



L1 Use in L2 Vocabulary Learning: Facilitator or Barrier

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Abstract

Based on empirical research and qualitative analysis, this paper aims to explore the effects of L1 use on L2 vocabulary teaching. The results show that, during L2 vocabulary teaching process, the proper application of L1 can effectively facilitate the memorization of new words, and the bilingual method (both English explanation and Chinese translation) is welcomed by most subjects. Therefore, the use L1 as a means of semantization or as a tool for checking and validating L2 learners' understanding of word meaning should not be completely rejected, especially for adult Chinese EFL learners.

Keywords: L1 use, L2 vocabulary teaching, memorization of new words

1. Introduction

During the L2 vocabulary teaching and learning process, there seems to be a preference, explicitly stated or not, for intralingual strategies, which involve the use of linguistic means of the target language such as synonyms, definitions, or linguistic contexts, over interlingual strategies, which utilize the L1 in the form of a bilingual dictionary, cognates, or L1 translation equivalents, often associated with word lists, among many teachers and researchers. As pointed out by Schmitt (1997), intralingual strategies are 'pedagogically correct' because they are consistent with principles of communicative language teaching or comprehensive input. Interlingual strategies, however, have easy associations with the grammar translation method or contrastive analysis. Many modern teaching methods treat L2 in isolation from L1, whether it is the communicative approach, the audio-lingual method, the mainstream EFL methods, or the older direct method, L1 is shunned in the classroom. Assumptions, nevertheless, do not necessarily dictate behavior. In fact, L1 is present in L2 learner's mind, whether the teacher wants it to be there or not, and the L2 knowledge that is being created in their mind is connected in all sorts of ways with their L1 knowledge. Then it raises the traditional issue again: during the L2 vocabulary teaching and learning process, is L1 a facilitator or barrier? Or in another way, does the use of L1 in teaching facilitate the L2 learners understand the meanings of the new words, or semantization? The researcher proposes the following hypotheses:

- (1) There are significant differences between the subjects' recalls of the new words and expressions with different teaching approach.
- (2) The bilingual vocabulary teaching method is suitable to Chinese EFL learners.

2. Methodology

2.1 Subjects

The subjects for the study were selected, according to their English results of National College Entrance Examination and Pre-test, from first-year undergraduates of non-English majors in Qingdao University of Science and Technology where the researcher worked. Chinese was their L1, and English their L2 or foreign language. And there is no obvious difference among the two selected groups (Experimental group and Control group), showing that they have roughly the same English proficiency, and we may take it for granted that the subjects roughly the same English vocabulary size.

2.2 Instruments

In this study, the instrument used to elicit and collect information was in the form of two tests. The use of language tests as tools to measure the EFL learners' literacy has been well justified in the literature. In the current study, two vocabulary tests were carried out in the classroom within three weeks. The subjects were asked to answer the test papers made up of 60 new words at different interval during the whole experiment process. Their test results were collected and analyzed to see whether the new words retain longer in their memories.

2.3 Procedures

Two pieces of English essay about 700 words respectively were selected from New Horizon College English. The researcher picked out 60 words or expressions that may be unknown to the subjects. These words or expressions were printed and made into test papers. The first test was carried out in the classroom settings. The subjects were handed out the new words test paper and were required to write down their names and classes, and then decide which word or expression was known to them and writes down the corresponding Chinese meaning within 30 minutes. The researcher collected all the test papers after the subjects finished.

After the first test, the subjects were required to read the first essay within 10 minutes. 10 minutes later, the teacher explained its main meaning briefly in English to facilitate their comprehension, during this process, the teacher consciously explained the 60 words and expressions included in the first test (the 60 words and expressions were marked in advance in the teacher's essays). For the experimental group, the teacher explained these words and expressions (their meanings and usage) both in English and Chinese. In order to strengthen their attention, the subjects were asked to underline each of these words and expressions and write down its corresponding Chinese meaning. By contrast, for the control group, the teacher explained these words and expressions (their meanings and usage) only in English, and the subjects were asked to underline each of these words and expressions, but not to write down its Chinese meaning. The second essay was dealt with in the same way.

Three weeks later, all the subjects participated in the second test. The test paper was made up of 60 English sentences, each sentence contained one word or expression from the above-mentioned 60 ones, and the other words in each sentence were all the frequently used ones. This test required the subjects to translate all these sentences into Chinese. The purpose of the second test was to see how many words or expressions that were acquired two weeks before could be remembered, so as to check whether there was any difference in memorizing the new words between the two groups.

2.4 Data Analysis

2.4.1 Data Preparation

In the quantitative study, a few steps were followed to prepare the data for statistical analysis. The raw data in the study was first inspected and as expected, some missing scores were found for the tests. However, to determine whether these scores should be treated as "missing" or "wrong", the researcher established the following procedures. First, if a subject made a reasonable attempt to answer the questions in the test, the questions left unanswered were treated as wrong and scored zero. However, if a subject left an entire test paper blank or if more than half of the questions were unanswered, the data were regarded as missing, and the subject was dropped from the statistics. In accordance with these conditions, the final number, which was of statistical value, of subjects in experimental group was 55, and the control group was 57.

2.4.2 Scoring of the Tests

In the data analysis, all the three tests were objectively marked by the researcher himself and checked by another teacher of English strictly in accordance with the key.

In the first test, the subjects were required to translate the possible new words and expressions for them into Chinese, each correct translation was scored 1, showing that it was known to the subjects; while for the incorrect translation, it was considered to be unknown to the subjects. According to the score of each subject, the number of his /her unknown words and expressions was counted, and then, the mean of each group was figured out so as to check whether there was any difference in the size of unknown words and expressions between the two groups. And based on the number of the each subject's unknown words and expressions, how many of these unknown words and expressions were used in his/her composition were counted, again, the researcher may gain the mean to test whether the teacher's purposeful requirements play a positive role in the learners' using of new words in their writings.

In the second test, the subjects were required to translate the 60 English sentences into Chinese. What the researcher concerned was whether the new word or expression contained in each sentence was remembered by the subjects, so, as long as the meaning of the new word or expression was correctly translated, the translation was scored 1. The total score of each subject might provide the researcher with the information that, three weeks later, how many new words or expressions could be remembered.

For every test, the raw scores were carefully typed into the SPSS data table in order to gain the desired data.

3. Results and Discussion

The results have been fed into SPSS (12.0) and analyzed using independent sample T-test analysis.

Table 3.1 shows that in Test 1, Group 1 and Group 2 are quite similar in the means (Group 1 is 48.78, while Group 2 is 48.77), this means both groups have nearly the same new words and expressions size (about 49) in the given two passages, and though control group is a little lower, it ($P > 0.05$) has no significance at all. Therefore, the results of Test 1 proved again that both groups started at the same or similar vocabulary level before the experiment which provides an ideal reference for the following experimental test.

Table 3.2 shows that, after three weeks, in the numbers of how many new words and expressions could be remembered by the subjects, Group 1 and Group 2 are different in the means (Group 1 is 22.44, while Group 2 is 16.96), and the difference is statistically significant. ($t=7.51$, $P 0.01$). This means that the subjects in Group 1 acquired the new words and expressions better than those in Group 2. Both the pre-test and the first test proved that the two groups of subjects started the experiment at the similar vocabulary level. Then what caused their different performances in the second test?

Undoubtedly, the difference in vocabulary teaching approach is the important factor which resulted in the different performances of the subjects in remembering the new words and expressions, that is, the bilingual teaching method (both English explanation and Chinese translation) may facilitate the subjects' vocabulary acquisition.

4. Further Discussion

4.1 Difference between children and adult vocabulary learning

When small children learn vocabulary, in fact, they are simultaneously learning the world, as it is categorized and described by the culture into which they have been born. To some extent, children seem to have built-in strategies for fitting categories to words. Nonetheless, the process involves a good deal of trial and error, and young children typically overgeneralize or undergeneralize.

L2 learners, too, face the problem of establishing the range of reference of new words and expressions that they meet, and a good deal of exposure may be needed before they have enough experience of the way words are used to be able to do this accurately. For instance, by being familiar with collocations like a convenient situation and a convenient time, but not with ones like a convenient person or a convenient cat, the students will realize, however subconsciously, that the adjective convenient is only used with inanimate nouns (Carter and McCarthy, 1988, p.75).

However, L2 learners have one great advantage over infants: they have already learnt how one culture categorizes and labels the world. Whatever the differences among human cultures and their perceptions, there is also massive common ground, so we have already known a lot about the scope of much second language vocabulary before we learn it. We can take it for granted, for example, that another language will have ways of talking about dogs, pains, sleeping, work etc., so if we are told that in Chinese 'tong' is roughly equivalent with 'pain' in English, the chances are that we will acquire the word more easily.

A second language learner is likely, then, to short-cut the process of observing a new word's various references and collocations, by mapping the word directly onto the mother tongue. We may assume that wherever possible the beginning foreign learner tries to operate with simplified translation equivalences between lexical items... In the learning of related languages, simplified equivalences work well for the development of a receptive competence, even though these equivalences will have to be modified by later learning. (Ringbom, 1986, p.154)

Often, it is argued that the translation equivalence is made explicit at the outset, as when a learner says 'What's the English for...?', or looks up an unknown word in a bilingual dictionary. Even this does not happen, though, an immediate association with a mother-tongue word is likely to be set up as soon as possible. At one time it was considered essential to avoid the L1 use in L2 teaching, and teachers would go through contortions to explain or demonstrate the meanings of words without translating. What often happened, of course, was that, after the teacher had spent ten minutes defining, say, curtain to a class of Chinese students, most of them would break into a relieved smile and say 'Ah, Chuanglian'.

So, adult L2 learners often do not have as much contextualized input as children do, which makes the extraction and integration of lexical meanings difficult. More important, adults already possess a well-established conceptual and lexical system, and most L2 words have a correspondent concept and translation in the adult learner's first language (L1). Thus, there is little need for them to learn new concepts or meanings while learning L2 words, at least in the early stages of L2 acquisition. The lack of conceptualized input and the presence of an existing conceptual and L1 system make adult L2 vocabulary acquisition fundamentally different from vocabulary acquisition in the L1. When children learn new words in their L1, they learn words and concepts at the same time. As a result, word form and meanings are often inseparable. Thus, when children or adults see a word in their L1, its meaning becomes available automatically. When people speak in their L1, the retrieval of lexical forms is usually spontaneous and effortless. In contrast, adult L2 vocabulary acquisition is accompanied by little conceptual or semantic development. Instead, the existing L1 linguistic and conceptual systems are actively involved in the L2 learning process.

4.2 Adult L2 vocabulary acquisition model

Based on the characterization of the unique learning conditions adult L2 learners face, Jiang (2000) proposed a three-stage psycholinguistic model of adult L2 vocabulary acquisition.

In the first, lexical association stage, adult learners recognize an orthographic or phonological form, or both, as a word. They understand the word's meaning within an existing semantic structure, which is closely linked to their L1. To help themselves remember this L2 word, the learners associate it with its L1 translation. In representational terms, the most

significant event that occurs at this stage is that a lexical entry is registered in the learner's mental lexicon. However, unlike a L1 word whose entry contains all four types of lexical knowledge, that is, meaning and syntax in the lemma structure, and morphology and phonology/orthography in the lexeme (Levett, 1989), this L2 lexical entry contains only form knowledge, that is, phonology and orthography. Other space in the entry is empty. The entry also contains a pointer that links the word to its L1 translation.

Lexical processing and production at this stage rely on the activation and mediation of L1 translations because no direct links exist between L2 words and concepts, or such links are very weak. Because only the semantic and syntactic information, or lemma information in the L1 entry participates in and assists L2 word use, this part of the L1 entry receives the most activation. The lexeme part that contains form specifications is gradually deactivated. Continued exposure to (and productive use of) L2 word means continued co-activation of a L2 word and the lemma structure of its L1 translation. The outcome of continued exposure is that the semantic and syntactic information in the L1 translation is copied or transferred into the empty space of the L2 words.

The occurrence of this transfer process leads to significant changes in lexical representation and processing of L2 word and signals the coming of the second stage in lexical development. The L2 entry now contains a mixture of L2 form specifications and semantic and syntactic specifications transferred from its L1 translation. The presence of the semantic content in the entry means that the word is now linked directly to conceptual representations. In processing terms, one may expect a L2 word at this stage to be used with more fluency or automaticity because this direct link makes the activation of L1 translation no longer necessary. At the same time, as in the case of a word at the first stage, there is still significant influence from the L1 in L2 word use because lexical processing and production are still mediated by the lemma information of its L1 translation, which now resides in the L2 entry. Thus, from a processing perspective, this stage may be called L1 lemma mediation stage. From a representational perspective, this stage may be called the hybrid-entry stage because a L2 entry at this stage contains a combination of L2 form information and L1 meaning and syntax information.

In principle, there is a third stage in lexical development when lexical knowledge specific to a L2 word is integrated in its entry and L1 information is discarded. As a result, a L2 word can be used with not only more automaticity, but also more idiomaticity, with little influence from its L1 translation. However, it is suggested by this model (Jiang, 2000) that many words may stop short of this third stage and L1 lemma mediation may become a steady state of lexical processing in advanced L2 learners.

To sum up, both the above-analysis and the findings of the present research challenge the complete rejection of L1 in the L2 vocabulary teaching (especially for adult L2 learner). Methods of foreign language teaching and learning are often predicted on the principle that learners need to think as much as possible in the language that they wish to learn. Therefore, many modern teaching methods treat L2 in isolation from L1, whether it is the communicative approach, the audio-lingual method, the mainstream EFL methods, or the older direct method, L1 is shunned in the classroom (Johnson & Johnson, 1999). Assumptions, nevertheless, do not necessarily dictate behavior. In fact, L1 is present in L2 learner's mind, whether the teacher wants it to be there or not, and the L2 knowledge that is being created in their mind is connected in all sorts of ways with their L1 knowledge.

5. Conclusion

L1 use in L2 vocabulary learning, or providing translation equivalents have several advantages. They are an easy and efficient way of depicting the core meaning of a word. Knowing the L1 equivalent also gives the learner a sense of certainty about the meaning of a word, a certainty that is a vital first step for reinforcing the form-meaning connection and retaining the new word in long term memory. As Grabe and Stoller (1997, p. 114) put it, "Perhaps, for adults, there are times when it is important to know that a word is understood accurately". What's more, using L1 translation may link a L2 word with well-established semantic and linguistic structure which help the learner retain the word better, because the L1 and its semantic structures are no doubt the steadiest "cognitive hook to hang the new item on"(Fraser, 1999, p.238)

Therefore, there is no reason not to use L1 as a means of semantization or as a tool for checking and validating L2 learners' understanding of word meaning. But the researcher is not promoting the use of L1 for semantization in place of intralingual or extralingual strategies. Rather, the researchers agree with an eclectic strategy, that is, a mixture of all three types of semantization strategies may produce the best overall effect (Fraser, 1999). But the researcher do want to emphasize, in line with the findings of the present study, that avoiding the L1 is neither practical nor desirable in adult L2 acquisition, especially for the Chinese EFL learners. And for College English teaching, instead of running the risk of confusing or misleading students whose English proficiency are nether high or too low while trying to minimize the use of Chinese, the teacher should be encouraged to use the interlingual strategies (such as the bilingual method, both English explanation and Chinese translation) as a quick and efficient means of the new word' initial semantization.

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Table 3.1 Means Comparison for Test 1

	N	Mean	Std. Deviation	t	Sig. (2-tailed)
Experimental Group (1)	55	48.78	2.29	.024	.981
Control Group (2)	57	48.77	2.05		

Table 3.2 Means Comparison for Test 2

	N	Mean	Std. Deviation	t	Sig. (2-tailed)
Experimental Group (1)	55	22.44	4.08	7.51	.000