

UNDERSTANDING COGNATE WORDS IN A FIRST CONTACT WITH ENGLISH

COMPREENDENDO PALAVRAS COGNATAS EM UM PRIMEIRO CONTATO COM A LÍNGUA INGLESA

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ABSTRACT: In the present study the cognate facilitation effect was investigated by means of a translation task applied to ten participants (mean age of 44 years old) who had never taken an English course and who were skeptical about being able to learn the language. The task consisted of the translation of 40 non identical cognate words from English to Portuguese. By means of this task, we could infer if the cognate words could be understood in a first contact with English. The results were positive: more than 50% of the words presented to these participants were correctly translated into Portuguese. In addition, the present study showed that cognate words work as a motivational factor to make people inspired to learn a second language, in this case English, as reported by all of the participants of who took part in the present study. Furthermore, the findings of the present study are aligned with the literature, favoring the view that cognate words are easily recognized. This data has implications for the teaching and learning of English in the Brazilian context.

Keywords: Cognates; L2 vocabulary; bilingualism.

RESUMO: No presente estudo, o efeito de facilitação dos cognatos foi investigado através de uma tarefa de tradução aplicada a dez participantes (idade média de 44 anos), os quais nunca haviam estudado inglês e eram incrédulos quanto ao fato de serem capazes de aprender essa língua. A tarefa consistia na tradução de 40 palavras cognatas não-idênticas do inglês para o português. Através desta tarefa, foi possível inferir se as palavras cognatas poderiam ser compreendidas em um primeiro contato com o inglês. Os resultados foram positivos: mais de 50% das palavras apresentadas foram corretamente traduzidas para o português. Adicionalmente, o presente estudo mostrou que as palavras cognatas servem como um fator motivacional para inspirar as pessoas a aprenderem uma segunda língua, neste caso o inglês, como reportado por todos os participantes do presente estudo no nosso pós-teste. Além disso, os resultados deste estudo estão alinhados com a literatura, favorecendo a visão de que as palavras cognatas são facilmente reconhecidas. Os dados apresentados têm implicações para o ensino e a aprendizagem do inglês no contexto brasileiro.

Palavras-chave: Cognatos; vocabulário em L2; bilinguismo.

1 Introduction

The number of people interested in mastering two or more languages has grown considerably. English has gained the status of lingua franca and, consequently, the number of people willing to learn this language is in a constant growth. In the Brazilian context, despite the great influence of English in our daily lives – we constantly encounter written and oral English input in many scenarios, such as in the movies and in the names of stores, for example – access to this language is not guaranteed to people from less privileged status. Even though English is a mandatory discipline at regular school, the teaching of the language has been proved to be mostly ineffective. Many students claim to have barely learned the ‘verb to be’ in the 7 years of English classes at school, which is a topic commonly seen throughout these many school years. In these scenarios, if these students do not have access to an English course outside the school environment, they will probably become adults without knowledge of the language. And this was the case of the participants who took part in the present study, who were all adults without knowledge of English, who were also skeptical about the possibility of being able to learn the language.

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The present study took place in Fortaleza which is a touristic city. English, thus, can be seen in many places, such as restaurants' menus and touristic information in general. People who work directly with tourists are generally required to speak the language. Still, a great proportion of the population does not have enough knowledge of English, or, as in the case of the present study, the participants thought they would never be able to learn the language, before participating in the task proposed in our investigation. Thus, the present study worked as an intervention in a less privileged community helping to demystify the belief of the impossibility to learn English.

The study was anchored on the ample evidence from the literature favoring the view that cognates are processed faster than noncognate words (POORT; RODD, 2017). Having this in mind, we devised a task in order to investigate if cognate words could be understood in a first contact with English. More specifically, we carried out this task with 10 people who had not had contact with English and who also did not want to learn English because they thought it was impossible for them to acquire the language, in order to show them that at least some part of the English vocabulary was somehow familiar to them. In other words, we wanted to see if the cognate words used in this task could work as a real 'bridge' between these participants' L1 and L2.

Vocabulary is a basic aspect of Second Language¹⁰ Acquisition (SLA). Among the new L2 words a Brazilian Portuguese speaker has to acquire to master English (L2), some, such as *actor*, are very similar to its translation equivalent in Portuguese - *ator*. These pairs of words which share a similar form and the same meaning in two languages - cognates - are claimed to be processed faster than non-cognate ones (POORT; RODD, 2017). Since, learning new vocabulary is essential for second language, it is important for the teacher to use as many tools as possible to facilitate the acquisition of the new words. According to Laufer, Meara and Nation (2005) any facilitation provided by the language teacher in the acquisition of new L2 words might be advantageous for the students.

In this investigation, both Psycholinguistics and Applied Linguistics, more specifically, language teaching, are at play. A hypothesis from psycholinguistics - cognate facilitation effect - is taken out of the traditional laboratory contexts and is applied in a real context to promote language learning. Therefore, it can be claimed that in the present study scientific knowledge is used to directly benefit a small number of people. The present study is part of a Research¹¹ and Extension Project¹² carried out by the Research Group¹³ coordinated by the first author of this article.

This article is divided in five sections, the present one, which is the introduction, section 2 which presents some theoretical considerations regarding the concepts of bilingualism, L2 vocabulary and cognate words. Section 3 presents more details about the methodological procedures and the results are presented in section 4. Section 5 presents the conclusion of the present study.

2 Bilingualism, L2 vocabulary and cognate words

Language plays a very important role in every aspect of our lives. It is used "to communicate our thoughts and feelings, to connect with others and identify with our culture, and to understand the world around us. And for many people, this rich linguistic environment involves not just one language but two or more" (MARIAN; SHOOK, 2012, p. 2). Knowing two or more languages is a common phenomenon in the current world. However, the definition of what it is to be a bilingual is not a consensus among scholars. Bassetti and Cook (2011) define bilingualism as "the knowledge of

¹⁰ In this article Second Language will be used as a broad term, encompassing both second and foreign language acquisition and learning.

¹¹ The Research Project is entitled "The effect of cognate words, false friends and interlingual homographs in the lexical processing of bilinguals and multilinguals" and aims to investigate the role of cognate and false cognate words, and interlingual homographs in sentence processing, contributing to the literature on the organization and processing of the bilingual and multilingual lexicon.

¹² The Extension project is entitled "Basic English course for beginners" and aims to provide a free English course to the community of the neighborhood Jardim Iracema (Fortaleza - CE).

¹³ Bilingual and Multilingual Language Processing (for further information visit: <http://www.plibimult.ufc.br/>)

more than one language, as opposed to monolingualism” (p. 1). That is, according to these authors being bilingual is different from being a monolingual. However, they do not mention in this definition the possibility of knowing more than two languages; in addition, they do not define how much knowledge one has to master in order to be considered bilingual. For Bloomfield (1933) bilingualism is “native-like control of two languages” (p. 56), which means speaking two languages with equal fluency in every situation. According to this definition, a bilingual needs to have a high level of proficiency in both languages. This is a disputed view in the current world. For Haugen (1953) bilingualism starts at “the point where a speaker can first produce complete meaningful utterances in the other language” (p. 7). In other words, for Haugen (1953) bilingualism refers to any real-life use of more than one language at any level. This seems to be a more suitable definition for the current days, where the goal of an L2 speaker is to be able to communicate effectively.

Besides being able to communicate with a larger group of individuals, having access to another culture, to a different literature and worldview, knowing two languages can also have cognitive consequences for language processing in general. For bilinguals, the two languages are constantly activated, and the language system of our brain works by guessing words that match the signal we are exposed to (MARIAN; SHOOK, 2012). Therefore, the bilingual speaker is in constant need of cognitive control of his/her two languages. This can have a beneficial effect to cognition in general, since processes of activation and inhibition are constantly executed and controlled by the L2 speaker (BIALYSTOK; CRAIK; LUK, 2012).

An important aspect to be considered in Second Language Acquisition (SLA) is the learning process of new vocabulary. Many linguists and psychologists place the lexicon at the center of the process and the production of human language (HUNT; BEGLAR, 2005). Learning new words in a Second Language (L2) is a successive and cumulative process that involves the linking of new lexical forms to conceptual representations already connected to word forms in the first language (L1).

It is suggested that L2 learners need to know a very large number of words in order to communicate in this new language. Therefore, teaching and learning vocabulary is a great part of any language development program (NATION, 2001). In addition, in order for the student to perceive new lexical items, there are two necessary conditions: interest and motivation on the part of the students.

The development of vocabulary can be seen as a “problem of pattern-matching and assimilation with current lexical knowledge, at least at the beginning of the word learning process” (HALL, 2002, p. 71). Hall et al. (2009) affirm that the acquisition of a new vocabulary item requires the establishment of an entry for this item in the lexical memory and this has to be linked to its meaning representation. For native language this is an automatic and unconscious process, however, for adults there are two requirements for this process to occur: (1) noticing of the form; (2) awareness of the form-meaning mapping (HALL et al., 2009).

According to Chacón-Beltrán, Abello-Contesse and Torreblanca-López (2010, p. 01), teaching and learning of vocabulary has come to be seen “as a key component in learning a second language”. Assche, Duyck, and Brysbaert (2013) argue that the process of learning the new L2 words occurs through the linking of these new lexical forms – the L2 words – to the conceptual representation that already exists and is connected to the L1. That is, according to these authors, there is a single representation for the meaning of words and there are two representations for the forms of the L1 and L2 words. Along these lines, Assche, Duyck, and Brysbaert (2013) claim that learning cognate words is easier because the links between form and meaning are already established for the L1 words.

According to Hall (2002) “similar form features in the L1 and L2 are automatically detected and exploited in the establishment of memory traces for new L2 words” (p. 71). This would explain the cognate facilitation effect. There is ample evidence that cognates are recognized or produced faster than monolingual control words— which is referred to as the cognate facilitation effect (COSTA; CARAMAZZA; SEBASTIAN-GALLES, 2000; DIJKSTRA et al., 1999).

The sharing of word forms between words of different languages can happen with cognates (words that have similar orthography and the same meaning) and interlinguistic homographs (words with the same spelling but different meaning - also known as false friends) (DIJKSTRA; GRAINGER; VAN HEUVEN, 1999). "In addition to their form, words of different languages may share (some of) their meaning(s), i.e., they may be translation equivalents" ((DIJKSTRA; GRAINGER; VAN HEUVEN, 1999, p. 497). This relationship of identical and similar form between pairs of words in the L1 and L2 is challenging for the word recognition system because it has to retrieve semantic information based on the phonological or orthographic information of the word and, there might be several possibilities associated to these word forms (DIJKSTRA; GRAINGER; VAN HEUVEN, 1999).

Therefore, cognate words (i.e., translation equivalents with full or partial form overlap, as in Portuguese- English *ator-actor*) are suggested to be easier to learn and to be remembered better than noncognates. As already mentioned, cognates can work as a bridge to the learning of English. According to Lemhöfer and Dijkstra (2004), when reading cognate words in the L2, it is suggested that the first language is activated as well and it facilitates word recognition. Still according to the authors, the same results in the opposite order (reading cognate words in the L1) are possible, but to a smaller extent. Concerning the effects of interlingual homographs (words that share form but not meaning), Lemhöfer and Dijkstra (2004) claim that they are not so straightforward and seem to depend on word frequency, the requirements of the task, and the composition of the stimulus list (whether it is monolingual or bilingual).

According to many bilingual studies, cognates presented out of context are processed faster than noncognates. For instance, Hall (2002) affirms that "early experimental research on cognate representation and processing in bilinguals [...] appeared to demonstrate that true cognates, but not false cognates, are accessed, named, and translated faster than noncognates" (p. 70). This cognate facilitation effect has been observed using tasks such as visual lexical decision (DIJKSTRA GRAINGER; VAN HEUVEN, 1999; LEMHÖFER; DIJKSTRA, 2004), picture naming (COSTA; CARAMAZZA; SEBASTIAN-GALLES, 2000), and word naming (SCHWARTZ; KROLL; DIAZ, 2007).

Van Assche, Duyck, and Hartsuiker (2012) affirm that depending on the amount of overlap with the input word the phonological, orthographic, and semantic representations become activated in both languages on the presentation of a word. The reason for this is that cognates have similar crosslingual orthographic, phonological, and semantic representations; as a consequence, activation levels are higher for cognates as compared to noncognates, which leads to faster recognition times (p. 5).

Cognates are a rich source for the investigation of the bilingual lexicon due to their orthographic and semantic similarity. They have an integrated representation in the two languages of the bilingual, according to the BIA+ model (DIJKSTRA; VAN HEUVEN, 2002, p. 496). According to Hall et al. (2009), the literature on cognates within both the SLA and bilingual lexicon research traditions, states unanimously that words that share an orthographic and/or phonological form across languages have different effects on learning, representation, and processing than words that do not share such characteristics (p. 155).

Furthermore, studies on lexical production and comprehension errors in a foreign language usually reveal patterns of formal organization in and between the native and foreign language lexicons. Ecke's work on tip-of-the-tongue recall stages in second and third language learners (ECKE 1996, 1997; ECKE; GARRETT 1998) shows that when learners are searching for a word, there is important interlexical influence at the phonological and orthographic level. Holmes and Ramos (1993) in a study with Brazilian learners of English found instances of lexical misidentification due to similar forms between words in the L1 and L2. For instance, the L2 word 'poll' was misidentified as 'polo' and the L2 word 'swing' as the L2 word 'swim'. The cognate facilitation effect has been investigated in a variety of studies, some of them are presented in Table 1.

Table 1 - Empirical studies supporting the cognate facilitation effect

Study	Goal	Participants	Task	Results
ROBERTS; DESLAURIERS (1999)	To investigate whether cognateness affects verbal confrontation naming performance in balanced bilinguals.	L1: French L2: English	Naming color photographs of 30 animals and 30 foods.	The cognate pictures were more often correctly named in both languages and more often correctly named in English than the non-cognate pictures.
LEMHÖFER; DIJKSTRA (2004)	To investigate how cross-linguistic overlap in semantics, orthography, and phonology affects bilingual word recognition.	L1: Dutch L2: English	Lexical decision	Cognate facilitation effect occurred with semantics and orthographic overlap, but not with phonology.
TOASSI; MOTA (2014)	To investigate the influence of cognates English- Portuguese in the comprehension of English.	L1: Brazilian Portuguese L2: English	Sentence comprehension with eye movement recording.	Double cognates were processed faster than their respective controls.
VANHOVE; BERTHELE (2015)	To investigate the lifespan development of the ability to correctly guess the meaning of foreign-language words with known translation-equivalent cognates.	L1: German L2: Swedish, English, French	Guessing the meaning of written and spoken words	Cognate guessing skills improve throughout childhood and adolescence. In the written modality, cognate guessing skills show some further improvement throughout adulthood. In the spoken modality, cognate guessing skills remain fairly stable between ages 20-50 but then start to decline.
VANHOVE (2016)	To investigate whether learners are able to quickly discover simple, systematic graphemic correspondence rules between their L1 and an unknown but closely related language in a setting of receptive multilingualism.	L1: German L2: Dutch	A computer-run learning experiment in the form of a translation task and three paper-and-pencil vocabulary tests.	Participants who encountered <œ> or <ij> cognates in the first part were more likely to translate <œ> or <ij> cognates using German words containing <u> or <ei>, respectively, in the second part compared to their respective controls, suggesting that correspondence rule learning took place.
TOASSI (2016)	To investigate the effect of triple cognates in the comprehension of English.	L1: Brazilian Portuguese L2: German L3: English	Sentence comprehension with eye movement recording.	Triple cognates were processed faster than double cognates.
SMIDFELT (2017)	To investigate the intercomprehension processes of multilingual Swedish L1 speakers while reading and decoding text in Italian, an unknown language.	L1: Swedish L2: English, French L3: Spanish and German	Lexical decision	All the languages known by the participants were activated during the intercomprehension task.

As can be seen in Table 1, empirical support for the cognate facilitation effect was found when cognate pictures were more often correctly named than the non-cognate pictures (ROBERTS; DESLAURIERS, 1999), in a lexical decision task (LEMHÖFER; DIJKSTRA, 2004), for the faster processing of double cognates as compared to non-cognates (TOASSI; MOTA, 2014), in the investigation of guessing skills of cognate words (VANHOVE; BERTHELE, 2015) in systematic graphemic correspondence rules between their L1 and an unknown but closely related language (VANHOVE, 2016), in the faster processing of triple cognates as compared to double cognates (TOASSI, 2016). Finally, there was evidence that all the languages known by the participants are activated during an intercomprehension task (SMIDFELT, 2017). However, all of these studies focused on the processing of cognate words by participants who already had knowledge of the two languages involved. None of these studies was carried out with participants that did not have knowledge of the target language (English in the present study) as it is reported in this article. Next, the methodological procedures adopted for the present study are presented.

3 The present study

The present study was carried out with the main goal of investigating the understanding of cognate words in a first contact with English. For that, an English-Portuguese cognate translation task was designed and applied to a group of 10 speakers of Brazilian Portuguese, who had never taken an English course.

Participants of this study were all volunteers and adults, who were native speakers of Brazilian Portuguese and had no knowledge of English or any other foreign language. The age range of the participants varied from 29 to 54 ($M = 44$, $SD = 8,9$). The specific information about these participants regarding sex, age, city of birth, profession, level of schooling, and knowledge of English was collected by means of a biographical questionnaire; the summary of the obtained answers are displayed in Table 2.

Table 2 - General information about the participants

Information	Participants	
Sex	2 (two) male	
	8 (eight) female	
Age	Average: 44 (29 - 54)	
City of birth	Fortaleza-CE	90%
	Arneiroz-CE	10%
Profession	Military policeman	10%
	Seamstress	10%
	Housewife	20%
	Self-employed	30%
	Cashier	10%
	Nurse	10%
	Bus driver	10%

Level of schooling	Middle School Junior	10%
	High School (incomplete)	10%
	High School	60%
	Higher education (incomplete)	10%
	Higher education	10%
Knowledge of English	Beginners	100%

N = 10

Note: N= number of participants

As can be seen in Table 2, there were more female participants than male ones and the mean age of the group was 44; they were all adults. All of them were Brazilians; most of them were born in the city of Fortaleza (90%). In relation to their profession, it can be observed that they were quite different and varied. Half of them, fifty (50%) were housewives or self-employed, and the other 50% per cent were military police, seamstress, cashier, nurse and bus driver. Regarding the level of schooling, most of them (60%) had finished high school, and only a few had access to college (20%). In addition, participants were asked, in the biographical questionnaire, to estimate their level of knowledge in English; all of them reported being real beginners. The next subsection presents the task applied to participants.

3.1 The task

For the present study, 40 (forty) English - Portuguese cognate words were selected using the database Corpus of Contemporary American English (COCA) (DAVIES, 2008), and discriminated in 4 different ranges of orthographic similarity, that is, how the pair of cognate words were equivalent to each other in terms of orthography. The orthographic similarity between a pair of words can vary from 0 to 1, being 0 equivalent to no similarity and, 1, to total similarity. For the present study, the selected words were separated in the following 4 groups of orthographic similarity: (1) from 0.5 to 0.59, (2) from 0.6 to 0.69, (3) from 0.7 to 0.79, and (4) from 0.8 to 0.89.

All of the selected words were nouns and their frequency of occurrence was offered by the Corpus of Contemporary American English (COCA). Frequency of the translation equivalents of the cognate words in Portuguese was obtained through the Corpus of Brazilian Portuguese, available at Linguatca (https://www.linguatca.pt/www_linguatca_pt.html). Orthographic similarity was calculated using an algorithm developed by Weber (1970) and Van Orden (1987), described in Van Orden (1987, p.196), where orthographic similarity is the ratio between the graphemic similarity word one with itself and graphemic similarity of word 1 and word 2 (VAN ORDEN, 1987). - The calculation is based on:

$GS = 10((50F + 30V + 10C)/A) + 5T + 27B + 18E$, where:

- A: Sum of letters in each word / 2
- B: If first two letters are the same B = 1 else B = 0
- C: Number of letters, which are present in both words.
- E: If last two letters are the same E = 1 else E = 0
- F: number of pairs of adjacent letters in the same order, shared by pairs
- T: ratio of shorter word to longer word
- V: number of pairs of adjacent letters in reverse order, shared by pairs

Then the Graphic Similarity = $10 ((50F + 30V + 10C) / A) + 5T + 27B + 18E$

The words selected for this task together with their translation equivalent, orthographic similarity and frequency in English and in Portuguese are displayed in Table 3.

Table 3 – Cognate words English- Portuguese, Orthographic Similarity and Frequency

Cognate word	Translation equivalent in Portuguese	Orthographic similarity	Frequency English	Frequency Portuguese
Academic	Acadêmico	0,80	45196	17997
Access	Acesso	0,71	63926	147842
Activities	Atividades	0,78	60074	269261
Actor	Ator	0,80	22018	31701
Air	Ar	0,56	146335	79608
Alarm	Alarme	0,86	9353	2340
Animals	Animais	0,85	41574	148444
Apartment	Apartamento	0,80	37398	13909
Area	Área	0,51	142801	512729
Auditorium	Auditório	0,74	3300	8394
Blouse	Blusa	0,57	3792	1117
Calendar	Calendário	0,76	6679	10333
Camera	Câmera	0,80	46825	8942
Class	Classe	0,80	98766	113565
Competition	Competição	0,64	35430	42420
Computer	Computador	0,81	65914	41159
Confusion	Confusão	0,69	11759	16618
Crocodile	Crocodilo	0,77	1262	408
Department	Departamento	0,80	110509	40925
Dictionary	Dicionário	0,69	3819	8782
Dissertation	Dissertação	0,64	2647	22533
Effects	Efeitos	0,70	60766	129640
Electricity	Eletricidade	0,65	15919	6626
Elephant	Elefante	0,64	5515	2014
Equipment	Equipamento	0,72	35715	30084
Exams	Exames	0,86	3326	43536
Factor	Fator	0,84	37463	99681
Galaxy	Galáxia	0,55	8903	1105
Groups	Grupos	0,64	111546	257910
Information	Informação	0,62	183701	149800
Language	Linguagem	0,67	78217	98252
Lists	Listas	0,81	11948	9627
Memory	Memória	0,58	42788	61369
Metabolism	Metabolismo	0,80	2836	13052

Movements	Movimentos	0,79	16378	61591
Music	Música	0,54	149327	82450
Palace	Palácio	0,55	10945	6399
Panic	Pânico	0,54	10726	6587
Series	Série	0,55	82295	160379
Sofa	Sofá	0,60	6715	2151

The final task consisted of these 40 (forty) cognate words organized in alphabetical order. Instructions were added to this list. Participants were instructed to write the word in Portuguese that better expressed the word that was presented in the task. The task (Appendix 1) was performed on a sheet of paper. Participants also answered a biographical questionnaire (Appendix 2) and a posttest (Appendix 3). After that, participants had any doubts clarified. It is important to mention that all of them were volunteers and were not paid for their participation. One of the researchers was present the whole time while the participants translated the words. The results of the translation task and post-test are presented in the following section.

4 Results

This section presents the results obtained for the translation task and the posttest. After the 10 participants completed the task, the accuracy of their answers was verified. First, the percentage of correct answers for each participant (Table 4) was analyzed. Next, the percentage of correct answers for each word was analyzed (Table 5). The descriptive statistics of these data is presented in the following.

Table 4 - Percentage of correct answers for each participant

Participants	Number of correct words (out of 40)	Percentage of correct items
1	14	35,00
2	17	42,50
3	37	92,50
4	5	12,50
5	15	37,50
6	24	60,00
7	31	77,50
8	36	90,00
9	31	77,50
10	7	17,50
Mean	22	54,25
Minimum	5	13
Maximum	37	93
Standard Deviation	12	29,32

According to Table 4, it can be seen that the mean of correct answers per participants was 54.25%. This means that on average, participants could guess the meaning of the cognate words presented in English more than 50% of the time. However, it can also be seen in Table 4 that there were great individual differences among participants, since Participant 4 had only 12,5% of the words translated correctly, while Participant 3 had 92,50% of the words translated correctly. The distribution of the data is not homogeneous as we can see in Figure 1.

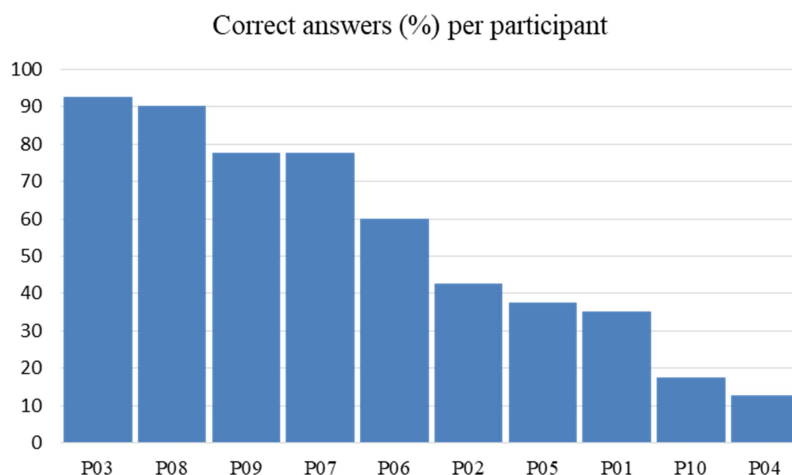


Figure 1. Percentage of correct answers per participant.

Figure 1 shows the distribution of the data regarding the percentage of correct answers by participant. We can see that there is a great variation in the obtained values, which can be explained by the individual differences of the participants who answered the test and the small number of participants. If we go back to the information regarding the profile of the participants, we will see that there is also a great variation in their level of schooling, whereas 20% had not completed high school, 60% completed high school and 20% reached the university level. Therefore, the group of participants is not homogeneous. However, what these participants had in common, as previously stated, is that they were all beginners in English. When asked in the biographical questionnaire if they had any experience learning English 80% (eighty percent) of them responded that they did not have any experience. They were also asked how their level of English was, and all of them affirmed they were beginners. Although participants' knowledge of English was limited, this did not impede them to perform the task and they could read and understand more than half of the words presented in English. Actually, half of the participants could guess less than 20 words while the other half could guess more than 20 words; this result is well demonstrated in Figure 1. Next, Table 5 presents the percentage of correct answers for each cognate word.

Table 5 - Percentage of the correct answers for each word

Cognate word	Number of correct answers	Percentage of correct answers
Academic	2	20,00
Access	5	50,00
Activities	3	30,00
Actor	6	60,00
Air	3	30,00
Alarm	7	70,00
Animals	10	100,00

Apartment	7	70,00
Area	4	40,00
Auditorium	7	70,00
Blouse	1	10,00
Calendar	8	80,00
Camera	7	70,00
Class	6	60,00
Competition	5	50,00
Computer	6	60,00
Confusion	6	60,00
Crocodile	5	50,00
Department	7	70,00
Dictionary	4	40,00
Dissertation	3	30,00
Effects	1	10,00
Electricity	4	40,00
Elephant	7	70,00
Equipment	7	70,00
Exams	8	80,00
Factor	2	20,00
Galaxy	5	50,00
Groups	4	40,00
Information	5	50,00
Language	5	50,00
Lists	3	30,00
Memory	8	80,00
Metabolism	6	60,00
Movements	7	70,00
Music	10	100,00
Palace	5	50,00
Panic	4	40,00
Series	5	50,00
Sofa	8	80,00
<hr/>		
Mean	5	54,25
Minimum	1	10
Maximum	10	100
Standard Deviation	2	22

As can be seen in Table 5, the mean correct answers for each word was 54,25%. Again, we see a great variation in the results, whereas the minimum number of people who responded correctly one of the presented words was 1, and, the maximum, 10. This means that no word had zero correct answers and some words were correctly translated by all of the participants. Analyzing the data in detail, we can see that all of the participants were able to translate from English to Portuguese two words: *animals* and *music*. Analyzing this data through the frequency of the words and the orthographic similarity of the pair English-Portuguese, we can see that *animals* is in the center of the frequency distribution of the cognate words presented regarding English (41.574), and, in Portuguese it is closer to the most frequent words of this list (148.444). *Animals* and *animais* have an orthographic similarity of 0,85, which is considered high. Therefore, the high frequency of this word in Portuguese and the high orthographic similarity can explain this result. Regarding the word *music*, we can see that it is the second most frequent word in English for the list of words presented (149.327), in Portuguese, however it is not so close to the most frequent words of the list (82.450). *Music* and *música* have an orthographic similarity of 0,54, which is not so high; however, this might be due to the accent existent for the word in Portuguese, which the algorithm considers as a different letter. In this specific case we can infer that the high frequency of this word in English might be responsible for this result, mainly because *music* is commonly heard in its English format in our Brazilian context.

Still analyzing the results of Table 5, we can also observe that 80% of the participants translated 3 (three) words correctly: *calendar*, *exams*, and *memory*. Regarding the frequency of these words, we can observe that *calendar* is closer to the least frequent words of the list both in Portuguese (10.333), and English (6.679). However, the orthographic similarity between *calendar* and *calendário* is 0,76, which can be considered a high similarity, and this could be responsible for the obtained results. *Exams* is close to the middle of the frequency distribution of the list of words in Portuguese (43.536), and close to the end of the frequency distribution in English (3.326). However, the orthographic similarity between *exams* and *exames* is 0,86, which can be considered a high similarity. Once more, the similarity of the form of the words could explain the obtained results. Concerning the word *memory*, it can be observed that it has a relatively high frequency in Portuguese (61.369), and it is in the middle of the frequency distribution of the list of words in English (42.788). The orthographic similarity between *memory* and *memória* is 0,58; however, in this case the word in Portuguese has an accent, which decreases its orthographic similarity according to the algorithm, but possibly this is not so influential for the identification of the word in English by the participant.

The analysis of the results presented in Table 5 also shows that only 10% of the participants translated 2 (two) words correctly, which were *blouse* and *effects*. *Blouse* presents a low frequency in the list of words, both for English (3.792) and for Portuguese (1.117). The orthographic similarity between *blouse* and *blusa* is 0,57, which is not a very high similarity. Therefore, both the low frequency of the words and the low similarity between the pairs of words could explain the results. However, this does not occur for the word *effects*, which presented a high frequency both for English (60.766) and for Portuguese (129.640). In addition, the orthographic similarity between *effects* and *efeitos* is 0,70, which is a high similarity. Another possibility that could explain the results obtained for *blouse* and *effects* could be the pronunciation of these words, which are not common for the participants who did not know English. We can infer that when participants were performing the task, they read these two words according to the grapheme-phoneme correspondences that fit Brazilian Portuguese rules, therefore no appropriate translation equivalent for the word in English was activated.

In general, the analysis of the results of Tables 4 and 5 shows us that more than half of the participants, whose mean age was of 44 years old, could translate the presented words correctly even without having knowledge of English, as reported by them. This can be considered as a positive result.

Regarding the posttest, the answers provided by the participants suggest that the use of cognate words as a way to first introduce English motivates people to learn the language. Furthermore, when

participants were asked if they would like to learn English, all of them reported that knowing that these words are similar in English and in Portuguese made them motivated to study English. Some of them provided the following answers:

*"I found out that English is not as difficult as we thought it was"*¹⁴. (our translation) Participant 4

*"I didn't know that it was easy and similar to Portuguese"*¹⁵. (our translation) Participant 9

After performing the task, they reported an interest in learning English because they felt motivated by the similarity of the words with their native language. Some of them provided the following answers:

*"I have a lot of interest in learning English. I could notice that I know many words. Even with my age I know I am capable"*¹⁶. (our translation) Participant 4

*"Yes, because I could answer many questions. After the task, I think I can learn English."*¹⁷ (our translation) Participant 1

*"Yes, because I know I am capable, and it is just to realize that there are similarities"*¹⁸. (our translation) Participant 3

As a result of the present study, the 10 participants who performed the task were offered an English course as part of an Extension Program coordinated by the first author of this article. The classes have been taking place in their local community since 2018, taught by the second author of this article. The Research Project, together with the Extension Project that has been carried out, has already impacted one of the participants who was hired as a hotel receptionist due to the learning of English. This study shows that it is possible to build a bridge between theory and practice.

5 Conclusion

Cognate words have been proven to be easily understood in a translation task with native speakers of Brazilian Portuguese, who had no knowledge or initial interest in learning English. Forty cognate words with varying degree of orthographic similarity between Portuguese and English, as calculated by Van Orden's (1987) formula, were presented in a translation task. Despite the small number of participants (10) and the large difference in the percentage of correctly translated words (12,5% - 92,5%), on average, more than half of the words were correctly translated.

In conclusion, it can be claimed that cognate words, besides being easily recognized, also work as a motivational factor to make people inspired to learn a second language, in this case, English, as could be seen in the previous section, where some answers provided by the participants of the present study were reported. Further, the findings also provide evidence that cognate words are easily identified, even when presented to non-speakers of the language, with a mean age of 44 years old.

The translation task carried out in the present study encouraged the participants to start learning English. The findings of the present study indicate the importance and necessity of searching

¹⁴ "Descobri que o inglês não é tão difícil assim como pensamos ser". - Participant 4

¹⁵ "Não sabia que era fácil e parecido com o português". - Participant 9

¹⁶ "Tenho muito interesse em aprender inglês. Pude perceber que sei muitas palavras. Mesmo com a idade que tenho sei que sou capaz". - Participant 4

¹⁷ "Sim, pois consegui responder várias perguntas. Depois da tarefa, acho que consigo aprender inglês". - Participant 1.

¹⁸ "Sim, pois sei que sou capaz, e basta perceber que existem semelhanças". - Participant 3

for possible approaches, strategies, and alternatives both for target language vocabulary instruction and for the motivational aspects, especially in the early stages of learning, corroborating Hall's (2002) statement regarding the motivational aspect of cognate words in a first contact with a foreign language.

These results have implications for language teaching, especially in the Brazilian context, where knowledge of English is ultimately important and teaching and learning of the language needs improvement. Presenting learners with cognates or similar words may be a beneficial step in the beginning of the learning process, especially due to its motivational factor. When we claim that cognates work as a bridge between the L1 and L2 words, we do not mean it only cognitively, due to their already existent representations in the L1, but also emotionally, since they can work as a connection between the two languages.

Another relevant point of the present study is to provide an example of a successful conjunction between research and extension projects in the Brazilian public university. In addition, it has also been shown how little knowledge of English can have an impact on the life of people with a less privileged status.

The present study had limitations that should be taken into consideration when interpreting the data, such as the small number of participants, only 10 (ten) participants, and some of the results can thus be explained by individual differences. Future research should be conducted with more participants and other language pairs.

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APPENDIX 1 - THE TASK

Código do participante: _____ (a ser preenchido pela pesquisadora)

Peço que escreva em português a tradução mais provável da palavra apresentada em inglês. A pesquisadora não poderá servir como fonte de informação para a tarefa. Também não poderá ser utilizado dicionário ou outra fonte de consulta. Você terá um tempo máximo de 15 minutos para desempenhar esta tarefa.

Obrigada por participar deste estudo!

Palavra em inglês	Tradução
Academic	
Access	
Activities	
Actor	
Air	
Alarm	
Animals	
Apartment	
Area	
Auditorium	
Blouse	
Calendar	
Camera	
Class	
Competition	
Computer	
Confusion	
Crocodile	
Department	
Dictionary	
Dissertation	
Effects	
Electricity	
Elephant	
Equipment	
Exams	
Factor	
Galaxy	
Groups	

Information	
Language	
Lists	
Memory	
Metabolism	
Movements	
Music	
Palace	
Panic	
Series	
Sofa	

APPENDIX 2 – THE BIOGRAPHICAL QUESTIONNAIRE

UNIVERSIDADE FEDERAL DO CEARÁ
CENTRO DE HUMANIDADES
DEPARTAMENTO DE ESTUDOS DA LÍNGUA INGLESA, SUAS LITERATURAS E
TRADUÇÃO
CURSO DE LETRAS-INGLÊS

Código do participante _____

QUESTIONÁRIO BIOGRÁFICO

Data da entrevista: ____/____/____

Data de nascimento: ____/____/____

Idade: _____

Sexo: () masculino () feminino

Nacionalidade: _____

Local de Nascimento: _____

Grau de escolaridade:

- () Nenhuma escolaridade
- () Ensino Fundamental: de 1º à 4º série
- () Ensino Fundamental: de 5º à 8º série
- () Ensino Médio incompleto
- () Ensino Médio completo
- () Superior incompleto
- () Superior completo. Nesse caso especifique a sua formação:

Ocupação atual: _____

- Qual a sua experiência com o aprendizado da língua inglesa?

- Qual a sua experiência com a língua inglesa?

- Como você estima o seu nível atual de inglês?

() Iniciante () Básico () Intermediário () Avançado

() Lê	() Pouco	() Razoavelmente	() Bem
() Fala	() Pouco	() Razoavelmente	() Bem
() Escreve	() Pouco	() Razoavelmente	() Bem
() Compreende	() Pouco	() Razoavelmente	() Bem

APPENDIX 3 – THE POSTTEST

PARTICIPANTE Nº _____

1. Qual foi a sua percepção sobre a tarefa realizada? Foi fácil identificar a palavra correspondente em português para as palavras fornecidas em inglês? Ou foi difícil? Por favor, justifique sua resposta.

2. Após realizar essa tarefa, a sua percepção sobre a língua inglesa mudou?

() SIM () NÃO

Por quê?

3. Você teria interesse em aprender a língua inglesa? Por favor, justifique sua resposta.

Recebido em: 14/11/19

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