The Use of Cognate Words and Interlingual Homographs to Investigate the Cross-Linguistics in Second Language Processing in Iran

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Abstract
Various investigations have shown that the native language impacts foreign word recognition and this influence is adapted by the dexterity in the nonnative language. Cognates, words which are similar across two or more languages in some fields signify an interesting, illuminating, and crucial aspect of foreign or second language learning and research. Forty-five (males and females) participants have been randomly chosen and participated in the experiment in Islamic Azad University, Zanjan, Iran, in 2014-2015 school year. The participants' age ranged from 18 to 28, with a mean age of 21.5 years. The materials were divided into two groups   which include 30 true cognates and 30 false cognates words from 300 words by doing CVR and CVI (Lawshe's table with index of 88% and 82% respectively) for being reliable and valid. These words have been taught to them, after a week, a test has been prepared about those words. According to the results of T-test for comparing the average marks of learning in every 2 groups can be said that there is a meaningful difference between the scores.   The results show that the students learned true cognate words better than the false cognate words. The results of this study also confirm the expectations that cognate-based instruction can positively influence in second language acquisition.
Keywords: false and true cognates; L2 structural relationship; second language vocabulary acquisition; teaching through cognates

INTRODUCTION

Learning a word in a second language (L2) usually comprises linking a new lexical form with a remaining concept is associated to the equivalent word in the first language (L1). How this mapping is recognized and how it changes over time are serious issues in Second Language Acquisition (SLA), and in particular in the vocabulary acquisition ground. Despite the number of studies developed to answer these questions (e.g., Basnight et al., (2007); Bassetti, B., & Cook, V. (2011); Bultena, S., Dijkstra, T., & van Hell, J. G. (2014); Casaponsa et al (2015)., ; Ferré et al., 2006; Guasch et al., 2008; Kroll & Linck, 2007; Sunderman & Kroll, 2006) they are still object of controversy.

One of the most influential models in the SLA field is the Revised Hierarchical Model (RHM) ` by Kroll and Stewart (1994). The model considers bilingual memory organization as comprised of three interconnected systems: two independent lexicons (L1 and L2) and a unified conceptual system (CS) shared by the two languages. A major feature of RHM is the notion that associations between the two lexicons and the CS change according to L2 proficiency. Teachers, linguists and psycholinguists have always been keen on errors produced by second language learners, either in their speech or writing or both.

Surveys on the false friendship phenomenon are rather scarce (Chacón, 2006).Studies show that almost all language users of languages are bored and confused in comprehending those languages which share common features inversely. Moreover, they are less likely to learn.

In the psycholinguistic literature, cognates are often defined as words that share aspects of spelling, sound, and meaning across languages (e.g. *setereh* in Persian and *star* in English). Second language (L2) learners are often quick to take advantage of the similarities found in cognates and transfer knowledge from their first language (L1) to facilitate vocabulary acquisition and understanding in the L2.

The aim of the present study is to investigate how knowledge of previously acquired words can be utilized in L2. More specifically, it seeks to verify whether pointing out the correspondences between the L1 and L2 lexical items can enhance L2 vocabulary acquisition. For this purpose, an English vocabulary test was carried out among Iranian students whose L1 is

Persian and who are learning English as an L2. In order to verify whether focusing on the structural relationships between L1/L2 cognates has any effect on L2 lexical competence, the English vocabulary test scores of the students receiving instruction were compared to the scores of true and false cognates . Sometimes learners encounter words in an L2 that are similar in form to those in their L1, but do not share meaning (i.e. false friends such as *did meaning* "doing a work" in English but in Persian means" seeing").

The fact that nonnative cognate words are recognized and produced faster and more accurately than nonnative non-cognate words   . (Bultena et al., 2014; Midgley et al., 2011; Peeters et al., 2013).

Research Question

Based on the theory behind L2 acquisition, the present study seeks to rely on the findings of L1 acquisition studies concerning the method of learning foreign language vocabulary through cognates and to implement these in an L2 acquisition context. Therefore, the main question which the current study proposes to answer is :
Do the Iranian students learn true or false cognates ?
The expectations is that the students who have structural relationships between L1/L2 cognate pairs will learn better. As far as other factors are concerned, the proficiency in L2 is expected to play an important role in L2 vocabulary proficiency.

Literature Review

A cognate is "a word in one language which is similar in form and meaning to a word in another language because both languages are related" (Richards & Schmidt, 2002 ; Wright et al ., 2014). Cognates can share phonological and/or orthographic form, and typically are related semantically although they are not always translation equivalents (Comesaña et al ., 2014 ; Hall, 2002). (Rodriguez , 2001) cites various types of cognates which include words that are phonologically similar and orthographically identical (dental-dental); phonologically similar but orthographically different (velocity-velocida), and false cognates in which words are phonologically and orthographically similar but not related in meaning, such as, tan (in Persian and English). Bilingual speakers rate cognate translation pairs as more similar phonologically and orthographically than translation pairs that are not cognates (de Groot & Nas, 1991; Elgort, I., & Piasecki, A. E. (2014). Monolingual speakers are more likely to correctly guess the meaning of the cognate pairs when asked to translate words in an unfamiliar language (Comesaña et al ., 2012 ; Friel & Kennison, 2001; Kroll & Stewart, 1994)

Cognates are interesting to consider in the study of bilingual language acquisition and language disorders because of their similarity across languages. First, the process of learning cognates might differ from learning other words because learners can draw directly on their knowledge in one language to facilitate word learning in the other language. In vocabulary tests where vocabulary is ordered developmentally or by frequency, the level of item difficulty for bilingual children might differ compared to monolingual children (Dégi, Z. 2012; Hall et al ., 2009. Thus, the focus of this paper is on bilingual students' performance on true and false cognates learning task. . We therefore see that although the cognate's cross-language overlap in lexical form can facilitate bilingual word recognition, any divergence or nonequivalence in meaning can slow processing. By manipulating cognate status and meaning overlap in the current study, we were able to separately examine the effects of cognate facilitation.

Cognates and False Cognates

The degree of semantic and/or orthographic overlap between words in different Languages is assumed to facilitate or interfere with the transmission of the intended messages. In cases where facilitation usually occurs at the lexical level, researchers very frequently mention *cognates*, defined as words that possess the same or a similar form and meaning in two or more natural languages (e.g. English *brother and Barder in Persian*). This kind of words are reported to be quite common, especially when the two languages are from the same language family, or somehow related (Chamizo Dominguez and Ner lich, 2002; Friel and Kennison 2001). When two words from different languages have the same or a similar form but do not share the same meaning, there occurs the case of false cognates, also recognized as *interlingual homographs* or *false friends* in literature (e.g. dam in English and Persian).

Meara (1993); Joshi, R. M., & Aaron, P. G. (Eds.). (2013) pointed out that false cognates are of interest to educators since they can cause problems for second language learners. Supportively, Friel and Kennison (2001) commented that once an incorrect association is learned, it might become harder for the learner to form the appropriate association than it would be with translations that are different in sound and appearance. Chamizo Dominguez and Nerlich (2002) divided false cognates into two groups, namely *chance false friends* (words that are similar or equivalent in two or more languages, but without any semantic or etymological overlap) and *semantic false friends* (words that are graphically and/or phonetically similar in various languages and having the same etymological origin, but the meanings of which have diverged). They also di vided semantic false cognates as *full false friends* (words the meaning of which diverge widely in various languages) and *partial false friends* (words that have several senses, some of which coincide in both languages while others do not).

Cognates and Vocabulary Learning

Adults who are learning English as a second language gradually shift from mediating their knowledge of words in their second language via their knowledge of words in their first language to having direct access between words and concepts in both of their languages (Dijkstra, T., & Rekké, S. 2010; Kroll & Tokowicz, 2005;). When this model is applied to the students of second language learning, we assume that when a student hears a new word such as *spinach* in English they are most likely to access the concept via the first language (e.g.,

spheng in Persian) than directly access the concept via English language knowledge .

Phonological representations play a role in building this richer representation and facilitate lexical retrieval (Dressler et al., 2011; Hoshino & Kroll, 2008 .). In this study, phonologically similar words were retrieved more slowly than phonologically dissimilar words. At the same time cognates were produced more accurately. In the case of cognates such as these, English language learners can use their Persian vocabulary knowledge to identify, interpret, and use English vocabulary (August et al., 2005; Peeters et al., (2013)). English and Persian are related because a significant number of words in each language are Latin-based and thus share a large number of cognate pairs (Comesaña et al., 2013; Zare, M., & Mobarakeh, S. D, 2013; Pishghadam, R., and Khajavy, G. H. 2013.). This increases opportunities to use cognates as a mechanism for language transfer. Cognates increases as students' progress academically.

Students can learn to use cognates as vocabulary learning strategy (Bravo, Hiebert, & Pearson, 2005 ; Proctor & Mo, 2011). In these studies, students learned about cognates via direct instruction (e.g., Proctor & Mo, 2011) or by learning to look for similarities (e.g., Bravo et al., 2005). Following interventions of this style, students demonstrated posttest increases in their vocabulary scores (e.g., Grasso, S. M. 2014) and were able to apply this knowledge to lessons and in reading comprehension (e.g., Bravo et al., 2005).

Teaching vocabulary through cognates
The present study seeks to find out how the above-described characteristics can be implemented in foreign language vocabulary teaching in the context, where minority students learn their first foreign language as an L2 after having acquired the state's language as an L1. The following section will present studies supporting the teaching of foreign language vocabulary through cognates. One of the most widely accepted practices in foreign language teaching proposes that other languages should be excluded and that the target language is the only one allowed in the classroom. Contrary to this, Jessner (2003) recommends that prior language knowledge should be reactivated in the classroom and that students should look for equivalent expressions in their L1, and L2. In accordance with Eskander et al., 2013; Molnar, T. 2010,   consider it useful to teach students to draw on their cognate knowledge, which can serve as a means of figuring out the meanings of new English words. Empirical studies focusing on teaching foreign language vocabulary through cognates were first carried out in the L2 acquisition context. Rodríguez (2001) proposes that English can be taught through meaningful reading and by relying on the students' knowledge and literacy in their L1. He also suggests that teachers should rely on L1/L2 cognates to teach students to analyze the L2 and be able to understand texts in the L2.
Mitkov, R., V. Pekar, D. Blagoev and A. Mulloni.(2007)carried out a research among

Spanish learning English who had been taught to search for cognate relationships as a strategy in reading texts in English. The results of the study showed that those students who were taught to search for cognate relationships were more successful in inferring meaning for untaught cognates than their peers in the control group. Furthermore, Mitkov et al points out that there was variability in the perception of L1/L2 cognates, the connection between the phonologically more transparent ones being more easily perceived than between the less salient ones.

Caplan-Carbin (2006); Van Assche, E., Duyck, W., & Hartsuiker, R. J. (2012) proposed that teaching the systematic relationship of the historical sound changes between English and German would help English speaking learners of German to recognize cognates and as a result expand their vocabulary in German more easily.

The Cognate Effect
The literature on cognates, within both the SLA and bilingual lexicon research traditions, reveals a broad consensus that words that share an orthographic and/or phonological form across languages have different effects on learning, representation, and processing than pairs of words that do not share such properties. A distinction is often drawn between cognates that share meaning (either "true cognates," "indirect cognates" or those that do not share meaning called "false cognates," "false friends," or "interlingual homographs"). In SLA, it has been long recognized that cognates trigger cross linguistic influence: either "positive transfer" in the case of true cognates or "negative transfer" in the case of indirect and false cognates (Meara, 1993; Nation, 1990; Odlin, 2004; Ringbom, 1987; cf. also Friel & Kennison, 2001, for a review of the research and a discussion of cognate identification procedures). Early experimental research on cognate representation and processing in bilinguals (e.g., de Groot, 1993; Kroll & Stewart, 1994;) appeared to demonstrate that true cognates, but not false cognates, are accessed, named, and translated faster than noncognates. Recent work on learners and balanced bilinguals, however, has demonstrated that sets of words that share an orthographic and/or phonological form interlingually are automatically activated at some point in both production and comprehension, regardless of meaning (Costa, Colom´e, G´omez, & Sebasti´an-Gall´es, 2003; Hall, 2002).

Cognates also play a significant role in the organization of lexical competence and the linguistic performance of multilinguals. De Angelis and Selinker b (2001) presented interlanguage samples from case

studies of two multilinguals, which clearly demonstrate CLI at the form level. Van Hell and Dijkstra (2002) reported word association and lexical decision results on L1 Dutch words, using English L1 and French L2 words as primes. They found a cognate effect for L1 in both tasks and an effect for L2 when participants' proficiency level in French was as high as it was for English. Herwig (2001) reported data from think-aloud protocols that reveal a strong reliance on cognate forms in a translation task involving speakers of four languages. Similar findings were reported by Gibson and Hufeisen (2003), who collected qualitative data from learners who were asked to translate from a new L3 (Swedish) into their L2. Finally, comparative data on L3 learner English from Swedish native speakers with L2 Finnish and Finnish native speakers with L2 Swedish show clear cognate effects from Swedish to English (Odlin & Jarvis, 2004).

Assuming a cognitive architecture that postulates spreading activation in a crosslinguistic lexical network (Herwig, 2001; Kroll & de Groot, 1997), these findings suggest that activation paths are regularly forged between lexical form representations that overlap at some criteria level. CLI at the lexical level may thus be understood as the establishment of interlingual connections of this type during acquisition and use of a second or subsequent language.

METHOD

Forty-five (males and females) participants from the Islamic Azad University of Zanjan,, Iran, in 2014   have been randomly chosen and participated in the experiment. All participants were native speakers of Persian who were studying in term one in bachelor period. The participants' ages ranged from 18 to 25, with an average age of 21.5 year. All participants were given a book for their participation in the study. Different dictionaries (*Longman Dictionary of Contemporary English*, *Oxford Advanced Learner's Dictionary*, *Cambridge International Dictionary of English*, and *Collins Cobuild English Dictionary*), internet, different sources were used in the project for the data collection. The materials were divided into two lists which includes 30 true cognates and 30 false cognates words (phonological. orthographical and semantic words) from 3oo words and have been done CVR and CVI   for being reliable and valid words .Due to the indo European language (Persian language) ,it was very difficult to find those words .These words have been taught to them and after a week, a test has been prepared about those words . With the help of T-test, the rates of memorizing true cognates and false cognates have been compared. The tested hypothesis has been as follows:
Hypothesis: There is a meaningful difference between the rate of memorizing   true cognate and false cognate words. Hypothesis 0 and 1 for the test of comparing means in two samples are:
H0 : The averages of two samples are equal. H 1: The averages of the two samples are not equal.
In which H1 is the mean of true cognates in memorizing test and H2 is the average of marks of false cognate words in memorization test. Results of holding comparing marks of memorizing true cognate and false cognate are as follow:

T-test for comparing averages of 2 dependent groups							variable
Test result	Sig	d.f	T	Mean	Number	Sample	
Meaningful difference	0.022	44	2.36	13.5	45	True cognates	Memorizing words
				8.25	45	False cognates	

According to the results of T-test for comparing the average marks of memorization in every 2 groups (true and false cognate words) can be said that there is a meaningful difference between the means. It means that between the rate of memorizing true and false cognate words, there is a meaningful difference so the average of marks on memorizing true cognate words is more than false cognate ones.

Discussion and Conclusion

The purpose of this study was to investigate whether instruction of the structural similarities between the L1 and L2 lexicon facilitates L2 vocabulary acquisition. The results showed that the students receiving such instruction obtained higher scores both on cognate target words than false cognates. Further analysis of the data revealed a positive correlation between L1 proficiency and the students' L2 vocabulary achievements. It was proposed that the method of teaching foreign language vocabulary through pointing out the similarities between the L1 and L2 lexical items is recommended because it may facilitate L2 vocabulary acquisition. Consistent with previous findings in the literature, and as expected, we found that individuals learned true cognates more quickly and accurately than false cognate words. The overlap of form and meaning across languages for the cognates facilitated lexical learning. Cognates were also considered as facilitating communication. Being aware of the true cognates or false friends, communication and learning are facilitated. As suggested by the current study, students´ problems with false friends could be greatly reduced if teachers paid more attention to a meaningful teaching of these lexical items. False cognates or words that are pronounced and/or spelled the same in the two languages but do not mean the same thing, were also accessed significantly slower than true cognate. It is

consistent with prior work demonstrating that cognate facilitation can be eliminated or reversed when there is not complete lexical overlap (Dijkstra, Grainger, & van Heuven, 1999; Schwartz, Kroll, & Diaz, 2007; Tokowicz & Kroll, 2007). As expected, we found a significant cognate effect in a single-word presentation lexical decision task in the nonnative language, showing that cognate words were processed faster and more accurately than false cognate words in line with previous literature (Dijkstra et al., 2010; Duñabeitia et al., 2010;   Midgley et al., 2011; Peeters et al., 2013; Kassaian and Esmae'li, 2011; Zare and Mobarakeh, 2013; among others).

Suggestions for Future Research

As mentioned and highlighted in this paper, there are very few studied on the study of false friends in English and Farsi language. Given the existence of rather big gaps in this area of literature, more research needs to be conducted by Iranian EFL researchers to shed further light on this interesting and revelatory area of research. EFL/ESL educators who have a high degree of familiarity with and proficiency in Farsi can also contribute to the enrichment of this area through research on it. Future research can focus not only on meaning-related, but also on etymological and pronunciational differences between false cognates of Farsi and English.

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