

Psycholinguistic Explanation in Lexical Acquisition of Second Language (L2) Adult Learners

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Abstract

This paper is organized into several sections. First, a model of L2 lexical development is outlined. It starts with a review on the internal structure of the lexical entries in the mental lexicon. Then a comparison is made between the different conditions under which L2 and L1 are learned. The consequences of such differences for L2 lexical development and representation are thus highlighted. Finally, the three stages of L2 vocabulary acquisition on the basis of what is represented in the lexical entry are applied.

Keywords : Lexical Acquisition , Second Language acquisition

1. Introduction

In psycholinguistics, second language (L2), in this context, English, has three (3) interrelated aspects namely the study of (i) representation, (ii) acquisition, and (iii) processing. In the study of vocabulary acquisition in L2 representation does receive little attention from L2 researchers. A lot of studies have been conducted to understand how L2 vocabulary can be acquired under various learning conditions and what factors influence the effectiveness of L2 vocabulary acquisition. Nevertheless, the question of how L2 lexical information is represented in the mental lexicon has largely been ignored. To explain the above phenomenon, I would

Phenomenon

This study which is developmental and cross-sectional in nature examines the receptive and productive English vocabulary knowledge of L2 tertiary students. Vocabulary Levels Test (VLT) which consists of three tests namely Passive Vocabulary Test (PVT), Controlled Active Vocabulary Test (CAVT), and Free Active Vocabulary Test (FAVT) is used to collect the data. When using the test, the researchers are not particularly interested in the students' total score on the tests, but are interested more in whether the students know enough of the high-frequency words. 360 first- and second-year university students are involved in the study. The findings reveal that majority of them have a very limited vocabulary knowledge and vocabulary size to use English as their second language though formal exposure to English language had been given to them for more than 12 years.

discuss it from two psycholinguistic angles namely the unique features associated with lexical development and representation in L2 as proposed by Nan Jiang (2000).

L1 Lexical Representation

Before going into L2 lexical representation, it is a good idea to see what lexical representation is like in L1- in this case our mother tongue. An L1 lexical entry basically contains the semantic, syntactic, morphological, phonological and orthographic specifications. Such information is believed to be represented in the **lemma** and **lexeme**- two components that make up a lexical entry. A **lemma** (**lemmas** or **lemmata**, in the plural form) is the dictionary or citation form of a set of words, for example, *run*, *runs*, *ran* and *running* are forms of the same **lexeme**, with *run* as the **lemma**. **Lexeme**, on the other hand, refers to the set of all the forms that have the same meaning. The lemma contains semantic and syntactic information about a word such as word meaning and part of speech. The lexeme contains morphological, phonological, and orthographic information such as different morphological variants of a word, spelling, and pronunciation (Garrett, 1975; Levelt, 1989).

An important feature of the lexical representation in L1 is that those different types of information are highly integrated in the sense that once the entry is opened, all the information automatically becomes available.

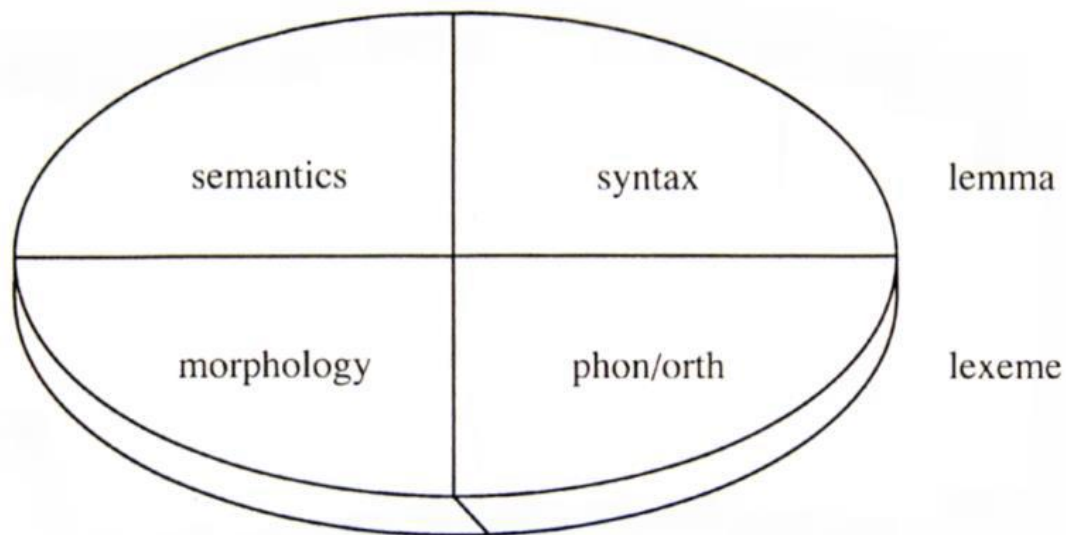


Figure 1: The internal structure of the lexical entry (adapted from Levelt 1989)

It is understandable that the integration of different kinds of information into lexical entries requires extensive, highly contextualized exposure to the language. With such highly contextualized input, a child is able to extract the semantic, syntactic, and morphological 3 information while becoming acquainted with the form of the word. The information a child extracts may not be accurate or correct by an adult's standard but what is learned becomes an integral part of the lexical entry. At the same time, the presence of these different kinds of

information in the lexical entries and their automatic activation are critical for the appropriate and efficient use of these lexical entries in natural speech communication.

L2 Lexical Development Constraints in Instructional Settings

There are two (2) practical constraints on L2 lexical development in instructional settings. The first constraint is the poverty of input in terms of both quantity and quality. Classroom L2 learners often lack sufficient highly contextualized input in the target language. This often makes it difficult for L2 learners to extract and create semantic, syntactic, and morphological specifications about a word and integrate such information into the lexical entry of that word.

The second constraint in L2 learning is the presence of an established semantic system with an L1 lexical system closely associated with it. With the presence of the established L1 lexical system, L2 learners particularly adult learners may tend to rely on their L1 lexical system in learning new L2 words. Because the meanings of an L2 word can be understood through their L1 translation, the learner's language acquisition device may be less motivated to pay attention to the contextual cues for meaning extraction.

The established L1 semantic system, at the same time, may discourage meaning extraction in a different way. When learning a word in L1, a child is learning a set of new semantic and formal specification simultaneously because no semantic system exists. When one learns a word in L2, however, it is very unlikely that a new concept or a set of new semantic specifications will be created because corresponding semantic specifications already exist in the learner's semantic system. Instead, it is more likely that the existing semantic specifications will be activated. In other words, the established semantic system blocks the creation of meanings similar to those in the existing semantic system. Thus, the tendency to use L1 translation on the learner's part will be inevitable in learning L2 words.

Three Stages of L2 Lexical Development

Due to the limited contextualized exposure and the presence of the existing semantic and lexical systems in learning L2, a fundamental difference in lexical representation and development between L1 and L2 exists. In L1 development, the task of vocabulary acquisition is to understand and acquire the meaning as well as other properties of the word. However, in tutored L2 acquisition, the task of vocabulary acquisition is to remember the word. Here, the L2 learner's attention is focused on the formal features of the word such as spelling and pronunciation. Little semantic, syntactic, and morphological information is created and established within the lexical entry in the process.

STAGE 1

The consequence of such a learning approach is that a lexical entry in L2 initially only contains its formal specifications. Little content is established within the entry. It may also contain a pointer that directs attention to the L1 translation equivalent. This pointer serves as a link between L2 words and their counterparts in L1 (see **Figure 2a**). Following the distinction of lemma and lexeme as two components of a lexical entry, L2 lexical items at the initial stage can be considered lexical items without lemmas (De Bot et al., 1997). We may call this initial stage the formal stage of lexical development.

The idea that little semantic, syntactic, and morphological information is represented in the lexical entry does not mean that such information is not available to the learners. They may know the meanings and the grammatical properties of those words through L2-L1 links for example. However, such information is not an integrative part of the mental lexicon. It is stored in one's general/ episodic memory and it cannot be retrieved automatically in natural communication. In other words, it is part of one's lexical knowledge not one's lexical competence.

At this initial stage, the use of L2 words involves the activation of the links between L2 words and their L1 translations as postulated in Lexical Association Hypothesis (Potter et al. 1984). 5

(a) (b)

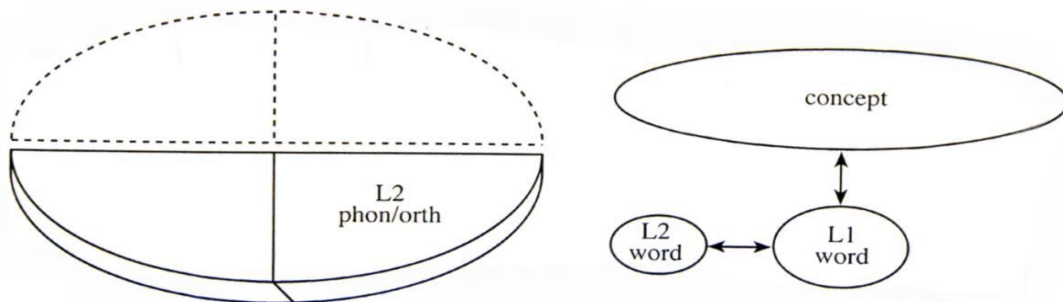


Figure 2: Lexical representation (a) and processing (b) at the initial stage of lexical development in L2

STAGE 2

As one's experience in L2 increases, stronger associations are developed between L2 words and their L1 translations. What does it mean? Among other things is the simultaneous activation of L2 word forms and the lemma information (semantic and syntactic specifications) of L1 counterparts in L2 word use. Another important characteristic of the lexical representation at this stage as well as the first stage is that no morphological specifications are contained in the lexical entry. **Figure 3** explains a lexical entry at this stage.

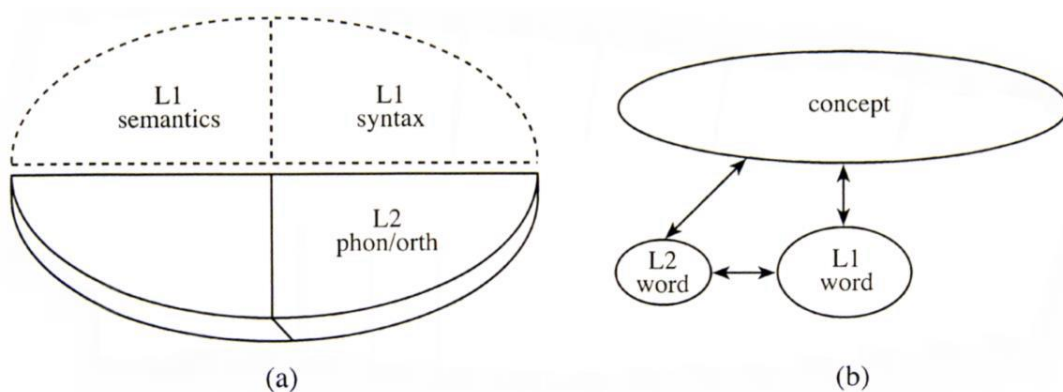


Figure 3: Lexical representation (a) and processing (b) in L2 at the second stage 6

STAGE 3

At this stage, there is a weak connection between L2 lexical items and conceptual representations. It is called the L1 lemma mediation stage because the use of L2 words is mediated by the lemmas of their L1 translations. A possible explanation of the weak connection is that the lemma information is copied from L1 rather than created in the process of learning the L2 words, thus not highly integrated into the entry. At this stage, a lexical entry into L2 will be very similar to a lexical entry in L1 in terms of both representation and process (**Figure 4**).

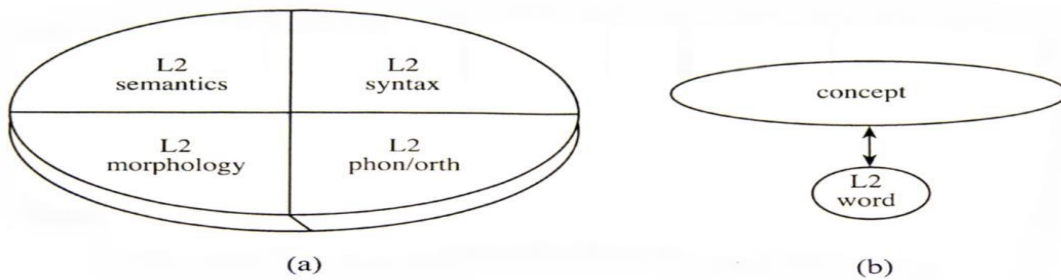


Figure 4: Lexical representation (a) and processing (b) in L2 at the third stage

Thus lexical development in L2 can now be seen as comprising three (3) stages as shown in Figure 5. At the formal stage of lexical development, a lexical entry is established in the L2 lexicon, but it contains only formal specifications and a pointer. As one’s experience in the language increases, semantic and syntactic information of an L2 word’s L1 translation equivalent may be copied or attached to the entry of an L2 word to form lexical entries that consist of L2 forms and L1 lemmas. At the final stage, semantic, syntactic, morphological, as well as formal specifications about an L2 word are established within the lexical entry. 7

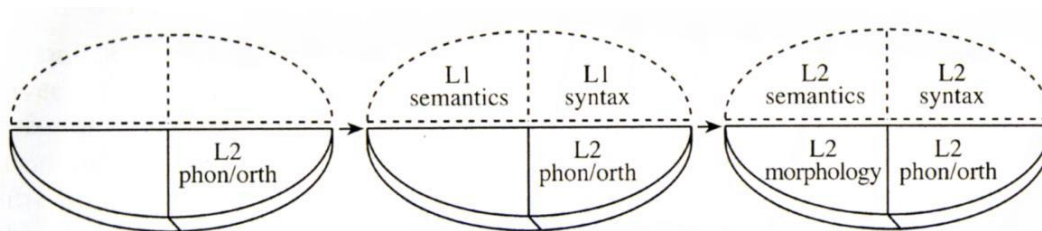


Figure 5: Lexical development in L2: From the formal stage to the integration stage

It should be pointed out that these stages are intended to describe how a specific word evolves in the learning process, rather than how the lexical competence of an individual learner develops as a whole, though these concepts are closely related. It is more likely that a learner’s L2 lexicon contains words that are at various stages of development. An L2 learner hence can be seen as being at one of these stages only in the sense that a majority of the words in his or her L2 lexicon are at that stage.

It is also worth mentioning that these stages should not be seen as clear-cut. Grey areas may exist when words are in transition from one stage to another. For example, one may be able to use an

L2 word without relying on its L1 translation in comprehension but not in production. Or the retrieval of some semantic information may become automatic but some other may not.

References

De Bot, K., Paribakht, T. S. and Wesche, M. B. (1997). Toward a lexical processing model for the study of second language vocabulary acquisition: Evidence from ESL reading. *Studies in Second Language Acquisition*, 19, 309-329.

Garrett, M. F. (1975). 'The analysis of sentence production' in G. Bower (ed.): *Psychology of Learning and Motivation*. New York: Academic Press.

Levelt, W. J. M. (1989). *Speaking: From Intention to Articulation*, Cambridge, MA: Bradford.

Nan Jiang (2000). Lexical representation and development in a second language. *Applied Linguistics*, 21(1), 47-77.

Potter, M. C., So, K. F., Eckardt, B. V. and Feldman, L. B. (1984). Lexical and conceptual representation in beginning and proficient bilinguals. *Journal of Verbal Learning and Verbal Behavior*, 23, 23-38.