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Pedagogical Suggestions: A Better Way of Encoding L1 Translation on the L1-L2 Mapping to Effectively Prime the Target L2 Sentence in Production*

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[Abstract]

Considering the entrenchment of current L1 use in many classrooms and the limitations of learning contexts in Korea, the present study aims to make practical pedagogical suggestions focusing on 'how' L1 translation should be used to effectively promote L2 production rather than its pros and cons of using L1 translation. A total of 54 English majors participated in the study and their L2 production with different types of L1 translation was compared. From the comparison of L2 sentence production between the learning group with the 'WfW L1 translation' (the contrived word-for-word translation) and the group with the 'CTIM L1 translation' (the translation close to the intended meaning in actual communication), the present study confirms the dramatic effect of L2 learning with the 'CTIM L1 translation' on L2 sentence production. This finding is promising since the effect was

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more beneficial in the test reflecting real English communication. If the use of the L1 translation in L2 learning is unavoidable in English classes in Korea, *faute de mieux*, the study suggests that 1) a sentence level approach rather than the L1-L2 word list may be more constructive for L2 production; 2) L1 translation on the L1-L2 mapping should be close to the intended meaning in real communication; and 3) if a test in class must be conducted in L1, the test should be designed in a way to maximize the priming of the target L2.

Key Words: L1 translation, L1-L2 mapping, L2 production, sentence level, word list

1. Introduction

English education in Korea has been in the direction toward promoting communication skills. Communicative competence has received increasing attention at a secondary level as stated in the 2015 Revised National English curriculum (Kim, S. 2017) as well as at a tertiary level (Chang 2009) including postgraduate programs (Shin 2015).

However, the gap between the need for promoting communication in English teaching and the actual implementation of communicative language teaching in class has long been pointed out (Choi, Y. 2007; Jeon 2009; Kim, Y. 2014). Apart from external causes such as policies and the educational environment, the internal factors that cause English learning to be inefficient for communication are mainly twofold.

First, the vocabulary learning of Korean L2 learners mainly relies on L1 translation equivalents. Learners attain semantic knowledge of an English word

through mapping L2 (e.g., *available*) and L1 translation equivalent (e.g., *이용 가능한*) rather than forming direct associations between the L2 word and its conceptual representations as described in the Revised Hierarchical Model (Kroll & Stewart 1994). As H. Kim (2008) pointed out, this approach of vocabulary learning has led Korean L2 learners to develop quantity rather than quality and the depth of vocabulary knowledge. Considering Richard's (1976) definition of word knowledge embracing not only semantic/syntactic knowledge but also "knowledge of the network of association" (83), the word knowledge simply copied from the L1 translation equivalent may not be sufficient for Korean L2 learners to produce English at a sentence level. More serious consequence of this method is that it does not promote productive vocabulary knowledge (Kwon 2009). This means, in most cases Korean L2 learners learn a new English word through its L1 translation equivalent to comprehend its meaning in reading or listening as in preparation for tests (e.g., College Scholastic Ability Test and TOEIC). Given the fact that the way vocabulary knowledge is learned can have an impact on the way the knowledge is retrieved in production (Nam 2015), this piecemeal word knowledge exclusively from L1 translation aimed at language reception may not be efficient for English production in real communication.

Second, Korean L2 learners' grammar tends to be learned deductively mainly through memorization of grammar rules. This information then is achieved and stored as metalinguistic knowledge outside the L2 system. Moreover, this approach of grammar learning tends to be reinforced by the reception-based test type. Not only was this washback effect of test types was found in grammar learning (Nam 2017), this was also found in vocabulary learning (Ko 2014). Due to the learning method and the test type, Korean L2 learners do not seem to have opportunities to apply their grammar knowledge to meaningful English production.

As discussed above regarding the vocabulary and grammar knowledge, L2 learning in Korea does not seem to effectively promote L2 production for communication. Problems may arise since it is not efficient to retrieve the grammar knowledge separately stored from the L2 lexicon as well as vocabulary knowledge limited to L1 translation. This can be observed in L2 production when Korean L2 learners try to assemble all the separately stored knowledge to create English sentences.

Many attempts have been sought to solve these problems. One example is that rather than learning discrete knowledge separately, learning lexical chunks which embrace both lexicon and grammar and range from collocations to any utterances that are widely and frequently used by English speakers can be regarded as a more fruitful bid (Ellis 2001; Hoey 2005; Lewis 2000). This present study aims to make practical suggestions to minimize the problems of English learning that rely on a L1-L2 word list. In doing so, considerations are taken of all the real-world constraints that English educators face (Choi, S. 2000; Kim, E. 2008) and of the voices of the realistic need for L1 translation in L2 learning in Korea (Song 2003) all the while attempting not to disrupt the status quo. That is first, in recognition of the problem of mapping L1-L2 translation equivalents at a word level, the L1-L2 mapping needs to be expanded to a sentence level, and second, since the encoded L1 translation in the learning process becomes the cue for the target L2 in production, the L1 translation should be carefully manipulated so that it can effectively prime the target L2 in the English production.

2. Literature Review

2.1 L1 in L2 Processing

A substantial body of research has been conducted to understand how L2 learners process L2 and whether/how L1 becomes involved in the process. The attempts have not been limited to a theoretical linguistic field. For example, researchers in neurolinguistics have utilized neuro-imaging techniques such as ERP (event-related potential) (Kim, S. 2017; Kotz & Elston-Güttler 2004; Oh 2012) to probe L2 learner's cognitive processing of words. Although the present study does not use the neuro-imaging or reaction time techniques, the cognitive paradigm concerning triggering or priming in mapping mechanism is employed to explain the L1 in L2 processing in this study.

Different from any conventional dictionary in which lexical entries are organized in alphabetical order, actual L2 processing works in a meaning-initiated way. To illustrate this in speaking, the concept or intended meaning that a speaker has in a given situation initiates the processing. Then the meaning triggers a word form that best fits the speaker's intention. One of the phenomena that may be observed as a failure of this selecting process is the tip-of-the tongue.

However, different from monolinguals, bilinguals' lexical retrieval is rather complex due to the additional resources from their L1 mental lexicon. Many researchers have suggested theoretical models to explain this complicated process in the past few decades. In Green's Inhibitory Control Model (1986, 1998), among many words activated by the meaning/concept, only the target L2 word is selected in production since other L1 candidates may be inhibited. More recently however, it has been found that bilinguals' both languages become simultaneously activated and

selected by competition (Finkbeiner, Gollan & Caramazza 2006; Kroll, Bobb & Wodniecka 2006). Moreover, the word which is more likely to be selected in production is the one that receives additional activation from bilinguals' L1 translation equivalent as well as from its related L2 words (Costa et al. 2000).

Regarding L1 activation in L2 processing, difficulties may arise in the case of L1-dominant Korean L2 learners. Since their L2 network is not fully developed, the strong L1 may be primarily used as a cue for priming in L2 processing (Nam 2011).

2.2 L1 Priming L2

Concerning L1 involvement in L2 processing, many researchers have been interested in priming effects. Priming effects in the direction of L1 to L2 (forward priming) have been found not only between the languages with orthographic similarity (e.g., Dutch-English, Spanish-English) but also with different scripts (e.g., Chinese-English, Korean-English) (Jiang & Forster 2001; Kim & Davis 2003; Voga & Grainger 2007; Lupker et al. 2015). Finkbeiner et al. (2004) explains this L1-L2 priming effect in his Sense Model which stipulates that L1 primes may be so strong that they can activate all the related semantic senses and thus facilitate L2 processing. On the other hand, the evidence of backward translation priming in the direction of L2 to L1 has also been found in Korean-English bilinguals' word recognition (Lee, Jang & Choi 2018). Regarding the direction of priming, the priming effects can also be bidirectional as found in both L1-L2 and L2-L1 direction in Schoonbaert et al. (2009) testing Dutch-English bilinguals.

Some explanations are needed to account for the inconsistent results of the previous research. First, methodological differences regarding the stimulus onset asynchrony (SOA) in the studies may have led to different results. More importantly,

the way the L1 is involved in L2 encoding in a learning process has not been included in the design of the previous research. As Nam (2018a) suggests, the way L2 word is learned strongly reflects the way it is processed in L2 production and thus in the absence of L1 translation in L2 learning the L1 effect may not emerge. Consequently, in research concerning L1 priming, it is important to note that the result of L1 priming in L2 production may be influenced by the way L1 translation is used in L2 encoding in the learning process.

2.3 Effective L1–L2 Mapping for Priming the Target L2

As researchers (Jiang 2002; Kroll & Linck 2007) suggest, it cannot be denied that L1 plays a major role as a resource for meaning in L2 learning. According to Kroll and Stewart's (1994) Revised Hierarchical Model, a lexical link between L1 and L2 is utilized in L2 processing more dominantly for low proficient L2 learners who have not developed the direct link between the L2 and the concept. The trace of L1 in L2 processing has been found from same L1 translation effects (e.g., Home-House-집) (Jiang 2002; Nam 2018b; Park 2011). This confirms that the L1 on the L1-L2 mapping is used as the cue for triggering the L2.

It is therefore of importance that L2 knowledge be organized in a way that can maximize L2 processing (Libben 2006; Libben & Jarema 2004; Tremblay, Derwing, Libben & Westbury 2011). For this, consistency in the L1-L2 mapping seems important. For example, Joyce (2018) found that the consistency of the language used in the learning and the testing session in their experiment facilitated language processing. In addition to the language itself, the consistency should be considered for the L1 encoded on L1-L2 mapping. This is even more salient knowing how L1 is used in L2 learning may determine L1 priming in L2 processing, and therefore the

L1 encoded on the L1-L2 mapping during a learning process should be consistent with the one that is most likely used as a cue for triggering the target L2 in actual production.

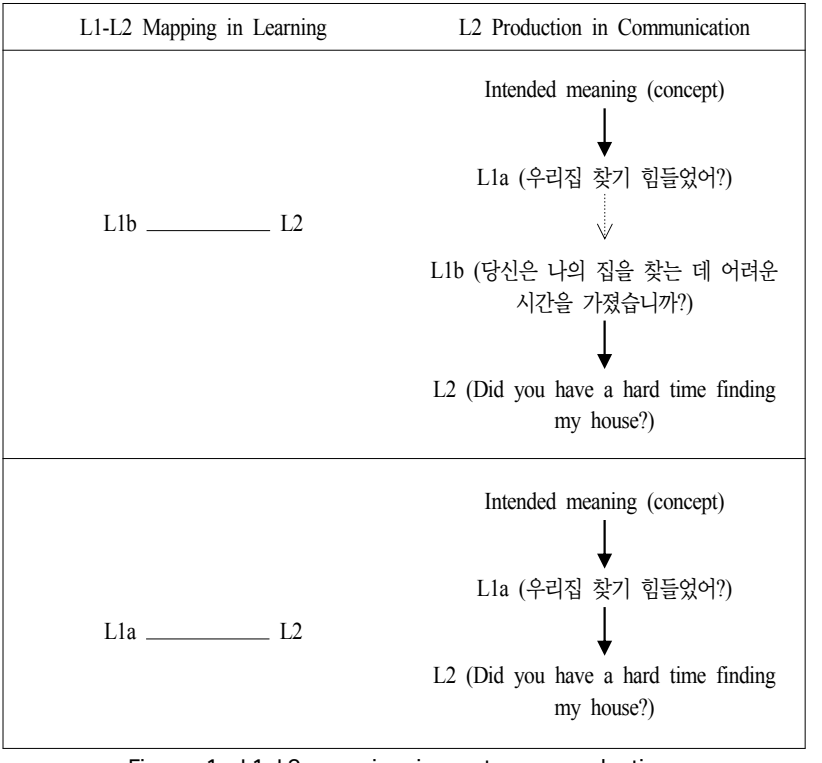

Figure 1. L1-L2 mapping in sentence production

As illustrated in Figure 1, suppose an L2 learner utilizes word-for-word L1 translation (L1b: "당신은 나의 집을 찾는 데 어려운 시간을 가졌습니까?") to encode L2 meaning of a sentence (L2: "Did you have a hard time finding my house?") in a learning process. When he/she encounters a situation where the target L2 sentence is needed, his/her intended meaning that is closer to L1 translation (L1a: "우리집 찾

기 힘들었어?) is more likely to come to the learner's mind. The problem may occur because the L1b encoded on the mapping through learning is so different from his/her intended meaning that it is not effective to promptly prime the target L2 sentence in production.

2.4 Previous Studies vs. the Present Study

Previous research concerning pedagogical implications of use of L1 translation in L2 learning has mainly investigated either its positive or negative effect. For example, J. Lee (2016) found the negative L1 effect from Korean EFL learners, while positive effects have also been found in a considerable amount of research (Goundareva 2011; Liu 2008; Masrai & Milton 2015; Mart 2013). From findings of recent studies in Korea (Joyce 2018; Kim, H. & Choi, U. 2017), it does not seem realistic to exclude the aid of L1 translations in L2 learning since the L2 definitions alone may not be sufficient for Korean EFL learners with limited linguistic resources. Considering the entrenchment of current L1 use in many classrooms and the limitations of learning contexts in Korea, the present study therefore aims to make practical pedagogical suggestions focusing on 'how' L1 translation should be used to effectively promote L2 production rather than its pros and cons.

Previous research has been limited to word level (Finkbeiner et al. 2004; Jiang 2002; Lee et al. 2018). Even in an alleged sentence-level test, a 'filling a word in a blank in a sentence' type has often been deployed (Lee, J. 2009). However, the present study examines a sentence level of L1 and L2. Considering that Korean L2 learners' L2 learning does not promote L2 production (Kim, J. 2011; Lee & Kim 2005; Ryoo 2009), this study seeks to find effective ways of learning L2 at a sentence level to promote L2 production. In addition, the sentence-level learning

paradigm used in this study may also facilitate attaining target L2 syntactic structures, which can also promote L2 production.

Previous research has not mainly been concerned with the way L1 translation should be presented in L2 learning. The present study in contrast gives careful consideration to the way L1 translation can effectively function as a cue for triggering the target L2 in production. Therefore, keeping in mind Kuzenko's (2008) three aspects of translation (functional, structural, and semantic), the L1 translations are manipulated to be close to the intended meaning (hereafter 'CTIM L1 translation') rather than the contrived word-for-word translation (hereafter 'WfW L1 translation') so that the L1 can be the ones that most likely come to the learners' mind in actual communication. In addition, considering the washback effect of test types (Nam 2017), the test to examine the effect of L1 translation type should reflect actual L2 communication. As such, the research questions of the present study are as follows.

1. Which type of translation do Korean L2 learners prefer in L2 sentence learning ('CTIM L1 translation' vs. 'WfW L1 translation')?
2. Is there any difference in the effect of L1 translation types in different test types (conventional vs. reflecting real L2 communication)?
3. In comparison with different learning groups (using 'CTIM L1 translation' vs. 'WfW L1 translation'), which type of L1 translation in L2 learning is more effective for L2 sentence production?

3. Method

3.1 Participants

Korean EFL learners majoring in English at a local university participated in the study. They were freshmen who were taking an English course "Basic Grammar." After excluding the students who did not obtain TOEIC (practice) test scores, a total of 54 English learners were selected for the study. From the mean of TOEIC (practice) test scores (585), the participants' English proficiency was considered to be at an intermediate level based on ETS Score Descriptors.

3.2 Materials and Procedure

The test materials consist of 40 English sentences which were collected from the textbook (*Oxford Living Grammar*) of the class that the participants were taking. Twenty English sentences were assigned to the 'CTIM L1 translation' type (the L1 translation close to the intended meaning) and the other half was assigned to the 'WfW L1 translation' type (the contrived word-for-word translation). In order to maintain the level of complexity of the structure of the test materials, the same grammar structures were used evenly for each L1 translation type. The grammar features used in the test were verb tenses, wh-questions, model verbs, infinitives and gerunds, and conditionals. In addition, a time constraint of 30 seconds for each question was given to the participants. This was adjusted based on the preliminary practice test with another 10 students in the same course who did not participate in the experiment. The study has acceptable internal consistency of the scales (40 items) as shown in Table 1.

Table 1. Reliability statistics

N=40	Test 1	Test 2	Test 3
Cronbach alpha	.887	.936	.907

Three tests were conducted in the study. The first test aimed to identify the L1 translation type that the participants inclined to use as a cue for L2 production in the absence of any learning treatment. In the test, the participants were asked to produce 40 target English sentences with 20 cues of the 'CTIM L1 translation' type (e.g., "우리집 찾기 힘들었어?) and 20 cues of the 'WfW L1 translation' type (e.g., "그 영화는 얼마나 오래 지속되나요?").

The second test was administered immediately after the answer sheets of the first test were submitted to prevent any undesirable reference to the first test. In order to reflect actual English communication situations, contextual information in English was provided as stimuli in this test as in the following example.

A: How can I make a reservation?
B: _____
A: Then, can you tell me the website address?

Before the third test which aimed to investigate the more effective L1 translation type as a cue for L2 production, two different types of learning treatment were assigned randomly to the participants. Half of the participants were asked to study new target English sentences with 'CTIM L1 translation' while the other half learned with 'WfW L1 translation.' After one-week-long learning treatment (two sessions), both groups of the participants were asked to produce the target English sentences in a test reflecting English communication.

3.3. Data Collection and Analysis

First, the participants' L2 production in the tests were manually scored and organized in Microsoft Excel 2016. Minor spelling errors were not counted to be consequential. Second, to compare the participants' L2 production with two different L1 cues ('CTIM L1 translation' vs. 'WfW L1 translation'), an independent t-test (SPSS 25) was used. Third, a paired t-test was used to see any changes of their L2 production from the test with the L1 cues to the test reflecting actual English communication. This was designed to investigate the more effective L1 translation type in actual communication. Fourth, an independent t-test was used to compare the effects of L2 learning with the two types of L1 translation ('CTIM L1 translation' vs. 'WfW L1 translation').

4. Results

The first test was conducted in L1. However, the learners' L2 sentence production was primed by two different types of L1 cues.

Table 2. L2 production with different types of L1 cues

	N	WfW L1 translation		CTIM L1 translation		t	p	d
		M	SD	M	SD			
L2 production with different L1 cues	54	16.64	2.76	14.73	3.56	3.12	.00	.08

$p<.05$, d=Cohen's d

In Table 2, an independent t-test was conducted to compare their L2 production with two different L1 cues. There was a significant difference between the 'WfW L1 translation' type of L1 cue (M=16.64, SD=2.76) and the 'CTIM L1 translation' type of L1 cue [M=14.73, SD=3.56; t(106)= 3.12, p=.00]. In addition, the magnitude of the differences in the means was moderate (eta squared=.08). This suggests that in the absence of any learning treatment, the Korean L2 learners' L2 production responds more to the 'WfW L1 translation' type of L1 cue. This phenomenon further suggests their tendency to rely on the 'WfW L1 translation' for their L2 learning.

Table 3. Comparison of L2 production in two different test types

	N	Questions assigned to 'WfW L1 translation' type		Questions assigned to 'CTIM L1 translation' type		t	p	d
		M	SD	M	SD			
L2 production in the conventional L1 test	54	16.64	2.76	14.73	3.56	3.12	.00	.08
L2 production in the L2 test reflecting L2 communication	54	14.28	4.01	14.42	5.15	4.17	.66	.25

$p<.05$, d=Cohen's d

Table 3 shows the change of L2 production in the test with L1 cues of L1 translations to the test reflecting actual L2 communication. The L2 production primed by the 'WfW L1 translation' type of L1 cue in the previous test (M=16.64, SD=2.76) significantly decreased in the second test, reflecting actual L2 communication [M=14.28, SD=4.01, t(53)=4.17, p=.00]. The magnitude of the differences in the means was large (eta squared=.25). This suggests that the L2 learned through the 'WfW L1 translation' may not be successfully retrieved in real situations where the 'WfW L1 translation' is not provided as a cue for triggering the target L2. However,

the L2 production primed by the 'CTIM L1 translation' type of L1 cue in the previous test (M=14.73, SD=3.56) did not significantly decrease in the second test which was close to real communication [M=14.42, SD=5.15, t(53)=.45, p>.05]. This further suggests that in real communication in English, L2 knowledge encoded with the 'CTIM L1 translation' type rather than the 'WfW L1 translation' may be more useful.

Table 4. Comparison of L2 production with different learning treatments

	N	WfW L1 translation		CTIM L1 translation		t	p	d
		M	SD	M	SD			
L2 production with two different learning types	54	27.07	5.84	37.30	2.05	-8.58	.00	.58

p<.05, *d*=Cohen's *d*

In Table 4, an independent t-test was conducted to compare the effect of different learning treatments on L2 production in a test reflecting real English communication. There was a significant difference of L2 production between the two learning groups with two different types of L1 cues, the 'WfW L1 translation' type of L1 cue (M=27.07, SD=5.84) and the 'CTIM L1 translation' type of L1 cue [M=37.30, SD=2.05; t(52)=-8.58, p=.00]. The magnitude of the differences in the means was large (eta squared=.58). This suggests that L2 encoded with 'CTIM L1 translation' in learning process rather than with 'WfW L1 translation' may be more effective in L2 production in real communication.

5. Discussion

5.1 Korean L2 Learners' Reliance on L2 Learning through Direct Word-for-Word L1 Translation

The findings of the present study suggest that Korean L2 leaners incline to use 'WfW L1 translation' (M=16.64, SD=2.76) rather than 'CTIM L1 translation' (M=14.73, SD=3.56) as a cue for triggering the target L2 sentence in production.

In application of the Revised Hierarchical Model (Kroll & Stewart 1994) to sentence processing, Korean L2 learners who have not built a direct link between the concept (intended meaning) and the target L2 sentence tend to rely on the link between the L1 and the L2. That is, different from native speakers of English, Korean L2 learners' L2 network is not fully developed and lacks L2 resources that are required for L2 sentence production. Thus, two cases can be presumed in the L2 sentence production. First, if the target L2 sentence is not learned, the link between the L1 and the L2 at a sentence level is not formed yet. Learners in this case fumble an attempt to create a new English sentence with their limited L2 knowledge. Second, if the link is already formed through their learning and the frequent use of the L1-L2 link through multiple practices that intensifies the strength of the association (the Bilingual Interactive Activation plus model in Dijkstra & Van Heuven 2002), the L1 translation on the link can be used as a cue for triggering the target L2 sentence.

However, the problem may arise in the selection of the type of L1 translation on the link as described in Figure 1. For example, if a Korean L2 learner encounters a situation in which the English sentence "Did you have a hard time finding my house?" is needed, the 'CTIM L1 translation' (우리집 찾기 힘들었어?) is more likely

to appear in his/her mind. If instead the 'WfW L1 translation' (당신은 나의 집을 찾는데 어려운 시간을 가졌나요?") is encoded on the link, it may not promptly trigger the target L2 sentence. The evidence of the ineffectiveness of the 'WfW L1 translation' as a cue in L2 sentence production has been found in the study, which supports this speculation. Furthermore, the L2 production with the 'WfW L1 translation' type of L1 cue which was successful in the first test with the 'WfW L1 translation' type of L1 primes (M=16.64, SD=2.76) significantly decreased in the second test reflecting actual communication (M=14.28, SD=4.01). To illustrate this, in the second test where the situational information instead of 'WfW L1 translation' was provided just like in real communication, 'CTIM L1 translation' close to the intended meaning in the situation may have come to mind. Therefore the 'WfW L1 translation' may not have been useful anymore. It is interesting to note that in contrast with the decreased L2 production regarding the 'WfW L1 translation' in the second test, no significant decrease was observed in the L2 production regarding the 'CTIM L1 translation.'

Regrettably, the present study reveals that the 'WfW L1 translation' on which Korean L2 learners rely may not be effective for L2 sentence production in real communication. Therefore it calls for discussion regarding the effective L1 translation type in L2 learning in the following section.

5.2 The Effective Way of L1 Use to Promote L2 Sentence Production

Discussions in previous research have focused on the pros and cons of the need for L1 translation in L2 learning (e.g., Song 2003) or the need for communicative language teaching in Korea (e.g., Choi, S. 2000; Choi, Y. 2007; Jeon 2009; Kim, Y.

2014). However, any compromise embracing the two major issues in Korea has not been attained. Considering all the limitations in the EFL classes in Korea that have been pointed out in the previous research, if it is not realistically implementable to teach English without L1 translation, it is critical to find a better way of using L1 translation to effectively promote Korean English learners' L2 sentence production for successful communication in English.

From the comparison of L2 sentence production between the learning group with the 'WfW L1 translation' (M=27.07, SD=5.84) and the group with the 'CTIM L1 translation' (M=37.30, SD=2.05), the present study confirms the dramatic effect of L2 learning with the 'CTIM L1 translation' on L2 sentence production. This finding is more promising since the effect was found in the test reflecting real English communication.

Furthermore, since the mapping of L1 to L2 in learning is at a sentence level as suggested in the present study, it may ease the concerns regarding the limitations of the L1-L2 word list type of L2 learning (e.g., Kim, H. 2008). In addition, the sentence level of mapping may also be helpful to Korean L2 learners who often struggle in L2 production to retrieve their vocabulary and grammar knowledge from the separate storages in their mental lexicon (e.g., Lewis 2000). Most importantly, since the L1 translation encoded on the mapping is close to the learner's intended meaning in order to readily trigger the target L2 sentence, it may be beneficial in actual communication.

6. Conclusion and Implications

To conclude, the findings of the study suggest the effect of 'CTIM L1 translation' encoded in learning on triggering the target L2 in production. If the use of the L1 translation in L2 learning is unavoidable in English class in Korea, *faute de mieux*, it should be carefully implemented as follows. First, a sentence level approach rather than the L1-L2 word list may be more constructive for L2 production. Second, L1 translation on the mapping in learning should be close to the one that is likely to come to the minds of Korean L2 learners in real communication. Third, if a test in class must be conducted in L1, the test should be designed in a way to maximize the priming of the target L2.

Future research may need to take a 'customized' approach to address the limitations of the present study regarding the use of the same L1 translations for all the participants. This means, since the L1 that comes to minds may vary amongst individual learners in real communication, the methodology using individually tailored L1 may yield refined results in future research.

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국문초록

목표영어문장 발화를 촉진하는 효과적 모국어-영어 인코딩 방안

남 현 정 (동아대)

현재 영어교육 현장에서 모국어 사용이 빈번하고, 영어몰입교육의 정책적, 현실적 한계를 인식함에 따라 본 연구는 실제 영어교육 현장에서 적용할 수 있는 현실적인 대안을 제안하고자한다. 따라서 기존연구가 모국어 사용의 찬반에 중점을 두어왔다면, 본 연구는 영어교육현장에서 모국어 사용이 불가피할 때 모국어사용을 어떻게 해야 영어학습자들의 영어생산에 효과적인가에 초점을 두었다. 이를 위해 54명의 영어전공자가 연구에 참여하였다. 본 연구 실험에서는 두 가지 번역 유형에 따른 영어문장 생성효과를 비교하였다. 즉, 단어 하나하나를 그대로 번역한 'WfW L1 translation'과 학생들이 실제 상황에서 떠올릴만한 모국어형태의 'CTIM L1 translation'의 효과를 비교하였다. 본 연구는 실험을 통하여 'CTIM L1 translation' 유형의 효과를 입증하였다. 이 효과는 실험에 쓰인 테스트가 실제 영어상황을 반영한 유형일 때 극대화 되었다는 점에서 더욱 큰 의미가 있다고 할 수 있다. 모국어 번역이 영어 학습에 불가피한 상황이라는 가정 하에, 본 연구는 교육현장에서 도움이 될 세 가지를 제안하고자 한다. 첫째, 모국어-영어의 단어 매칭보다는 문장단위의 접근법이 영어문장생성 능력을 함양하는 데 도움이 될 것이다. 둘째, 모국어-영어의 매칭에 사용되는 모국어번역은 실제 학생들이 그 상황에서 떠올릴만한 것이어야 그 해당 목표문장을 기억저장소에서 추출하기에 용이할 것이다. 셋째, 교육현장에서 영어시험 질문을 모국어로 할 경우에는 그 모국어가 실제 학생들이 해당 상황에서 떠올릴만한 형태로 되어야 추후 학생들의 실제 영어생산에 도움이 될 것이다.

주제어: 영어학습, 모국어사용, 번역투 영어문장생성, 모국어-영어 연결, 시험유형

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