

*Economics and Administration, Tourism and Tourism Management, History, Culture, Religion, Psychology, Sociology, Fine Arts, Engineering, Architecture, Language, Literature, Educational Sciences, Pedagogy & Other Disciplines in Social Sciences*

**Vol:4, Issue:23**  
sssjournal.com

**pp.4685-4695**  
**ISSN:2587-1587**

**2018**  
sssjournal.info@gmail.com

Article Arrival Date (Makale Geliş Tarihi) 17/08/2018

The Published Rel. Date (Makale Yayın Kabul Tarihi) 28/10/2018

Published Date (Makale Yayın Tarihi) 29.10.2018

## **LEXICAL SELECTION AND TRANSLATION EFFECT: EXPERIMENTAL STUDY ON TURKISH SECOND LANGUAGE LEARNERS<sup>1</sup>**

**SÖZLÜK SEÇİMİ VE ÇEVİRİ ETKİSİ: TÜRK İKİNCİ DİL ÖĞRENCİLERİNDE DENEYSEL ÇALIŞMA**

**Dr.Öğretim Üyesi Fatma Demiray AKBULUT**

Bolu Abant İzzet Baysal Üniversitesi, Yabancı Diller Yüksekokulu, Mütercim Tercümanlık Bölümü, Bolu/Türkiye



**Article Type** : Review Article / İnceleme Makalesi

**Doi Number** : <http://dx.doi.org/10.26449/sss.922>

**Reference** : Demiray Akbulut, F. (2018). "Lexical Selection And Translation Effect: Experimental Study On Turkish Second Language Learners", International Social Sciences Studies Journal, 4(23): 4685-4695

### **ABSTRACT**

In this study, three experimental research using picture-word task have been reported to analyse and examine lexical selection and translation effect in Turkish second language learners of English. These languages (English, German and French) have been chosen according to their foreign language courses which they have taken in undergraduate level. The first participant group named objects in their L2 (English) depending on the equivalents or distractors of the objects (English equivalent, English distractor, Turkish equivalent, Turkish distractor), the second group named them in their L2 (English) and this time German equivalents and distractors are added to the picture-word task list, and the third group named them in L2 (English) again and this time French equivalents and distractors are added to the task list. The first group has been used as a control group to examine whether the third languages affect the lexical selection in a second language or vice versa. The findings of the study have been analysed. According to the findings, when second language learners of English named the objects in English when they were given with their L1 equivalents and distractors, they had more difficulties in naming them when they were given with English equivalents and distractors. Similarly, second language learners of English and German or English and French named the objects in L2 with a similar response time limit to the first group. However, their response time in naming objects in English is faster than the first group. Besides, their response time in naming objects in English with French or German equivalents and distractors is faster than their response time in naming objects with Turkish equivalents or distractors. The effects of third languages of learners appear to affect their lexical selection in a positive way and the facilitation effect is higher than the learners who use one second language only. Thus, there is a positive correlation between the languages to be used and reaching a higher and faster lexical selection in a new language.

**Key Words:** Lexical selection, translation effect, second language learning, inhibitory control model

### **ÖZ**

Bu çalışmada, İngilizce-ikinci dil öğrencilerindeki sözcük seçimi ve çeviri etkilerini incelemek ve analiz etmek amacıyla resim-sözcük görevi kullanılan üç deneysel araştırma yapılmaktadır. Bu diller (İngilizce, Almanca ve Fransızca), lisans düzeyinde öğrencilerin aldıkları yabancı dil kurslarına göre seçilmiştir. İlk katılımcı grubunun birinci dili Türkçe, ikinci dili İngilizce, ikinci katılımcı grubunun birinci dili Türkçe, ikinci dilleri İngilizce ve Almanca, son katılımcı grubunun ise birinci dili Türkçe, ikinci dilleri ise İngilizce ve Fransızcadır. Birinci grup, edinilen üçüncü dillerin (Almanca ve Fransızca), ikinci dilde sözcük seçimini etkileyip etkilediğini incelemek amacıyla kontrol grubu olarak kullanılmıştır. Çalışmanın sonunda araştırmanın bulguları analiz edilmiştir. Bulgulara göre, İngilizce ikinci dil öğrencileri, nesnel D1 eşdeğerleri ve çeldiricileri ile birlikte verildiğinde, İngilizce eşdeğerleri ve çeldiricileri ile birlikte verildiğinden daha yavaş bir sürede nesnelere İngilizce karşılıklarını vermişlerdir. Benzer şekilde, İngilizce ve Almanca ya da İngilizce ve Fransızca ikinci dil öğrencileri, nesnel İngilizce eşdeğerleri ve çeldiricileri ile birlikte verildiğinde nesnelere İngilizce karşılıklarını, nesnel Türkçe eşdeğer ya da çeldiricileri ile birlikte verildiğinden daha hızlı bir sürede vermişlerdir. Ancak, İngilizce nesnelere adlandırma yanıt süreleri ilk gruptan daha hızlıdır. Ayrıca, Fransızca veya Almanca eşdeğerleri ve çeldiricileri ile verilen nesnel İngilizceye çevrilirken, İngilizce eşdeğerleri ve çeldiricileri ile verildiğinden

<sup>1</sup> Bu makale çalışması, yazarın Bolu Abant İzzet Baysal Üniversitesi, Yabancı Diller Yüksekokulu bünyesinde yapılan 2016.15.01.1053 nolu "İkinci Dil Ediniminde Sözcüksel Depolama ve Süreç Analizi: Ruhbilimsel Deneyler ve Disiplinlerarası Bulgular" başlıklı Bilimsel Araştırma Projesi kapsamında gerçekleştirilmiştir.

daha hızlı sürede İngilizceye çevrilmişlerdir. Öğrencilerin üçüncü dillerinin etkileri, sözcük seçimini olumlu yönde etkiliyor gibi görünmektedir ve kolaylaştırıcı etki tek bir ikinci bir dil kullanan öğrencilerden daha yüksektir. Böylece, kullanılan diller ile yeni bir dilde daha yüksek ve daha hızlı sözcük seçimine ulaşma arasında pozitif bir ilişki vardır.

**Anahtar Sözcükler:** Sözcüksel seçim, çeviri etkisi, ikinci dil öğrenme, engelleyici kontrol modeli

## 1. INTRODUCTION

Attentional control and lexical selection in second language performance plays an important role in speech production. Duncon (2010) states that attentional control ability is critical to normal human functioning. In literature, bilingual language performance or lexical selection process deal with some theories such as inhibition control or concept selection model. These theories aim to find out the answer to the question of how bilingual reach the lexical access. On the other hand, some studies in literature suppose that individuals who learn English, German or French in countries such as Turkey where these languages are taught as a second language are late bilinguals. From this point of view, the aim of the present study is to illuminate properties of these lexical access mechanisms from the perspective of late bilinguals in Turkey. Bilingual speakers can usually choose from at least two words for the given concept, they can restrict their utterances to one language they have known only (Roelofs et al., 2011). At this point, "it is generally accepted that the conceptual and semantic representations aroused by a communicative intent, or by a stimulus object to name, will activate a number of related words (e.g., 'dog', 'hound', 'terrier', 'fox', 'cat', etc.), if to varying degrees" (Dylmana, & Barry, 2018, p.151). Finkbeiner, Gollan, and Caramazza (2006) defined the "hard problem" in lexicalization stating "the closer two lexical representations are in meaning the more difficult it will be to select the correct one" (p. 153). Thus, "bilingual (and multilingual) speakers will always have two (or more) words to name the same object and, more generally, to express the same concept in speech" (Dylmana, & Barry, 2018, p.151).

In terms of bilinguals; when they are asked to name any of their own words, the concept of choice in the mind and the development of competition and language selection do not occur in a very different and complex way from the monolinguals. It is one of the most important competences to discriminate between the two languages during the production of the discourse (Costa & Santesteban, 2004). So, what are the control arrangements that take place in the mind in the production of the dualistic discourse, and how do the bilinguals process these arrangements? The answer to this question can only be given after the bilingual speakers speak on one level and understand why they do not speak on the other. One of the aims of linguistic access to linguistic production is to describe the language selection and its place (Costa, 2005; La Heij, 2005). As stated in La Heij's (2005) study, there are two basic features of dual language production. Among these, the language which the bilingual intends to speak includes all features belonging to that language and its lexicology within the pre-discourse message process. So, as in the model proposed by Poulisse & Bongaerts (1994), the lexical access process can be called "complex access, easy choice". If the pre-discourse message contains all the necessary information, lexical choice may be an easy selection process depending on the regional appropriateness of the activation levels of the words (La Heij, 2005). Second, the choice of the word depends on the level of activity of lexical representations and is an easy operation associated with these levels.

In bilinguals, the choice of language depends on a number of factors which vary according to the experience of the bilinguals, the processing of language production, the degree of non-target language activity and the dominance of languages. (Kroll et al., 2006, 2008). For bilinguals, the distinctive point that distinguishes them from the language selection of the bilingual is the necessity of absolute choice of the word in language production. It is also stated that a language-specific selection of lexical access in production will not be possible. However, the choice of word occurs at the lemma level (La Heij, 2005). When a bilingual wants to select a language to name this object after encountering any object, the language key that this individual needs in his mind, that is, the language key he wants to produce, will be activated. According to many researchers, language exchange or mechanism change occurs at this point.

### 1.1. Lexical Selection and Inhibitory Control Model (Green, 1998)

The lexical access, which seems to be only a small part of the production of the bilingual language and the language selection process, is in fact the first step of language production. Levelt (1989) emphasizes that the cognitive process of lexical access is the lifeblood, indicating that it contains semantic memory, word presentation, selective attention, and other executive functions. For this reason, it is certain that we will have more knowledge of cognitive processing as long as we understand lexical access. Levelt (1989) underscores the need for lexical access to be complete and appropriate so that a communicative goal can be achieved by

describing a situation, answering questions, seeking clarity when asked for information. On the other hand, in cases of lexical access and language selection that are to be proven by the translation task, the speaker encodes the change between the two languages used in translation as the source language; this occurs before the production of L2 (Macizo & Bajo, 2006, Costa et al., 2000, 2003). As already mentioned, in the language production models there are widespread studies about two selection processes. Levelt (1989) collects this process under two main headings:

1. The choice of lexicalised conceptual information (concept selection)

2. The choice of the word to be produced by going out of the activated words (lexical choice)

As can be seen, lexical access in the electoral process is an important part of the production of bilingual tongues and serves as a bridge between the two worlds (La Heij, 2005). These two worlds have been described as the world of message before speech and the world of language production. This lexical access process in which the bridge is functioning can be understood more clearly during the naming of any object. For example, in planning the naming of an object depicted on a single language, the language key is presented at the same level as the conceptual features of the planned production (Hermans et al., 1998; Jescheniak & Schriefers, 1998; Kroll, Bobb & Wodniecka, 2006; Poulisse & Bongaerts, 1994). As Finkbeiner, Gollan & Caramazza (2006a) argues, if only the intention of speaking on a single level is not successful and sufficient in terms of sending activities to concepts, then some unfamiliar words may also enter into the competence of activation and it can create some difficulties in the phonological sense. These are language specific or, in other words, language selective word selection (Costa et al., 1999, Costa & Caramazza, 1999, Finkbeiner, Gollan & Caramazza, 2006, Finbeiner et al., 2006b, Neumann, 1986) and is a language non-specific or in other words a language non-selective word choice (Bloem, Boogard & La Heij 2004, Green 1998, La Heij 2005, Poulisse 1997 Poulisse & Bongaerts, 1994).

Some of the researchers who do not share the same view about the language selection mechanisms of the bilingual, argue that language choice takes place through non-language lexical access, ie language production as a result of a competition-for-selection. In short, all word candidates in the language to be produced and not produced will be active in the selection process (Hernandez et al., 2000, 2001; Kroll, Bobb & Wodniecka, 2006). In other words, lexical access is only possible by limiting or blocking the effectiveness of lexical knots in the non-target language. Costa & Santesteban (2004), by doing studies in this field, depending on the level of bilinguals may be the first researchers to argue that this situation may vary. Green (1998) supposed that inhibition in bilingual performance is reactive, so that, evoked in response to lexical activation. As a result, "the amount of inhibition that is applied depends on the magnitude of lexical activation in the non-target language" (Roelofs et al., 2011, p.1). In other words, they argued that bilinguals, who have a balanced or linguistic competence, can be influenced by the language-specific selection strategy, whereas bilinguals who have less competence may have to prevent the effectiveness of lexical knots in their L1. In this respect, Green (1986, 1998) proposed the Inhibitory Control Model in his work. The main theory of the model is that language choice is not related to conceptual level, but rather to lexical level control mechanisms. In this model, each lexical item contains a language key, which indicates the language of the words. Thus, in this research, Inhibitory Control Mechanism has been tested on second language learners, supposing that their language level is not as high as bilinguals.

## **2. EXPERIMENT 1: LEXICAL FACILITATION EFFECT FROM TRANSLATIONS IN TURKISH SECOND LANGUAGE LEARNERS OF ENGLISH**

### **2.1. Method**

#### **2.1.1. Participants**

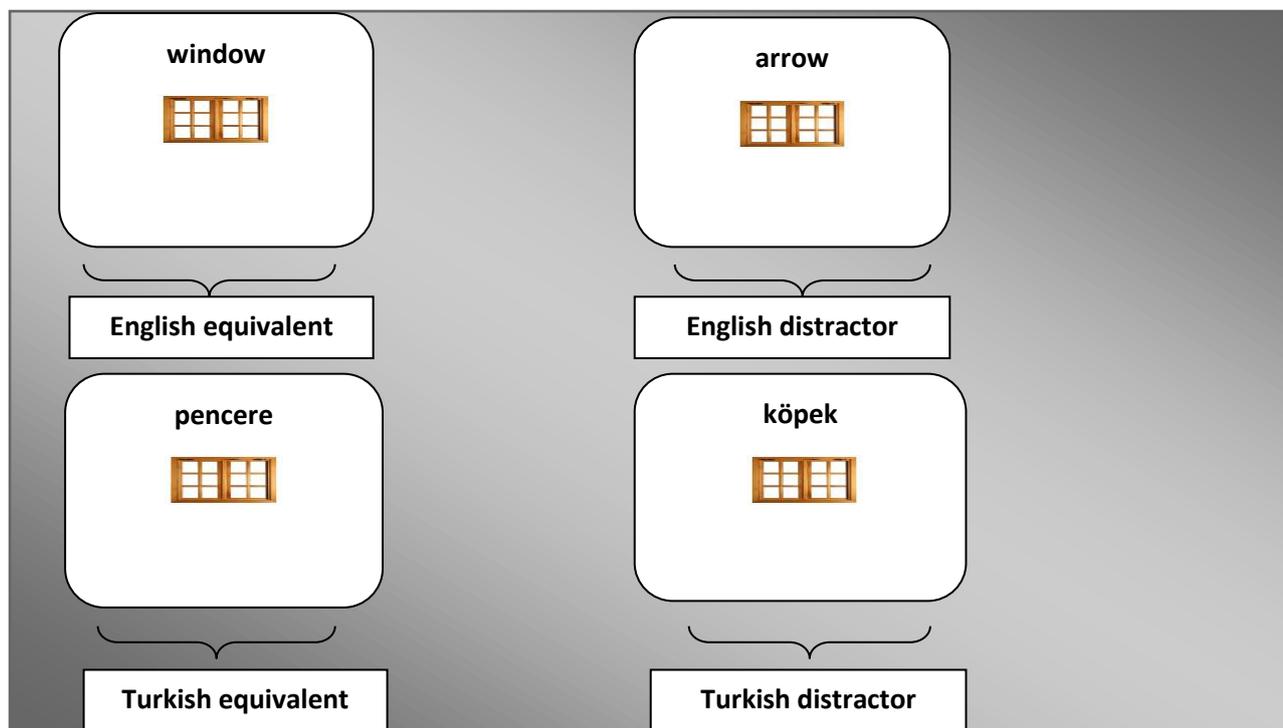
Twenty Turkish Second Language Learners of English (TSLLE) (12 women and 8 men) participated in this study. The mean age was 18.5 years (ranging from 17 to 20 years). All participants were from a state university in Turkey and had lived and studied in the same country. Their department was Translation and Interpreting department and had learned English for over at least 6 years at school. Their level of English was quite high and most of them (89%) indicated that they could understand and analysed in detail a wide range of long and complex text, and also a great percentage of them (92%) stated that they could interpret and easily understand all forms of written language. None of them had a vision problem and reported that they had no reading difficulties.

### 2.1.2. Stimulus Materials

Thirty-six pictures were selected from Snodgrass and Vanderwart (1980) and the Turkish-English cognates were omitted from the list. Each picture was paired with four distractor words: one is the picture's English name, one is its unrelated English control name, one is its Turkish name and one is its unrelated Turkish control name. All selected words were concrete names.

### 2.1.3. Procedure

In the first experiment, which was prepared by Superlab Bundle-D experiment software program, the students who were native speakers of Turkish and who had acquired the English as a second language were asked to give the English equivalents of the objects on the computer screen. The participants were tested individually on an HP computer and a microphone. A picture of an object was appeared in the centre of the computer screen with a word on it. Just above the objects shown on the screen, the English and Turkish equivalents and distractors of these objects are written in English and Turkish one by one. Thus, each object is seen four times with different vocabulary items (one is Turkish equivalents, one is English equivalent, one is Turkish distractor, and the last one is English distractor).



**Figure 1.** Sample of Experiment 1.

The participants were asked to ignore the words on the pictures and to name the English equivalents of the objects they have seen on the screen as quickly and accurately as possible. All in all, they received 144 experimental trials (36pictures x 4trials) and each of them was presented in a randomized order. The participants named the pictures which were presented simultaneously and the trials remained on the screen until the participants' responses were detected by the computer's built-in microphone connected to computer and SuperLab's voice key. After the participants responded to each trial, the researcher classified and analysed each response as being correct or incorrect. The equivalents and distractor words of the pictures were presented in lower-case Arial font size 32 and appeared on the pictures. The size of the pictures and words were between 8 x 5cm and 4 x 3cm. With this study, it will be tried to understand which of the two languages in the minds of the participants reached the glossary faster.

### 2.2. Results and Discussion

Incorrect, hesitant or failed responses were removed from the results. The responses which were below or above 250 ms. were also excluded and the results were analysed. 6.3 % of responses in total were not included in the statistical analysis.

When the results are examined, it is seen that, without distinction of distractors, the participants translated objects into English in a slower millisecond when the objects were given with their Turkish equivalents than given in English equivalents. If the objects were given with their Turkish equivalents, they were translated

into English more slowly than they were given with Turkish distractors (940ms.>912ms.). In other words, when the Turkish distractors of the objects are given, the participants ignored the irrelevant Turkish equivalent of the object in their minds because they were sure that the object was not equivalent, and gave the object's English equivalent faster (912ms.). However, when the objects were given together with their Turkish equivalents, the participants experienced a slowing process in their minds and the English equivalent of the object was given in a slower time (940ms.). On the other hand, when the words were given with English equivalents (880ms.), the objects were translated into English in a slower time than they were given with the English distractors (843ms.). Generally speaking, when respondents were given the English distractors of objects, they immediately ignored the word in their minds and responded correctly with English (also see Table 1.). Statistically, it was seen that, there is a significant difference between the answers of the participants to the different trials. The findings obtained from the answers of the participants for the first experiment showed that there were significant differences between their translation response times when the objects were given with Turkish or English equivalents (Turkish Equivalent: M=940,45, SD=40,0; English Equivalent: M= 880,00, SD=31,44) ((t(20)=5,90, p=0,00). Similarly, there was also a significant difference between their response times when the objects were given with Turkish or English distractors (Turkish distractor: M= 912,00, SD=31,64; English Distractor= 843,00, SD= 37,30) ((t(20)=6,29, p=0,00) (see also Table 2.)

Looking at the findings of the study, while the language selection and lexical access process are taking place, the participants spend less time in responding to the less dominant language by blocking their dominant languages. This result directs the study to the Inhibitory Control Model (Green, 1998). The researchers who advocate the ICM argue that language choice occurs through lexical access, which is not language-specific, ie language production is a result of a competition-for-selection. In short, all word candidates in the language to be produced and not produced will be active in the selection process (Hernandez et al., 2000, 2001; Kroll, Bobb & Wodniecka, 2006). In other words, lexical access is only possible by blocking the effectiveness of lexical knots in the non-target language. According to Lucht (2011), the more activated language would require stronger inhibition in order to ensure the weaker language selection. As a result of this, asymmetric switch cost (ASC) occurs in the studies of language change and falls under the scope of the research. The inexorable change overhead is a mixture of slower response times in the more dominant language and faster response times in the weaker language (Green, 1998; Meuter, 1994; Meuter & Allport, 1999).

**Table 1.** Response Times and Asymmetric Switch Cost for Turkish and English

1. Turkish Second Language Learners of English				
	Turkish		English	
	RT	%Error	RT	%Error
<b>Equivalent</b>	940	2.1	880	1.2
<b>Distractor</b>	912	1.7	843	1.3
<b>ASC</b>	-28		-37	

**Table 2.** Paired Sample Statistics for Experiment 1.

Paired Samples Statistics								
		Mean	N	Std. Deviation	Std. Error Mean	t	df	Sig. (2-tailed)
Pair 1	Eq_TR_1	940,4500	20	40,00720	8,94588	5,906	19	,000
	Eq_ENG_1	880,0000	20	31,44921	7,03226			
Pair 2	D_TR_1	912,0000	20	31,64441	7,07590	6,290	19	,000
	D_ENG_1	843,0000	20	37,30669	8,34203			

### 3. EXPERIMENT 2: LEXICAL FACILITATION EFFECT FROM TRANSLATIONS IN TURKISH SECOND LANGUAGE LEARNERS OF GERMAN

#### 3.1. Method

##### 3.1.1. Participants

Twelve Turkish second language learners of English and German (7 women and 5 men) participated in this experiment. The mean age was 18,4 (ranging from 18 to 20 years). All participants were from a state university in Turkey and studied in the same country similar to the ones who participated in the previous experiment. Their department was Translation and Interpreting department and had learned English for over at least 6 years and German for over 3 years as a second language at school and the university. Their level of

English was quite high and most of them (82%) indicated that they could understand and analysed in detail a wide range of long and complex text, and also a great percentage of them (94%) stated that they could interpret and easily understand all forms of written language in English. A great percentage of them also indicated that they could easily understand the complex text in German (78%) and interpret the written language easily (72%). None of them had a vision problem and reported that none of them had any reading difficulties.

### 3.1.2. Stimulus

Thirty-seven non-cognate pictures were selected from Snodgrass and Vanderwart (1980). Each picture was paired with six equivalents or distractors: the object's English equivalent, English distractor, Turkish equivalent, Turkish distractor, German equivalent and German distractor. All selected words were concrete names.

### 3.1.3. Procedure

The participants were tested individually on an HP computer using software program SuperLab like in the previous experiment. The instructions, stimulus presentation and the procedure were the same as in Experiment 1. However, this time, they received 222 experimental trials in a randomized order (37pictures x 6trials). They had a 10 minutes break between the trials to prevent them from overloading.

## 3.2. Results and Discussion

Incorrect, hesitant or failed responses were removed from the results. The responses which were below or above 250 ms. were also excluded and the results were analysed. 7.9 % of responses in total were not included in the statistical analysis.

In the second experiment, students from the Department of Translation and Interpretation, whose mother tongue is Turkish and who has acquired English as a second language as well as German, were asked to give the English equivalents of the objects in order on the computer screen. The participants were asked to ignore again the printed words on the objects. In this study, it was tried to determine the language in which the participants gave their answers more quickly. With this information, it will be tried to understand which of these three languages in the minds of the participants facilitates their lexical selection process in L2.

When the results are examined, it can be seen that without the distinction of distractors, the participants translated the objects into English faster when they were given with English or German equivalents or distractors than when they were given with Turkish equivalents or distractors. If the objects were given with their Turkish equivalents, they were translated into English in a slower time (910ms.) than they were given with Turkish distractors (901ms.). In other words, when the Turkish distractors of the objects were given, the participants ignored the irrelevant Turkish distractor on the object immediately in their minds because they were confident that the object was not equivalent, and gave the object's English equivalent faster. However, when the objects were given together with their Turkish equivalents, the participants experienced a slowing process in their minds and the English equivalent of the object was given in a slower time when they were given with English or German equivalents. On the other hand, when they were given with English equivalents, the objects were translated into English in a slower time (867ms.) than they were given with English distractors (831ms.). When the objects were given together with their German equivalents and distractors (811ms. and 801ms.), participants responded more quickly in English. When examined in general terms, the participants were named the objects in English more quickly when they were given with Turkish or English equivalents or distractors (see also Table 3.). When the findings were analysed statistically it was seen there were significant differences between the answers of the participants (see also Table 4.) As can be seen, the second experimental findings also show that the study supports the Inhibitory Control Model. In addition to the lexical knots in the target language, other semantically related lexical knots are also activated by the semantic string (Caramazza, 1997; De Bot, 1992; Levelt, 1989; Roelofs, 1992, 1998) and the selection of the target language will be more difficult and result in a longer response time if there are highly activated opponents. Other researchers who agree with the same subject (De Groot, 1992; Dijkstra & Van Heuven, 2002; Roelofs, 1992; Schwieter & Sunderman, 2008; Starreveld & La Heij, 1995) argue that the event is leaping from lexical to semantic and lexical phonological level. For this reason, they think that sending word to lexical knots will facilitate the choice of words.

**Table 3.** Response Times and Asymmetric Switch Cost for Turkish, English and German

2. Turkish Second Language Learners of English and German						
	Turkish		English		German	
	RT	%Error	RT	%Error	RT	%Error
<b>Equivalent</b>	910	1,7	867	1.2	811	1.1
<b>Distractor</b>	901	1.5	831	1.1	801	1.3
<b>ASC</b>	-9		17		-10	

**Table 4.** Paired Sample Statistics for Experiment 2.

Paired Samples Statistics								
		Mean	N	Std. Deviation	Std. Error Mean	t	df	Sig. (2-tailed)
Pair 1	Eq_TR_2	910,0000	12	50,20684	14,49347	3,133	11	,010
	Eq_ENG_2	867,0000	12	10,87951	3,14064			
Pair 2	Eq_TR_2	910,0000	12	50,20684	14,49347	7,647	11	,000
	Eq_GER_2	811,0000	12	17,92915	5,17570			
Pair 3	Eq_ENG_2	867,0000	12	10,87951	3,14064	9,478	11	,000
	Eq_GER_2	811,0000	12	17,92915	5,17570			
Pair 4	D_TR_2	901,0000	12	38,72279	11,17831	5,037	11	,000
	D_ENG_2	831,0000	12	28,35810	8,18628			
Pair 5	D_TR_2	901,0000	12	38,72279	11,17831	7,311	11	,000
	D_GER_2	801,0000	12	23,31601	6,73075			
Pair 6	D_ENG_2	831,0000	12	28,35810	8,18628	3,034	11	,011
	D_GER_2	801,0000	12	23,31601	6,73075			

#### 4. EXPERIMENT 3: LEXICAL FACILITATION EFFECT FROM TRANSLATIONS IN TURKISH SECOND LANGUAGE LEARNERS OF FRENCH

##### 4.1. Method

##### 4.1.1. Participants

Eighteen Turkish second language learners of English and French (11 women and 7 men) participated in this experiment. The mean age was 18,6 (ranging from 18 to 20 years). All participants were from a state university in Turkey and studied in the same country similar to the ones who participated in the previous experiments. Their department was Translation and Interpreting department and had learned English for over at least 6 years and French for over 3 years as a second language at school and the university. Their level of English was quite high and most of them (88%) indicated that they could understand and analysed in detail a wide range of long and complex text, and also a great percentage of them (90%) stated that they could interpret and easily understand all forms of written language in English. A great percentage of them also indicated that they could easily understand the complex text in French (71%) and interpret the written language easily (68%). None of them had a vision problem and reported that they had any reading difficulties.

##### 4.1.2. Stimulus

Thirty non-cognate pictures were selected from Snodgrass and Vanderwart (1980) again. Each picture was paired with six distractor words: the object's English equivalent, English distractor, Turkish equivalent, Turkish distractor, French equivalent and French distractor. All selected words were concrete names.

##### 4.1.3. Procedure

The participants were tested individually on an HP computer using software program SuperLab like in the previous experiments. The instructions, stimulus presentation and the procedure were the same as in Experiment 1 and 2. However, this time, they received 180 experimental trials in a randomized order (30pictures x 6trials). They had a 10 minutes break again between the trials to prevent them from overloading.

## 4.2. Results and Discussion

Incorrect, hesitant or failed responses were removed from the results. The responses which were below or above 250 ms. were also excluded and the results were analysed. 7.5 % of responses in total were not included in the statistical analysis.

In the last experiment, students from the Department of Translation and Interpreting, who acquired English as a second language as well as French were asked to name the objects on the computer screen in English. When the results are examined, it can be seen that without the distinction of distractors, the participants translated the objects into English in a slower millisecond time when the objects were given with Turkish equivalents or distractors than they were given with English and French equivalents and distractors. If the objects were given with their Turkish equivalents (892ms.), they were translated into English in a slower time than they were given in Turkish distractors (888ms.). In other words, when the Turkish distractors of the objects are given, the participants ignored the irrelevant Turkish distractors of the object in their minds because they were sure that the object was not equivalent, and gave the object's English equivalent faster. Similarly, in the case of distractors in all three languages, objects were translated into English more quickly than the corresponding languages. However, when the objects were given together with their Turkish, English or French equivalents (892ms., 840 ms., 807ms. respectively), the participants experienced a slowing process in their minds and the English equivalents of the objects were given in a slower time. When the objects were given together with their French equivalents (807ms.) and distractors (798ms.), the participants responded more quickly in English. In general, when the objects were given together with their French equivalents, the participants translated objects into English faster than they were given with English and Turkish equivalents or distractors (see Table 5.). Besides, when the statistic results were analysed, it was seen that there were a significant differences between the answers of the participants depending on the languages and their equivalents and distractors (see also Table 6.)

The findings of the last experiment overlap with the second experimental findings and support the Inhibitory Control Model. The words of the language to be produced in the production of the word, ie at the lexical selection stage, enable production to be realized by preventing or limiting the words in the non-target language. According to this model, the realization of the lexical selection can be achieved by suppressing the words in the language that will not be produced. It is stated that languages are competing for language selection during production and that there is an activation between known languages. Thus, the language that will not be produced during this activity will be blocked and lexical access will be provided. In other words, in order to be able to begin production in a language, the data of the language to be produced should remain active, but the data of the language that will not be produced should be prevented (Green, 1998). The power of inhibition is directly proportional to the activation power of languages.

**Table 5.** Response Times and Asymmetric Switch Cost for Turkish, English and French

3. Turkish Second Language Learners of English and French						
	Turkish		English		French	
	RT	%Error	RT	%Error	RT	%Error
<b>Equivalent</b>	892	1.4	840	1.1	807	1.3
<b>Distractor</b>	888	1.2	827	1.4	798	1.1
<b>ASC</b>	-4		-13		-9	

**Table 6.** Paired Sample Statistics for Experiment 3.

Paired Samples Statistics								
		Mean	N	Std. Deviation	Std. Error Mean	t	df	Sig. (2-tailed)
Pair 1	Eq_TR_3	892,0000	18	30,54023	7,19840	6,587	17	,000
	Eq_ENG_3	840,0000	18	37,07544	8,73876			
Pair 2	Eq_TR_3	892,0000	18	30,54023	7,19840	10,590	17	,000
	Eq_FRA_3	807,0000	18	25,01059	5,89505			
Pair 3	Eq_ENG_3	840,0000	18	37,07544	8,73876	3,855	17	,001
	Eq_FRA_3	807,0000	18	25,01059	5,89505			
Pair 4	D_TR_3	888,0000	18	43,34811	10,21725	4,748	17	,000
	D_ENG_3	827,0000	18	27,21375	6,41434			
Pair 5	D_TR_3	888,0000	18	43,34811	10,21725	6,965	17	,000

	D_FRA_3	798,0000	18	23,68916	5,58359			
Pair 6	D_ENG_3	827,0000	18	27,21375	6,41434	2,979	17	,008
	D_FRA_3	798,0000	18	23,68916	5,58359			

## 5. CONCLUSION

Under the headline ICM, Green (1998) argues that the intention to perform this action is part of the conceptual representation to produce a word in the target language and emphasizes that this conceptual representation must also be in contact with the relevant basics. On the other hand, Green (1998) argues that the blocking is reactive and believes that they can control both language strings. In the translation proposed by Green ICM and Kroll & Stewart (1994), the category expands the explanation of the limiting effect and, in the case of lexical access, presents a process as follows. First, the semantic string sends activation to the knots of both languages. Then, depending on the language keys, the other language that is not in production is suppressed. In the last step, the degree of suppression is set proportionally with the activation level, so that more activation is sent to the language that will not be produced, while less activation is sent to the target language to be generated. As already mentioned, due to the difference in the level of competence between L1 and L2, further inhibition is required for L1, which has a larger string. The opposite would be true for L2 with a narrower string and less blocking would go to L2 when L1 was in production. When the bilingual, in its most basic form, wants to speak only in one language, this language is the chosen language and the production of the other non-related language is prevented (Schwieter, 2007, p.16).

This study takes its place in the literature as a study advocating the Inhibitory Control Model. The biggest difference in this study is that the task of naming pictures is done in a single foreign language (English), although the words of the picture naming task are prepared with one native language and two different foreign language equivalents and distractors.

One reason for this difference is to examine whether the English learned as a second foreign language has the effect on a third language. Another reason is to see if a third language learned affects the second language positively or negatively or whether it facilitates translation between them. When the findings are examined, it can be seen that the order of activity or degree of frustration of the languages learned in turn varies according to the competencies of individuals. That is, participants respond more slowly when faced with more dominant language structures, and respond more quickly when they encounter structures in the less dominant language. This result leads us indirectly to the assumptions of the Inhibitory Control Model. In conclusion, although the studies are different, the findings of the study and the assumptions of the ICM overlap with each other. All in all, it will be more difficult to make changes to more oppressed languages, and in the case of unbalanced bilinguals, this will also apply to the non-dominant language. As a result, the choice of the language to be produced in the ICM will only be possible by blocking the language that will not be produced.

## REFERENCES

- Bloem, I., van den Boogaard, S., & La Heij, W. (2004). Semantic facilitation and semantic interference in language production: Further evidence for the conceptual selection model of lexical access. *Journal of Memory and Language*, 51, 307-323.
- Caramazza, A. (1997). How many levels of processing are there in lexical access? *Cognitive Neuropsychology*, 14(1), 177-208.
- Costa, A., & Caramazza, A. (1999). Is lexical selection in bilingual speech production language-specific? Further evidence from Spanish-English and English-Spanish bilinguals. *Bilingualism: Language and Cognition*, 2, 231-244.
- Costa, A. & Santesteban, M. (2004). Lexical access in bilingual speech production: Evidence from language switching in highly proficient bilinguals and L2 learners. *Journal of Memory and Language*, 50, 491-511.
- Costa, A., Miozzo, M., & Caramazza, A. (1999). Lexical selection in bilinguals: Do words in the bilinguals' two lexicons compete for selection? *Journal of Memory and Language*, 41, 365-397.
- Costa, A., Caramazza, A., & Sebastiaon-Galloes, N. (2000). The cognate facilitation effect: Implications for models of lexical access. *Journal of Experimental Psychology: Learning, Memory and Cognition*, 26, 1283-1296.

- Costa, A., Colomoe, A., Gomez, O., & Sebastiaon-Galloes, N. (2003). Another look at cross-language competition in bilingual speech production: Lexical and phonological factors. *Bilingualism: Language and Cognition*, 6, 167-179.
- Costa, A. (2005). Lexical access in bilingual production. In J. F. Kroll and A. M. B. de Groot (Eds.), *Handbook of bilingualism: Psycholinguistic approaches* ( pp.308-325). New York: Oxford.
- De Bot, K. (1992). A bilingual production model: Levelt's speaking model adapted. *Applied Linguistics*, 13, 1-24.
- De Groot, A. M. B. (1992). Bilingual lexical representation: A close look at conceptual representations. In R. Frost & L. Katz (Eds.), *Orthography, phonology, morphology, and meaning* (pp. 389-412). Amsterdam: Elsevier.
- Dijkstra, T., & Van Heuven, W. J. (2002). The architecture of the bilingual word recognition system: From identification to decision. *Bilingualism*, 5(3), 175-197.
- Dylman, A. S., & Barry, C. (2018). When having two names facilitates lexical selection: Similar results in the picture-word task from translation distractors in bilinguals and synonym distractors in monolinguals. *Cognition*, 171, 151-171.
- Finkbeiner, M., Almeida, J., Janssen, N. & Caramazza, A. (2006b). Lexical selection in bilingual speech production does not involve language suppression. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 32(5), 1075-1089.
- Finkbeiner, M., Gollân, T., & Caramazza, A. (2006a). Lexical access in bilingual speakers: What's the (hard) problem? *Bilingualism: Language and Cognition*, 9(2), 153-166.
- Green, D. W. (1986). Control, activation and resource. *Brain and Language*, 27, 210-223.
- Green, D. W. (1998). Mental control of the bilingual lexico-semantic system. *Bilingualism: Language and Cognition*, 1, 67-81.
- Hermans, D., Bongaerts, T., de Bot, K., & Schreuder, R. (1998). Producing words in a foreign language: Can speakers prevent interference from their first language? *Bilingualism: Language and Cognition*, 1, 213-230.
- Hernandez, A. E., Martinez, A., & Kohnert, K. (2000). In search of the language switch: An fMRI study of picture naming in Spanish-English bilinguals. *Brain and Language*, 73, 421-431.
- Hernandez, A. E., Dapretto, M., Mazziotta, J., & Bookheimer, S. (2001). Language switching and language representation in Spanish-English bilinguals: An fMRI study. *NeuroImage*, 14, 510-520.
- Jescheniak, J. D., & Schriefers, K. I. (1998). Discrete serial versus cascading processing in lexical access in speech production: Further evidence from the coactivation of near-synonyms. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 24, 1256-1274.
- Kroll, J. F., & Stewart, E. (1994). Category interference in translation and picture naming: Evidence for asymmetric connections between bilingual memory representations. *Journal of Memory and Language*, 33, 149-174.
- Kroll, J., Bobb, S., & Wodniecka, Z. (2006). Language selectivity is the exception, not the rule: Arguments against a fixed locus of language selection in bilingual speech. *Bilingualism: Language and Cognition*, 9(2), 119-135.
- Kroll, J.F., Bobb, S.C., Misra, M., & Guo, T. (2008). Language selection in bilingual speech: Evidence for inhibitory processes. *Acta Psychologica*, 128, 416-430.
- La Heij, W. (2005). Selection processes in monolingual and bilingual lexical access. In J. F. Kroll ve A. M. B. de Groot (Eds.), *Handbook of bilingualism: Psycholinguistic approaches* (289-307). New York: Oxford.
- Levelt, W. J. M. (1989). *Speaking: From intention to articulation*. Cambridge: MIT Press.
- Lucht, S.V. (2011). Exploring the role of work-related language-switching experience and different tasks for language-switch costs: An empirical study in the laboratory and within international companies. Published PhD Thesis.
- Macizo P., & Bajo M. T. (2006). Reading for repetition and reading for translation: do they involve the same processes? *Cognition* 99, 1-34.

- Meuter, R. F. I. (1994). Language switching in naming tasks. Unpublished PhD thesis, Oxford University.
- Meuter, R. F. I., & Allport, A. (1999). Bilingual language switching in naming: Asymmetrical costs of language selection. *Journal of Memory and Language*, 40, 25-40.
- Neumann, O. (1986). Facilitative and inhibitory effects of "semantic relatedness" (No.111/1986). University of Bielefeld, Bielefeld, Germany.
- Poullisse, N. (1997). Language production in bilinguals. A. M. B. de Groot ve J. F. Kroll (Eds.) in, *Tutorials in bilingualism: Psycholinguistic perspectives* (201-224). Mahwah, NJ: Erlbaum.
- Poullisse, N., & Bongaerts, T. (1994). First language use in second language production. *Applied Linguistics*, 15, 36-57.
- Roelofs, A., Piai, V., & Garrido Rodriguez, G. (2011). Attentional inhibition in bilingual naming performance: evidence from delta-plot analyses. *Frontiers in psychology*, 2, 184.
- Roelofs, A. (1992). A spreading-activation theory of lemma retrieval in speaking. *Cognition*, 42, 107-142.
- Roelofs, A. (1998). Lemma selection without inhibition of languages in bilingual speakers. *Bilingualism: Language and Cognition*, 1, 94-95.
- Schwieter, J. W., & Sunderman, G. (2008). Language switching in bilingual speech production: In search of the language-specific selection mechanism. *The Mental Lexicon*, 3(2), 214-238.
- Schwieter, J. (2007). A psycholinguistic investigation of language selectivity in bilingual speech production. Published PhD Thesis, 68(9), Florida University. (UMI No. 3282661).
- Snodgrass, J.G., & Vanderwart, M. (1980). A standardized set of 260 pictures: Norms for name agreement, image agreement, familiarity, and visual complexity. *Journal of Experimental Psychology: Human Learning and Memory*, 6, 174-215.
- Starreveld, P. A., & La Heij, W. (1995). Semantic interference, orthographic facilitation, and their interaction in naming tasks. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 21, 686-698.