

On the Cognition of Second Language Mental Lexicon and Teaching Chinese as a Foreign Language

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Abstract: Teaching Chinese as a foreign language is actually the teaching of Chinese as a second language by international Chinese teachers. People must learn vocabulary as a language element in the process of language acquisition. Without vocabulary, there is no language. When we master the vocabulary of a language, we rely on mental lexicon, which is vocabulary that has been stored in the brain for a long time. Through the study of second language mental lexicon, it can be used effectively, and corresponding teaching methods can be used in the vocabulary teaching of Chinese as a foreign language to help students learn Chinese quickly and effectively.

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The basic elements of language are pronunciation, text, vocabulary and grammar. Generally, learners need to master certain related contents of a language when learning a second language. If we compare a language to a house, then the vocabulary is akin to the walls in the house. British linguist Wilkins (1972) put forward that: "It is difficult for people to express well without grammar, and nothing can be expressed without vocabulary". In addition, Singer also pointed out in his research that in the process of reading, "understanding the meaning of vocabulary accounts for 39% of reading ability, vocabulary alone plays 47% role in understanding the meaning of vocabulary

in the article, and vocabulary recognition accounts for 28% of reading speed." (Sun Xingwen, 1998). This shows the importance of vocabulary teaching. The current HSK syllabus requires students to master a certain amount of vocabulary for each level. HSK Level 1 requires 150, HSK Level 2 requires 300, HSK Level 3 requires 600, HSK Level 4 requires 1,200, and HSK Level 5 requires 2,500. For HSK6, it is required to master 5000. The vocabulary increase exponentially. In the process of learning and using a language, foreign students usually know the superficial meaning of the vocabulary, but cannot fully grasp the extended meaning that needs to be mastered in combination with the context or apply it to real communication and writing. All these have allowed foreign students learning Chinese to realize the importance of lexicon learning, but lexicon learning is basically rote memorization, more on remembering and less on using, and therefore quickly forgotten, resulting in more time-consuming and inefficient lexicon learning. This paper starts from the perspective of second language mental lexicon and explores how to combine the cognition of second language mental lexicon with vocabulary teaching in foreign Chinese lessons, so as to improve foreign students' memory, preservation, identification, extraction, understanding and use of vocabulary more effectively.

1 Cognition of Second Language Mental Lexicon

1.1 Mental Lexicon

Mental lexicon refers to the vocabulary stored in the long-term memory of the human brain. The use

of mental lexicon includes two aspects: storage and extraction: one is to store the new vocabulary learned in the memory; the other is to smoothly extract the words stored in the mental lexicon when listening to others. To study mental lexicon is to study how vocabulary is stored in and extracted from memory. Therefore, how to scientifically store mental lexicon so that it can be extracted in time and successfully is an important issue that researchers need to consider. In language, a fixed or semi-fixed combination of two or more words that has a high frequency of joint occurrence, is connected to a certain pragmatic function, and can be treated as a whole is called a chunk. Chunks can help learners reduce the burden of information processing. The chunk optimization method is not only a prerequisite for improving the level of short-term memory, but also a necessary way to establish connecting channels for mental lexicon. Therefore, strengthening cognitive learning of mental lexicon will help students master language acquisition. However, second language acquisition is a complicated psychological mechanism process. Although the study of second language mental lexicon is based on the mental lexicon of the mother tongue, there are still differences.

1.2 Second Language Mental Lexicon

Linguists have been skeptical about what factors affect second language mental lexicon cognition. They are usually divided into three types: one is the “phonetic theory”, which believes that second language mental lexicon is more affected by phonetics; the other is “semantic theory”, which believes that the second language mental lexicon is more affected by semantic relations; and there is yet another theory known as the “syntactic theory”.

As one of the earliest linguists to study the nature of mental lexicon, Pau Meara believed that second language mental lexicon is not the same as first language mental lexicon. Meara's conclusion was based on the following findings: in second language mental lexicon, phonetics have a greater organizational role, and there is a systematic difference in the semantic connection between the second language mental lexicon and the mental lexicon of the mother tongue. In subsequent studies, Meara's conclusions were widely cited. (Carter, 1987; Channell 1988; Gass & Selinker, 1994) Laufer also believes that the connection between words in the

mental lexicon of the mother tongue is semantic, while the connection between words in the mental lexicon of the second language is mainly phonetic. (1989: 17). After reviewing relevant mother tongue and second language studies, Channell (1988) also concluded that there is very little evidence that the second language mental lexicon is similar to the mother tongue mental lexicon, that is, the second language mental lexicon is different from the mother tongue mental lexicon. The acquisition process is greatly affected by speech. Chinese scholar Zhang Shujing (2003) also showed in research that even in the free association test responses of English major senior students, there are a large number of phonetic responses, indicating that the lexicon in the elementary level English is all phonetic connections and a deep semantic response has not yet been established.

Those who advocate the semantic theory believe that the second language mental lexicon is the same as that of the mother tongue, and semantic relations are predominant. Marcha (1995) studied the response types of two groups of English students learning French to 50 stimulus words. These stimulus words came from the vocabulary of Kent-Rosanoff (1910), 100 of which are high-frequency words without any sentiments. The 50 response words were provided to the subjects in English (mother tongue) and French (second language). The results showed that, regardless of the mother tongue or the second language, most of the subjects produced semantic responses (including aggregate and combination responses), and only a small part of phonetic response; the phonetic response induced by the stimulus words accounted for 2% in the mother tongue and 3% in the second language. O Gorman (1996) surveyed 22 intermediate English learners who spoke Cantonese. Among all the responses, only ‘health-wealth’ was considered a phonetic response, and the rest were all semantic responses. Further evidence supporting the semantic theory came from the research of Singleton (1999). Singleton presided over the Trinity College Dublin Modern Language Research Project and conducted a series of follow-up surveys to monitor the development of the second language. Although the purpose of the project is not to study mental lexicon, it has drawn its own conclusions on some controversial issues. The results also showed that the responses produced by advanced second language

learners were mostly semantic-pragmatic association with stimulus words. Shanshan Zhang (2006) also investigated the lexicon structure of second language learners through lexicon association. The study found that the word class of stimulus words has a profound effect on the response of second language test subjects.

Scholars who agree with the “syntax theory” argue that the second language mental lexicon is essentially a combination type, that is, the relationship between words is a linear modification and matching relationship. Linguist Wolter (2001) believes that convergent responses are words that belong to the same category as stimulus words and can perform the same grammatical function in a sentence. Gong Shelian (2010) uses Chinese as the second language to study the response types of primary Chinese learners in a university whose first language is Vietnamese to 45 stimulus words. The research results show that whether it is the association response of the second language or the mother tongue, the semantic connection of mental lexicon accounts for a large proportion, and all aggregate, combination and knowledge interconnection are semantic. Among all the semantic responses, the combination response represents the largest part in each word class. This can confirm the viewpoint of the syntax theory, since the second language mental lexicon is essentially of combination type, and the relationship between words is mainly a linear modification and matching relationship.

1.3 Mental Lexicon Learning Strategies

In lexicon learning, it is impossible to use only one strategy and method. In order to complete a learning task, learners may have to choose a variety of different lexicon learning strategies, so it is necessary for students to establish a systematic and complete lexicon strategy framework. O'Malley (1990) believes that learning strategies should be divided into three levels: the first level is metacognitive strategies, which mainly involves planning, selective attention, self-monitoring, and self-evaluation. The second level is cognitive strategies, including search strategies, rote memorization strategies (repetition), practice strategies, reading strategies, mother tongue strategies (translation), association strategies, guessing strategies, and keyword strategies. The third level is

emotional strategy. These three levels run through the course of language learning all the time and help learners improve their language proficiency. Helping students to use appropriate learning strategies is also part of the teacher's teaching process.

2 Teaching Vocabulary for Chinese as a Foreign Language

The vocabulary consists of phonetics, semantics, grammar and culture. The famous British linguist Wilkins pointed out that: There is very little information conveyed without grammatical information, and no information can be conveyed without vocabulary. It can be seen that the formation and improvement of any language skill must be based on vocabulary. In addition, Chinese is a semantic language. The semantics are mainly reflected in the vocabulary, and the vocabulary can be broken down into morphemes or built into phrases and sentences. Therefore, vocabulary teaching should be an important part of teaching Chinese as a foreign language.

2.1 Modular Teaching

Teaching can start from the process of vocabulary memorization, by optimizing the chunks, establishing an interconnected network of mental lexicon, clearing and strengthening the vocabulary extraction channels, not only can the problem of vocabulary memorization be solved, but also the comprehensive language skills of foreign students can be improved. Specifically, through different methods such as subject classification, grammatical classification, basic layer classification, idiom classification, root module classification, and prefabricated chunks classification, different vocabulary cognitive modules are established. These different modules can enable language users to efficiently extract the vocabulary they need after hearing the speech, and they can also focus the speaker's attention on the hierarchical structure of the text. And the greater these modules are, the higher the efficiency of extraction and use, and the stronger the language output ability. This involves graphic or upper-lower vocabulary teaching. Teachers can integrate vocabularies of similar meanings for teaching, for example:

Animals
 ↓
 Birds Fishes
 ↓ ↓
 Ostrich Sardine

2.2 Real Life Scenario Setting

Mental lexicon is different from book vocabulary, its number will expand and produce new connotations in a specific context or in a new era. For example: "He is my comrade (tā shì wǒ de tóngzhì)." and "He is a 'comrade' (tā shì yīgè 'tóngzhì')." The meaning of comrade in these two sentences is completely different. Therefore, the teaching of second language mental lexicon cannot be separated from life, let alone the actual psychological needs of students. The introduction of mental lexicon meets the needs of students for cognitive vocabulary to a certain extent. Therefore, we provide students vivid and detailed language materials set up a context similar to the real life scenes in Chinese vocabulary teaching, allowing them to learn vocabulary through cognition in the context, and apply it to real life and even future daily communication, which can promote the effective extraction of mental lexicon.

3 Thoughts

Scholars with different theories have their own ideas and opinions, but the author believes that the researchers neglected the language proficiency of the sample learners in the experiment. At different stages of language acquisition, learners rely on different learning support points. The nature of mental lexicon of intermediate and advanced learners will inevitably be different. Moreover, domestic researches on the use of second language mental lexicon in Chinese teaching with Chinese as the research language are not very sufficient. Most of them were studying how the second language mental lexicon of English can improve the learning efficiency of students

in teaching, but the differences between the two languages of English and Chinese have resulted in the heterogeneity of their second language mental lexicon. It is hoped that more professional research on Chinese second language mental lexicon will emerge to help foreign students build a reasonable and effective mental lexicon and improve their Chinese proficiency so that their mental lexicon of Chinese communication can be as close as possible to the level of native speakers.

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