

## TRANSLATION AS A LEARNING STRATEGY OF TURKISH EFL LEARNERS

Res. Assist. Gizem MUTLU  
Marmara University  
Istanbul- TURKEY

Res. Assist. Dilan BAYRAM  
Marmara University  
Istanbul- TURKEY

Instr. Buket DEMIRBÜKEN  
Marmara University  
Istanbul- TURKEY

### ABSTRACT

Translation has been suggested as a way of language teaching that addresses the need to clarify the inevitable role of translation in language learning. The present study attempted to have an understanding of the translation use by Turkish adult learners of English, specifically, in gaining English skills (i.e. reading, listening, writing, speaking) and in learning lexical items. The study also aimed to find out if the use of translation in these areas shows any variances according to proficiency levels of the learners. It was conducted with 118 students studying at three different proficiency levels in English preparatory school of a state university in Turkey. Data for the present study were collected in the fall term of the 2013-2014 academic year through the Inventory for Translation as a Learning Strategy (ILTS) (Liao, 2002). The findings were discussed in relation to the results of prior studies and practical suggestions on the use of translation were provided.

**Key Words:** Translation, learning strategy, language learning.

### INTRODUCTION

Translation in teaching and learning is the heritage of the Grammar-Translation Method (GTM) developed many centuries ago. In the GTM, students' native language is the medium of instruction and they are expected to gain translation skills good enough to be able to analyze the grammar rules of the target language made available to them through literary texts (Richards & Rogers, 2001). The failure of the GTM in providing learners with the ability to use the target language resulted in the emergence of the language teaching methods abandoning translation such as Direct Method, Audiolingual Method. Similarly, the Communicative Language Teaching (CLT), emphasizing the importance of communication as the aim of teaching, supports the idea that translation should not be included in foreign language teaching process. This approach to teaching has been integrated into curriculum in many countries including Turkey (1997 curriculum innovation) and in Turkey, in spite of this integration, many teachers still resort translation in their teaching environments (Kırkgöz, 2008). It is also recruited in English preparatory schools of higher education institutions in Turkey (Coskun, 2011).

In teaching perspective, many studies found that translation had positive effect on foreign language teaching (Hummel, 2010; Kim, 2011; Laufer & Girsoi, 2008; Moritomo & Loewen, 2007; Ramachandran & Rahim, 2004) and in learners' perspective, Naiman, Froanlich, Stern and Toedesco (1978, as cited in O'Malley & Chamot, 1990) described translation as one of the learning strategies employed by good language learners. Considering its role in teaching from both perspectives, translation use should be analyzed in detail, especially from learners' point of view to answer the question of why, how and for which students practitioners should give a room for translation in their teaching. Thus, the present study aims to get a deeper insight into translation as a learning strategy.

## LITERATURE REVIEW

Previous research having investigated the role of translation in second language learning approached translation use from two different perspectives. Some of them examined the effect of translation use by comparing it to other instructional methods (Hummel, 2010; Kim, 2011; Laufer & Girsoi, 2008; Moritomo & Loewen, 2007; Ramachandran & Rahim, 2004), while some others focused on second language (L2) learners' perceptions on first language (L1) incorporation in teaching of different language skills (Brooks-Lewis, 2009; Calis & Dikilitas, 2012; Karimian & Talebinejad, 2013; Liao, 2006).

### The effect of translation as a learning strategy

The use of translation as a learning strategy in teaching environments has been a research target for many studies to understand if it is beneficial compared to other teaching methods. One of them, comparing translation with a non-translation method, Ramachandran and Rahim (2004) investigated the effectiveness of translation in teaching vocabulary to 60 Malaysian elementary level ESL learners. The students were randomly assigned to one experimental and one control group. While the experimental group received translation method as the treatment, the control group received non-translation method. The findings of the study revealed that the translation method had a positive impact on learners' recall and retention of the meanings of the target words. In other words, the study evidently showed that translation method was an effective way to improve ESL learners' vocabulary learning ability.

In another comparison study, Moritomo and Loewen (2007) focused on the possible link between L2 vocabulary teaching and image-schema-based instruction. The study attempted to find out if there was a difference between image schema-based instruction (ISBI) and translation-based instruction (TBI) on acquisition of L2 polysemous words. A total of 58 Japanese high school learners of English in three different classes participated in the study. Two classes were used as treatment groups, one ISBI and the other receiving TBI. The remaining class was control group and they received no instruction on the target vocabulary items. In the treatment groups, 20 minutes were allocated for the instruction on the target words: the verb *break* and the preposition *over*. The effects of these two types of instruction were measured by learners' performance on a vocabulary acceptability judgment test and vocabulary production test that were used as pre-tests, post-tests and delayed post-tests. The analysis of the tests showed that ISBI and TBI outperformed the control group and the study revealed some evidence that explicit instruction resulted in learners' use of L2 polysemous words in a more accurate way.

Combining translation with another teaching point, Laufer and Girsoi (2008) focused on the translation effect on vocabulary learning. The researchers investigated the effect of explicit contrastive analysis and translation activities on the acquisition of ten single L2 words and ten collocations by 10<sup>th</sup> graders. They compared three high school groups of learners, 75 learners in total, having the same L1 and comparable L2 proficiency. One of the groups received meaning focused instruction (MFI), while one received non-contrastive form-focused instruction (FFI) and the other received contrastive analysis and translation (CAT). The MFI group was asked to perform content-oriented tasks which did not require the students to pay attention to the target items, the students in FFI group performed text-based vocabulary tasks in which they need to focus on the target items while the CAT group was assigned text-based translation tasks in which they did translations in both directions (L2-L1 and L1-L2). After completing the tasks and a week later, the three groups were tested on the retention of the target words by active recall and passive recall tests. The CAT group performed significantly better than the other two groups, MFI and FFI, on all the tests. The findings of this research suggest that there should be a place for contrastive analysis and translation activities in foreign language teaching.

### Translation as a learning strategy from learners' perspective

Translation has also been investigated in terms of learners' view on it. Focusing on the role of translation in a different language skill, Kim (2011) combined 20 students' previous learning experiences that they gained through GTM with her writing classes. She aimed to help her students see their own writing objectively in this way. Her students were Korean learners of English and placed in a low-level class after a placement test. They were asked to translate their writings into Korean and reflect what they felt and learnt as a result of this task.

The second task she asked her students to do was to translate one of their friends' writing and write reflections on that task accordingly. The analysis of the reflections revealed that the students benefited from these tasks in analyzing their writing more objectively and understood that grammatical accuracy was important for written communication. The study shows one clear and efficient way of incorporating students' L1 into language teaching.

Focusing on learners' perceptions on translation as a learning strategy, Liao (2006) aimed to explore the role of translation in learning English by collecting data from survey questionnaires and interviews. The results showed that in addition to their conflicting beliefs about translation, most of the 351 Taiwanese learners of English believed that translation played a positive role in their English learning experiences. The participants showed a medium to high level use of translation as a learning strategy. Their beliefs about translation were found to affect the translation strategies they chose to use in learning English. The researcher also came up with the result that the students having foreign language majors and high proficiency level reported negative beliefs about translation and less use of translation.

Along the same line, Brooks-Lewis (2009) conducted a classroom-based research in an English as a Foreign Language (EFL) course which included L1 use with university students who were native speakers of Spanish. After the completion of the course, the participants were asked for their perceptions about their experience in written form. Results demonstrated learners' positive response to the experience; they considered that the inclusion of their L1 was beneficial to their language learning experience. The reasons for the participants who were in favor of using L1 in their classrooms were explained:

"...being able to understand what is being said; being able to participate; making the learning meaningful and easier; dissolving the sense of rupture in knowledge, along with ideas of forgetting or replacing identity or the L1; promoting confidence and a sense of achievement; and inspiring language, learning, culture, and self-awareness." (Brook-Lewis, 2009:234)

Calis and Dikilitas (2012) analyzed elementary learners' reaction to the use of translation as a L2 learning practice. It was a classroom-based research lasted for seven weeks and conducted with 28 Turkish learners of English in a preparatory school. The participants were taught some grammatical subjects through the translation exercises. Following these exercises, the participants were asked for their perceptions of this learning experience through a questionnaire together with interview questions adapted from Liao (2002). Results showed that learners, in general, had positive ideas about the use of translation as a practice. Additionally, they believed that the use of translation helps them understand reading passages better and memorize target vocabulary. The students also reported that they themselves use bilingual dictionaries frequently and translate the text first to understand it.

Employing the same qualitative and quantitative data collection instruments, Karimian and Talebinejad (2013) investigated Iranian English learners' use of translation. In the quantitative part of the study, 170 Iranian EFL learners were asked to answer the Inventory for Translation as a Learning Strategy (ITLS) and in the qualitative part, 120 students were selected to respond the learners' interview guide (Liao, 2002). The data analysis revealed that language learners used translation in a wide variety of learning strategies to comprehend and use English effectively.

Review of literature on translation suggests that translation as a learning strategy has been suggested as an effective tool for the learners to use and also the learners have been reported to state that they hold positive beliefs about it. However, the use of translation as a learning strategy by learners having different language proficiency has not been much investigated. To fill in this gap in the literature, the research in the present study sets out to have a better understanding of translation as learning strategy used by Turkish EFL learners by addressing the following research questions:

1. What kinds of learning strategies involving translation do Turkish EFL learners use?
2. Does the use of translation by Turkish EFL learners to enhance language skills (reading, writing, listening and speaking) differ according to proficiency level?

3. Does the use of translation by Turkish EFL learners to learn English forms and structures (vocabulary, idiom, phrases, and grammar) differ according to proficiency level?

## METHODOLOGY

### Participants

The participants in the present study were 118 Turkish EFL learners studying in a preparatory school of a state university, which were chosen through convenient sampling. As shown in Table 1, the ages of 52 male and 66 female students range between 18 and 20 and they were in three proficiency classes, elementary (N=35), pre-intermediate (N=37) and intermediate (N=46). All three level students have both native and non-native teachers. They were taught English through the coursebooks presenting language skills in an integrated way.

Table 1: Demographic Information

Level	Number	Age (Mean)
Elementary	35 F: 16 M: 19	18
Pre-intermediate	37 F:19 M:18	18,31
Intermediate	46 F:32 M:14	19,19

Note: F: Female, M: Male

### Data Collection Methods

For the present study, the Inventory for Translation as a Learning Strategy (ITLS) (Liao, 2002) was administered to the participants. The inventory has 28 items that the participants responded on a Likert Scale of 1 to 5. It consists of five composite variables and two of them (Strategy 1 (S1) - strategies to enhance English skills such as reading, writing, listening and speaking, Strategy 2(S2) - strategies to learn English forms or structures in areas such as vocabulary, idioms, phrases and grammar) were focused separately in this study. The inventory was translated into Turkish to eliminate the language barrier. To ensure that translated version is understandable enough, two EFL teachers pursuing their MA degrees in ELT were asked to examine the translated version. Cronbach Alpha value of the translated version was found as .84, confirming its high reliability.

### Data Analysis Procedures

The data gathered through the ILTS were analyzed quantitatively using SPSS version 15.0. Descriptive statistics were computed to summarize the participants' responses to all items to explore the learning strategies involving translation Turkish EFL Learners use. Regarding the use of translation by Turkish EFL learners to enhance language skills, responses to S1 items (items 1, 2, 4, 5, 6, 7, 8, 9, 10, 11, 12, and 25) and to learn English forms and structures responses to S2 items (items 13, 14, 15 and 16) were examined through one way ANOVA.

## RESULTS

The present study was conducted to understand the use of translation as learning strategy by Turkish EFL students having different proficiency levels and to investigate whether translation use as a learning strategy differs based on different proficiency levels. The results are presented below under each research question.

### The 1<sup>st</sup> Research Question

The first research question of the study was as follows:

*RQ1: What kinds of learning strategies involving translation do Turkish EFL learners use?*

For this research question, the participants were asked to respond 28 items in the ITLS and the means and standard deviations were computed on the answers of the participants. As Table 2 illustrates, out of 28 items, 11 items had the highest means ( $M > 3.5$ ), which shows the tendencies of the participants about the use of translation as a learning strategy.

According to Table 2, Turkish EFL learners resort translation when they are reading an English text and writing in English. They reported that they organize their ideas in Turkish, and then translate them into English in a speaking task. To learn words, idioms and phrases in English, they use translation and get help from dictionaries. Additionally, the results of the responses of the participants showed that Turkish learners of English ask other people to do translation when they have problems in comprehension. They also stated that they are interested in translations of Turkish expressions in English.

Table 2: Means and Standard Deviations for ITLS items

Item Description	M	S.D
1. When reading an English text, I first translate it into Turkish in my mind to help me understand its meaning.	3.53	1.19
2. To write in English, I first brainstorm about the topic in Turkish.	4.05	.92
5. When I write in English, I first think in Turkish and then translate my ideas into English.	3.92	1.12
11. When speaking English, I first think of what I want to say in Turkish and then translate it into English.	3.78	1.08
13. I memorize new English vocabulary words by remembering their Turkish translation.	3.86	1.06
16. I learn English idioms and phrases by reading their Turkish translation.	3.58	1.14
17. I use English-Turkish dictionaries to help myself learn English.	4.01	1.00
18. I use Turkish-English dictionaries to help myself learn English.	4.00	1.07
19. I use an electronic translation machine to help myself learn English.	3.86	1.18
20. If I do not understand something in English, I will ask other people to translate it into Turkish for me.	3.62	1.13
21. I ask questions about how a Turkish expression can be translated into English.	3.52	1.08

### The 2<sup>nd</sup> Research Question

The second research question of the study was as follows:

*RQ2: Does the use of translation by Turkish EFL learners to enhance language skills (reading, writing, listening and speaking) differ according to proficiency level?*

Table : S1 items

Item Description
1. When reading an English text, I first translate it into Turkish in my mind to help me understand its meaning.
2. I read Turkish translations in the course reference book to help me better understand English articles in the textbook.
4. To write in English, I first brainstorm about the topic in Turkish.
5. When I write in English, I first think in Turkish and then translate my ideas into English.
6. I write Turkish outlines for my English compositions.
7. When I listen to English, I first translate the English utterances into Turkish to help me understand the meanings.
8. I read the Turkish translation scripts before I listen to instructional English tapes or CDs
9. When I watch English TV or movies, I use Turkish subtitles to check my comprehension.
10. I listen to or read Turkish news in order to understand English radio/TV news better.
11. When speaking English, I first think of what I want to say in Turkish and then translate it into English.
12. If I forget certain English words or expressions in the middle of conversation, I translate from Turkish into English to help me keep the conversation going.
25. I write Turkish translations in my English textbooks.

S1 items that are presented in Table 3 are defined by Liao (2002) as “strategies to enhance English skills such as reading, writing, listening and speaking”. To answer the second question, the total number of responses to S1 items, one of the composite variables of the ITLS, was examined through one way ANOVA.

Table 4: One way ANOVA results of S1 items

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1799.84	2	899.92	16.77	.000
Within Groups	6170.02	115	53.65		
Total	7969.87	117			

As demonstrated in Table 4, there was a significant difference among the proficiency levels of the Turkish adult students in terms of the learning strategies involving translation that they use to enhance language skills (reading, writing, listening and speaking) ( $p < .05$ ). To find out between which groups there was a significant difference, Scheffe was applied as a post-hoc technique and the result is given in Table 4.

Table 5: Scheffe results of S1 items

Groups (i)	Groups (j)	Mean Difference	Std. Error	p
elementary	pre-intermediate	-.24	1.73	.990
	Intermediate	7.88 (*)	1.61	.000
pre-intermediate	elementary	.24	1.73	.990
	Intermediate	8.13 (*)	1.64	.000
intermediate	elementary	-7.88 (*)	1.61	.000
	pre-intermediate	-8.13 (*)	1.64	.000

\* The mean difference is significant at the .01 level.

The statistically significant differences were found between the elementary students and the intermediate students in favour of elementary students at  $p < .05$  level and between the pre-intermediate students and the intermediate EFL students in favour of pre-intermediate students at  $p < .05$  level as shown in Table 5. The results showed no significant difference between other groups ( $p > .05$ ).

### The 3<sup>rd</sup> Research Question

The third research question of the study was as follows:

*RQ3: Does the use of translation by Turkish EFL learners to learn English forms and structures (vocabulary, idiom, phrases, and grammar) differ according to proficiency level?*

Table 6: S2 items

Item Description
13. I memorize new English vocabulary words by remembering their Turkish translation.
14. I learn English grammar through Turkish explanations of the English grammatical rules.
15. I use Turkish translation of grammatical terms such as parts of speech, tenses, and agreements to help me clarify the roles of the grammatical parts of English sentences.
16. I learn English idioms and phrases by reading their Turkish translation.

S2 items that are presented in Table 6 are defined by Liao (2002) as “strategies to learn English forms or structures in areas such as vocabulary, idioms, phrases, and grammar”. One way ANOVA were performed on the total number of the responses to S2 items, which is another composite variable in the ILTS, to answer the third question.

Table 7: One way ANOVA results of S2 items

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	172.72	2	86.36	8.35	.000
Within Groups	1189.10	115	10.34		
Total	1361.83	117			

As shown in Table 7, there was a significant difference among the proficiency levels of the Turkish EFL learners in terms of the use of translation to learn English forms and structures ( $p < .05$ ). As a post-hoc technique, Scheffe was applied to find out between which groups there was a significant difference and the result is given in Table 7.

Table 8: Scheffe results of S1 items

Groups (i)	Groups (j)	Mean Difference	Std. Error	p
elementary	pre-intermediate	2.23 (*)	.75	.015
	Intermediate	2.80 (*)	.71	.001
pre-intermediate	elementary	-2.23 (*)	.75	.015
	Intermediate	.57	.72	.732
intermediate	elementary	-2.80 (*)	.71	.001
	pre-intermediate	-.57	.72	.732

\* The mean difference is significant at the .05 level.

As Table 8 illustrates, the statistically significant differences occurred between the elementary students and the pre-intermediate students in favor of elementary students at  $p < .05$  level and also between the elementary students and the intermediate students in support of elementary students at  $p < .05$  level. The results showed no significant difference between other groups ( $p > .05$ ).

## DISCUSSION & CONCLUSION

The current study was conducted to explore the use of translation by Turkish EFL learners as a learning strategy and whether those learning strategies differ according to the proficiency levels of the learners, i.e. elementary, pre-intermediate, and intermediate. The results indicated that Turkish EFL learners use translation when they are reading an English text, which supports the arguments of Kern (1994) and Calis and Dikilitas (2012). It was also found out that the students use translation when writing in English, which contradicts with the findings of Kobayashi and Rinnert (1992) and Huang and Tzeng (2000) who stated that participating students mostly preferred directly the target language in their writing.

The participants reported that organize their ideas in Turkish before they translate them to use in an English speaking task. It was also found that they use dictionaries to learn words, idioms and phrases in English. They ask other people for help to translate English sentences they have difficulty with and also they are interested in translations of Turkish expressions into English. This reliance on translation may be because they do not feel comfortable with doing any language task in English, so they do them in their native language, which is easier for them to read, write, organize ideas, form sentences and then employ translation to achieve the outcome of the tasks. Another reason may be that they are not accustomed to doing the tasks directly in English and they still use the strategy that they used in their previous learning experiences. This previous learning experience may be a result of the heavily use of translation by their teachers in English classes.

The results of the second research question that seeks to find out if the learning strategies involving translation the Turkish EFL learners use to enhance English skills differ according to their proficiency levels showed that the elementary students employ translation more than the intermediate students and the pre-intermediate students use translation as a learning strategy more than the intermediate students. In other words, the students in the intermediate group use translation for English skills least compared to other proficiency levels,

which is consistent with previous studies (e.g. Liao, 2006). It can be stated depending on this result that the frequency of the use of translation for the acquisition of English skills decreases as the learners gain higher proficiency in English. This may be due to the reason that they get their independence from translation as they get more into the language and thus improve themselves in learning English skills. Also students having lower L2 proficiency level might make use of translation to compensate their lack of knowledge, which might intensify their confidence and feeling of relaxation (Husain, 1996).

The other research question of the study aims to understand whether the use of translation to learn English forms and structures differ according to proficiency levels of the Turkish learners of English and the results showed that the elementary students use translation to learn English words, phrases and structures more than both the pre-intermediate students and the intermediate students. It can be concluded from this result that as the most users of translation to learn English vocabulary, idiom, phrases and grammar, the elementary level EFL learners have a heavy reliance on translation which might be because they are not proficient enough to develop other strategies. This might be due to the potential of translation in encouraging “not only a swift solving of structurally complication in the second language but also a quick and effective comprehension” (Danchev, 1983, as cited in Karimian & Talebinejad, 2013: 608).

All these results suggest some pedagogical implications that the teachers need to take into account while they are organizing their lessons. Although most teachers have a tendency to reject the inclusion of native language into foreign language classes, the learners still rely on translation to improve themselves in language learning. Keeping this in mind, teachers should give a room for translation in teaching language skills, vocabulary items and sentence structures, especially for elementary learners, rather than totally ignoring the role of mother tongue.

Given the importance of the role of translation in language learning, the present study might be validated with the inclusion of more students from different proficiency levels and from different backgrounds as it was only conducted with 118 students in three different proficiency levels. Interviews with teachers and students may be effective in getting a deeper insight into the use of translation in learning English.

**IJONTE's Note:** This article was presented at 6<sup>th</sup> International Conference on New Trends in Education - ICONTE, 24-26 April, 2015, Antalya-Turkey and was selected for publication for Volume 6 Number 2 of IJONTE 2015 by IJONTE Scientific Committee.

#### BIODATA AND CONTACT ADDRESSES OF AUTHORS



**Gizem MUTLU** is currently working as a research assistant at English Language Teaching Department of Marmara University where she is doing her MA study. She graduated from Foreign Language Education Department of Middle Esat Technical University in 2011. She taught English to adult learners at the preparatory school of a private university for one and a half year. She also worked in the testing department of the same institution. Her research includes vocabulary teaching, collocational knowledge.

Gizem Mutlu  
Marmara University  
Göztepe Campus  
İstanbul,- TURKEY  
E. Mail: [mutlugzm@gmail.com](mailto:mutlugzm@gmail.com)





Dilan BAYRAM is currently working as a research assistant at the English Language Teaching Department of Marmara University, where she held her BA and MA degrees. Her professional interests include educational technology and critical thinking in foreign language education.

Dilan BAYRAM  
Marmara University, Goztepe Campus  
İstanbul- TURKEY  
E. Mail: [dilan.byrm@gmail.com](mailto:dilan.byrm@gmail.com)



Buket DEMIRBÜKEN an instructor and member of the Curriculum and Material Development Unit, School of Foreign Languages, Marmara University. She has a Bachelor's degree in ELT from Middle East Technical University. She is currently enrolled in a Master's Degree in ELT at Marmara University. Her research interests bilingualism and language education.

Buket DEMIRBÜKEN  
Marmara University, Göztepe Campus  
İstanbul- TURKEY  
E. Mail: [buk.dbuken@gmail.com](mailto:buk.dbuken@gmail.com)

## REFERENCES

Brooks-Lewis, K. A. (2009). Adult learners' perceptions of the incorporation of their L1 in foreign language teaching and learning. *Applied Linguistics*, 30(2), 216-235.

Calis, E., & Dikilitas, K. (2012). The use of translation in EFL classes as L2 learning practice. *Procedia-Behavioral and Social Sciences*, 46, 5079-5084.

Huang, S., & Tzeng, C.S. (2000). *Learning strategies used by high English proficiency learners in Taiwan*. Paper presented at the Ninth International Symposium on English teaching, Taipei, Taiwan.

Hummel, K. M. (2010). Translation and short-term L2 vocabulary retention: Hindrance or help. *Language Teaching Research*, 14(1), 61-74.

Husain, K. (1996). Translation in the history of language teaching. *International Journal of Translation*, 8(1-2), 111-120.

Karimian, Z., & Talebinejad, M. R. (2013). Students' use of translation as a learning strategy in an EFL classroom. *Journal of Language Teaching and Research*, 4(3). 605-610.

Kern, R. (1994). The role of mental translation in second language reading. *Studies in Second Language Acquisition*, 16, 441-61.

- Kim, E. (2011). Using translation exercises in the communicative EFL writing classroom. *ELT Journal*, 65(2), 154-160.
- Kirkgoz, Y. (2008). Curriculum innovation in Turkish primary education. *Asia-Pacific Journal of Teacher Education*, 36, 309-322.
- Kobayashi, H., & Rinnert, C. (1992). Effects of first language on second language writing: Translation versus Direct Composition. *Language Learning*, 42, 183-215.
- Laufer, B., & Girsai, N. (2008). Form focused instruction in second language learning: a case of contrastive analysis and translation. *Applied Linguistics*, 29(4), 694-716.
- Liao, P. (2002). *Taiwanese college students' beliefs about and strategy use of translation in English learning* (Unpublished doctoral dissertation). The University of Texas at Austin, Texas, USA.
- Liao, P. (2006). EFL learners' beliefs about and strategy use of translation in English learning. *RELC Journal*, 37(2), 191-215.
- Moritomo, S., & Loewen, S. (2007). A comparison of the effects of image-schema-based instruction and translation-based instruction on the acquisition of L2 polysemous words. *Language Teaching Research*, 11(3), 347-372.
- O'Malley, J. M., & Chamot, A. U. (1990). *Learning Strategies in Second Language Acquisition*. NY: Cambridge University Press.
- Ramachandran, S. D., & Rahim, H. A. (2004). Meaning recall and retention: The impact of translation method on elementary level learners' vocabulary learning. *RELC Journal*, 35(2), 161-178.
- Richards, J. C., & Rogers, T. S. (2001). *Approaches and methods in language teaching*. (2nd ed.) NY: Cambridge University Press.