

# The Acquisition of Spanish Clitic Pronouns as a Third Language: A Corpus-based Study

Hui-Chuan Lu

(National Cheng Kung University)

An Chung Cheng

(The University of Toledo)

Yu-Hsin Chu

(National Cheng Kung University)

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This corpus-based study investigated third language acquisition by Taiwanese college students in learning Spanish clitic pronouns at beginning and intermediate levels. It examined the acquisition sequences of Spanish clitic pronouns of the Chinese-speaking learners whose second language was English and third language was Spanish. The results indicated that indirect object pronouns (OP) preceded direct OP (case), first person preceded third person OP (person), masculine preceded feminine OP (gender), and animate preceded inanimate OP (animacy). The findings presented similar patterns as those of previous studies on English-speaking learners of Spanish. In further comparisons of the target forms in Chinese, English, and Spanish, the results suggested that L1 Chinese had strong influence on L3 Spanish, which accounts for the challenges that Taiwanese learners of Spanish face as they learn the Spanish clitic pronouns in the beginning stage.

**Keywords:** Spanish Clitic Pronouns, Corpus-based, Third Language Acquisition

## 1. Introduction

The study of learning Spanish clitic pronouns (i.e. object pronouns) has drawn special attention in the area of second language acquisition (SLA) for the last three decades. Spanish clitic pronouns are difficult for second language learners and they are acquired relatively late in the SLA process because they are complex for different levels of learners (Malovrh & Lee, 2013). Spanish clitic pronouns are more complicated compared to other languages in terms of number, person, case, and gender. Spanish object pronouns can be categorized as follows: *me* (sing., 1<sup>st</sup> pers., dir./ind.), *te* (sing., 2<sup>nd</sup> pers., dir./ind.), *le* (sing., 3<sup>rd</sup> pers., ind., masc./fem.), *lo* (sing., 3<sup>rd</sup> pers., dir., masc.), *la* (sing., 3<sup>rd</sup> pers., dir., fem.), *nos* (pl., 1<sup>st</sup> pers., dir./ind.), *os* (pl., 2<sup>nd</sup> pers., dir./ind.), *les* (pl., 3<sup>rd</sup> pers., ind., masc./fem.), *los* (pl., 3<sup>rd</sup> pers., dir., masc.), and *las* (pl., 3<sup>rd</sup> pers., dir., fem.). They can be either placed before the inflected verbs or attached right after the infinitive verbs and gerunds. In addition, the first-person pronouns *me* and *nos* and the second-person pronouns *te* and *os* can also be used as reflexive pronouns. The third person singular pronoun *le* and third person plural pronouns *los* and *las* are also forms of definite articles for nouns.

Previous research on Taiwanese learners (Mandarin Chinese speakers) of Spanish in the acquisition of clitic pronouns is relatively scarce. This study, thus, focuses on third language acquisition of the Spanish clitic pronouns by Taiwanese college students, whose first language is Chinese, second language is English, and third language is Spanish, at different proficiency levels. Based on a constructed learner corpus and a trilingual parallel corpus of Spanish, English, and Chinese,

this study aims to identify multilingual learners' acquisition sequence of linguistic features of Spanish clitic pronouns in hope of understanding how learners' previously acquired languages, Chinese and English, affect the acquisition of L3 Spanish clitic pronouns through cross linguistic comparisons.

The differences between Chinese and Spanish seem to be greater than those between English and Spanish. English clitics (dir./indir.) are: me (sing., 1st pers.), you (sing./pl., 2nd pers.), him (sing., 3rd pers., masc.), her (sing., 3rd pers., fem.), it (sing., 3rd pers., masc./fem., inanim.), us (pl., 1st pers.), and them (pl., 3rd pers.), whereas Chinese object pronouns include: 我/wǒ (sing., 1st pers.), 你/nǐ (sing., 2nd pers.), 他/tā (sing., 3rd pers.), 她/tā (sing., 3rd pers., fem.), 我們/wǒmen (pl., 1st pers.), 你們/nǐmen (pl., 2nd pers.), 他們/tāmen (pl., 3rd pers.), 她們/tāmen (pl., 3rd pers., fem.). In terms of word order, examples (1) and (2) below show that English objects pronouns can only be placed after the inflected verbs, whereas there are more restrictions, such as positions and markers, in Chinese (Li & Thompson, 1989; Quirk et al., 1972).

(1) English

- (a) Verb + direct object pronoun
- (b) Verb + indirect object pronoun + direct object
- (c) Verb + direct object pronoun + preposition + indirect object

(2) Chinese

- (a) Verb + direct object pronoun
- (b) “把(bǎ)” + direct object pronoun + Verb
- (c) Verb + direct object pronoun + “給(gěi)” + indirect object pronoun
- (d) “把(bǎ)” + direct object pronoun + Verb + “給(gěi)” + indirect object pronoun

Given the differences in the object pronouns in Spanish, English, and Chinese, we questioned if Chinese-speaking learners would demonstrate the same acquisition sequence in learning the Spanish clitics as English-speaking counterparts and whether cross-linguistic differences account for some of the learner errors in the uses of the Spanish object pronouns.

## 2. Previous Research

Several previous studies have examined the acquisition sequence of the Spanish clitic pronouns regarding their linguistic features, including morphological, syntactic, and semantic perspectives. Klee (1989) found that Quechua-speaking learners of Spanish acquired case, number, and gender sequentially. In a comprehensive study, Malovrh and Lee (2013) examined the production and processing of these forms by L2 English learners at four different proficiency levels and suggested the following developmental sequences: case (indirect>direct), person (first person>third person), number (singular>plural), gender (masculine>feminine). That is, the Spanish indirect object pronouns were acquired before the direct object pronouns; clitic pronouns in the first person were acquired before those in the third person; clitic pronouns in singular forms were acquired before the plural forms, and masculine forms were acquired before the feminine forms. Other studies suggested that the order of certain linguistic features in the acquisition process may vary among learners with different language backgrounds and at different proficiency levels. Castilla and Pérez-Leroux (2010) found that the omission of direct object pronouns could be observed in the transitive structures produced by L1 Spanish-speaking children at ages three to five. Among L2 learners of Spanish, Malovrh and Lee (2013) also found that beginning level learners tended to omit the object pronouns due to overuse of full noun phrases. Andersen (1984) and VanPatten (1990) found that the linguistic feature, first person, not only appeared earlier than the third person in beginning level learners' oral

productions, but also was produced at a higher accuracy rate. Malovrh and Lee (2013) indicated that semantic features [+/-animate] affected the accuracy rate of Spanish object pronoun production. Schwenter and Torres Cacoulos (2014) pointed out that third person direct object pronouns were correlated with the semantic feature [-animate].

Rossi, Kroll and Dussias (2014) explained that Spanish learners' sensitivity to number and gender agreement appeared at a later developmental stage because English object pronouns lack number and gender features. LoCoco (1987), VanPatten (1984) and VanPatten and Houston (1998) suggested that word order affected English-speaking learners of Spanish in their processing and production of subjects and objects in sentences. According to the First Noun Principle by VanPatten (2004), learners tend to process the first noun or pronoun in a sentence as the subject/agent. The word order "Object-Verb-Subject" might become a path that leads learners to take the first noun as a subject or agent. In addition, Klee (1989) and VanPatten (1990) found that beginners used "Subject-Verb-Object" more than "Subject-Object-Verb" due to the influence of their first language, English.

Second language acquisition research investigates the learning of a language other than the first language, which is an umbrella of studies involving foreign language, second language, heritage language, third language, and multiple language learning experiences. As researchers examine the internal and external factors in language acquisition, studies in third language acquisition, in particular, could lead to better understanding of cross-language influence on the learning of a target language. Focusing on third language acquisition, Leung (2006) indicated that the knowledge transfer of the third language learner comes from the interlanguage of the first and second languages. When learning the second language, the transfer might come from the first language, and when learning the third language, the transfer might come from both the first and second language. Currently, there are four major hypotheses regarding language transfer in third language acquisition, and all of them recognize the important roles of the first and second languages in third language acquisition (García Mayo & Rothman, 2012). First, Hermas (2010) and Na Ranong and Leung (2009) hypothesize that first language affects third language acquisition most. Second, Falk and Bardel (2011) hypothesize that second language affects third language acquisition most. Both statements were based on the knowledge transfer from first and second language and further forecasted third language development. Third, Flynn, Foley and Vinnitskaya (2004) propose the "Cumulative Enhancement Model," which suggests that any previously learned language either does not have any influence or would have a positive effect on the target language acquisition due to accumulated linguistic knowledge. Finally, Rothman (2015) proposes the "Typological Primacy Model," which is similar to the "Cumulative Enhancement Model;" however, Rothman hypothesizes that the typology and similarity of previous languages are crucial for third language acquisition. Furthermore, De Angelis (2007) suggests that cross-linguistic transfer might come from the language distance (the relation or similarity between languages), learners' proficiency levels in the first and target languages, and their acquisition stages. Ringbom (2007) indicates that the closest language affects the target language acquisition most, regardless of whether the closest language is the native language or not. Cross-language transfer can be observed in the beginning stage of acquisition, when the learner's proficiency level in the target language is still low (Odlin, 1989; Ringbom, 1986; Williams & Hammarberg, 1998). In the study by Salaberry (2005) examining L1 English, L2 Spanish, and L3 Portuguese, and the study by Chin (2009) examining L1 Chinese, L2 English, and L3 Spanish, they all claim that L2 has a significant influence on L3 learning because of language distance.

Concerning research methodology, there have been increasing numbers of corpus-based studies on second language acquisition with learner production error analyses. Granger (2013) indicates that an error tagged learner corpus is a new resource for foreign language teaching and learning. Asención-Delaney and Collentine (2011) investigated the interlanguage of beginning and intermediate learners of Spanish, using a multivariate quantitative method to analyze the uses of vocabulary and grammar in a Spanish written corpus. Lozano and Mendikoetxea (2010) conducted a comparative analysis of a

Spanish-English-Chinese corpus and an English corpus to explore the interaction between syntactic knowledge and cognitive systems. Mitchell et al. (2008) constructed the Spanish Learner Language Oral Corpora (SPLLOC) and investigated the suffix of verb inflection, object pronoun, and word order to understand the pragmatics, syntax, and morphology in Spanish acquisition. Furthermore, to examine cross-linguistic differences, a contrastive analysis could be used to compare the data in a parallel corpus. Rabadán (2015) utilized P-ACTRES (contrastive analysis and translation English-Spanish) parallel corpus to conduct a constative analysis of the English “still/already + verb phrase” structure for different tenses and aspects in Spanish expressions. Xu and Li (2014) used an English-Chinese parallel corpus to study the differences in morphology and semantics of Chinese splittable compounds in English translations.

This study, using data in a learner corpus compiling the productions of L3 Spanish learners with a different methodology from previous research on the target forms, will advance the knowledge of the acquisition of Spanish clitic pronouns in the field. The corpus-based contrastive analysis between the target language and learners’ previously learned languages (Chinese and English) will also shed light on some learner errors related to language differences and language transfer.

### 3. Research Method

This study addressed the following research questions:

- (1) What is the developmental sequence of the acquisition of the Spanish clitic pronouns by Taiwanese learners? Is the acquisition of Chinese-speaking learners the same as that of English-speaking learners?
- (2) How do the linguistic features of learner L1 Mandarin Chinese, L2 English, and L3 Spanish differ? How might such differences affect the learning of the L3 Spanish clitics?

To address the first research questions on the acquisition sequence of the linguistic features of Spanish clitic pronouns, a corpus-based error analysis of the Spanish clitic pronouns in a learner’s corpus CEATE<sup>1</sup> was conducted. The CEATE consists of original texts written by Taiwanese learners of Spanish and revised texts edited by Spanish native speakers. To address the second research questions, a contrastive analysis of a trilingual parallel corpora CPEIC was conducted. The trilingual parallel corpus compiled texts from fairy tales and movie subtitles. The contrastive analysis of the object pronouns in the CPEIC could provide linguistic explanations on how previously acquired languages, L1 Chinese and L2 English, might affect learners’ L3 Spanish acquisition.

In the analysis of learner errors of the target forms, 749 and 751 texts from learners at the beginning and intermediate levels in the learners’ corpus CEATE were included as the data source. The proficiency levels were based on learners’ total number of instructional hours in Spanish. Learners at the beginning level received 64~640 hours of instruction, and the intermediate group received 1,088~2,016 hours of instruction. Then, we used 10 clitic pronouns “*me, te, lo, la, le, nos, os, los, las, les*” as keywords to search data in the learner corpus for a posterior analysis. We obtained the results of original and revised texts corrected by Hispanic native speakers in order to compare the differences between the usages of learners and native speakers. The examples of learner production (original texts) and corrected texts done by native Spanish speakers (revised texts) are shown in (3) and (4) below.

#### (3) Original texts

- (a) *Todos los tardes, mi padre traía yo a parque y enseñaba a mi cómo escribir.*

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<sup>1</sup> Lu, H. C. (2005). Corpus Escrito de Aprendices Taiwanese de Español (CEATE), <http://corpora.fild.ncku.edu.tw/>

(b) *Mientras lo lobo he dormido y lo cazador entra. El mata lo lobo y escucha voces las pedie auxilio.*

(c) *Por eso, estaba lanzado la flecha a ellos.*

(4) Revised texts

(a) *Todas las tardes, mi padre me llevaba al parque y me enseñaba a escribir.*

(b) *Mientras el lobo estaba dormido, el cazador entró y lo mató y luego escuchó unas voces pidiendo auxilio.*

(c) *Por eso, les lanzó una flecha a ellos.*

The learner errors obtained from the search results in the CEATE were then classified in terms of overuse, misuse, and underuse of clitic pronouns. The examples are shown in (5)-(7) below.

(5) Overuse of “lo” in learner’s text

(a) Original text: *Él cree que el programa es muy entretenido y Estela lo cree que es ilusionada.*

(b) Revised text: *Él cree que el programa es muy entretenido y Estela cree que Javier está ilusionado con ella.*

(6) Misuse of “lo” in learner’s text

(a) Original text: *Es que ella le quiere mucho.*

(b) Revised text: *Es que ella lo quiere mucho.*

(7) Underuse of “lo” in learner’s text.

(a) Original text: *Pero ahora lamento mucho.*

(b) Revised text: *Pero ahora lo lamento mucho.*

The search results from the CEATE were categorized and annotated based on the following linguistic features: case (direct/indirect), person (first/second/third), number (singular/plural), gender (masculine/feminine), animacy (animate/inanimate), and word order (object pronoun + verb/verb + object pronoun). Finally, the accuracy rate of clitic pronoun uses by learners at different proficiency levels were computed. Furthermore, a Chi-square test was used to check whether the results were statistically significant. Then, based on the accuracy scores, the linguistic features of the clitic pronouns were ranked. Then, the results of acquisition sequence of the linguistic features were compared with those of English-speaking counterparts in previous research.

In the contrastive analysis, 280 trilingual parallel texts in the Trilingual Parallel Corpus CPEIC were included. Ten clitic pronouns “*me, te, lo, la, le, nos, os, los, las, les*” were entered as keywords to search the uses of target form in the CPEIC. The examples are shown in 8a-8c below.

(8) Parallel sentences

(a) Spanish: “*¡No te mentiría!*” dijo Monty mientras caminaba por el bosque.

(b) English: “*I wouldn’t lie to you!*” said Monty as they marched along through the woods.

(c) Chinese: 「*我不會對你撒謊!*」當他們穿過樹林時，芒提說。

The search results in the CPEIC were annotated in terms of different linguistic attributes: case (subject/direct object/indirect object/preposition object) and word order (omission/noun + “*把(bǎ)/給(gěi)*” + clitic pronoun/noun). A Chi-square test was used to check whether the differences between Spanish and English and those between Spanish and Chinese were statistically significant.

## 4. Results and Discussion

The results of error analysis of correct and incorrect uses of object pronouns found in the learner corpus, CEATE, showed a significant difference ( $p < 0.05$ ) between beginning and intermediate learners. The distribution of the uses of object pronouns of the learners at different proficiency levels is shown in Table 1.

**Table 1.** Comparison of Learner Levels and Object Pronoun Uses

Proficiency /Usage	Incorrect	Correct	Total
Beginning	298 (39.80%)	451 (60.20%)	749
Intermediate	219 (29.20%)	532 (70.80%)	751
Total	517 (34.50%)	983 (65.50%)	1500

Chi-square test ( $p < 0.05$ )

For the difference between two levels of learners, the accuracy rate of the intermediate learners (70.8%) was higher than that of learners at the beginning level (60.2%), and the inaccuracy rate at the intermediate level (29.2%) was lower than that at the beginning level (39.8%). The results showed that the accuracy rate of object pronouns increased along with the learners' proficiency levels.

We further compared the uses of object pronouns between learners at two levels in terms of the accuracy rate regarding case, person, number, gender, word order, and animacy. The results are shown in Table 2.

**Table 2.** Learners' Uses of Object Pronouns in Different Linguistic Features

Feature/Level	Beginning		<i>p</i> -value	Intermediate		<i>p</i> -value	
	Incorrect	Correct		Incorrect	Correct		
Case	Dir.	183 (40.4%)	270 (59.6%)	.540	155 (31.8%)	332 (68.2%)	.011
	Indir.	111 (38.0%)	181 (62.0%)		59 (22.8%)	200 (77.2%)	
Person	1	65 (27.0%)	176 (73.0%)	.000	28 (12.2%)	202 (87.8%)	.000
	2	34 (37.8%)	56 (62.2%)		1 (3.4%)	28 (96.6%)	
	3	199 (47.6%)	219 (52.4%)		190 (38.6%)	302 (61.4%)	
Number	Pl.	65 (34.6%)	123 (65.4%)	.102	47 (35.1%)	87 (64.9%)	.115
	Sing.	233 (41.5%)	328 (58.5%)		172 (27.9%)	445 (72.1%)	
Gender	Fem.	35 (55.6%)	28 (44.4%)	.081	56 (40.9%)	81 (59.1%)	1.000
	Masc.	83 (42.1%)	114 (57.9%)		77 (40.3%)	114 (59.7%)	
Word order	Obj. + V	230 (38.9%)	362 (61.1%)	.315	179 (29.9%)	420 (70.1%)	.425
	V + Obj.	68 (43.3%)	89 (56.7%)		40 (26.3%)	112 (73.7%)	
Animacy	Anim.	209 (37.3%)	352 (62.7%)	.016	122 (23.4%)	399 (76.6%)	.000
	Inanim.	89 (47.3%)	99 (52.7%)		97 (42.2%)	133 (57.8%)	

Chi-square test

The linguistic feature "case" at the intermediate level and the "person" and "animacy" at the beginning and intermediate levels showed significant differences ( $p < 0.05$ ). In terms of accuracy rate, the correct uses of indirect object pronouns were higher than those of the direct object pronouns (77.2% vs 68.2%) in the intermediate group. The correct uses of first person were higher than the third person in both the beginning and intermediate groups (73.0% vs 52.4% in the beginning group; 87.8% vs 61.4% in the intermediate group). Interestingly, the accuracy rates for the second person were presented in a different order in the beginning and intermediate groups. In the beginning group, the order of correct uses from high to low was first person > second person > third person (73.0%, 62.2%, 52.4%, respectively). In the intermediate group the order became: second person > first person > third person (96.6%, 87.8%, 61.4%, respectively). However, it should be noted that the instances of the second person occurrence in the learner corpus were much lower than those of first and third person. The correct uses of animate object pronouns were higher than the inanimate object pronouns in both the

beginning and intermediate groups (62.7% vs 52.7% in the beginning group; 76.6% vs 57.8% in the intermediate group). There were no significant differences in case for the beginning group nor in number, gender, and word order in both beginning and intermediate groups.

In the study on the acquisition of Spanish clitics by English-speaking learners, Malovrh & Lee (2013) concluded the following developmental sequence for case, person, number and gender: (1) The acquisition of indirect object is earlier than direct object; (2) First person is earlier than third person. (3) Singular is earlier than plural. (4) Masculine is earlier than feminine. Their findings were similar to this study in terms of case and person.

To answer the first research question, the developmental sequences for each linguistic feature showed: “case” (indirect>direct), “person” (first person>third person), and “animacy” (animate>inanimate). The acquisition sequences of Spanish clitic pronouns by Taiwanese learners were the same as those of English-speaking learners of Spanish in case, person, and animacy.

Furthermore, the incorrect uses of the Spanish clitics in the learner corpus were classified into three types of errors: misuse (the different uses between learners of Spanish and Spanish native speakers), underuse (learners should have used but didn’t use), and overuse (learners should not have used but used). The results are shown in Table 3.

**Table 3.** Learners’ Incorrect Uses: Misuse, Underuse and Overuse

Proficiency/Usage	Correct	Misuse	Underuse	Overuse	Total
Beginning	451 (60.20%)	121 (16.20%)	151 (20.20%)	26 (3.50%)	749
Intermediate	532 (70.80%)	94 (12.50%)	91 (12.10%)	34 (4.50%)	751
Total	983 (65.50%)	215 (14.30%)	242 (16.10%)	60 (4.00%)	1500

As shown in Table 3, the beginning learners had a higher percentage of misuse and underuse than the intermediate learners. However, the beginning group had a lower percentage of overuse than the intermediate group. The overuse might be due to the over generalization of the indirect object pronouns in place of direct object pronouns. As found earlier, indirect object pronouns are acquired earlier than direct object pronouns. In addition, it is plausible that the higher instances of overuse of the Spanish clitics found in the intermediate group might be related to the Spanish clitic doubling. According to Spanish grammar norms, direct object pronouns cannot appear at the same time with common nouns, but indirect object pronouns can. The clitic doubling, for example, refers to the co-existence of the indirect object pronoun (*le/her*) and common noun (*la profesora*) as in “*Juan le pidió ayuda a la profesora / Juan asked the professor for help.*” The situation is further complicated with the case of *leísmo*, substituting the *lo* (sing., 3<sup>rd</sup> pers., dir., masc.) with the *le* (sing., 3<sup>rd</sup> pers., ind., masc./fem.) commonly used. The Spanish Royal Academy allows the use of *le* as a singular direct object when referring to a male person (but not a thing). In some regional variations, the indirect pronouns *le & les* can replace the direct object pronouns *lo/la & los/las*. Therefore, as the intermediate learners’ knowledge increased (e.g., learning about *leísmo*), they had to restructure their developing system regarding the Spanish clitics. Overuse occurred when these factors influenced learner output with the Spanish clitics to a certain degree. For example, instead of using *las acompaña* (accompany them), a learner used *les acompaña a las niñas* (accompany the girls).

The omission of object pronouns in the corpus was also frequently seen in the learner errors. The omission has been observed in early L1 Spanish learners and could be found in the production of L2 learners as well. While the omission of objects pronouns could be taken as a universal phenomenon in the acquisition process of clitic pronouns, the characteristics of a learner’s previously learned languages might play a role in the development of the target forms. Andersen’s One-to-One Principle specifies that “an interlanguage system should be constructed in such a way that an intended underlying meaning is expressed with one clear invariant surface form (or construction)” (1984:79). The omission of Spanish direct object pronouns in learner productions might last longer when a target

form maps onto an empty position in the case of the learners' L1 or L2. In the parallel corpus-based cross-linguistic analysis of this study, 280 units of data were retrieved from the "Corpus Paralelo de Español, Inglés y Chino, CPEIC", then, annotated, classified, and calculated to compare the target forms across three languages. The results of the data analysis are shown in Table 4.

**Table 4.** Correspondence of Object Pronoun in Trilingual Parallel Corpus<sup>2</sup>

Correspondence	Spanish Direct Object Pron (197)	Indirect Object Pron (83)	<i>p</i> -value
vs. English object pron.	146 (74.11%)	52 (62.65%)	
vs. English omission	31 (15.74%)	13 (15.66%)	
vs. English common noun	10 (5.08%)	13 (15.66%)	
vs. Chinese object pron.	64 (32.49%)	32 (38.55%)	<i>p</i> <0.05
vs. Chinese omission	64 (32.49%)	16 (19.28%)	
vs. Chinese common noun	21 (10.66%)	9 (10.84%)	
vs. Chinese $\alpha$ +object pron.	28 (14.21%)	16 (19.28%)	

Chi-square test

To address the second research questions, we examined the usage tendencies and matching structures of object pronouns in the trilingual parallel corpus, CPEIC. The results showed that there is usually more than one way of presenting Spanish object pronouns corresponding to the constructions of the meaningfully equivalent sentences in English and in Chinese. Among them, 74.11% and 62.65% of the direct and indirect object pronouns uses in Spanish corresponded to English, and only 32.49% and 38.55% of the object pronouns corresponded to Chinese. On the one hand, the similar tendency of correspondent relations (indirect objects, 38.55% higher than direct objects, 32.49%) between Spanish and Chinese also mirrored the accuracy tendency of usage by Taiwanese learners (indirect object>direct object, as shown in Table 2). The pattern suggested a stronger influence of the first language on the third language acquisition. On the other hand, the similarity of corresponding relations between Spanish and English is higher than the correspondence between Spanish and Chinese. For example, the direct objects in Chinese often appear after “把(bǎ)”, and its linear structure in word order is different from English, but similar to Spanish. In addition, in Chinese, the indirect object appears after “给(gěi)”, which is similar to English and to the part “a+ person” in clitic doubling in Spanish.

In addition, some of Spanish object pronouns showed empty positions (omission) in the correspondent constructions in English (15.74% direct and 15.66% indirect objects) and in Chinese (32.49% direct and 19.28% indirect objects). Furthermore, the omission rate of object pronouns, especially the direct object pronouns, is higher in Chinese than in English. Chinese does not use the inanimate direct object pronouns, but, instead, the object pronouns are presented in the form of omitted or common nouns. Thus, in terms of object pronouns corresponding to common nouns, the corresponding proportions of the direct and indirect object pronouns in Spanish were 5.08% and 15.66%, respectively, in English; 10.66% and 10.84%, respectively, in Chinese. Furthermore, the correspondent Chinese elements of the Spanish object pronouns also contain the structure “ $\alpha$  + object pronoun,” such as the pattern of “把(bǎ)” or “给(gěi)” + object pronoun. The pronoun omissions or variations in many Chinese and English equivalents mentioned above might help to account for why L3 Spanish learners, especially the beginners, incorrectly omit the object pronouns that should be used in Spanish. If we further consider the degrees of similarity (Chinese omission rate higher than English) and similarity tendency (omission rate of direct object higher than indirect object in parallel Chinese data and learner data) of the corresponding relations mentioned above, we suggest that the first language influenced on learners' productions of the target forms in third language more than the

<sup>2</sup> Due to space limitations, we only list the major types of matches that are more dominant in both English and Chinese.



second language did. In sum, the difference in the three languages may be the reason for learning difficulties, such as the improper omission of the Spanish clitics is likely influenced by cross language transfer from both Chinese and English.

## 5. Conclusion

In this study, the error analysis in the learners' corpus CEATE and the contrastive analysis in the trilingual parallel corpora CPEIC provided insightful evidence of the acquisition sequences of the Spanish clitics in terms case, person, gender, and animacy by Taiwanese learners of Spanish. Based on accuracy rate, the acquisition sequences of clitic pronouns, which show the same patterns in both beginning and intermediate levels, include "case" (indirect>direct), "person" (first person>third person) and "animacy" (animate>inanimate). In a further analysis of error types, the results showed that beginning learners had a higher tendency toward misuse and underuse and a lower tendency toward overuse than the intermediate learners.

In addition, this study shed light on the issue of language transfer, in which L1 Chinese played a more influential role on the L3 acquisition of Spanish clitic pronouns. Future research could investigate other linguistic forms to advance our understanding of third language acquisition and the influence of cross-language transfer on third language acquisition. Finally, the research findings suggest some pedagogical implications. Since the degree of similarity in the corresponding relations between Spanish and English was higher than the correspondence between Spanish and Chinese, learners with higher English proficiency could make good use of their English ability and acquire Spanish clitic pronouns more efficiently, whereas the differences between Chinese and Spanish could be emphasized and contrasted in teaching to draw learners' special attention.

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## References

- Andersen, R. W. (1984). The one to one principle of interlanguage construction. *Language Learning*, 34(4), 77-95.
- Asención-Delaney, Y., & Collentine, J. (2011). A multidimensional analysis of a written L2 Spanish corpus. *Applied Linguistics*, 32(3), 299-322.
- Castilla, A. P., & Pérez-Leroux, A. T. (2010). Omissions and substitutions in Spanish object clitics: Developmental optionality as a property of the representational system. *Language Acquisition*, 17(1-2), 2-25.
- Chin, D. H. J. (2009). Language transfer in the acquisition of the semantic contrast in L3 Spanish. In Leung, Y-k. I. (Ed.), *Third Language Acquisition and Universal Grammar* (pp. 30-54). Bristol: Multilingual Matters.
- De Angelis, G. (2007). *Third or Additional Language Acquisition*. Clevedon: Multilingual Matters.
- Falk, Y., & Bardel, C. (2011). Object pronouns in German L3 syntax: Evidence for the L2 status factor. *Second Language Research*, 27(1), 59-82.
- Flynn, S., Foley, C., & Vinnitskaya, I. (2004). The cumulative-enhancement model for language

- acquisition: Comparing adults' and children's patterns of development in first, second and third language acquisition. *International Journal of Multilingualism*, 1(1), 3-16.
- García Mayo, M. P., & Rothman, J. (2012). L3 morphosyntax in the generative tradition: The initial stages and beyond. In Amaro, J. C., Flynn, S., & Rothman, J. (Eds.), *Third Language Acquisition in Adulthood* (pp. 9-32). Amsterdam: John Benjamins.
- Granger, S. (2013). Error-tagged learner corpora and CALL: A promising synergy. *CALICO Journal*, 20(3), 465-480.
- Hermas, A. (2010). Language acquisition as computational resetting: Verb movement in L3 initial state. *International Journal of Multilingualism*, 7(4), 343-362.
- Klee, C. A. (1989). The acquisition of clitic pronouns in the Spanish interlanguage of Peruvian Quechua speakers. *Hispania*, 72(2), 402-408.
- Leung, Y-k. I. (2006). Full transfer vs. partial transfer in L2 and L3 acquisition. In Slabakova, R., Montrul, S., & Prévost, P. (Eds.), *Inquiries in Linguistic Development: In Honor of Lydia White* (pp. 157-188). Amsterdam: John Benjamins.
- Li, C. N., & Thompson, S. A. (1989). *Mandarin Chinese: A Functional Reference Grammar*. Berkeley, CA: University of California Press.
- LoCoco, V. (1987). Learner comprehension of oral and written sentences in German and Spanish: The importance of word order. In VanPatten, B., Dvorak, T. R. & Lee, J. F. (Eds.), *Foreign Language Learning: A Research Perspective* (pp. 119-129). Cambridge, NY: Newbury House.
- Lozano, C., & Mendikoetxea, A. (2010). Interface conditions on postverbal subjects: a corpus study of L2 English. *Bilingualism: Language and Cognition*, 13(4), 475-497.
- Malovrh, P., & Lee, J. F. (2013). *The Developmental Dimension in Instructed Second Language Learning: The L2 Acquisition of Object Pronouns in Spanish*. London: Bloomsbury.
- Mitchell, R. F., Domínguez, L., Arche, M. J., Myles, F., & Marsden, E. (2008). SPLLOC: A new database for Spanish second language acquisition research. *EuroSLA Yearbook*, 8(1), 287-304.
- Na Ranong, S., & Leung, Y-K. I. (2009). Null objects in L1 Thai-L2 English-L3 Chinese: An empiricist take on a theoretical problem. In Leung, Y-K. I. (Ed.), *Third Language Acquisition and Universal Grammar* (pp. 162-191). Clevedon: Multilingual Matters.
- Odlin, T. (1989). *Language Transfer: Cross-linguistic Influence in Language Learning*. Cambridge: Cambridge University Press.
- Quirk, R., Greenbaum, S., Leech, G. N., & Svartvik, J. (1972). *A Grammar of Contemporary English*. Singapore: Longman.
- Rabadán, R. (2015). A corpus-based study of aspect: Still and already+ verb phrase constructions into Spanish. *Nordic Journal of English Studies*, 14(1), 34-61.
- Ringbom, H. (1986). Crosslinguistic influence and the foreign language learning process. In Kellerman, E., & Sharwood-Smith, M. (Eds.), *Crosslinguistic Influence in Second Language Acquisition* (pp. 150-162). Oxford: Pergamon.
- Ringbom, H. (2007). *Cross-linguistics Similarity in Foreign Language Learning*. Clevedon: Multilingual Matters.
- Rossi, E., Kroll, J. F., & Dussias, P. E. (2014). Clitic pronouns reveal the time course of processing gender and number in a second language. *Neuropsychologia*, 62(1), 11-25.
- Rothman, J. (2015). Linguistic and cognitive motivation for the Typological Primacy Model of third language (L3) transfer: Considering the role of timing of acquisition and proficiency in the previous languages. *Bilingualism: Language and Cognition*, 18(2), 179-190.
- Salaberry, R. (2005). Evidence for transfer of knowledge about aspect from L2 Spanish to L3 Portuguese. In Ayoun, D., & Salaberry, M. R. (Eds.), *Tense and Aspect in the Romance Languages: Theoretical*

*and Applied Perspectives* (pp. 179-210). Amsterdam: John Benjamins.

- Schwenter, S. A., & Torres Cacoullos, R. (2014). Competing constraints on the variable placement of direct object clitics in Mexico City Spanish. *Revista Española de Lingüística Aplicada*, 27(2), 514-536.
- VanPatten, B. (1984). Learners' comprehension of clitic pronouns: More evidence for a word order strategy. *Hispanic Linguistics*, 1(1), 57-68.
- VanPatten, B. (1990). The acquisition of clitic pronouns in Spanish: Two case studies. In VanPatten, B. & Lee, J. F. (Eds.), *Second Language Acquisition/Foreign Language Learning* (pp. 118-139). Bristol: Multilingual Matters.
- VanPatten, B., & Houston, T. (1998). Contextual effects in processing L2 input sentences. *Spanish Applied Linguistics*, 2(1), 53-70.
- VanPatten, B. (2004). *Processing Instruction: Theory, Research, and Commentary*. Mahwah, NJ: Erlbaum.
- Williams, S., & Hammarberg, B. (1998). Language switches in L3 production: Implications for a polyglot speaking model. *Applied Linguistics*, 19(3), 295-333.
- Xu, J., & Li, X. (2014). Structural and semantic non-correspondences between Chinese splittable compounds and their English translations: A Chinese-English parallel corpus-based study. *Corpus Linguistics and Linguistic Theory*, 10(1), 79-101.

## THE AUTHORS

Hui-Chuan Lu is a Professor at Department of Foreign Languages and Literature, National Cheng Kung University, Taiwan with emphasis in Spanish linguistics, corpus linguistics and syntax studies.

An Chung Cheng is a Professor of Spanish of the Department of World Languages and Cultures and the director of the Asian Studies Institute, The University of Toledo, US with emphasis in applied linguistics and corpus-based approach in second language acquisition.

Yu-Hsin Chu is an MA student in Multilingual Corpora team at National Cheng Kung University, Taiwan.

## THE AUTHORS' ADDRESSES

### First and Corresponding Author

#### Hui-Chuan Lu

Professor

Department of Foreign Languages and Literature

National Cheng Kung University

1 University Rd, East District, Tainan City 70101, TAIWAN

E-mail: huichuanlu1@gmail.com

### Co-author

#### An Chung Cheng

Professor

Department of World Languages and Cultures

The University of Toledo

2801 Bancroft St, Toledo, OH 43606, United States

E-mail: Anchung.Cheng@utoledo.edu

### Co-author

#### Yu-Hsin Chu

MA Student

Department of Foreign Languages and Literature

National Cheng Kung University

1 University Rd, East District, Tainan City 70101, TAIWAN

E-mail: katy0806@gmail.com

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