



The effects of language typology on L2 lexical availability and spelling accuracy

MARÍA MARTÍNEZ-ADRIÁN & FRANCISCO GALLARDO-DEL-PUERTO*
Universidad del País Vasco (UPV/EHU, Spain)
Universidad de Cantabria (UC, Spain)

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ABSTRACT

This paper explores whether language typology plays any role in lexical availability and spelling accuracy in L2 English. Two groups of adult speakers were compared: a group of native speakers of a language typologically distant from English with a logographic writing system (Chinese; n=13) vs. a group of native speakers of a language typologically closer to English with an alphabetic system (Spanish; n=14). All participants performed a lexical availability task (Carcedo González, 1998a) which was later on analyzed in terms of the ‘total number of words’ and the ‘total number of words containing spelling mistakes’ per each of the 15 semantic categories included. Spanish speakers displayed larger available lexica and fewer spelling mistakes than Chinese speakers, an outcome which would confirm the positive influence of L1-L2 proximity on L2 lexical availability and the deleterious effect of having a non-alphabetic L1 writing system on L2 spelling accuracy.

KEYWORDS: lexical availability, spelling, cross-linguistic influence, typology.

1. INTRODUCTION

Lexical availability is a dimension of a speaker’s lexical competence inasmuch as it is understood “as the vocabulary flow *usable* in a given communicative situation” (López Morales, 2014: 3). In a lexical availability task, participants are asked to write down all the words that come to their mind in a limited span of time in response to a given cue word. A lexical availability task allows us to make comparisons among different communities of speakers of the same first language (L1) (Carcedo González, 1998b). However, when this

**Address for correspondence:* María Martínez-Adrián. Universidad del País Vasco / Euskal Herriko Unibertsitatea, Departamento de Filología Inglesa y Alemana y de Traducción e Interpretación. Facultad de Letras. Paseo de la Universidad, 5. 01006 Vitoria-Gasteiz, Spain; e-mail: maria.martineza@ehu.eus.

task is used with second language (L2) learners, lexical availability becomes “an important dimension of language learners’ lexical competence” (Jimenez Catalán, 2014: v). Thus, lexical availability studies on L2 populations would enable us to discover any differences in the total number of words produced or in the most/least productive semantic fields among L2 learners with different language backgrounds.

The primary purpose of the studies on lexical availability has changed a lot in recent years. Initially, their goal was directly related to language teaching. Subsequently, studies have explored the influence of specific factors on the lexical availability of the learners. However, this type of research is still in its infancy and more research is needed in this respect. In addition, the studies on lexical availability in L2 English are more limited than in L2 Spanish, and a call for more research in L2 English has been made in recent investigations.

The investigations on the influence of specific factors on learners’ lexical availability have addressed different variables such as age, gender, proficiency level, instruction, language proximity, among others (i.e. Carcedo González, 1998a; Gallardo-del-Puerto & Martínez-Adrián, 2014; Jiménez Catalán & Ojeda Alba, 2009, 2010; López Rivero, 2008; Samper Hernández, 2002; Šifrar Kalan, 2012; Urzúa, Sáez & Echeverría, 2006). Nevertheless, the effect of language proximity on lexical availability has been examined mainly in the case of L2 Spanish (Carcedo González, 1998a; López González, 2014; López Rivero, 2008; Samper Hernández, 2002, 2014; Šifrar Kalan, 2009, 2014). Thus, the examination of the influence of this variable on vocabulary acquisition deserves special attention in other L2s. Concurrent validity will be achieved by further exploring the beneficial effect of language proximity on language learners’ lexical availability, something previously attested in L2 Spanish but scarcely investigated in L2 English. In addition, linguistic distance has been a variable investigated in L2 spelling studies, in particular in populations with logographic writing systems (Akamatsu, 2003; Holm & Dodd, 1996; Li & Suen, 2015; Wang & Koda, 2005). However, none of those studies have analyzed the impact of language typology on spelling errors in a L2 lexical availability task. Therefore, the present study will try to fill these gaps by investigating the impact of linguistic distance on L2 English lexical availability and spelling errors. The paper is organized as follows. Section 2 deals with cross-linguistic influence and, more specifically, it tackles the effect of language proximity on lexis as well as reading and spelling. Section 3 addresses the main research questions of the study, while the methodology is described in section 4. Then, the results are shown and discussed in section 5. The main conclusions of the study are finally drawn in section 6.

2. CROSSLINGUISTIC INFLUENCE

One of the most widely discussed issues in L2 acquisition research is that of L1 influence (see Jarvis & Pavlenko, 2008; Odlin, 2005, 2010; Ringbom, 2007). From a cognitive account (Kellerman, 1986), transfer is seen as a cognitive process constrained by different factors such as learner proficiency, markedness, context, or the typological distance between the L1 and the L2. This last factor can contribute to both positive and negative transfer (Ellis, 2008). Positive transfer is evident in the case of Chinese learners of L2 Japanese when compared to English learners because of the similarity between Chinese and Japanese writing systems (Ellis, 2008). On the contrary, negative transfer can be observed among Swedish-speaking Finns who manifest more errors than Finnish-speaking Finns learning English, as Swedish-speaking Finns perceive a greater similarity between Swedish and English (Ringbom, 2007).

In what follows, we will focus on the effect of typological distance on lexis and spelling.

2.1. Effect of language proximity on lexis

The 1970s and 1980s witnessed the emergence of L2 studies dealing with typological distance and grammar. However, studies carried out from the 1990s onwards have focused on the lexical acquisition processes of English learners coming from different language backgrounds (e.g. Agustín Llach, 2012; Hu, Brown & Brown, 1982; Jarvis, 2000; VanParys, Zimmer, Li & Kelly, 1997; Yu, 1996). These studies, which have employed a wide range of vocabulary tasks other than the lexical availability task, attest the differences in productive and receptive vocabulary knowledge between learners with different L1s and explain these differences in the light of linguistic distance. An advantage can be observed in L2 learners when their L1 and the L2 share similar or identical words (Ringbom, 2007), as in a very recent study conducted by Agustín Llach (2012) on receptive vocabulary. She examined two groups of learners with different mother tongues: Spanish and German. Spanish L2 English learners showed greater knowledge of words of Greco-Latin origin than their German peers, whereas German learners showed greater knowledge of words of Anglo-Saxon origin than their Spanish peers. Current research has also explored the effect of language proximity on lexical availability, which we tackle in the following section.

2.1.1. Effect of language proximity on lexical availability

Although lexical availability is an important dimension of L2 learners' lexical competence, little research has been conducted on this issue (Jiménez Catalán, 2014). Studies dealing with L2 Spanish are quite scarce (Carcedo González, 1998a; López Rivero, 2008; Samper Hernández, 2002; Šifrar Kalan, 2009; among others) and, specifically, those dealing with L2 English are even more limited (Germany & Cartes, 2000; Jiménez Catalán & Ojeda Alba,

2009, 2010), even though the recent monograph edited by Jiménez Catalán (2014) has tried to fill this gap by joining both L2 Spanish and L2 English research in the same volume. Those studies dealing with lexical availability in L2 Spanish and L2 English have examined the incidence of variables such as age (Jiménez Catalán, Agustín Llach, Fernández Fontecha & Canga Alonso, 2014), gender (Agustín Llach & Fernández Fontecha, 2014), proficiency level (Samper Hernández, 2014), and instruction (López González, 2014), among others.

However, the effect of language proximity on lexical availability has been analyzed mainly in the case of L2 Spanish (López Rivero, 2008; Samper Hernández, 2002; Šifrar Kalan, 2009) and, consequently, there is a lack of studies with L2 English in this respect, a gap that will be filled in the present paper. Samper Hernández (2002) examined the lexical availability of L2 Spanish learners with a variety of L1s. She concluded that there was no relationship between the number of words produced and the Romance origin of the L1 of some of the informants, as learners with L1 French, L1 Romanian and L1 Portuguese produced the lowest number of words. However, when she analyzed the average number of different words, she observed higher means on the part of English learners when compared to Chinese and Arabic learners. Similarly, López Rivero (2008) investigated the lexical availability exhibited by L2 Spanish learners from different L1 backgrounds. Those informants with L1 English, L1 Dutch and French, L1 Portuguese, L1 Dutch, and L1 German were found to produce the greatest number of words. Given that French and Portuguese were the only Romance L1s, López Rivero (2008) comes to the conclusion that there is no correlation between the number of words produced and the L1 Romance origin. Šifrar Kalan (2009) makes a comparison of 3 groups of L2 Spanish learners: a group of learners with L1 Slovenian, a group of learners with L1 Finnish (corpus from Carcedo González, 1998a) and a group of learners with a wide variety of L1s (corpus from Samper Hernández, 2002). This author observed that there were similarities in the most productive semantic fields ('food and drink', and 'city') in the three corpora. Additionally, the most available words in the three studies were *dog*, *car*, *cat* and *professor*. However, Šifrar Kalan (2009) also detected quantitative and qualitative differences when the three corpora were compared with respect to the variables 'total mean number of words' and 'different words produced', as well as with respect to 'the most available words in each semantic field'. According to this author, we cannot forget that lexical availability is an index of cultural differences. For example, our perception of 'field' may vary from one place to another, which may yield differences in the production of the most available words in each semantic field. Given the similarities reported in the most productive semantic fields and the most available words in the three corpora analyzed, Šifrar Kalan (2009) concludes that there seems to be a similar basic lexical competence despite different L1s and cultures.

2.2. Effect of language proximity on reading and spelling

The effect of language proximity has also been studied among L2 learners with L1s that have different writing systems. For example, speakers of Chinese use a logographic writing system in which symbols represent meaning (Wang & Geva, 2003) and complex arrangements of them map onto morphemes (Perfetti & Dunlap, 2008). This contrasts with the alphabetic system we find in English and Spanish, in which there is a relationship between graphemes and phonemes. However, there is also a difference between these two Indo-European languages in terms of their alphabetic writing system, as English has a deep alphabetic orthography and Spanish, a shallow writing system (Cook, 2010). Namely, the relationship between letter and phoneme is less direct in English, whereas in Spanish, we can observe a one-to-one relationship between its graphemes and phonemes.

Several studies carried out with adults report transfer effects in this type of age groups (Akamatsu, 2003; Holm & Dodd, 1996; Li & Suen, 2015; Wang & Koda, 2005). Chinese adult learners tend to rely on their L1 literacy experience and on a visual whole-word strategy when reading or spelling (Wang & Geva, 2003). Akamatsu (2003) compared a group of Chinese and Japanese (logographic system) learners to a group of Persian (alphabetic system) learners with respect to reading rate and comprehension of L2 English texts. The first text was presented in normal English orthography and the second text on lower/upper case alternations. Chinese and Japanese learners were more adversely affected by case alternations than Persian learners. This author concludes that word processing skills or strategies developed in an L1 are transferred to L2 reading. Similar results were obtained by Wang and Koda (2005) when comparing a group of Chinese (logographic system) learners to a group of Korean (alphabetic system) learners. Both groups of learners were tested through a reading aloud task with real and pseudo-words. Results indicated an advantage on the part of Korean learners when naming real and pseudo-words thanks to their alphabetic system. Holm and Dodd (1996), in their study on reading and spelling, found similar transfer effects in the groups of adult learners tested. A group of students from Hong Kong without knowledge of Pinyin (the official phonetic system for transcribing the Mandarin pronunciations of Chinese characters into the Latin alphabet) obtained worse results when tested on reading and spelling of pseudo-words than a group of Chinese Mandarin students who had been taught Chinese through Pinyin (alphabetic system). Very recently, Li and Suen (2015) hypothesized that Chinese English-as-a-Second-Language (ESL) learners could face much greater challenges in learning English vocabulary than Romance-language (Spanish and Portuguese) speaking learners, as the difference between Chinese and English is much greater than the one between Romance languages and English. Both English and Romance languages share an alphabetic system and many linguistic features due to the influence of Latin and the Norman Conquest (Campbell, 1982). In order to test this hypothesis, Li and Suen (2015) compared a group of adult Chinese ESL learners to Romance-language speaking ESL learners regarding their

ability to recognize English words while responding to a multiple-choice reading test. Additionally, this was supplemented by learners' think-aloud verbal protocols while completing the task. The analysis of the data revealed that Romance-language speaking learners were better able to recognize English words using linguistic clues from their native languages, such as cognates and shared prefixes, suffixes and word roots. However, Chinese participants used more test-taking abilities due to their poor recognition skills. In this respect, it is worth mentioning that, as reported by the authors, the teaching of English in China is intensively test oriented and it emphasizes rote memorization and drills.

Even if the effect of the alphabetic-logographic distinction over spelling accuracy (Holm & Dodd, 1996) as well as over reading (Akamatsu, 2003; Holm & Dodd, 1996; Wang & Koda, 2005) has already been investigated, none of these studies have analyzed the impact of language typology on spelling errors in an L2 lexical availability task, a gap which will be filled in the present investigation.

3. RESEARCH QUESTIONS

Taking into account previous findings regarding the variable 'language proximity' and lexical availability in L2 learners (López Rivero, 2008; Samper Hernández, 2002; Šifrar Kalan, 2009), as well as the incidence of this variable on L2 spelling accuracy (Akamatsu, 2003; Holm & Dodd, 1996; Wang & Koda, 2005), we address the following two research questions:

1. RQ1: Does language typology affect L2 lexical availability?
More specifically, we will investigate whether differences emerge as regards the number of L2 English words retrieved by L1 Spanish vs. L1 Chinese speakers.
2. RQ2: Does writing system typology affect L2 spelling accuracy?
More precisely, we will explore whether differences are found as regards L2 English spelling between L1 Spanish and L1 Chinese speakers.

4. METHOD

4.1. Participants

To answer those questions, a total number of 27 L2 English post-graduate students at the University of Iowa (USA) were tested. They were selected on the basis of a background questionnaire administered prior to the data gathering process. Those participants were divided into two research groups depending on their L1 origin: a group of L1 Spanish and a

group of L1 Chinese learners of English. Both Spanish and English are Indo-European languages, whereas Chinese is a Sino-Tibetan language. Thus, Spanish is typologically closer to English than Chinese. Similarly, both Spanish and English use an alphabetic writing system, whereas Chinese uses a logographic writing system.

Table 1 displays the main characteristics of both research groups:

	Spanish (n=14)	Chinese (n=13)
Gender	8 male 6 female	5 male 8 female
Mean age	26.29 (6.48)	22.67 (2.64)
Onset age	9.64 (5.37)	10.15 (1.90)
Exposure (in years)	13.31 (4.11)	12.54 (3.52)
English competence (max=100)	75.40 (12.47)	72.08 (8.21)
Motivation (max=5)	3.91 (0.51)	4.03 (0.40)

Table 1. Participants' characteristics.

As can be observed in Table 1, the Spanish group was composed of 14 subjects (8 males and 6 females), while the Chinese group was made up of 13 subjects (5 males and 8 females). Both groups were quite alike regarding various variables, namely age, age of first English exposure, length of English exposure, English proficiency and L2 motivation. The mean age in the Spanish group was of 26.29 and in the Chinese group of 22.67. Onset ages were quite close—9.64 vs. 10.15. Both groups had been learning English for about 13 years (13.31 vs. 12.54). Their English proficiency was quite similar, as the results of the *Oxford Placement Test* (Allan, 1992) test showed (75.40 vs. 72.08). Finally, they exhibited similar degrees of L2 motivation (3.91 vs. 4.03), which was measured by means of a 5-point Likert scale examining both intrinsic and extrinsic motivation.

4.2. Instrument

As for instruments, both groups performed a lexical availability task adapted from the task designed by Carcedo González (1998a) for L2 Spanish. This task was administered by two research assistants. Each group performed the task at the same time in the same room. This instrument has been proved to be a reliable measure in L1 Spanish (Alba, 1998; Etxebarria Arostegui, 1996; López Morales, 1999; among many others), L2 Spanish (Carcedo González, 1998a; López Rivero, 2008; Samper Hernández, 2000) and L2 English (Agustín Llach & Fernández Fontecha, 2014; Gallardo-del-Puerto & Martínez-Adrián, 2014; Germany & Cartes, 2000; Jiménez Catalán & Ojeda Alba, 2009, 2010; Martínez-Adrián & Gallardo-del-Puerto, 2010) lexical availability. This task was made up of fifteen prompts, each representative of an area of interest (center of interest) related to everyday life: '1. Parts of the body', '2. Clothes', '3. House', '4. Furniture', '5. Food and drink', '6. Table',

'7. Kitchen', '8. School', '9. Town', '10. Countryside', '11. Means of transport', '12. Animals', '13. Hobbies', '14. Professions', and '15. Colours'. Participants were given a written questionnaire containing these 15 prompts. Each prompt was written on a separate sheet of paper, where participants had to write as many words as possible related to the given prompt in the order that the words came into their heads. They were allowed 2 minutes for each cue word. The task lasted 30 minutes in total, as there were fifteen cues, but was accomplished in two different rounds in order to avoid respondents' tiredness.

4.3. Statistical analyses

Both descriptive and inferential statistical analyses were carried out. As far as the former, mean scores and standard deviations were calculated for the 'number of words' and the 'number of words containing spelling mistakes' in both learner samples. As for the latter, T-tests and Mann-Whitney tests were performed for normal and non-normal distribution samples respectively so as to investigate whether the differences found between the two learner groups were statistically significant. Statistical significance was indicated at $p < .01^{**}$ and $p < .05^{*}$ levels. Marginally significant differences were indicated at $p < .09^{\#}$ level.

5. RESULTS AND DISCUSSION

In this section, we will be presenting and discussing the results according to the research questions of the study. First, we will focus on the results which are related to the first research question—Does language typology affect L2 lexical availability? More specifically, we want to discover if there are any differences between the number of L2 English words produced by Spanish and Chinese speakers in the lexical availability task they performed.

In Table 2 mean scores and standard deviations are displayed both for overall results and for each of the fifteen semantic fields. Overall results indicated that Spanish learners produced a mean number of 32.72 words more than Chinese speakers (238.57 vs. 205.85); that is, 13.71 % more. Higher means for Spanish speakers were observed in most of the semantic fields as well, '10. countryside' and '13. hobbies' being the only exceptions. Statistical analyses revealed highly significant differences in the case of '2. Clothes', with a 29.51% gap between the two groups ($17.79 - 12.54 = 5.25$). Significant differences were also found for '5. Food and drink', and '15. Colours', with 19.63% ($24.50 - 19.69 = 4.81$) and 13.57% ($14.86 - 12.85 = 2.01$) gaps respectively. The category '3. House' yielded a marginal 29.16% ($18.79 - 13.31 = 5.48$) difference. A marginally significant difference was also observed for the overall results. In all these cases, Spanish speakers produced a larger amount of words than Chinese speakers:

	SPANISH		CHINESE		T-test
	Mean	SD	Mean	SD	
1. Parts of the body	21.43	5.75	21.31	3.55	t=.066
2. Clothes	17.79	4.96	12.54	3.64	t=3.147**
3. House	18.79	6.92	13.31	7.23	t=2.009#
4. Furniture	10.29	3.27	8.69	3.09	t=1.302
5. Food and drink	24.50	5.65	19.69	3.86	t=2.596*
6. Table	12.14	3.28	10.00	3.56	t=1.624
7. Kitchen	13.14	5.50	10.46	5.03	t=1.323
8. School	14.29	4.56	13.23	2.86	t=.713
9. Town	15.07	5.61	12.08	4.17	t=1.581
10. Countryside	13.14	4.05	13.85	5.94	t=.357
11. Means of transport	12.43	3.48	10.46	2.90	t=1.599
12. Animals	20.64	5.20	19.54	4.35	t=.600
13. Hobbies	13.64	5.62	16.31	3.25	t=1.520
14. Professions	16.07	4.23	15.23	4.42	t=.504
15. Colours	14.86	3.98	12.85	1.21	t=2.195*
OVERALL RESULTS	238.57	57.05	205.85	39.06	t=1.750#

Table 2. Number of words.

On the basis of our results, we can say that language typology seems to affect L2 lexical competence, as the group of Indo-European speakers (Spanish) had a higher number of L2 English words available to them than the group of non-Indo-European speakers (Chinese). This finding would go against the results of some lexical availability studies (López Rivero, 2008; Samper Hernández, 2002) in which the L1 background did not seem to matter. These are studies on L2 Spanish where no relationship between the number of words produced and the origin of the L1 (Romance vs. non-Romance) was found. However, in one of these studies (Samper Hernández, 2002) there is an interesting finding which might be in line with the results of our study, as it was reported that there was a superiority on the part of a group of Indo-European speakers (English) when compared to non-Indo-European ones (Chinese and Arabic) in the number of different words produced in a lexical availability task performed in an Indo-European L2 (Spanish).

Besides, we fully agree with Šifrar Kalan (2009), who also discovered L1-based differences in the total mean number of words and different words in L2 Spanish. Our findings partially agree with those of Agustín Llach (2012), who found no L1-based differences for L2 English receptive vocabulary size but discovered quantitative differences in the proportions of English words of Romance vs. Germanic origin when comparing L1 Spanish to L1 German learners of English. The data reported in the present study are also in line with Li and Suen (2015), who attested an advantage on the part of Romance-speaking learners when compared to Chinese-speaking learners in an English vocabulary recognition task. Thanks to the Latin origin of some words and the use of an alphabetic writing system in both English and the Romance languages (Spanish and Portuguese) of the participants,

Romance-speaking learners outperformed the Chinese-speaking participants. As claimed by Riches and Genesee (2006), the transfer of orthographic and cognate vocabulary knowledge is more likely in languages that are typologically similar (e.g. Spanish and English) than in typologically different languages (e.g. English and Chinese).

The analysis of which semantic fields were most productive pointed out some similarities between our study and previous literature. We found that both learner groups coincided with one another in the fields with higher lexical availability, namely ‘food and drink’, ‘body’ and ‘animals’. Šifrar Kalan (2009) also found that ‘food and drink’ was the most productive category. The similarity in the levels of lexical availability among different kinds of learners is also common ground in previous literature examining the effect of various learner variables on lexical availability, gender (Carcedo González, 1998a), Content and Language Integrated Learning (Jimenez Catalán & Ojeda, 2009, 2010), or previous foreign language exposure (Gallardo-del-Puerto & Martínez-Adrián, 2014; Martínez-Adrián & Gallardo-del-Puerto, 2010), to name but a few.

Consequently, the evidence presented here seems to go in line with the idea that typological distance plays a role in additional language acquisition (see Cenoz, 2001; Rothman, 2011), and more particularly in the learning of the lexicon, supporting previous findings on the facilitating effect of a typologically-related L1 on L2 vocabulary development (Dewaele, 1998; Ringbom, 2007).

We shall now present and discuss the results which will answer the second research question—Does writing system typology affect L2 spelling accuracy? In other words, we aim to investigate whether differences in spelling accuracy in L2 English are observed between Spanish and Chinese speakers. Table 3 presents the average number of words containing spelling mistakes in the whole task and in each semantic field produced by each learner group. With regard to overall results, we observed that Chinese speakers produced a higher amount of erroneous words, 4.63 (12.29–16.92) to be exact, which represented a 27.36% difference. This tendency was observed in twelve out of the fifteen semantic fields, ‘2. Clothes’, ‘12. Animals’, and ‘15. Colours’ being the exceptions. T-tests revealed that on three occasions statistical significance was reached, namely for ‘3. House’, ‘7. Kitchen’ and ‘8. School’ categories, with differences that amounted to 63.84%, 61.62% and 63.02%, respectively. In all these cases, Chinese speakers were found to produce a substantially higher amount of erroneous words than Spanish speakers:

	SPANISH		CHINESE		T-test or Mann-Whitney
	Mean	SD	Mean	SD	
1. Parts of the body	1.21	1.12	1.31	.95	t=.234
2. Clothes	.86	1.29	.62	.96	z=.225
3. House	.64	.74	1.77	1.30	t=2.733*
4. Furniture	.64	.63	1.00	1.78	z=.677
5. Food and drink	1.43	1.65	2.38	1.61	t=1.523
6. Table	.64	1.08	1.00	1.00	t=.891
7. Kitchen	.71	.99	1.85	1.65	t=2.163*
8. School	.71	1.07	1.92	1.26	t=2.683*
9. Town	.50	.52	.62	.96	t=.384
10. Countryside	.29	.61	.46	.78	z=.600
11. Means of transport	.64	1.08	.69	.75	z=.659
12. Animals	1.07	1.14	1.00	1.15	t=.162
13. Hobbies	1.14	2.63	1.23	1.36	z=1.001
14. Professions	1.29	1.44	1.31	.85	t=.049
15. Colours	.64	.84	.23	.44	z=1.493
OVERALL RESULTS	12.29	8.35	16.92	6.97	t=1.570

Table 3. Number of spelling mistakes.

In the light of the comparison of the number of words containing orthography errors in our two learner samples—Spanish speakers with a shared alphabetic orthography vs. Chinese speakers with a non-shared logographic writing system—, we can conclude that word spelling accuracy seems to be affected by the L1 writing system. The error analysis of the words produced by participants in the lexical availability task indicated that Chinese speakers tended to be less accurate in English spelling than Spanish speakers. This finding matches previous literature on the effect of the alphabetic-logographic distinction over spelling accuracy in alphabetic L2s (Holm & Dodd, 1996). It is also in line with the negative influence exerted by a non-shared logographic L1 writing system on reading in an alphabetic L2 (Akamatsu, 2003; Holm & Dodd, 1996; Li & Suen, 2015; Wang & Koda, 2005). These differences might also be ascribed to different traditions in the teaching of Chinese and English literacy in primary school as a consequence of the idiosyncrasy of each of these two writing systems. Whereas instruction of Chinese characters focuses on the morphological elements of words (Chow, McBride-Chang, Cheung & Chow, 2008), learning to read and write in English is achieved by means of boosting letter-to-sound, grapho-phonemic awareness (Roman, Kirby, Parrila, Wade-Wooley & Deacon, 2009).

6. CONCLUSION

This paper aimed to explore the role of language typology in the acquisition of L2 English vocabulary. The target was two-fold: first, we wanted to investigate if linguistic distance affects L2 English lexical availability; second, we sought to look into the influence of language proximity on L2 English spelling accuracy. To accomplish those aims, a comparison between two groups of L2 English learners was carried out. These groups differed in terms of their L1 background: one group was made up of native speakers of Spanish, a language which shares its Indo-European origin and Latin alphabet with English; the other group were native speakers of Chinese, a Sino-Tibetan language which is typologically more distant from English and whose writing system is logographic. Both groups performed a lexical availability task and results showed that our hypotheses were satisfied since Spanish speakers displayed more available vocabulary and more accurate spelling in L2 English than Chinese speakers. These findings lead us to conclude that there exists a beneficial effect of language proximity on L2 learners' lexical competence, at least in terms of lexical availability and spelling accuracy.

Notwithstanding, our study presents some limitations which must be taken into account, so findings are to be considered with caution. Firstly, our sample is quite small, so generalizations to other populations are not optimal enough. Secondly, the analyses carried out took a group perspective; thus, an exploration of individual learner behaviour would be desirable in further research. Thirdly, the lexical availability task, however standardized it is, is a limitation itself, as only a limited number of semantic fields are included as prompts, so we do not know what could have happened if other cue words had been included.

The present study also reinforces the need to work with Chinese-speaking learners of L2 English in a different way in the foreign language class. As their available lexicon and spelling accuracy seem to be weaker due to typological differences between Chinese and English, a different approach to the learning of vocabulary should be implemented in their foreign language classes. We fully agree with Li and Suen (2015) that extensive reading and increasing phonological awareness could aid in an improvement of Chinese speakers' vocabulary skills in L2 English. More explicit instruction devoted to the recognition of alphabetic graphemes and practise in letter-sound combinations could help them connect meaning to words. Both receptive and productive vocabulary, as well as reading skills, would benefit from this teaching approach.

Further research could explore the variable 'number of different words', as in previous studies differential effects of language proximity have been observed for 'number of words' vs. 'number of different words', the latter yielding larger differences in terms of L1 background (see Samper Hernández, 2002). Perhaps the gap between our Spanish and Chinese speakers is widened with the analysis of this variable.

Additionally, a qualitative study on the kind of words elicited in the different semantic fields would be advisable. An exploration of potential differences between Spanish and Chinese speakers regarding the most available words in L2 English may shed some light on the role of cultural differences in lexical availability (Šifrar Kalan, 2009).

A study on the etymological origin of the words produced by our participants would also be welcome. Agustín Llach (2012) demonstrated that the L1 background has an impact on L2 receptive vocabulary. Her Spanish speakers recognized more Romance-origin words in L2 English whereas her German speakers did so with Germanic-origin words. It would be very interesting to see if this trend is observed in productive vocabulary as well by inspecting our data in this regard. It would also be interesting to analyze the number of spelling mistakes in words of Romance and non-Romance origin made by Spanish vs. Chinese learners of English.

Finally, a study on the type of spelling mistakes made by our two learner samples regardless of the origin of the word would also be recommendable. Wang and Geva (2003) reported some L1 background differences, as Chinese adult learners were found to rely on their L1 literacy experience (visual whole-word strategy) when reading and spelling pseudo-words, and not to follow grapheme-onto-phoneme mapping strategies, as other L1 speakers did. Celaya and Torras (2001) compared children vs. adults, and found that the former used L1 phonographic coding rules (e.g. *braun* for *brown*), whereas adults presented more instances of graphemes that would code a phoneme in their L1 (e.g. *diferent* for *different*). The think-aloud protocols in Li and Suen (2015) are also in line with these findings. While Spanish L1 phonological awareness was a significant predictor of English L2 word recognition (Durgunoglu, Nagy & Hancin-Bhatt, 1993), Chinese-speaking learners relied more on orthographic than on phonological cues (Grabe, 2009; Hamada & Koda, 2010). L2 learners from different L1 backgrounds produce different types of orthographic errors as a reflection of their L1 phonological categories and/or the correspondences between sounds and graphemes in their L1 (Bebout, 1985; Okada, 2005; Seeff-Gabriel, 2003). For example, while both Spanish and Chinese lack the phoneme /v/, Spanish learners of L2 English may write *ban* for *van* because and <v> letters are pronounced as /b/ in Spanish, and Chinese learners might use the graphemes <f>, <l>, <th>, <s>, and <w>, as substitutions for English <v> (see Harding, 2000). Similar differential behaviours like the ones observed in some of these studies could also be found in our data.

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