa (2004) as the verbs occurring with the double accusative form (i.e., cwuta, karuchita, meokita) and 10 double accusative sentences presented by Whong-Barr and Schwartz (2002) as licit sentences in Korean. All but four students found all the double accusative sentences unacceptable or at least awkward. Therefore, the present study assumes that the double accusative form is illicit in Korean and, thus, Korean does not have a construction which is analogous to the English DC.

In sum, there are both differences and similarities between the grammars of English, Chinese, and Korean. English and Chinese allow both the AC and the DC, whereas Korean allows the AC only. In addition, semantically comparable English and Chinese ditransitive verbs do not always behave similarly. This fact is highlighted in this study, as will be discussed in detail later.

III. METHOD

This study’s research question is: Does Korean and Chinese ESL learners’ L1 grammars influence their acquisition of English verbs occurring with English ditransitive constructions? On the basis of the differences and similarities among Korean, Chinese, and English, the following predictions about L1 influence was formed.

(12) L1 influence predictions
a. At least at the initial stage of acquisition, Korean learners draw on their L1 grammar.
The syntactic similarity between the Korean AC and the English AC should facilitate adult Korean learners’ acquisition of the English AC, and, at the same time, the syntactic difference between the Korean AC and the English DC should interfere with adult Korean learners’ acquisition of the English DC.

b. At least at the initial stage of acquisition, Chinese learners draw on their L1 grammar. The syntactic similarity between the Chinese AC and the English AC should facilitate adult Chinese learners’ acquisition of the English AC, and, at the same time, the syntactic similarity between the Chinese DC and the English DC should facilitate adult Chinese learners’ acquisition of the English DC.

c. Some Chinese ditransitive verbs do not behave like their semantically comparable English counterparts. As a result, it is expected that adult Chinese learners would acquire the English verbs that are used the same way in Chinese faster than those in which there is a mismatch in acceptable construction patterns. That is, given English ditransitive verbs whose Chinese counterparts occur with the DC only, adult Chinese learners’ acquisition of the DC with those English verbs should be particularly facilitated. Similarly, given English ditransitive verbs whose Chinese counterparts occur with the AC only, adult Chinese learners’ acquisition of the AC with those English verbs should be particularly facilitated.

1. Participants

The participants consisted of 30 adult Korean ESL learners with low English proficiency (the Korean group) and 30 adult Chinese and Taiwanese ESL learners with low English proficiency (the Chinese group). Both Chinese and Taiwanese ESL learners were assumed to speak the same L1, that is, Mandarin. All of the participants were recruited from the beginning and low intermediate levels of an intensive English program in a southern city of the U.S. The participants’ English proficiency level was determined by their status in the program because most students of the program had not taken an English proficiency test. Seven students had taken the computer-based testing (CBT) of TOEFL, and their scores were 153-177. The participants’ exposure to English can be a variable that affects results of the study, so the length of their residency in the U.S. was also considered in the recruitment. Students who had been staying from four months to a year by the time of the experiment were recruited. The bio data of the Korean group and the Chinese group are summarized in Table 1.
TABLE 1
Bio Data of Korean and Chinese Participants

<table>
<thead>
<tr>
<th>Group</th>
<th>Male/female</th>
<th>Age range (mean)</th>
<th>Length of residency range (mean)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Korean</td>
<td>14/16</td>
<td>18 - 35 (21.9)</td>
<td>4 months ~ 1 yr (.73 yr)</td>
</tr>
<tr>
<td>Chinese</td>
<td>18/12</td>
<td>18 - 28 (22.9)</td>
<td>4 months ~ 1 yr (.6 yr)</td>
</tr>
</tbody>
</table>

2. Tasks and Materials

The experiment consisted of two tasks: an acceptability judgment test and an elicited production task. In the selection of English ditransitive verbs for the two tasks, this study highlighted the fact that semantically comparable English and Chinese ditransitive verbs do not always behave similarly. In the actual selection, Chinese verbs served as a starting point. A number of Chinese ditransitive verbs were collected for this study from the literature (Chung & Gordon, 1998; Inagaki, 1997; Liu, 2006; Yang, 1991). Verbs of each of the three types were selected: Chinese ditransitive verbs that occur with the DC only (D-type), with the AC only (A-type), or with both the DC and the AC (B-type) were chosen. The selected Chinese verbs were then checked for their constructional bias by ten native Mandarin-speaking graduate students majoring in Applied Linguistics at a university in a southern U.S. city.

TABLE 2
Verbs Selected for the Acceptability Judgment Test & the Elicited Production Task

<table>
<thead>
<tr>
<th>Types</th>
<th>Chinese verbs (English counterparts)</th>
</tr>
</thead>
<tbody>
<tr>
<td>D: verbs occurring with the DC only in Chinese</td>
<td>hueida (answer), wen (ask), fakaun (fine), quian (owe), jiao (teach), gaosu (tell)</td>
</tr>
<tr>
<td>A: verbs occurring with the AC only in Chinese</td>
<td>dai (bring), fa (issue), ti (kick), liu (leave), ji (mail), diu (throw)</td>
</tr>
<tr>
<td>B: verbs occurring with both the AC and the DC in Chinese</td>
<td>wei (feed), jie (lend), huan (return), zu (rent), mai (sell), song (send)</td>
</tr>
</tbody>
</table>

After the check, semantically comparable English counterparts were selected from the larger list. Using Gropen et al. (1989) and Levin (1993), the constructional bias of the English verbs were checked. This constructional bias was also double-checked by 20 native English speakers attending the same Applied Linguistics program described above. Chinese verbs whose English counterparts do not occur with the AC and/or the DC were discarded. Finally, from the remaining verbs, 18 were selected. Table 2 presents the 18 Chinese verbs of three types (i.e., D-, A-, and B-types) and their English counterparts.
This way of selecting verbs has an advantage in that it allows for a clearer observation of L1 influence. With verbs of the three different types, six different types of sentences could be produced.

(13) Six different types of sentences
- a. DAC: AC sentences with the D-type verbs in Table 2
- b. DDC: DC sentences with the D-type verbs
- c. AAC: AC sentences with the A-type verbs
- d. ADC: DC sentences with the A-type verbs
- e. BAC: AC sentences with the B-type verbs
- f. BDC: DC sentences with the B-type verbs

With the three verb types in Table 2 and the six sentence types in (13), the following predictions for L1 influence are formed.

(14) Predictions about L1 influence
- a. Due to the influence of the L1, which allows the AC only, the Korean group should rate the acceptability of AC sentences more favorable than that of DC sentences, regardless of sentence type. For the same reason, the Korean group should also produce AC sentences more frequently than DC sentences, regardless of verb type.
- b. Due to the influence of the L1, the Chinese group’s acceptability rating and production pattern for B-type verbs should not show the bias toward AC sentences. Instead, the Chinese group should rate the acceptability of DC sentences as favorably as that of AC sentences and produce DC sentences as frequently as AC sentences.
- c. Given D-type verbs, the Chinese group should rate the acceptability of DDCs more favorably than that of DACs, and produce DC sentences more frequently than AC sentences. In addition, the Chinese group’s acceptability ratings of DDCs should be far more favorable than the Korean group’s ratings of the same sentences, which should result in the biggest inter-group difference. The Chinese group should produce DC sentences far more frequently than the Korean group, again resulting in the biggest inter-group difference.
- d. Given A-type verbs, the Chinese group should rate the acceptability of AACs more favorably than that of ADCs, and produce AC sentences more frequently than DC sentences. In addition, the Chinese group’s acceptability ratings of AACs should be as favorable as (if not more favorable than) the Korean group’s ratings of the same sentences, resulting in the smallest inter-group difference, and the Chinese group should produce AC sentences as frequently as the Korean group, again resulting in
the smallest inter-group difference.

For the acceptability judgment test, 12 of the 18 English verbs in Table 2 were used: four D-type verbs (answer, ask, fine, owe), four A-type verbs (bring, issue, kick, leave), and four B-type verbs (lend, rent, return, send). Twenty-four sentences were created with the 12 verbs: 12 AC sentences and 12 DC sentences. These sentences were created in such a way that participants’ acceptability rating and production would not be affected by discourse factors (e.g., pronominality, given/new information, length of NPs) and the test effect. In particular, the length of the post verbal NPs were controlled by using words with approximately the same number of syllables for the NPs. For example, with the verb send, the following AC and DC sentences were created: I sent a package to a friend vs. She sent the customer a present. A 5-point Likert scale with the numbers -2 (absolutely unacceptable in English) through 0 (unable to decide) to 2 (absolutely acceptable) was given after each sentence. The participants were asked to rate the acceptability of each sentence by circling one of the numbers. Because of the structural saliency of English ditransitive constructions, 48 filler sentences were also created. These distractor sentences focused on subject-verb agreement and count/non-count nouns. In the actual test, the resulting 72 sentences were given in a random order.

The verbs used in the acceptability test were not used in the production task to avoid test effect. The remaining six of the 18 verbs were used for the production task: two of the type D (teach, tell), two of the type A (mail, throw), and two of the type B (feed, sell). Six test drawings were created with the six verbs. Twelve filler drawings were also created. The resulting 18 drawings were presented to the participants in a random order. Participants first read the direction and practiced with an example drawing. The drawing described a man named Tom who was reading a newspaper. The drawing was given with a question “What does Tom do?” and three words (read, Tom, newspaper). Participants were asked to read the expected answer “Tom reads a newspaper.” In this exercise with an example drawing, a ditransitive verb was not used to avoid test effect. If a ditransitive verb was used, either the AC or the DC should be given as an example answer, and it might affect the participants’ production of ditransitive sentences. Participants were then asked to look at each of the 18 test drawings and respond to a question given in each drawing, which asks about the interaction between two figures in the drawing, by writing a complete sentence using the four words given in the drawing (see Appendix for examples). Participants were told that they could change the forms of verbs (but not nouns) and could also add prepositions whenever they thought necessary.
3. Analysis

In the analysis of the data collected from the acceptability judgment test, a value of 1 was assigned for -2, 2 for -1, 3 for 0, 4 for 1, and 5 for 2 in the 5-point Likert scale. In the analysis of the data collected from the elicited production task, 1 was given when participants produced a DC sentence and 0 was given when they produced an AC sentence. Then, independent-samples T-tests, paired-samples T-tests, one-way ANOVAs, and repeated measures (RM) ANOVAs were conducted to check intra- and inter-group differences.

IV. RESULTS AND DISCUSSION

1. Results from the Acceptability Judgment task

The means and standard deviations of the acceptability ratings by the Korean and the Chinese groups are summarized in Table 3.

<table>
<thead>
<tr>
<th>Sentence type</th>
<th>Group</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>DAC</td>
<td>Korean</td>
<td>4.06</td>
<td>.524</td>
</tr>
<tr>
<td></td>
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<td>.718</td>
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<tr>
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<td>Chinese</td>
<td>3.85</td>
<td>.724</td>
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An RM ANOVA showed a significant main effects for the sentence type, $F(1, 58) = 36.78$, $p < .001$, $\eta^2_p = .39$; group (L1), $F(1, 58) = 4.24$, $p = .044$, $\eta^2_p = .07$; and interaction between the sentence type and the group, $F(1, 58) = 34.59$, $p < .001$, $\eta^2_p = .37$. As Figure 1 shows, regardless of sentence types, the Korean group’s acceptability ratings of AC sentences were favorable. A one-way ANOVA indicated no significant difference in the Korean group’s acceptability ratings of the AC sentences of three types (i.e., the DACs, the AACs, and the BACs). At the same time, the Korean group’s acceptability ratings of DC sentences were not favorable, regardless of sentence types. Another one-way ANOVA revealed no significant difference in the Korean group’s acceptability ratings of the DC sentences of three types (i.e., the DDCs, the ADCs, and the BDCs). Moreover, paired-samples $t$-tests revealed that the Korean group’s acceptability ratings of DACs were more favorable than those of the DDC, $t(29) = 10.40$, $p < .001$, $d = 2.67$; its acceptability ratings of AACs were more favorable than those of the ADC, $t(29) = 10.17$, $p < .001$, $d = 2.5$; and its acceptability ratings of BACs were more favorable than those of the BDC, $t(29) = 9.14$, $p < .001$, $d = 2.49$.

In short, regardless of sentence types, the Korean group’s acceptability ratings of the AC sentences were more favorable than those of the DC sentences. These results indicate that the Korean group’s acceptability ratings were influenced by the L1, which allows the AC only. The results confirm the prediction (14a).

The Chinese group’s acceptability ratings were not similar to the Korean group’s AC-oriented rating pattern. The Chinese group’s ratings varied according to sentence types. When the B-type verbs, which occur with both the AC and the DC, were involved, the
Chinese group rated the acceptability of the BACs as favorably as those of the BDCs. A paired-samples t-test revealed no significant difference between the Chinese group’s acceptability ratings of the BACs and those of the BDCs. The result confirms the prediction (14b).

As for the sentences with the D-type verbs, a paired-samples t-test revealed that the Chinese group’s acceptability ratings of the DDCs were more favorable than those of the DACs, \( t(29) = -5.52, p < .001, d = -1.1 \). These results indicate that, due to the influence of L1, which allows only the DC with the verbs in question, the Chinese group’s acceptability ratings of the DDCs were more favorably than those of the DACs. Moreover, an independent samples t-test revealed that the Chinese group’s acceptability ratings of the DDCs were particularly favorable, compared to the Korean group’s acceptability ratings of the same sentences, \( t(58) = -7.54, p < .001, d = -1.95 \), because, in Chinese, the verbs included in the sentences occur only with the DC and in Korean, the DC is not allowable. This interaction between the sentence type and the group (L1) led to the biggest inter-group difference, confirming the prediction (14c).

As for the sentences with the A-type verbs, a paired-samples t-test revealed that the Chinese group rated the acceptability of the AACs more favorably than that of the ADCs, \( t(29) = 7.25, p < .001, d = 1.23 \). The results indicate L1 influence, that is, when English verbs whose Chinese counterparts occur only with the AC were given, the Chinese group’s acceptability ratings of the AC sentences (i.e., the AACs) were more favorably than those of the DC sentences (i.e., the ADCs). Moreover, an independent-samples t-test revealed no significant difference between the two groups’ acceptability ratings of the AACs. The Chinese group’s acceptability ratings of the AACs were as favorable as the Korean group’s ratings of the same sentences. The two groups showed similarly favorable rating patterns because, in Chinese, the verbs included in the AACs occur with the AC only and, in Korean, the AC is allowable regardless of sentence types.

According to Table 3 and Figure 1, it appears that the smallest inter-group difference was not shown by the two groups’ acceptability ratings of the AACs (3.99 vs. 3.85) as predicted in (14d) but by the two groups’ acceptability ratings of the BACs (4.00 vs. 3.97). However, an RM ANOVA revealed no significant difference in the Chinese group’s acceptability ratings of the AACs, the BACs, the DDCs, and the BDCs. At the same time, as discussed earlier, there was no significant difference in the Korean group’s acceptability ratings of the AACs, the BACs, and the DACs. These two results together mean that the two groups’ acceptability ratings of the AACs and the BACs showed no statistically significant difference. To put this differently, the smallest inter-group difference took place at two occasions, at the two groups’ acceptability ratings of the AACs and of the BACs. In this sense, it can be said that the prediction (14d) is confirmed.

In sum, the results from the acceptability judgment test confirm the predictions. Thus,
the results as a whole clearly show evidence of L1 influence in the Korean and the Chinese groups’ acquisition of English ditransitive verbs. In addition, the inter-group difference in the acceptability ratings of AC sentences provides evidence against Dong Han Lee’s (1997) markedness-theory-based interpretation of adult Korean learners’ initial preference for the English AC. If the relative markedness of the English AC and DC influences L2 acquisition of those constructions, there should be no difference in Korean and Chinese learners’ acceptability ratings of English sentences with the unmarked AC. However, the results indicate not an inter-group homogeneity required to support the markedness-theory-based interpretation but an obvious inter-group heterogeneity in acceptability ratings of sentences with the unmarked AC.

2. Results from the Elicited Production Task

The means and standard deviations of the productions by the Korean and Chinese groups are summarized in Table 4. It is worth noting here that, in the analysis of the data from the elicited production task, 1 was given when participants produced a DC sentence and 0 was given when they produced an AC sentence. An RM ANOVA showed significant main effects for verb-type, \( F(1, 58) = 57.77, p < .001, \eta_p^2 = .50 \); a group (L1), \( F(1, 58) = 93.96, p < .001, \eta_p^2 = .62 \); and interaction between verb-type and group, \( F(1, 58) = 29.63, p < .001, \eta_p^2 = .34 \).

Table 4

<table>
<thead>
<tr>
<th>Verb type</th>
<th>Group</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Korean</td>
<td>.27</td>
<td>.521</td>
</tr>
<tr>
<td>D</td>
<td>Chinese</td>
<td>1.60</td>
<td>.675</td>
</tr>
<tr>
<td>A</td>
<td>Korean</td>
<td>.00</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>Chinese</td>
<td>.10</td>
<td>.305</td>
</tr>
<tr>
<td>B</td>
<td>Korean</td>
<td>.13</td>
<td>.346</td>
</tr>
<tr>
<td></td>
<td>Chinese</td>
<td>.50</td>
<td>.509</td>
</tr>
</tbody>
</table>

As Figure 2 shows, regardless of verb types, the Korean group produced AC sentences more frequently than DC sentences. This result confirms the prediction (14a). In contrast, the Chinese group’s production was influenced by the verb types. A one-way ANOVA revealed a significant difference in the Chinese group’s productions of DC sentences, \( F(2, 87) = 67.30, p < .001, \eta_p^2 = .61 \). Post hoc tests indicated that the Chinese group produced DC sentences significantly more frequently when the D-type verbs were given than when
the A-type verbs were given \( p < .001 \). They also produced DC sentences more frequently when the D-type verbs were given than when B-type verbs were given \( p < .001 \); and it produced DC sentences more frequently when the B-type verbs were given than when the A-type verbs were given \( p = .010 \). In short, the Chinese group produced DC sentences most frequently when the English verbs whose Chinese counterparts occur only with the DC were given and least frequently when the English verbs whose Chinese counterparts occur only with the AC were given. Between these two extremes came the Chinese group’s production of DC sentences with the two B-type verbs. These results indicate that the Chinese group’s sentence production was influenced by its L1 and, thus, confirm the prediction (14b).

Interaction between the groups (L1) and the verb type was obvious in the production of DC sentences. An independent-samples t-test revealed that, when the D-type verbs were given, the Chinese group produced DC sentences more frequently than the Korean group, \( t (58) = 8.568, p < .001, d = 2.21 \) and that, when the B-type verbs were given, the Chinese group produced DC sentences more frequently than the Korean group, \( t (58) = 8.568, p = .002, d = .85 \). However, when the A-type verbs were given, there was no inter-group difference. The biggest difference between the two groups took place when the D-type verbs were given. When the D-type verbs were given, due to the influence of its L1, which allows the AC only, the Korean group produced more AC sentences than DC sentences. In contrast, the D-type verbs are verbs whose Chinese counterparts occur with the DC only. Due to this characteristic of its L1, the Chinese group produced far more DC sentences
than AC sentences when the D-type verbs were given. These contrasting characteristics of the two L1s caused the biggest inter-group difference, confirming the prediction (14c). In addition, the smallest inter-group difference was when the A-type verbs were given. When the A-type verbs were given, the Korean group produced more AC sentences than DC sentences because of the influence of its L1 which allows the AC only. Due to the influence of its L1 in which the A-type verbs occur with the AC only, the Chinese group produced far more AC sentences than DC sentences. These similar characteristics of the two L1s resulted in the smallest inter-group difference, confirming the prediction (14d).

In sum, the results from the elicited production task confirm the four predictions in (14). They provide clear evidence of L1 influence on the Korean and the Chinese groups’ acquisition of English ditransitive verbs occurring with the AC and the DC. Interestingly, although the Korean group produced AC sentences more frequently than DC sentences regardless of verb types, its production of DC sentences differed according to verb types. A one-way ANOVA indicated a significant difference in the Korean group’s production of DC sentences, $F(2, 87) = 4.094, p = .020, \eta^2_p = .09$. Post hoc tests revealed that the Korean group produced DC sentences more frequently when the D-type verbs were given than when the A-type verbs were given ($p = .014$). This variation may indicate that the Korean group’s production of DC sentences was influenced not simply by L1 but by other factors as well. One possible factor can be the frequencies of the D-type verbs (i.e., teach and tell) used in the study. The two D-type verbs are not only high frequency verbs but also they occur with the DC more frequently than with the AC (Biber, Johansson, Leech, Conrad, & Finegan, 1999; Callies & Szczesnak, 2006; Gries & Wulff, 2005). As a result, the Korean participants might have been exposed to the two D-type verbs with the DC more frequently than to the two A-type verbs with the DC. They thus learned the D-type verbs with the DC more easily and faster than the A-type verbs with the DC. This might have been reflected in their more frequent production of DC sentences with the D-type verbs than with the A-type verbs. This deserves a further research.

V. CONCLUSION

Previous L2 studies have shown that L1 influence is evident in L2 acquisition at least at the initial stage. L1 influences of various linguistic subsystems, including phonetics, phonology, morphology, semantics, and syntax have also been shown (Gass & Selinker, 1983; Odlin, 1989, 2003; Ringbom, 1992; Schwartz & Sprouse, 1996; Spada & Lightbown, 1999). The results of the present study support previous findings. The results indicate that L1 plays a significant role in (Korean and Chinese) ESL learners’ acquisition of English ditransitive constructions.
The study’s findings have some implications. This empirical evidence for L1 influence on L2 acquisition of English verbs associated with the AC and the DC sheds light on ways of teaching English and developing texts and other materials. Spada and Lightbown (1999) argue that making learners aware of cross-linguistic differences will help with certain difficulties in the target language. Providing information on cross-linguistic differences and similarities may help (adult Korean and Chinese) ESL learners’ acquisition of English ditransitive constructions.

Another implication is that L1 influence can and perhaps should be investigated together with other possible factors (e.g., frequency). Schachter (1974) argues that one of the biggest obstacles to comparing the relative contribution of L1 influence is frequencies of occurrence. This argument points out the possibility that data collected for L1 influence can be at least partially explained by frequencies of English ditransitive verbs used in the experiment. When the verb answer (hueida) (which is considered in this study as a DC-only verb in Chinese) was given, for example, do Chinese learners rate the acceptability of a DC sentence with that verb more favorably than an AC counterpart because of the influence of their L1 (in which the verb is a DC-only verb) or because of the effect of the high frequency of the English verb itself which causes Chinese learners to be exposed frequently to the verb with the DC and, as a result, to learn the verb with the DC more easily and faster than the verb with the AC? We may need to investigate L1 influence together with other factors, particularly in conjunction with frequency. Such a combined investigation may lead us to a better understanding of L2 acquisition.

REFERENCES


Influence on ESL Learners’ Acquisition of English Ditransitive Constructions

Taehaksa.


**APPENDIX**

Examples of the Elicited Production Task

1) The direction

*Direction:* In this task, you will see 16 pictures. Please look at each picture carefully, and think about what the person(s) do(es) in the picture. Then, read the question given on the answer sheet and answer the question by writing a complete sentence. When you write the complete sentence, you must use the four words given in the picture. You can add whatever you think is necessary in writing the sentence. Here is an example:

![Example Image](image)

What does Tom do?

Tom reads a newspaper.
2) An example of test drawings

Applicable levels: all levels
Key words: ditransitive constructions, typology, L1 transfer, L1 influence, L2 acquisition

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