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TRABAJO DE FIN DE GRADO

AN APPROACH TO ENGLISH-SPANISH COGNATES: L1 SPANISH SPEAKERS'

IDENTIFICATION OF ENGLISH COGNATES

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Abstract

Cognates have always been a problematic issue for L1 Spanish speakers in their L2 English learning process. The term *cognates* is understood as words that share roots and origin in two different languages, while their meaning may remain the same (i.e. true cognates), or not (i.e. false cognates). This undergraduate dissertation deals with the problems that arise to L1 Spanish speakers in their learning process of English as an L2. The results obtained from the two experimental tasks conducted revealed how language transfer from the L1 influences negatively the learning of the L2, as well as how participants struggle more when identifying than when producing cognates.

KEYWORDS: Cognates, true cognates, false cognates, language learning process, second language learning, language transfer, English, Spanish

Resumen

Los cognados siempre han sido una cuestión problemática para los hablantes de español como L1 en su proceso de aprendizaje del inglés como L2. El término *cognados* se entiende como aquellas palabras que comparten raíces y origen en dos lenguas diferentes, al tiempo que su significado puede mantenerse (p.ej., cognados verdaderos), o no (p.ej., cognados falsos). Este trabajo de fin de grado aborda los problemas que les surgen a los hablantes de español en su proceso de aprendizaje del inglés como L2. Los resultados obtenidos a través de las dos tareas propuestas revelan como la L1 influye negativamente en el aprendizaje de la L2, y como los participantes encuentran más dificultades reconociendo que produciendo cognados.

PALABRAS CLAVE: Cognados, cognados verdaderos, cognados falsos, proceso de aprendizaje del lenguaje, aprendizaje de la lengua segunda, transferencia, inglés, español

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1. Introduction

Cognates have been defined in different ways throughout the years as there seems to be no agreement among the various terminologies proposed by experts in the field. For instance, Longman (2005) pointed out that cognates are terms of a language “that have the same origin as a word in another language”. Chacón Beltrán (2006) established that cognates are a shared vocabulary between two languages (a first language, L1, and a second language, L2) that eases the learning or the acquisition of the L2. Therefore, cognates can be understood as vocabulary pairs with the same or similar origin, etymology, spelling, and/or pronunciation in two different languages. However, the fact that cognates share these properties just mentioned does not mean that such words have the same meaning. Consequently, cognates can be divided into two types: true cognates or true friends and false cognates or false friends. Even though there is no consensus on the classification of cognates as a general rule, this study will differentiate two types of cognates, as illustrated in (1): true cognates and false cognates. The former are those words that do share form and meaning in the two languages, as in (1a) for English and Spanish; while the latter are those word pairs that share formal standards but not meaning, as in (1b), where each word means something different in English and in Spanish.

- (1) a. hospital_{EN} / hospital_{SP} EN = SP
b. argument_{EN} / argumento_{SP} EN ≠ SP
[discussion, debate, or statement] / [plot]

EN = English; SP = Spanish

The emergence of cognates is typically linked to the fact that the two languages involved have had to maintain some contact or relation in the past. That is, the reason for the appearance of cognates is to be found in the linguistic history of two languages which may have led to some vocabulary whose etymology and roots are alike. It could be said that the

historical evolution of each language, from their overlapping origins to their independent developments, plays a crucial role in the process of cognate categorization.

Indeed, Mendiluce Cabrera and Hernández Bartolomé (2005, 1) described false cognates as “those words of a language that are similar in form, but not in meaning, to some words of another language”. Yet, their evolution in the languages involved must have been distinct, and that is probably why cognates acquire different connotations and become false cognates.

The present study focuses on true and false cognates. The language pair under consideration is English-Spanish and, more specifically, Spanish as an L1 and English as an L2. The cognates under investigation include graphic and phonetic true cognates and total and partial false cognates, as discussed in section 3. The main concern is to address how L1 Spanish speakers deal with cognate recognition and usage in their L2 English learning.

L1 Spanish speakers face a challenge when they are required to differentiate between English true and false cognates since both languages have plenty of words that may share the same meaning, as illustrated in (1) above. For that reason, the main issue that is going to be evaluated in this research is the knowledge L1 Spanish speakers have of English cognates.

This undergraduate dissertation is divided into seven different sections. The first section consists of an introduction to the topic of cognates, where the main concepts and the thesis statement are settled. The second section states the linguistic connections between the English and the Spanish languages; their respective origin, evolution, and contact established over the decades. This is followed by a third section which presents a taxonomy of cognates according to two different criteria – formal and semantic. From the former criteria, graphic and phonetic true cognates arise, while from the latter one, total and partial false cognates. Then, the fourth section displays the notions of crosslinguistic influence and, in particular, how the L1 affects the learning of the L2, and consequently, the identification of English-Spanish cognates. After these background sections, the fifth one is based on an empirical experiment carried out on L1

Spanish-L2 English learners with a view to analyze their competence and performance on cognates; knowledge on the matter and its employment. Finally, the sixth section contains the conclusions in which the results of the experiment are contrasted and supported with the theory given previously.

2. Linguistic connection between English and Spanish: origin, evolution, and contact

Both Spanish and English stem from the same language, proto-Indo-European, although each language belongs to a different linguistic branch in their evolution from proto-Indo-European. Proto-Indo-European predominated in Central Europe, the Balkans, and Iran, and over decades, it expanded and evolved. As a result of this evolution, different branches and dialects emerged depending on the geographical location. English derives from the Germanic branch, while Spanish from the Romance branch. In spite of their different evolution, they both have a connection to Latin in that the Germanic languages received contributions and influences from French and Latin at different historical moments and Spanish derives directly from Latin (Cantos & Sanchez, 2011).

In fact, Spanish became what it is today due to the evolution of Latin, brought by the Romans when they invaded the Iberian Peninsula, as well as the multiple influences of other languages such as Greek, Arabic, or French. Together with English, Latin began to acquire greater importance in the British Empire after the Norman Conquest of 1066. Although the presence of Latin was more lasting and predominant in Spain than in the British Empire, English was influenced by this Romance language, and hence some English words have Latin roots.

Chacón Beltrán (2006, 30) pointed out that “the relationship of English and Spanish with Latin has occasioned a non-parallel lexical development”. This is to say that the contact that both English and Spanish had with Latin in the past affected both in the word forms, but

the nature of this contact differently affected their respective historical development. As a result, this has caused semantic differences that make both languages not entirely equal in spite of this common contact with Latin.

Nowadays, English and Spanish continue to affect each other more directly and in a variety of ways. For instance, there are geographical areas where Spanish and English coexist, creating bilingual communities where the two languages are used on a daily basis and are always in contact (e.g., Florida or Arizona in the USA, Gibraltar in the UK). And more globally, given the use of English as a lingua franca all over the world, it can be evidenced that the Spanish-speaking community is acquiring more and more borrowings and expressions from English (i.e., *blog, chat, marketing, email*).

3. Classifying cognates: taxonomies

Cognates have been discussed and studied by many linguists in order to provide an appropriate classification that could help organize the many properties these pairs of words have. Nevertheless, so far, no study seems to have come up with a successful and precise categorization that comprises every type of cognate (Roca Valera, 2010). Not having developed an accurate categorization capable of establishing and dividing cognates into groups with individual characteristics has led many linguists to search for their own typology. What unites each of the existing typologies is that they all take into account two standards, formal and semantic. For instance, Moss (1992) and Postigo Pinazo (1997) conducted their respective research based on a corpus of false cognates, and each came up with their own categorizations and conclusions. Moss decided to follow a criterion merely based on spelling, as in (2), since his study was based on a reading test. Indeed, Moss distinguishes between English-Spanish cognates that have vowel or consonant differences (2a), and cognates with specific letter differences (2b).

- | | | | |
|-----------------------------|---|------------------------|---------|
| (2) a. effect _{EN} | / | efecto _{SP} | EN = SP |
| b. designate _{EN} | / | designar _{SP} | EN = SP |

Postigo Pinazo (1997) adds on new classification criteria, apart from spelling, which include information on semantics, phonetics and etymology. These new criteria result in the following classification of cognates, as in (3): phonetic false friends (3a), graphic false friends (3b), false friends derived from loanwords (3c), and semantic total (3d) and partial (3e) false friends.

- | | | | |
|--|---|--------------------------|---------|
| (3) a. peace _{EN} | / | piis _{SP} | EN = SP |
| [paz] _{SP} | / | [pee] _{EN} | |
| b. pan _{EN} | / | pan _{SP} | EN ≠ SP |
| [olla] _{SP} | / | [bread] _{EN} | |
| c. avocado _{EN} | / | abogado _{SP} | EN ≠ SP |
| [aguacate] _{SP} | / | [lawyer] _{EN} | |
| d. topic _{EN} | / | tópico _{SP} | EN ≠ SP |
| [theme, subject, matter] _{EN} | / | [cliché] _{EN} | |
| e. involve _{EN} | / | involucrar _{SP} | EN ≠ SP |
| [include, cover, concern, connect] _{SP} | / | [include] _{EN} | |

Phonetic false friends, like the pair in (3a), share a similar phonology but they are in fact semantically unrelated words. Likewise, graphic false friends (3b) resemble in terms of spelling, but their meanings differ from one another. Regarding those false friends that derived from loanwords (3c), they are cognates that were borrowed from the other language and their diverse developments caused disparities in their meanings, too. Semantic total (3d) and partial false friends (3e), as the previous categories, are false cognates that despite their alike appearance in English and Spanish, they do not share meaning.

Slightly along the lines of the typology established by Postigo Pinazo (1997), Chacón Beltrán (2006) broadened the study and proposed a classification of cognates which includes not only false cognates, but also true cognates. As his predecessor, he included the same areas (i.e., spelling, phonetics, and semantics) but he articulated them in terms of two criteria (i.e., form and semantics). Formal criteria include pronunciation (i.e., phonetics) and spelling (i.e., orthography). Semantic criteria refer to whether the meaning across the word pairs in the two languages is total or partial. These led Chacón Beltrán (2006) to propose the following classification, as in the examples in (4): graphic true cognates (4a), phonetic true cognates (4b), total false cognates (4c), and partial false cognates (4d).

(4) a. agenda _{EN}	/	agendas _{SP}	EN = SP
b. essential _{EN}	/	esencial _{SP}	EN = SP
[ə'senʃəl] _{EN}	/	[e sen 'θjal] _{SP}	
c. lecture _{EN}	/	lectura _{SP}	EN ≠ SP
[conference] _{EN}	/	[reading] _{EN}	
d. faculty _{EN}	/	facultad _{SP}	EN ≠ SP
[university, institution, capacity, aptitude] _{EN}	/	[ability] _{EN}	

The cognate classification above as proposed by Chacón Beltrán (2006) is the one that has been taken into consideration for the present research. Therefore, in what follows, we offer a more in-depth presentation of how the two criteria (i.e., formal and semantic) give way to the four cognate types considered.

3.1. Formal criteria: graphic and phonetic true cognates

True cognates may occur when the formal criteria of the words are alike in two languages. This actively demonstrates that these true cognates are words that are utterly resembling in graphics (5a), phonetics (5b), or both (5c):

- (5) a. chocolate_{EN} / chocolate_{SP} EN = SP
b. television_{EN} / televisión_{SP} EN = SP
c. animal_{EN} / animal_{SP} EN = SP

Bearing in mind what was presented above, true cognates may be divided according to which aspect is similar across the two languages. Hence, it is possible to distinguish true friends in terms of two etymological factors: graphics and phonetics.

On the one hand, graphic true cognates are defined as the paired words whose spelling and orthography, as well as meaning, are related in the two languages concerned. It can be said that, due to this alike appearance, graphic true friends promote the learning of these words. The English learner will identify the similar spelling and will associate the English word to the Spanish one both in terms of form and meaning, as the example in (6) suggests.

- (6) final_{EN} / final_{SP} EN = SP
[/'faɪnəl]/_{EN} [fi 'nal]/_{SP}

On the other hand, phonetic true cognates are those words whose agreed formal aspect is the pronunciation. Besides, these true friends share the orthography as well, as shown in (7).

(7) illusion_{EN} / ilusión_{SP} EN = SP
 [i'luʒən]_{EN} [i lu 'sjon]_{SP}

True cognates are very helpful for L1 Spanish - L2 English learners as they are easier to identify and to learn. Indeed, Chamizo and Nerlich (2002, 1836) categorized them as “chance false friends”. They defined them as “those words that are similar or equivalent (graphically and/or phonetically) in two or more given languages, but without there being any semantic or etymological reason for this overlap.”

3.2. Semantic criteria: total and partial false cognates

False cognates are known as words that look alike in form, but the meaning differs from one language to the other. Therefore, despite formal equivalence, those words that appear and/or sound similar in English and in Spanish should not be assumed to be equivalent in meaning as well. That is why semantics plays a crucial role in cognate analysis, and, more specifically, in the analysis of false cognates. According to semantics, false cognates are divided into two types: total false cognates (8a) and partial false cognates (8b).

(8) Example	word meaning	SP mis-association	EN translation
a. College	universidad	colegio	university
b. Support	apoyar	soportar	hold, reinforce, help

When discussing the semantic criteria of cognates, Chamizo and Herlich (2002) used the term “semantic false friends” when referring to words that have a mutual etymology. In fact, mutual etymology is the key to the emergence of false cognates. Parallel to Chacón Beltrán’s distinction between total and partial false cognates, Chamizo and Herlich (2002) established the same division but with different labels: full and partial, respectively.

Total false cognates or full false cognates are those semantic false cognates that are comparable in form in two languages, but the meaning is completely distinct. The word in English and the word in Spanish are, thus, homonyms. Therefore, it can be said that total false cognates are the words of the L2 that agree in form with the words of the L1 but not in meaning, as illustrated in (9).

<i>Example</i>	<i>word meaning</i>	<i>SP mis-association</i>	<i>EN translation</i>
(9) contest	concierto	contestar	answer

Partial false cognates are words that could be considered polysemic since they have various senses. Among the different senses of a single word, one of them may coincide in the two languages, while the others may not. Therefore, partial false cognates are words that look alike, but their meaning does not fully correspond in the two languages. An example of partial false cognates appears in (10).

<i>Example</i>	<i>word meanings</i>	<i>SP mis-association</i>	<i>EN translation</i>
(10) discuss	debate, consider, argue, dispute	discutir	Argue

The English word *discuss* has the senses of debate, consider, deliberate, argue, and/or dispute.

Seeing that *discuss* may also mean 'argue' or 'dispute' makes it neither a false friend easy to recognize nor even a true friend. The actual sense of the word *discuss* refers to talking about a subject, debating the facts, and not arguing heatedly, which is the sense it has in Spanish.

Chacón Beltrán (2006, 34) captured his proposal as in figure 1 in which cognates are divided into true and false friends (following his terminology), according to formal and semantic criteria.

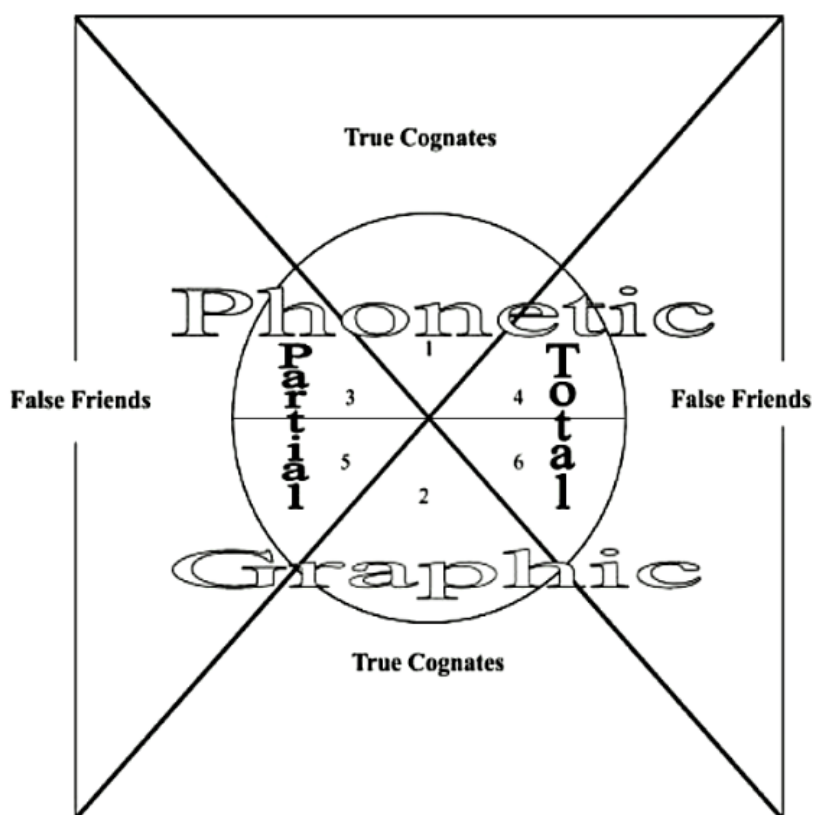


Figure 1. Classification of cognates (Chacón Beltrán 2006, 34)

The numbers from 1 to 6 in figure 1 indicate the level of difficulty thus giving way to a difficulty hierarchy: cognates 1 —phonetic true cognates— should be the easiest cognate for L2 English learners to recognize, while cognates 6 —total false cognates— are the ones posing more problems for learners.

A summary of the cognates considered in this undergraduate dissertation are displayed in Table 1 in accordance with Bertán Chacón’s proposal. The table presents true and false cognates with their respective classifications and examples.

Taxonomies	Form	Semantic	Examples
True Cognates	Graphic	Same meaning in both languages	Horrible, hospital, inevitable, simple, chocolate
	Phonetic		Essential, illusion, personal, familiar, decision
False Cognates	Similar spelling	Partial	Aggressive, argument, support, pretend, conclude
		Total	Library, carpet, evidence, signature, remove

Table 1. Overview of the classification of cognates

4. On how learners deal with cognates: the notion of crosslinguistic influence

The taxonomy of true and false cognates, as described above and depicted in figure 1 and table 1, involves that English L2 learners are indeed affected by their L1. In particular, it is, in fact, L1 influence that mediates in the interpretation of these L2 vocabulary items. This gives way to similarities between the two languages, which makes L2 learning easy (i.e., the case of true cognates), and to differences between the two languages, which makes L2 learning challenging (i.e., the case of false cognates). Therefore, crosslinguistic influence between the L1 (Spanish in this case) and the L2 (English in this case) needs to be looked into when attempting to characterize L2 knowledge.

Crosslinguistic influence, also referred to as language transfer, has been defined by Odlin (1993, 27) as “the influence resulting from similarities and differences between the target language and any other language that has been previously (and perhaps imperfectly) acquired”. Crosslinguistic influence, therefore, can only occur when two or more languages are involved. There must be a speaker who has the competence to express himself/herself (orally and/or in

writing) in two or more languages for crosslinguistic influence to happen. In this way, the speaker can apply and mix rules and/or vocabulary from one language into the other. Therefore, such influence may arise not only when a speaker is a simultaneous bilingual (with two L1s), but also when the speaker has one L1 and is learning an L2. Focusing on those speakers who have an L1 and an L2, crosslinguistic influence typically has a specific directionality, which is based on which is the language that affects the other: in this case, L1 Spanish will be the one influencing the learning of L2 English.

Crosslinguistic influence may have two different outcomes as it can have a positive or a negative effect. If the effect is positive, the L1 influences the L2 in a way that learners prove more native-like, and a more accurate production in their L2 takes place. Per contra, if the effect is negative, the learners' L1 influences their L2 resulting in a less native-like and less accurate production. True and false cognates are very clear examples of these two effects that crosslinguistic influence could have. In the case of true cognates, crosslinguistic influence is likely to have a positive effect since the two languages are equivalent both in terms of form and meaning. But regarding false cognates, the effect is likely to be negative since the analogies that come from formal features turn out to be deceptive on account of their disparate meanings.

5. Empirical study

5.1. Research questions

This study addresses the competence and the performance of cognates on the L2 English of the L1 Spanish speakers. The main purpose of this research is to assess whether the L1 Spanish speakers are able to identify cognates, and with which of them they struggle the most according to the prior classification. Other than recognizing cognates, this study addresses whether the L1 Spanish speakers are also able to use them properly in a given context. This gives way to the following research questions:

1. are false cognates more challenging for learners to recognize than true cognates?
2. is there any difference between the two true cognates so that either graphic cognates or phonetic cognates are more problematic for the L2 English learners?
3. are semantic total false cognates more problematic to identify than semantic partial false cognates?
4. how does the participants' proficiency level influence the recognition and use of cognates?
5. is it more complex to recognize a cognate in a given context or to produce it in an experimental setting?

These five research questions cover three different approaches when dealing with English-Spanish cognates. Differences among every type of cognate (questions 1 to 3) can be tested by (i) considering the participants' overall performance, (ii) dividing the participants according to their proficiency level, and (iii) distinguishing the participants' performance into two different task types (i.e., cognate choice and cognate production).

5.2. Participants

The participants who were selected to conduct this study are adult L1 Spanish speakers who are learning English as an L2 in a school context. They have been divided into two groups, depending on their proficiency in English as per the Common European Framework of Reference for Languages: one group is composed of those whose level is between A2-B1, and the other group is that of those with a level between B2-C1. The total number of participants

who have completed the survey is 32, of which 16 participants have A2-B1 level, and the remaining 16 have B2-C1 level of their English L2. By this means, a more homogeneous number of participants from each level group is achieved, which allows for a more uniform analysis of the results. It is worth mentioning that none of the participants are studying or have studied a university degree related to English. All of them have been studying English during their period of compulsory primary and secondary education in Spain, and those with a higher proficiency level have achieved it through additional studies to obtain an accredited English certificate.

5.3. Experimental tasks

In order to elicit data for the present study, two experimental tasks have been used: a cognate recognition multiple choice task and a cognate production task. For that reason, cognates of every type had been gathered from “The Most Frequent English Cognates List - MFCogn English” (Morán, 2017; for more information on the compilation of this list, please visit <http://www.cognates.org/pdf/mfcogn.pdf>).

In the multiple-choice task, the participants had to demonstrate their knowledge on cognates since they had to decide the correct answer among different possible ones (some correct and some incorrect). The task consists of 20 experimental items, 5 per each type of cognate: 5 sentences with a graphic true friend, 5 with a phonetic true friend, 5 with a semantic total friend, and 5 with a semantic total friend. Each experimental item is composed of three sentences presenting the same target word (i.e., cognate) from which participants have to choose the sentence that they considered the correct one. An example of an experimental item appears in (11) the target cognate *discuss* appears in three different contexts: the sentence that had to be chosen by the participants had the proper use of the cognate (11a), the wrong sentence

has the cognate in the misleading context (11b), and the last one has the cognate employed in a nonsense context (11c).

(11) a. Eve had nothing to discuss with her boss

b. You get angry and discuss it with Oliver. argue_{EN} / discutir_{SP}

c. The airplane started to discuss with me.

The order of the three contexts (i.e., correct, misleading, and nonsense) was randomized during the task, so that the correct option, for example, did not always appear in the first position. Likewise, the four different types of cognates were randomized.

In the cognate production task participants are required to translate sentences from Spanish into English and, therefore, their performance on cognates is tested. There are a total of 16 sentences, all of which contain a cognate. Among these sentences, there are 4 with a graphic true cognate, 4 with a phonetic true cognate, 4 with a partial false cognate, and 4 with a total false cognate. Examples of Spanish sentences with a graphic true cognate (12a), a phonetic true cognate (12b), a total false cognate (12c), and a partial false cognate (12d) that the participants had to translate appear in (12):

(12) a. Tengo una llamada urgente.

[I have an urgent call]CORRECT / [I have an urgente call]INCORRECT

b. Hay turistas en Madrid.

[There are tourists in Madrid]CORRECT / [There are turistas in Madrid]INCORRECT

c. Mi piel es muy sensible.

[My skin is very sensitive]CORRECT / [My skin is very sensible]INCORRECT

d. Harry suspendió el examen.

[Harry failed the exam]CORRECT / [Harry suspended the exam]INCORRECT

As can be seen in (12), the sentences that the participants had to translate in this task were simple sentences, without coordination or subordination. As the participants have different proficiency levels on the L2, the task had to be adapted to those participants with lower proficiency level, and thus, the sentences were in present or past simple tense, had accessible and elemental vocabulary, and followed the pattern of SVO(A) (Subject Verb Object (Adjunct)). This makes this task different from the multiple-choice one in that in the latter the experimental items had a higher difficulty, in terms of vocabulary and sentence structure (simple, coordinated, and subordinated). This was thought so, given that in the multiple-choice task participants did not have to produce language, but deduce and choose; while in the production task their task was harder as they had to produce language.

The goal of these tasks is, therefore, to evaluate the competence and performance of the different participants in the case of Spanish-English cognates. The results obtained have been classified following the criteria presented in section 3, as there are samples of experimental items of every type of cognate on an equal basis. Such a balanced experimental design entails that the results can be differentiated according to both the formal and the semantic criteria, and in terms of the taxonomy of cognates: graphic and phonetic true cognates, and total and partial false cognates.

5.4. Results

The data collected are going to be tackled according to the research questions stated in section 5.1. The first three questions dealt with which cognate is more challenging for the L1 Spanish speakers to recognize, the fourth question focused on the differences across participant groups in terms of their level of English, and the last question considered the differences across data obtained through different tasks to test not only the participants' knowledge but also their production of cognates.

Figure 2 below shows the correctness rates in terms of the two cognate types (i.e., true and false cognates). The objective is to detect which ones tend to cause more troubles in their identification and recognition for the L1 Spanish speakers, regardless of their L2 proficiency level.

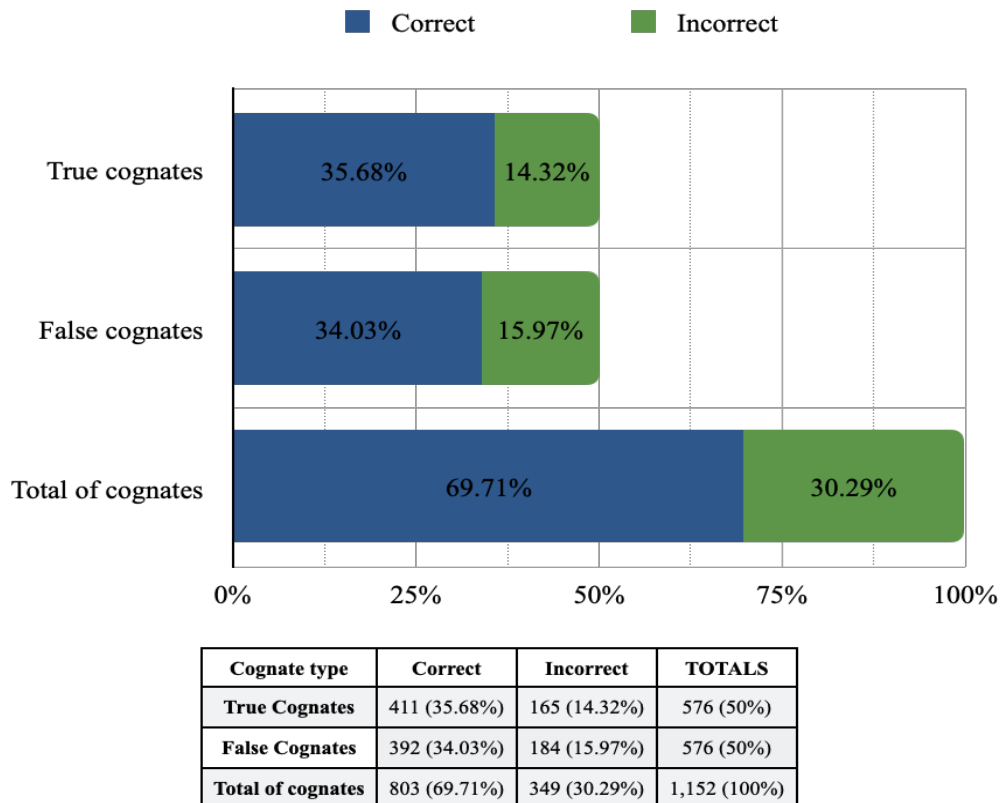


Figure 2. True cognates vs. false cognates

The data gathered in Figure 2 demonstrate that participants achieved slightly more correct responses with true cognates than with false cognates, since the different correctness rates between the two cognate types is not very big. There was a total of 1,152 responses, among them, it is observed that in addition to having a higher percentage of hits (69.71%) than errors (30.29%), participants attained more accurate answers with true cognates (35.68%) than with false cognates (34.03%). Thus, there were 14.32% and 15.97% of inaccuracy in true and

false cognates. However, the differences across the correctness rates of the two cognate types are not very big.

The second research question focused on true cognates (i.e., graphic and phonetic true cognates). It aims to identify which of these two types of true cognates are more complex for the L2 English learners to recognize. The results of the experimental items with true cognates for all participants are presented in Figure 3.

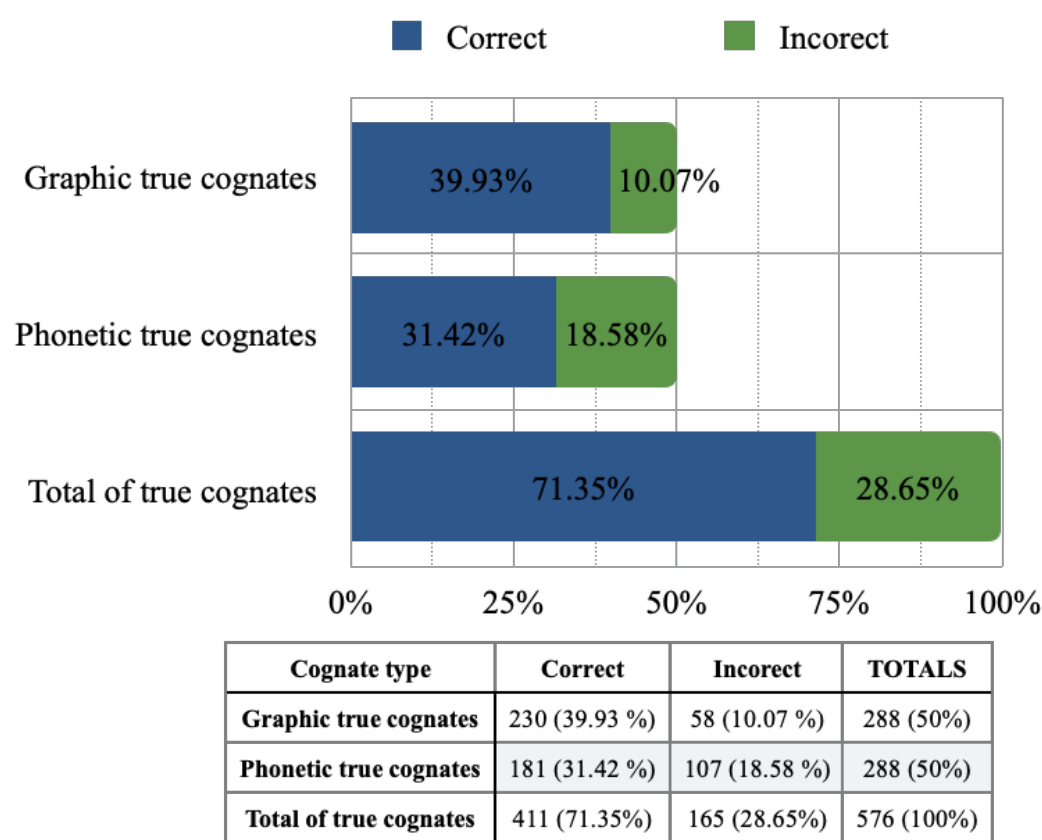


Figure 3. True cognates: graphic vs. phonetic

Taking into account the theory on cognates presented in section 3 above, true cognates are divided into graphic and phonetic cognates. Consequently, this research question addressed whether the L1 Spanish speakers who were tested exhibit a difference in their recognition. Indeed, it is evidenced in Figure 3 that there were more accurate responses in graphic true

cognates (39.93%) than in phonetic true cognates (31.52%). Hence, their incorrectness rate corresponds to 10.07% for graphic true cognates, and 18.58% for phonetic true cognates.

Likewise dividing the results of the false cognates by their corresponding types, research question three is concerned with the results of partial and total false cognates, as Figure 4 displays.

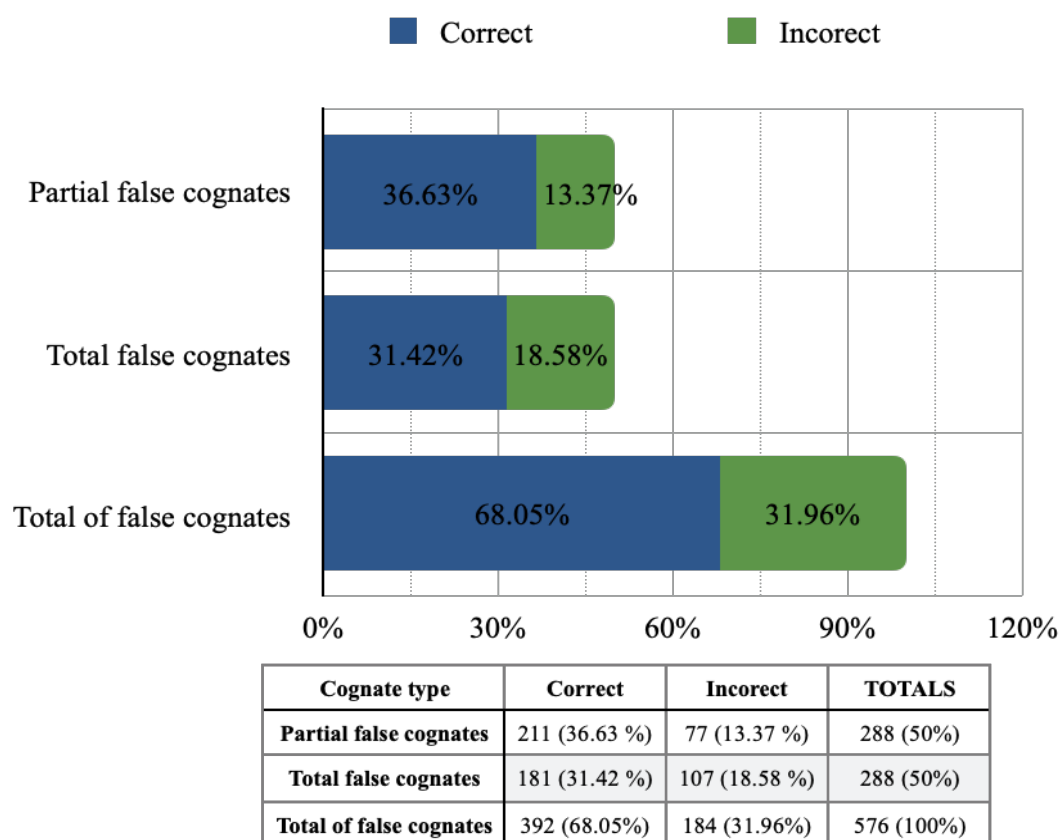
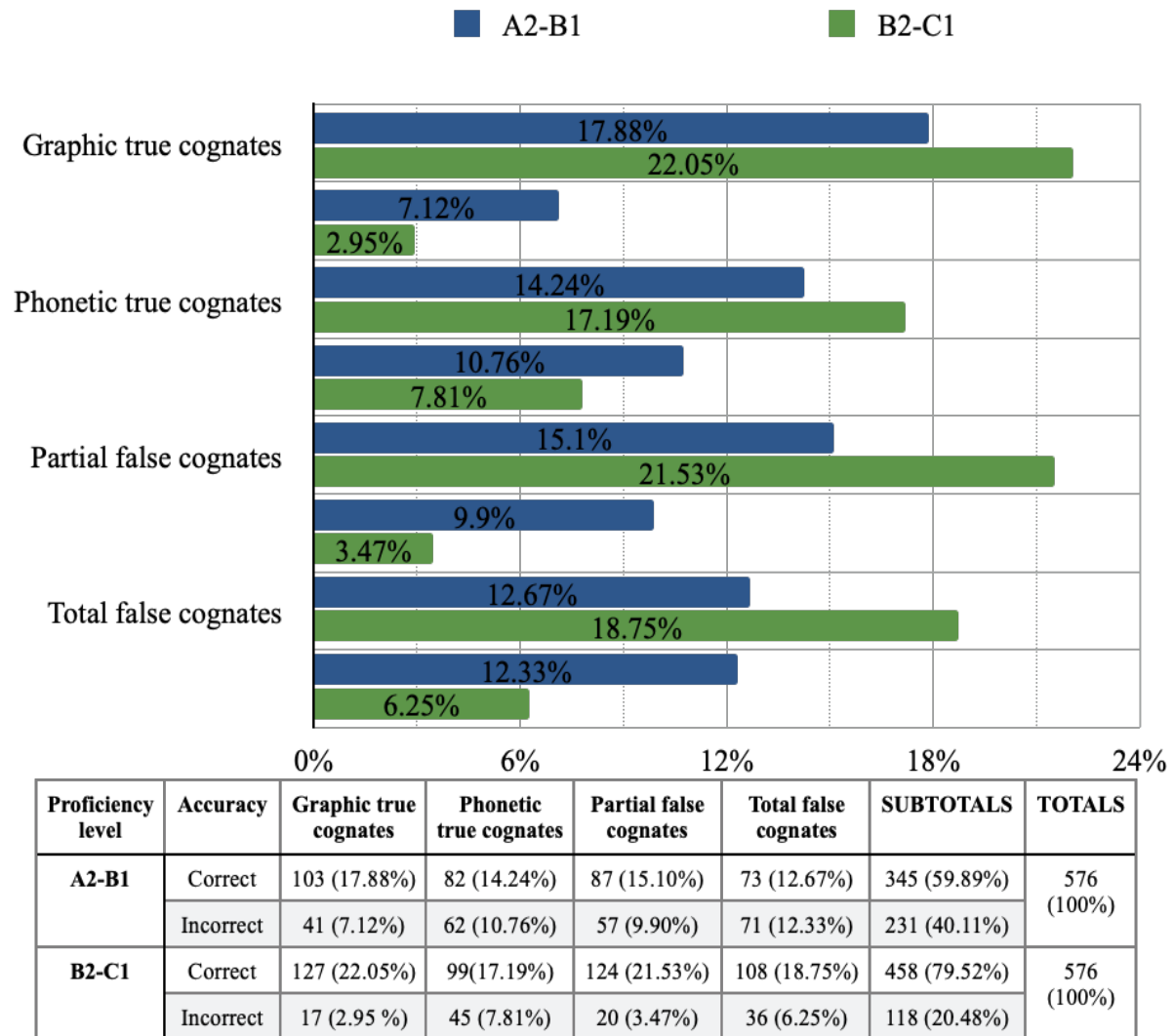


Figure 4. Semantic false cognates: partial vs. total

Figure 4 proves that the correctness rate for false cognates is 68.05%, in contrast to the incorrectness rate of 31.96% which suggests that in general the participants are able to identify these cognates. Apart from this, it is also seen that the L2 English participants identified more accurately partial false cognates (36.63%) than total false cognates (31.42%). Therefore, the corresponding rates for incorrect false cognates is lower for partial false cognates (13.37%) than for total false cognates (18.58%).

Research question four discussed the L1 Spanish speakers' accuracy and inaccuracy on every type of cognate. In this case, the results were divided considering the participants' proficiency level in L2 English in order to see how their proficiency level affects cognate recognition. These results are shown in Figure 5.



100% = total of answers by proficiency group (576)

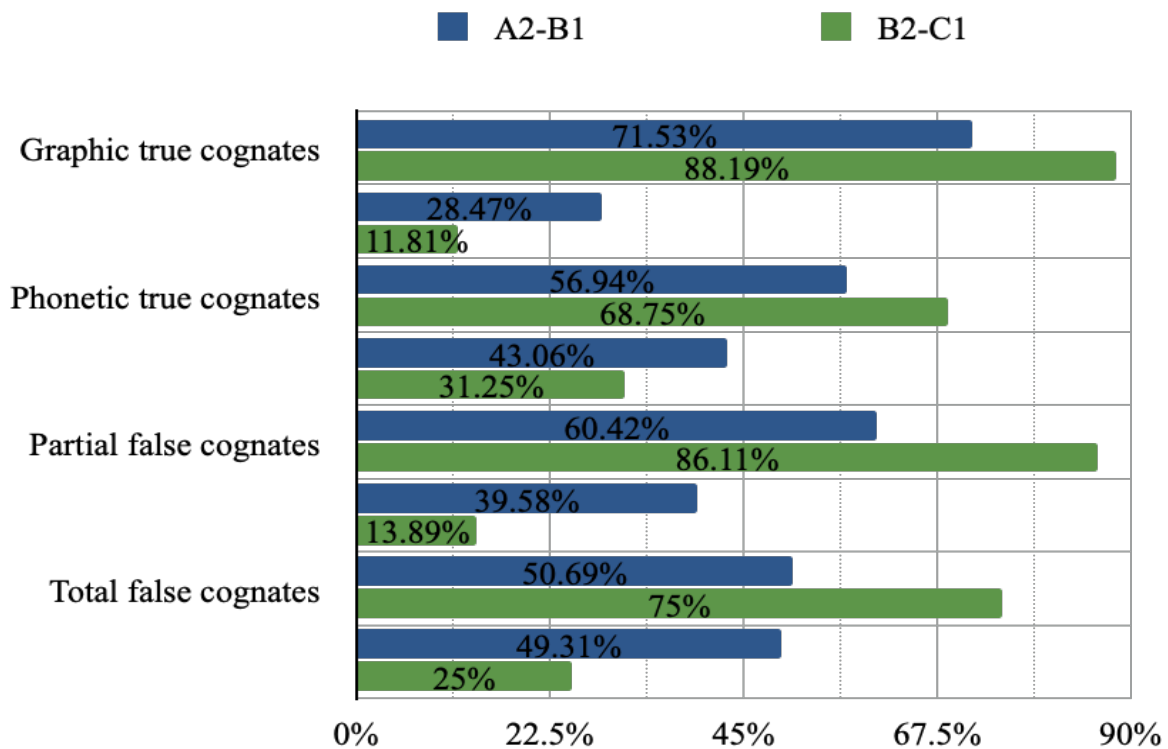
Figure 5. Cognates by L2 proficiency group: overall.

The participants' L2 proficiency groups offer different results in cognate recognition. It is evident from the Figure 5 that the highest scores of those participants with A2-B1 are with graphic true cognates (17.88%), followed by partial false cognates (15.1%), phonetic true

cognates (14.24%), and finally, total false cognates (12.67%). Meanwhile, looking at the B2-C1 level group, participants revealed that the most accurate hits were with graphic true cognates (22.05%), then, partial false cognates (21.53%), total false cognates (18.75%), and phonetic true cognates (17.19%). The two scales of difficulty appear in (13) below, (13a) for the A2-B1 group and (13b) B2-C1 group.

- (13) a. graphic true > partial false > phonetic true > total false
b. graphic true > partial false > total false > phonetic true

This same research question four can be interpreted in a different way, as it is illustrated in Figure 6. Instead of only dividing the results according to the participants' proficiency group responses, it can also be arranged by the correctness rate of each proficiency group by cognate type.



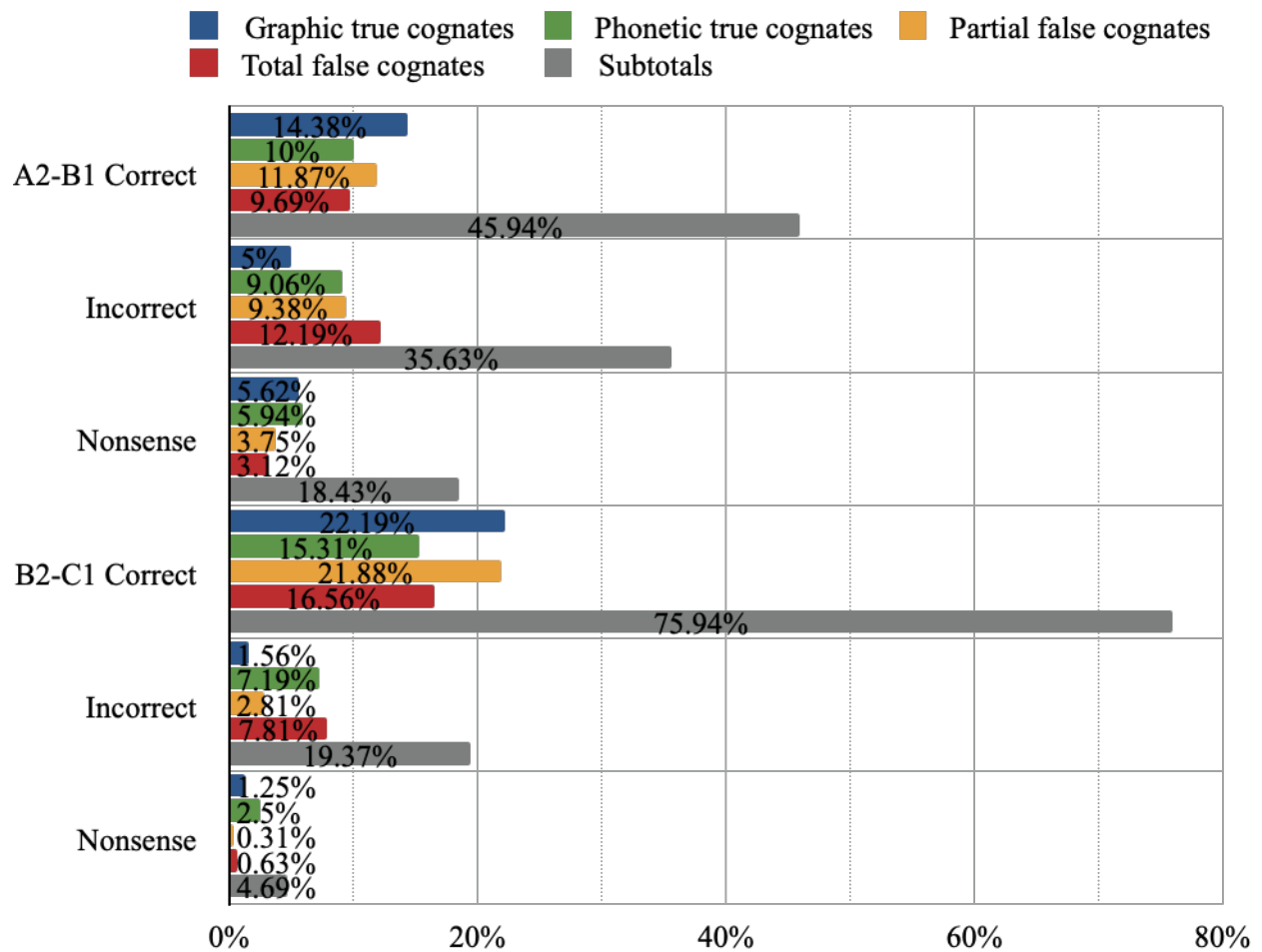
Proficiency group	Accuracy	Graphic true cognates	Phonetic true cognates	Partial false cognates	Total false cognates
A2-B1	Correct	103 (71.53%)	82 (56.94%)	87 (60.42%)	73 (50.69%)
	Incorrect	41 (28.47%)	62 (43.06%)	57 (39.58%)	71 (49.31%)
TOTALS		144 (100%)	144 (100%)	144 (100%)	144 (100%)
B2-C1	Correct	127 (88.19%)	99 (68.75%)	124 (86.11%)	108 (75%)
	Incorrect	17 (11.81%)	99 (68.75%)	20 (13.89%)	36 (25%)
TOTALS		144 (100%)	144 (100%)	144 (100%)	144 (100%)

100% = total of responses by cognate type (144)

Figure 6. Cognates by L2 proficiency group: by cognate type.

Figure 6 depicts that both A2-B1 and B2-C1 participants recognize graphic true cognates to a greater extent (71.53% and 88.19% respectively). Then, phonetic true cognates were responded accurately by those with an A2-B1 level with a 56.94% accuracy rate, compared to the 68.75% rate of those participants with B2-C1 level. Partial and total false cognates had fewer correctness for the A2-B1 level group (60.42% and 50.69%), unlike the B2-C1 group (86.11% and 75%). Considering Figure 6, it can be said that these results reaffirm the two scales of difficulty presented in (13) above.

The last research question evaluated participants' competence and performance on cognates throughout the two different task types -cognate choice and cognate production. The results for the cognate choice task are presented in Figure 7.



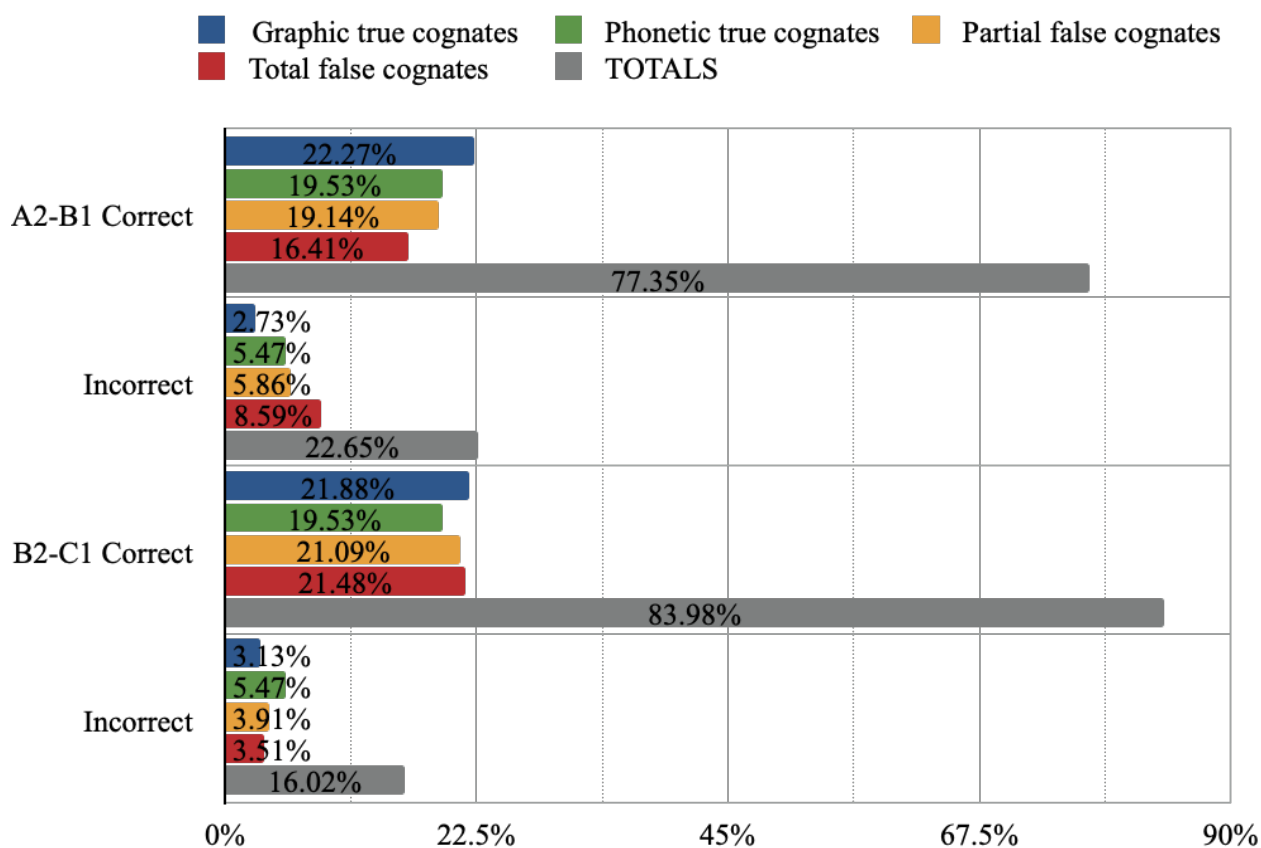
Proficiency group	Accuracy	Graphic true cognates	Phonetic true cognates	Partial false cognates	Total false cognates	Subtotals	TOTALS
A2-B1	Correct	46 (14.38 %)	32 (10 %)	38 (11.87 %)	31 (9.69 %)	147 (45.94%)	320 (100%)
	Incorrect	16 (5 %)	29 (9.06 %)	30 (9.38 %)	39 (12.19 %)	114 (35.63%)	
	Nonsense	18 (5.62 %)	19 (5.94 %)	12 (3.75 %)	10 (3.12 %)	59 (18.43%)	
B2-C1	Correct	71 (22.19 %)	49 (15.31 %)	70 (21.88 %)	53 (16.56 %)	243 (75.94%)	320 (100%)
	Incorrect	5 (1.56 %)	23 (7.19 %)	9 (2.81 %)	23 (7.81 %)	60 (19.37%)	
	Nonsense	4 (1.25 %)	8 (2.5 %)	1 (0.31 %)	2 (0.63 %)	15 (4.69%)	

100%= total of responses of each proficiency group (320)

Figure 7. Cognate choice task according to proficiency group: overall

The results for the cognate choice task demonstrate that the three response options for each experimental item have been used by participants: the correct sentence with the proper cognate use, the incorrect one with the misleading cognate use, and the nonsense one. Thus, Figure 7 shows that those participants with A2-B1 identified easier graphic true cognates (14.38%), followed by partial false cognates (11.87%), and phonetic true cognates (10%), being total false cognates the most challenging for this proficiency group (9.69%). The B2-C1 participants also achieved a higher correctness rate with graphic true cognates (22.19%), followed by partial false cognates (21.88%), and total false cognates (16.56%), being phonetic true cognates the most problematic (15.31%). All participants, independently of their proficiency level, obtained a higher rate of correctness than incorrectness. The options of misleading cognates and nonsense were chosen to a lesser extent, respectively.

Results from the production task show greater differences between the two proficiency groups in cognate performance (Figure 8).



Proficiency group	Accuracy	Graphic true cognates	Phonetic true cognates	Partial false cognates	Total false cognates	TOTALS
A2-B1	Correct	57 (22.27%)	50 (19.53%)	49 (19.14%)	42 (16.41%)	198 (77.35%)
	Incorrect	7 (2.73%)	14 (5.47%)	15 (5.86%)	22 (8.59%)	58 (22.65%)
B2-C1	Correct	56 (21.88%)	50 (19.53%)	54 (21.09%)	55 (21.48%)	215 (83.98%)
	Incorrect	8 (3.13%)	14 (5.47%)	10 (3.91%)	9 (3.51%)	41 (16.02%)

100%= total of responses of each proficiency group (256)

Figure 7. Cognate production task according to proficiency group: overall

As per the production task, both group levels were able to construct sentences with accurate cognates. Besides, it is seen that graphic true cognates were the easiest ones for the participants to use, obtaining a correctness rate of 22.27% for A2-B1 participants, and 21.88% for B2-C1 ones. Hence, this also means that the lower proficiency group had a more native-like production of true graphic cognates than the participants with higher proficiency in the L2. The next cognate type that is more accurately produced differs from one proficiency group to

another. The A2-B1 group produced better phonetic true cognates (19.53%), while B2-C1 were more correct with total false cognates (21.48%). Then, partial false cognates are the third type of cognates best reproduced by the two proficiency groups (19.14% for the A2-B1, and 21.09% for the B2-C1). Eventually, total false cognates were the most troublesome for the A2-B1 group (16.41%), while phonetic true cognates were the most problematic for the B2-C1 group (19.53%). Apart from the fact that the groups manifest significant discrepancies in terms of which cognates have the best results and which ones the worst results, percentages are rather disparate as well. The B2-C1 participants obtain a higher correct rate with all cognates, except for graphic true cognates, and phonetic true cognates, which they use successfully in equal amounts. Additionally, as in the cognate choice task, both groups of participants produced more native-like cognates (77.35% for A2-B1 and 83.98% for B2-C1) than non-native-like cognates (22.65% for A2-B1 and 16.02% for B2-C1).

The results are captured in the scales in Table 2, where there is an overview of the different scales of correctness according to the task type and the proficiency group of the participants.

Task type	Proficiency group	Correctness
Cognate choice task	A2-B1	Graphic true > partial false > phonetic true > total false
	B2-C1	Graphic true > partial false > total false > phonetic true
Cognate production task	A2-B1	Graphic true > phonetic true > partial false > total false
	B2-C1	Graphic true > total false > partial false > phonetic true

Table 2. Correctness comparison between proficiency groups and cognate types.

5.5. Discussion

To discuss the results presented in section 5.4, this section proceeds to address the results in the same order according to the research questions. The proposed questions will be answered one by one as arranged in section 5.1.

1. Are false cognates more challenging for learners to recognize than true cognates?

The total amount of responses gathered from the two experimental tasks conducted demonstrated that participants achieved more native-like responses in recognizing true cognates than false cognates. Participants identified true cognates easier since these cognate types make them rely on their L1. Indeed, it is faster and easier for participants to transfer the meaning of the Spanish word they know to the English word that seems and/or sounds similar. This may be the reason why their responses were more accurate with true cognates; participants tend to be influenced by their L1 Spanish which in this case exerts positive influence in their L2 English. However, the difference in the correctness rates between true cognates and false cognates is not meaningful which suggests that true cognates are not substantially easier for the L1 Spanish participants to recognize. Therefore, research question 1 receives a negative answer as these participants do not treat false cognates very differently from true cognates.

2. Is there any difference between the two true cognates so that either graphic cognates or phonetic cognates are more problematic for L2 English learners?

Bearing in mind the division of true cognates in graphic and phonetic cognates, this second research question analyzes whether participants achieved more accurate responses than inaccurate ones in the case of true cognates. Participants' L1 influences positively over their L2 English since they assume the similarities of spelling and pronunciation between the two languages and transfer these features from their L1 to their L2. In addition, participants

manifested a better recognition of graphic true cognates than phonetic true cognates. This may be caused by the fact that the experimental tasks were designed to recognize cognates in a writing/reading mode, rather than in an oral mode (i.e., by hearing or speaking). In fact, once L1 Spanish speakers completed the tasks, it was possible to detect that, participants noticed the spelling connections between the English true cognate with the Spanish equivalent and directly assumed the meaning. Despite the fact that they displayed this tendency to better recognize graphic true cognates, participants also obtained a higher correctness rate of phonetic true cognates, in comparison to the inaccuracy rate. Similar to what happens with graphic true cognates, participants also related cognates' likeliness of pronunciation in English and Spanish and transferred the meaning from their L1 to their L2. Perhaps, these results were influenced by the task design, and if the tasks had been oral, participants would have provided different results. As it is, therefore, research question 2 receives a positive answer in that phonetic true cognates are slightly more challenging for participants to identify.

3. Are semantic total false cognates more problematic to identify than semantic partial false cognates?

In the case of semantic false cognates, the participants achieved results utterly close to those of true graphic and phonetic cognates, and the correctness rate is higher than that of the errors. Nonetheless, the analogous spelling and/or pronunciation may not be the reason for these results, but the knowledge of the word itself. The fact that false cognates do not share meaning implies that the participants must be aware that these words are not what they seem to be and must study this vocabulary beforehand. Accordingly, the correctness rate is due to the fact that the participants have previously acquired this vocabulary, while the incorrectness rate is due to a negative transfer from the L1 to the L2.

Additionally, semantic false cognates are divided into partial and total, and the results evidenced that participants treat both types differently. The experimental tasks proved that L1 Spanish speakers achieved slightly more native-like responses when dealing with partial false cognates than with total false cognates. In order to explain this, partial false cognates may be more noticeable for L1 Spanish speakers as these cognates share some of their senses with the L1 word. If they identified the sense that the Spanish and the English word have in common, then language transfer is positive and, hence, it causes native-like responses. This differs from what happens with total false cognates whose similarities with the Spanish word have nothing to do with the meaning. The meanings of the L2 word and the L1 word do not share any sense(s); they are completely different since it does not matter that the words share origin if their evolutions were disparate. However, participants must have had previous knowledge on total false cognates as they gathered more native-like responses than non-native-like ones. The incorrectness rate is lower due to the fact that the participants were not so much affected by the similarities of the words; instead, they already knew the words and their meanings. Crosslinguistic influence from the L1 has a negative effect when the participants do not recognize the false cognate; and, when they identify it properly, it is not so via positive transfer from the L1 to the L2, but rather because of previous knowledge of the cognate. Despite the fact that negative transfer is inevitable, participants have managed to produce more accurate responses with partial false cognates, proving total false cognates to be the most problematic. This makes this research question receive a positive answer.

4. How does the participants' proficiency level influence the recognition and use of cognates?

Participants were divided according to two different proficiency groups that comprised the intervals of A2-B1 and B2-C1. The results of the experimental tasks carried out exhibited

that both proficiency groups obtained more accurate than inaccurate answers, as seen in Figure 5. Participants also reported more accurate than inaccurate responses for all types of cognates. It shows that participants are both influenced by their L1 Spanish, which causes a positive transfer from Spanish to English, and at the same time, they have previous knowledge of false cognates resulting in no negative transfer. Yet, the proficiency groups are rather divergent in terms of their corresponding correctness rate. Participants with an English proficiency between B2-C1 showed a higher percentage of hits than errors with every type of cognate, while the A2-B1 group did not demonstrate a substantial difference between accuracy and inaccuracy. Despite the fact that both groups received a positive transfer of the L1 language by having a higher correctness rate, the A2-B1 group did not perceive the differences between true and false cognates.

Concerning the type of cognate, the two proficiency groups also present notable discrepancies. As illustrated in (13), the A2-B1 proficiency group exhibited the scale of difficulty in (13a), repeated below:

- (13) a. graphic true > partial false > phonetic true > total false
b. graphic true > partial false > total false > phonetic true

This corroborates that the L1 transfers negatively its features to the L2 since its use does not present a difference by cognate type. In contrast, participants from the B2-C1 proficiency group followed the scale of difficulty in (13b). This proficiency group tended to find more challenging phonetic true cognates, and, as well as the previous group, they did not distinguish uses by cognate type. However, they reported greater differences between correctness and incorrectness rate. While they are negatively influenced by the L1, they have more knowledge

of false cognates than participants from the A2-B1 group. After analyzing the results according to the proficiency groups, it can be confirmed that the participants' level of proficiency in their L2 English does play an important role on cognate recognition. Those with a higher proficiency level obtain a higher correctness rate, so that negative transfer occurs to a minor degree as well. This makes this research question receive a positive answer.

5. Is it more complex to recognize a cognate in a given context or to produce it in an experimental setting?

The experimental tasks determined whether participants struggled more in recognizing cognates in context, or in producing them. Analyzing both task types, it is seen that participants obtained more native-like than non-native-like cognates in both task types. However, as seen in Table 3 below, tasks evidenced several discrepancies between correctness and incorrectness rates.

ACCURACY	Cognate Choice Task	Cognate Production Task
CORRECTNESS RATE	390 (60.94%)	413 (80.66%)
INCORRECTNESS RATE	250 (39.06%)	99 (19.34%)
TOTALS	640 (100%)	512 (100%)

Table 3. Cognates across tasks: compiling overall information from Figures 7 and 8.

Rates from Table 3 show that, although more accurate than inaccurate responses are given for both tasks, differences across rates are bigger in the cognate production task where correctness rate (80.66%) is much higher than incorrectness rate (19.34%). Therefore, participants demonstrated more proficiency in producing cognates (80.66%) than in recognizing them (60.94%). In fact, they are able to produce cognates, but when it comes to recognizing them in

a given context, negative transfer imposes more difficulties and incorrectness rate increases (from 19.34% in the production task to 39.06% in the choice task).

Considering the disparities in results between task types, the outcomes can be analyzed by dividing them according to the answers given by each proficiency level. Thereby, it can be seen whether such discrepancies between correctness and incorrectness rate are reported by the two proficiency groups or, on the contrary, whether one proficiency group, in particular, causes the correctness rate to decrease. Results per proficiency groups appear in Table 4.

ACCURACY	A2-B1		B2-C1	
	Cognate choice task	Cognate production task	Cognate choice task	Cognate production task
CORRECTNESS RATE	147 (4.94%)	198 (77.35%)	243 (75.94%)	215 (83.98%)
INCORRECTNESS RATE	173 (54.06%)	58 (22.65%)	77 (24.06%)	41 (16.02%)
TOTALS	320 (100%)	256 (100%)	320 (100%)	256 (100%)

Table 4. Compiling overall information from Figure 7 and 8: proficiency groups

Table 4 reveals that the cognate production task still achieved more native-like cognates, and therefore, higher correctness rate for both proficiency groups. But focusing on the cognate choice task, B2-C1 participants demonstrated a similar proficiency between recognizing and producing cognates. Yet, A2-B1 participants show a difference between accuracy and inaccuracy in the cognate choice task, reducing the correctness rate. They had higher non-native-like cognate choices, giving rise to a negative transfer from their L1 that hinders the learning of their L2 English. This makes this research question receive a positive answer since participants found it more challenging to recognize a cognate in a given context than to produce

them in an experimental setting. This difference is especially salient in the case of the participants that have a lower degree of proficiency in English.

6. Conclusion

The present undergraduate dissertation is focused on how cognates are dealt with by L1 Spanish speakers in their L2 English. *Cognates* as those words whose roots are alike in two languages and, following Chacón Beltrán (2006), they can be classified according to a formal taxonomy (i.e., graphic and phonetic true cognates) as well as to a semantic taxonomy (i.e., partial and total false cognates). Taking these different cognate types, this study aimed to test competence and performance on cognates of 32 L1 Spanish speakers divided into two groups according to their English proficiency level, A2-B1 and B2-C1. Participants completed two tasks that revealed differences on cognate recognition and cognate production. The analysis of the results displayed differences regarding cognates competence, proficiency level, and task types. As a set of participants, there were no remarkable differences that determined a particular type of cognate to be easier, in fact, they seemed to make no important distinctions from one type to another. Nonetheless, substantial disparities between task types, and proficiency levels were noticed. B2-C1 participants demonstrated greater differences between correctness and incorrectness rates proving their competence in cognate recognition and production. In contrast, A2-B1 participants differed in that they produced cognates highly better, displaying no huge treatment difference of cognate types in the cognate choice task.

These conclusions point to a combination of cognate type and proficiency as the elements responsible for L2 English attainment in this area of grammar. Additionally, given the results obtained regarding the vulnerability of phonetic cognates, a possible research venue that could be undertaken is the analysis of true cognates through another experimental task

designed for oral, and not only written purposes. In this manner, it will be possible to corroborate if this vulnerability is due to the task type.

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