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The Influence of the Intermediary System of Cognition on Vocabulary Acquisition for Chinese English-Majors

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Abstract

In the article, the author tries to find out the main factors that affect the subject's vocabulary acquisition by an investigation. It is concluded that vocabulary acquisition models and strategies are something external, what really works upon vocabulary acquisition is the intermediary system of cognition including the knowledge structure and abilities structure of the subject. The richer the intermediary system is, the greater the subject's cognition will be, which will contribute greatly to the subject's vocabulary acquisition. Meanwhile, the components of the knowledge structure and abilities structure are explored, furthermore, it studies how the components as the intermediate means work upon vocabulary acquisition in an interactive manner.

Keywords: The intermediary system of cognition, Vocabulary acquisition, Knowledge structure, Abilities structure

1. Introduction

Vocabulary is a key aspect of language learning since it is a fundamental element of a language. Words "are basic building blocks of language"(Brown 1994: 365). Vocabulary acqisition always exists in the whole process of Second Language Acquition. Vocabulary learning was thought to be remembering word lists and vocabulary skills were regarded as necessary for understanding the grammatical structures of a language. The activity of vocabulary learning was viewed to be a natural and mechanical process. Teachers just let the students learn vocabulary by themselves. In general, students feel that words are very important and are eager to learn them. But in contrast, teachers tend to feel that words are easy to learn--while grammar is the challenge (Coady&Huckin, 2001:274). So how to teach and learn vocabulary efficiently is undoubtedly a very urgent problem. In this article we are trying to solve this problem from a cognitive perspective.

Much research has been done in this field in the last two decades. The contemporary study in this field can be dated back to 1980, when the British psychologist P. Meara published an article expounding the relevant research works on lexicon control, lexical memorization, lexical storage as well as vocabulary testing. For example, comprehensive studies concerning various vocabulary learning strategies have been conducted by Nattinger (1988), Cohen(1990),Nation(1990),Hatch and Brown(1995). Quite a number of strategies are described and examined. The relationship among reading, dictionary consult strategies and vocabulary learning has been examined by Li Xiaolong (1988), Summers(1988), Parry(1991), Luppescu and Day(1993). Yet results from different studies are not consistent .In addition, there are some researches focusing on the different vocabulary learning strategies between good and poor learners (Ahmed, 1989; Parreren, 1992; Gu, 1994 ,etc.). Most of these studies are confined to a specific method used to memorize words and try to prove that a specific method is the most effective one. However, students tend to adopt a variety of strategies while learning new words. Furthermore, most of them are conducted in the Western countries and almost all of the subjects involved are native speakers of other Indo-European languages. They belong to the same language family, while Chinese and English are of different language families. As Schmitt (1997: 205) stated, since strategies may be culture-specific, the same findings may not be observed with people from different cultural backgrounds and learning different languages. Different learners in different learning environments usually choose different learning strategies. Are the learning strategies employed by Chinese learners the same as those of Westerners? Will the strategies useful to Westerners still be effective for Chinese learners of English? Therefore, the vocabulary learning strategies of Chinese students are worth investigating.

Many scholars in China have conducted research in this area. In the early 1990s, few Chinese researchers have made contribution to the exploration of English vocabulary learning, However, they are either summarizing their teaching or learning experiences (e. g. Bu Yuan 1992: 14-19; Ren Cheng 1993: 22-23) or introducing the related theories by translating works of Western researchers (e. g. Nie Aimin 1996: 21-26). To make further exploration into vocabulary

learning strategies, many empirical studies have been conducted in recent years. More comprehensive ones are those done by Gu and Johnson (1996: 643-679), Wang Wenyu (1998: 47-52), Wu Xia and Wang Qiang (1998: 53-57). In the study of Gu and Johnson (1996), 850sophomore non-English majors are investigated. Wu Xia and Wang Qiang conduct a research on the beliefs and strategies involved in the students' vocabulary learning processes with 202 sophomore non-English majors as their subjects, while these of Wang Wenyu are 25 English majors and 25 non-English majors only. So vocabulary learning beliefs and strategies adopted by some Chinese English majors and the main real factors that affect their vocabulary acquisition in Chinese environments are investigated in this study.

It is urgent to look into the problem of how we can help students with their vocabulary learning and obviously it is best to help students develop effective learning strategies in addition to teaching words. Despite the fact that many studies have been done in this area, previous researches on vocabulary learning strategies are far from adequacy in telling us what to do and there is still room to improve .Firstly, though studies of vocabulary learning have been influenced by theories in second language acquisition and in cognitive psychology, there has been little communication between them(Gardner et al, 1992).Secondly, recent research in vocabulary learning strategies has yielded conflicting findings in the effectiveness of mnemonic strategies, context strategies, dictionary strategies and so on .Most important of all, as we know, language is the result of interaction between the subjects and the objects, and the interaction between the subjects and the objects is working through an intermediary medium: *the intermediary system* from the cognitive viewpoint, their relationship is as follows: *subject---intermediary---object*. Studies on vocabulary learning strategies at home have been concentrated on patterns of vocabulary acquisition and pedagogy in teaching second language vocabulary but no such study has been done about how the intermediary system of cognition including the knowledge structure and abilities structure of the subject works upon the vocabulary acquisition. The author in the paper tries to explore the main factors affecting the vocabulary acquisition, give illustrations of the supporting evidence, and make concrete suggestions as to its implication for our English vocabulary instruction.

2. Reflection from an investigation

Most subjects who are first-year English-majors in Fuyang Teachers' College didn't do well in the vocabulary part in the final examination of the last semester .The vocabulary part test at the band-1 level was used to test students' receptive and productive knowledge. All words are mainly adopted from their newly-learned textbook---A New English Course. However, their achievements are not satisfactory. As a matter of fact, to most Chinese students, the first major problem they meet during English study is vocabulary learning, and vocabulary has long been their top concern as well as their big headache on which they spend a lot of time. In this sense, students at all levels, especially freshmen majoring in English, are in great need of guidance on how to learn vocabulary effectively and efficiently. It is necessary to explore what learning strategies they actually use and what factors affect their vocabulary acquisition in their English vocabulary learning process. The first college year is the initial stage, and it is the best chance for teachers to help students to form their best learning style in vocabulary acquisition.

Therefore, we aim to find out the main real factors that affect the subjects' vocabulary acquisition and the choice of strategies in order to establish the vocabulary learning strategies used by the EFL learners in Chinese colleges and the relationship between their learning strategies and outcomes. The results of the present study should be considered as better representing the whole situation in China. In order to establish a relatively satisfactory framework for this study, we make a slight revision of the classification of leaning strategies by O'Malley and Chamot (1990), who defined three main types of learning strategies: metacognitive strategies, cognitive strategies and social/affective strategies. In addition, we add beliefs on vocabulary learning and individual difference factors. 108 freshmen in one college (all English majors) are asked to do the questionnaire and the vocabulary knowledge test. By the methods of written questionnaires and vocabulary testing, it is found out that there exist many problems in English majors' Vocabulary learning. The purpose of the study is to investigate the overall pattern of vocabulary learning strategies employed by freshmen in Fuyang Teachers' College and to find the different strategies employed by high-proficiency students and low-proficiency students and the correlation between learning strategies uses and high learning proficiency. Great attention is given to the main factors working upon the choices of vocabulary learning strategies.The case study was expatiated in another of my paper (Yanyan Luo, 2006).

Results from the present study strongly suggest that metacognitive strategies are essential to the success of vocabulary learning. On the one hand, correlation analysis shows that it holds very strong correlation with both the quantity and the quality of vocabulary knowledge. On the other hand, the T test reveals that the high frequent use of metacognitive strategies makes good learners distinguish from poor learners. The metacognitive level is limited by one's abilities structure.

Besides, students should be encouraged to use contextualized strategies, because in certain context the pragmatic and discoursal knowledge of a word are provided and this will benefit the development of the quantity of vocabulary knowledge, What's more, a word can be easily remembered when it is put in meaningful context. When reading, students should also be encouraged to guess unknown words. Some students often stop to consult the dictionary when

they meet new words .This prevents them from reading more and learning more words .So, it might he wise for the teacher to ask students to underline unknown words and encourage them to guess these words through some useful inferring techniques, e.g. guessing according to background knowledge, clues provided by immediate context and a wide context. Furthermore, learners should be encouraged to look up some important and frequent words in the dictionary and their attention should be directed to the meaning and usage of these words. Dictionaries enable learners to have an in-depth and concise understanding of words and thus benefit the quality of their vocabulary knowledge. Another suggestion is that the teacher should help students organize their vocabulary meaning-orientedly .Studies point out that words are stored also shows that good learners tend to group derivations together, while poor learners do not . So, students should be encouraged to put words into semantic networks. To a great extent, the choice of cognitive strategies is affected by one's knowledge structure. Lastly, the individual differences factors also work upon words learning a lot. Once students face difficulties in the learning process, teachers will help students to reduce anxiety, play aptitude and strengthen confidence.

It may be argued that since strategies for language learning are often used in combination and rarely used individually, the consideration of strategies as individual entities and the drawing of conclusions about the effectiveness of a certain particular strategy are both problematic. Up till now, the general conclusion in the field of second language acquisition has been that there is not single method that has proved to be effective in language acquisition for all learners across all contexts. No single strategy will be appropriate for all learners and for all tasks. Strategies are not inherently " good " or "effective", because one cannot deny that there are various contextual, teacher related, and learner related factors that come into play. Lexical–learning strategies and instructional approaches need to be applied, explored, and evaluated by individual learners and instructors on an ongoing basis. As Schmitt (1997) pointed out by the results of his study, "learners naturally mature into using different strategies" (Schmitt, 1997:25). It is also important for instructors to recognize that some strategies may be more effective for some learners than for others, and to encourage learners to find out what works best for them. Instructors should not unquestioningly accept any traditional or well-known technique, no matter how frequently used. In addition, the ultimate goal of teaching the students learning strategies is to encourage and cultivate the students to be autonomous learners. And therefore teachers are advised to help the students foster the habit of planning vocabulary leaning and getting some strategies to comment on and evaluate their own learning outcomes regularly.

We may enhance students' abilities of vocabulary acquisition once and for all, only constantly improve knowledge structure and abilities structure, and richen the intermediary system as far as possible. It is concluded that what really works upon vocabulary learning and the choice of strategies is the intermediary system of cognition including the knowledge structure and abilities structure of the subjects.

3. The intermediary system of cognition

As we know, language is the result of interaction between the subjects and the objects, so is vocabulary, and the interaction between the subjects and the objects is working through an intermediary medium: the intermediary system from the cognitive viewpoint, their relationship is as follows: subject---intermediary---object. As active factors, the role of subjects of cognition is to receive, change, organize and arrange information from objects. However, without the intermediary medium of cognition, objects couldn't be a part of the cognitive structure of subjects. The cognitive process of vocabulary acquisition shows that intermediary system plays a key role in the change of information between subjects and objects. When the intermediary system of cognition couldn't meet the demands of subjects&objects, subjects and objects can't exchange information between them, and it is impossible for objects to transfer information to subjects. Intermediary system plays a role of two-way medium in learning, and it stimulates subjects to carry out construction and regulation upon objects, and then it also conveys information from objects by itself. It is its two-way flow that makes subjects---objects to be a dynamic process.

The intermediary system of cognition internally consists of two correlated sub-systems (Chen,10): knowledge structure system and abilities structure system, and they directly affect the operation and practice of the intermediary system of cognition. We 'll make use of a table(Table 1) to show connotative factors of the intermediary system of cognition working upon objects in vocabulary acquisition.

Knowledge structure system is one of main factors which affect subjects' vocabulary learning." By the knowledge structure we mean that man forms the knowledge system in the specialized learning and application, especially in the process of thinking."(Wang, Yan:9). All kinds of knowledge acquired from books and social practice are methodically and orderly stored in the brain in the form of structure. With the demands of the activities' task, they can be activated and used at all times. In regard to knowledge structure in the process of vocabulary acquisition, it includes language knowledge (Here means vocabulary knowledge) and other correlated background knowledge. Language knowledge (vocabulary knowledge) comprises pronunciation, spelling, meaning, collocation, grammar, word-formation, context, metaphor, pragmatics, syntax etc. Other correlated background knowledge includes natural science, social science, modern science and technology, theory of learning strategies, common sense and social experience etc.

According to Brown and Payne (1994, Hatch, Brown: 2001), the steps of vocabulary acquisition are as follows: (1) having sources for encountering new words; (2) getting a clear image, either visual or auditory or both, (3) learning the meaning of the words, (4) making a strong memory connection between the forms and meanings of the words, and (5) using the words. The first three steps are foundations in the process of vocabulary acquisition, and the last two steps are critical. Information constantly enters our minds through our senses. Most of this information is almost immediately discarded, and we may never even be aware of much of it. Some is held in our memories for a short time and then forgotten. However, some information is retained much longer, perhaps for the rest of our lives. We can use a figure (Figure 1) to illustrate the sequence of information process.

Individuals differ, of course, in the capacity of their working memories to accomplish a given learning task. One of the main factors in enhancing this capacity is background knowledge. The more a person knows about something, the better able the person is to organize and absorb new information (Engle, Nations, & Cantor, 1990; Kuhara-Kojima&Hatano, 1991).It shows that subjects' prior knowledge really plays a very important role in the process of decoding. However, prior knowledge is not the only factor. Individuals also differ in their abilities to organize information and can be taught to consciously use strategies for making more efficient use of their working memory capacity (Levin & Levin, 1990; Peverly, 1991; Pressley & Harris, 1990). Strategies of this kind have already discussed in the previous chapter.

Abilities structure is the other important sub-system in the intermediary system of cognition. "Abilities are indispensable psychological characteristics of individual characters to accomplish a task successfully." (Meng, 44)They can be subdivided into cognitive abilities, operation abilities, social intercourse abilities. Words acquisition abilities belong in the field of cognitive abilities. Abilities structure in vocabulary acquisition is a series of synthesizes of psychological characteristics of individual characters. Vocabulary acquisition calls for various abilities.

It is obvious that there is a close relationship between knowledge and abilities. Knowledge is stored information in the brain, without it, abilities couldn't work; without abilities, knowledge is a waste resource. In the process of vocabulary acquisition, knowledge structure and abilities structure both restrict subjects' grasp on information from objects.

4. The intermediary system of cognition in vocabulary acquisition

On the basis of the above analysis, it is obvious to conclude that the knowledge structure and abilities structure of the subject play a very important role in the process of vocabulary acquisition. It is evident that the richer the intermediary system is, the greater the subjects' cognition will be, which will contribute greatly to the subjects' vocabulary acquisition. Subjects are far from only having vocabulary knowledge. Words are multi-level mixed objects, and it is impossible for subjects to master words just by common sense and simple knowledge. The exchange of information between subjects and objects demands that subjects should have good knowledge background and multi-functional abilities structure system. Without the intermediary role of these systems, subjects' thinking is bound to be limited to rudimentary meaning understanding, and they impossibly analyze and generalize objects' complicated information. One's cognition is always based on the already-known fruits and previous knowledge, that is to say, the known infers the unknown. Subjects' knowledge background, experience background, concept network system, inferring process and principle (thinking mode), emotion, mood, irrational factors make up a many-sided subjects' abilities structure system. Subjects use already-formed cognitive theory to assimilate vocabulary objects in order to make them adaptable mutually, and cognitive process consists of assimilation and development. If subjects and objects couldn't get well along with each other, and subjects would regulate again and revise the original cognitive structure, and then reconstruct a new structure, and then assimilate and development again to have subjects and objects adapt each other. Subjects may grasp various information implied in the mixed objects, only make active use of all kinds of cognitive abilities factors in the intermediary system and have them play a dynamic and mutual role flexibly and methodically.

Subjects' knowledge structure is a hardware factor of their abilities structure, and they restrict the full play of abilities. But knowledge does not totally mean abilities. If subjects could not apply such knowledge flexibly in objects, knowledge and experience would not be turned into subjects' abilities. Knowledge system and abilities system can both work in the two-way operation, in the practice, knowledge is conducive to abilities' play, and abilities also raise the efficiency of learning knowledge. As intermediary means, knowledge structure and abilities structure may improve subjects' perceptive ability and cognitive ability, most important of all, they can communicate information between subjects and objects in the dynamic way, and furthermore, they help subjects to grasp objects' profound meanings. It is the intermediary system of cognition that decides the choice of subjects' strategies, and conversely, the choice of subjects' strategies also reflect their intermediary system of cognition. Therefore, teachers should transfer knowledge of these kinds to the students. Although vocabulary learning to a large extent is the task of the individual, there is still much the teacher can do to help students learn vocabulary more successfully. Given the fact that subjects' intermediary system of cognition has relatively strong correlation with the vocabulary strategies choosing, the conclusion may be drawn that intermediary–based approaches to language teaching, which involve extensive instruction and active use of knowledge and abilities, supplemented by additional techniques for vocabulary learning, all promote vocabulary acquisition. Various strategies for vocabulary should be further explored and applied. As Oxford (1989) suggested, a

very important concern in the choice of language-learning strategies may be the purpose for which a language is learned. The results of the present study show that the effectiveness of strategy is associated with high levels of achievement in vocabulary learning .So, Chinese EFL teachers should help the students recognize the power of consciously using vocabulary learning strategies and help them use more effective strategies to make learning quicker, easier and more effective and strategy training needs to be given more consideration and specific training methods need to be worked out for effective training. To solve the problem, teachers have to start with the intermediary system of cognition. Teachers should help students to understand the effect of intermediary system on vocabulary acquisition and strategies' choice.

5. Conclusion

The present study has presented a comprehensive picture of the intermediary system of cognition in English vocabulary learning possessed by some English majors in China. Language learning is generally an internal or mental process, and the present study has made some contribution to vocabulary acquisition research from a new angle of view. Vocabulary learning is a life-long process, and therefore, subjects' intermediary system of cognition and English vocabulary learning strategies deserve more attention and further research. We may enhance students' abilities of vocabulary acquisition once and for all, only constantly improve knowledge structure and abilities structure, and richen the intermediary system as far as possible. It is hoped that this paper may enlighten language learners and educators, so that language learning may be transformed into a less daunting endeavor.

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Table 1. The intermediary system of cognition

the inter-mediary system of cognition	knowledge structure	language knowledge (vocabulary knowledge)	pronunciation,spelling. meaning, collocation, grammar,word-formation, context,metaphor,pragmatics,syntax etc.
		background knowledge	natural science,social science,modern science and technology,theory of learningstrategies,common sense,social experience etc.
	abilities structure	rational factors	memory,association,inference,omparing and grouping ,self-encouragement etc.
		irrational factors	emotion,mood etc.

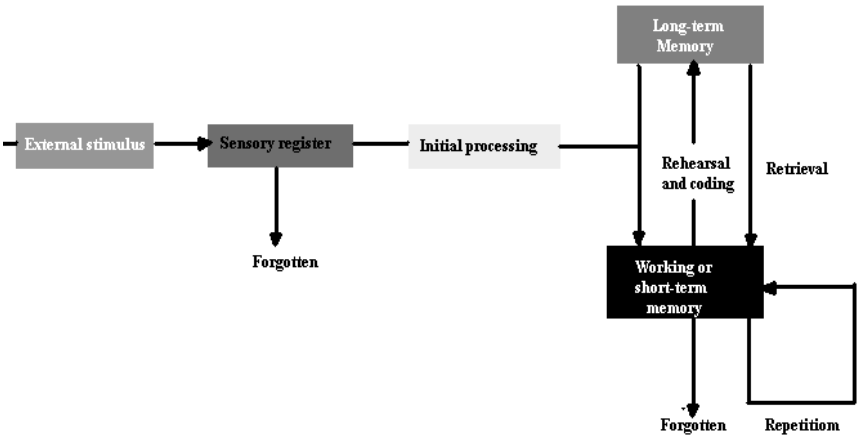

Figure 1. The sequence of information process