Presentation Modes and Vocabulary Learning and Retention Effects

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Abstract

Based on the elaboration and mental lexicon theories, this study investigates, by use of experiments, the different effects of English vocabulary learning and retention when adopting 3 different presentation modes. 58 English majors are selected as the subjects and two tests are performed one hour and one week after the relevant presentation, utilizing a certain presentation mode respectively. Data analysis reveals four major findings, and supported by the major findings and our interpretations, we are able to reach the conclusions of the study: (1) Different presentation modes will surely produce different vocabulary learning and retention effects; (2) Providing example sentences in presentation influences vocabulary learning effect; (3) The ways of providing example sentences in presentation influences the vocabulary learning and retention effects as well. Generally, the effect is better when learners make their own example sentences than that when the sentences are hastily and randomly provided by the teacher.

Key Words: elaboration; English vocabulary teaching and learning; mental lexicon; presentation; vocabulary memorization

Abstracto

Basado en la elaboración y las teorías mentales del léxico, este estudio investiga, a través del uso de experimentos, los diferentes efectos de la retención y el vocabulario en inglés en tres diversos modos de presentación. 58 estudiantes, cuya concentración académica es el inglés, fueron elegidos para ser sujetos en dos estudios de una hora y una semana respectivamente, después de efectuar unas exposiciones relevantes al tema utilizando una cierta metodología de presentación. El análisis de datos refleja cuatro hallazgos principales. De acuerdo a estos hallazgos y nuestras interpretaciones concluímos que: (1) Diversos modos de

presentación producen claramente diferentes efectos en el aprendizaje de vocabulario y la retención del mismo; (2) Proveer ejemplos de oraciones durante las exposiciones influencia el efecto del aprendizaje de vocabulario; (3) Las maneras de proveer oraciones como ejemplos durante las presentaciones influencia el aprendizaje de vocabulario, como también, los efectos de retención. Generalmente, el efecto es mejor cuando los aprendices formulan sus propios ejemplos de oraciones en comparación con cuando las mismas son suplidas apresuradamente por el(la) maestro(a).

***Palabras claves:** Elaboración; enseñanza y aprendizaje de vocabulario en inglés; léxico mental; presentación; memorización de vocabulario*

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Introduction

In English language teaching and learning, there have been contrasts in attitudes towards the role of vocabulary and its instruction. Some hold the idea that English learning is completely based on syntax and text structures, thus it is unnecessary to learn vocabulary or specially study the domain of vocabulary instruction. While some other people insist that the process of learning English is actually the process of learning English vocabulary and grammar, adequate English vocabulary and grammar ensures the mastering of this language. Obviously, these two extreme perspectives and attitudes are not correct or objective.

Although "a recurring theme has been the neglect of vocabulary" (Hedge, 2002) in the literature of English language teaching and learning throughout different stages, just as Sweet (1964) insists that "…we do not speak in words, but in sentences…the

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sentence is the unit of language, not the word."(p. 97), language teachers and researchers have already realized the importance of vocabulary and vocabulary instruction. Laufer states that "the earlier neglect of vocabulary in theorizing and study is now being replaced by a vigorous interest" (as cited in Nation, 1990, p. 192), and it will "continue to interest and be a fertile area for the efforts of second language researchers, materials writers, and instructors" (Sökmen, 2002, p. 257).

As is widely accepted, vocabulary is "of critical importance to the typical language learner" (Zimmerman, 2001, p. 5), and Wilkins (1972) states that without grammar very little can be conveyed, without vocabulary nothing can be conveyed (as cited in Carter & McCarthy, 1988, p. 42). Singer points out that in a reading activity, understanding vocabulary is about 39% of a reader's reading competence, and a reader's ability to understand vocabulary in texts 47% relies on his/her vocabulary size, and 28% of the reading speed is used to recognize vocabulary (as cited in Sun, 1998, p. 101). This is why more and more language learners, practitioners and researchers are considering vocabulary as being a vitally important, if not the most important, element in language learning (Nation, 1990, p. 2), and consequently vocabulary instruction has been regarded as a significant segment in language teaching and learning.

Introducing target words (lexical items) to learners is called vocabulary presentation. It is extremely important since, on the one hand, learners are assigned the task of learning, and on the other, which is more important, and using appropriate presentation methods enables learners to obtain a deeper impression of and richer information about the target words to make them enter the long-term memory more

easily.

Based on mental lexicon and elaboration theories, this study investigates the different effects of English vocabulary teaching and learning when adopting different presentation modes. The orientation is to compare the vocabulary learning results when utilizing three types of commonly used presentation modes. In the study, 3 groups of words are presented respectively to the 58 randomly chosen subjects (each group is presented using a certain presentation mode), and then the subjects take two tests, namely the short-term memory test and the long-term memory test. The study attempts to identify an effective presentation mode in English vocabulary instruction in China.

We are to answer the following three questions:

1. Will different presentation modes lead to different vocabulary learning and retention results?
2. Will providing example sentences in the process of vocabulary presentation influence the effects of learners' vocabulary learning and retention?
3. Will the ways of providing example sentences in the process of vocabulary presentation influence learners' vocabulary learning and retention?

Studies on vocabulary teaching and learning

We can find a large number of journal articles under the key words of vocabulary instruction published in China, and various aspects of this topic have been studied in terms of the following 12 issues:

1. The problems and options of English vocabulary teaching and learning.
2. The principles of English vocabulary teaching and learning.
3. Skills, Methods and Strategies of implementing English vocabulary teaching and learning.
4. Linguistic theories and English vocabulary teaching and learning.
5. Linguistic contexts and English vocabulary teaching and learning.
6. Memory and English vocabulary teaching and learning.
7. Active and Passive vocabulary.
8. Culture and English vocabulary teaching and learning.

9. Corpuses, collocations, chunks and vocabulary teaching and learning.
10. Vocabulary acquisition and English vocabulary teaching and learning.
11. Meaningful learning theory and English vocabulary instruction.
12. Teaching and learning vocabulary in specialized fields.

The history of studying vocabulary instruction abroad can at least trace back to the next half of the nineteenth century (Prendergast, T. 1864; Sweet, 1899, etc.). A great number of research publications appeared in the 20th century, and among which there are some other orientations:

1. Computer-assisted vocabulary instruction (Goodfellow, 1994; Kang, 1995; Van de Poel, Kris & Swanepoel, Piet, 2003, etc.)
2. Incidental vocabulary acquisition (Hulstijn, J., Hollander, M. & Greidanus, T., 1996; Gass, S., 1999; Pulido, D., 2004, etc.)
3. Written and spoken vocabulary (McCarthy, M., 1988; Nation, I.S.P., 1990, 2001; McCarthy, M. & Carter, R., 2002, etc.)
4. Difference between L1 and L2 and their vocabulary acquisition and instruction (Zimmerman, C., 1997; Koda, K., 2001; Swan, 2002, etc.
5. On-line resources and vocabulary instruction (Rickman, 1990; Hulstijn, 1993, etc.)
6. Vocabulary and testing (Nation, I.S.P., 2001; Read, J. 2002, etc.).

Among the numerous studies, we failed to find a specific study on vocabulary presentation; therefore we chose this topic as our experimental study, attempting to identify effective presentation mode(s) in English vocabulary instruction in China.

Theoretical Framework

Elaboration Theory

The elaboration theory evolved in the late 1970's. Charles Reigeluth and his associates (Merill, Wilson & Spiller) are responsible for developing this theory. Basically, the theory is a model for sequencing and organizing instruction courses, and the fundamental principle of this theory is that instruction should be organized in an

increasing order of complexity for optimal learning (Zhang, 2004a, p. 349), because "a simple to complex sequence is hypothesized to result in a function of more stable cognitive structures, hence causing better long-term retention and transfer" (Jackson & Dwyer, 1995). Since Reigeluth refined the theory by offering detailed procedures for planning and designing conceptual, procedural, and theoretical instruction, elaboration theory "has been one of the best-received theoretical innovations in instructional design", and "is heavily referred to and used by practitioners and researchers" (Wilson & Cole, 1992) in the fields of course design, psycholinguistics research, and language teaching practice and research.

The simple to complex sequence (elaboration) exists in the process of vocabulary learning. When people receive and process new input, they unavoidably add some extra information intentionally or unintentionally, thus elaboration is "a process during which newly received information and the information stored in the long-term memory are connected with each other so that the mnemonic representations of the new information can be enriched" (Gui, 2000). Various things can be elaborated, including "logic inference, the continuum of information, examples and details added, and anything that can connect information" (Gui, 1991).

Considering elaboration, two questions are closely related to English vocabulary learning:
1. What function is elaboration performing in storing and retrieving vocabulary?
2. How can elaboration be achieved?

As to the first question, we believe the function lies in the two aspects: Firstly, in vocabulary presentation, relevant information (phonological, semantic, and syntactic

features) can be elaborated, which ensures the target words enter mental lexicon with relatively complete lexical knowledge, which provides a better access to the retrieval of the target words; Secondly, in promoting the retrieval of the vocabulary items, elaboration "provides more possible paths as spreading activation occurs, and some other paths can be chosen even when one of them has been blocked", and at the same time, it "provides more information as well so that answers can be established" (Gui, 1991).

The second question is what we attempt to answer in the study. In the previous studies, elaboration has been considered as an internal psychological process, and the elaborating behavior is most probably unintentional. However, we believe that in vocabulary presentation stage, elaboration can be achieved to help and promote learners learning by effectively devising certain activities. We insist that in vocabulary presentation, utilizing example sentences is an important means to achieve this goal.

Mental Lexicon

The organization of word knowledge in permanent memory (the long-term memory) is called mental lexicon or the internal lexicon (Carroll, 2000, p. 102). Two points are involved: how word knowledge is stored (organized) in memory, and in what way the knowledge can be retrieved. Researchers offered some models to interpret their research findings, among which the Spreading Activation Model has so far been considered the best to reflect the intrinsic quality of mental lexicon.

Spreading Activation Model was originally put forward by A. M. Collins and E. F. Loftus in 1975, and they assume that "words represented in the internal lexicon in a

network, but the organization is not strictly hierarchical", instead, it is "closer to a web of interconnecting nodes, with the distance between the nodes determined by both structural characteristics and considerations between related concepts" (as cited in Carroll, 2000, p. 114). In this model, the retrieval of the knowledge stored occurs via a process of spreading activation, that is, when one notion is stimulated, the node of the notion will be activated, and this kind of activation will be spread in all directions through various links. Concepts closely related to the central node are more likely to be activated than those distant ones, and the power of activation gradually weakens as it spreads farther and farther away from the central node.

Bock and Levelt revised Spreading Activation Model in 1994. They assume that our word knowledge exists at three levels: the conceptual level (consists of nodes representing concepts), the lemma level (syntactic aspects of word knowledge), and the lexeme level (phonological properties of words) (as cited in Carroll, 2000, pp. 114-115). The ideal word knowledge is stored in memory (mental lexicon) at the three levels with relatively complete forms. Hence, vocabulary information at these three levels is needed to ensure that the target words have easy access to the mental lexicon with more complete forms, and to acquire better storage (memorization). Therefore, when presenting the target words, teachers need to take the relevant information (knowledge) at the three levels into consideration.

When receiving new information, people usually do some elaborating. By elaboration, they establish certain connections between new information and the existed knowledge structure, constantly enriching and perfecting the relevant information, and

strengthening information processing. Presenting vocabulary knowledge (information)

at the conceptual, the lemma (syntactic) and the lexeme (phonological) levels, learners

can acquire elaboration through more channels:

1. Phonologically, learners can establish the memory of sound intuition by using analogy and other elaboration means;
2. Conceptually, learners receive the morphologic and semantic information of the target words, and utilize their previous experiences, the existed knowledge, and the world knowledge to integrate new information with the existed knowledge structure in the manner of assimilation and accommodation;
3. Syntactically, by providing example sentences, learners can perceive the syntactic rules and the collocations.

Presenting vocabulary information at more levels serves to strengthen learners' effective

elaboration through more paths. In order to help learners to acquire more complete word

knowledge, to reinforce their memorization and to retrieve the target words, we need to

value the presentation process, and present vocabulary information at as more levels as

possible to increase channels of elaboration. By elaborating information from more

channels, the target words can enter the semantic network (mental lexicon) with

adequate information, and therefore, they are easier to be retrieved since any stimulus of

phonological, conceptual, or syntactic information may activate the relevant information,

thus lead to successful retrieval.

Methodology

Subjects

58 subjects were randomly chosen. 30 were second year Business English majors in

Guangxi Normal University and 28 were English majors of Grade 2 in Hubei Institute

for Nationalities.

Experimental material

We carefully selected 100 English words from *A Selection of GMAT vocabulary* (Yu 1999), and then invited 20 Grade 2 English majors to do the pretest. Each of them was given a word list containing the 100 words and required to circle the words that they knew or felt familiar with. After that, we eliminated all those circled and selected 45 from the remained, and divided them into three groups, balancing relatively the learning difficulty of each group by considering spelling, pronunciation and abstractness.

Experiment implementation

Three presentation modes were adopted in the experiments. In Presentation Mode 1, the forms, phonetic symbols, parts of speech and meanings of the target words were presented; Presentation Mode 2 included the forms, phonetic symbols, parts of speech, meanings of the words, and then the teacher provided an example sentence for each word; Presentation Mode 3 was the same as Presentation Mode 2 except that the example sentences were made by subjects themselves rather than provided by the teacher.

In the experiments, the target words were presented to the subjects in twenty minutes, using a certain presentation mode respectively, then the subjects were tested twice, namely the short-term memory test (held one hour after the presentation) and the long-term memory test (performed one week after the presentation). The test paper involves two types of commonly used vocabulary testing forms in China: giving the Chinese equivalent for the English word, and giving the relevant English word according to the Chinese meaning.

Results and Major Findings of the Study

Descriptives of the short-term memory tests **(see Table 5.1)**

Table 5.1 Descriptives of the short-term memory tests

TS

PM	Mean	Std. Deviation	Minimum	Maximum	Range	Variance
1	46.33	17.731	13	87	74	314.379
2	46.18	18.458	20	83	63	340.712
3	40.30	14.722	19	68	49	216.728
Total	44.27	17.136	13	87	74	293.659

Note: TS: test scores; PM: presentation modes

Descriptives of the long-term memory tests **(see Table 5.2)**

Table 5.2 Descriptives of the long-term memory tests

TS

PM	Mean	Std. Deviation	Minimum	Maximum	Range	Variance
1	25.08	12.041	3	47	44	144.994
2	28.13	17.807	6	60	54	317.087
3	33.03	11.176	14	63	49	124.897
Total	28.74	14.254	3	63	60	203.185

Note: TS: test scores; PM: presentation modes

Multiple Comparisons of short-term memory tests results **(see Table 5.3)**

Table 5.3 Multiple Comparisons of short-term memory tests results

Tukey HSD

(I)PM	(J)PM	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	Upper Bound
1	2	.15	3.812	.999	-8.90	9.20
	3	6.03	3.812	.258	-3.02	15.07
2	1	-.15	3.812	.999	-9.20	8.90
	3	5.88	3.812	.276	-3.17	14.92
3	1	-6.03	3.812	.258	-15.07	3.02
		-5.88	3.812	.276	-14.92	3.17
	2					

Note: 1 = Presentation Mode 1, 2 = Presentation Mode 2, 3 = Presentation Mode 3

*Multiple Comparisons of the long-term memory tests r*esults (see Table 5.4)

Table 5.4 Multiple Comparisons of the long-term memory tests results

Dunnett T3

(I) PM	(J) PM	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
1	2	-3.05	3.399	.750	-11.36	5.26
	3	-7.95 *	2.598	.009	-14.28	-1.62
2	1	3.05	3.399	.750	-5.26	11.36
	3	-4.90	3.324	.372	-13.04	3.24
3	1	7.95 *	2.598	.009	1.62	14.28
	2	4.90	3.324	.372	-3.24	13.04

* The mean difference is significant at the .05 level.

Major findings and analyses

Major findings of the study

Based on the statistics, we have the four findings:

(1) In Table 5.1, the mean vocabulary retention amount of the short-term memory test by using Presentation Mode 1 is the most, the one when using Mode 2 is a little less, and that by using Mode 3 is the least. This shows that the vocabulary learning and retention effects by utilizing the three presentation modes decrease gradually.

(2) Table 5.2 shows that when using the three presentation modes, vocabulary learning and retention effects ameliorate progressively: the vocabulary retention amount when utilizing presentation Mode 1 is the least, the one when adopting Mode 3 is the most and that by using Mode 2 lays in the middle.

(3) Observing the comparisons of the short-term memory tests in Table 5.3, we recognize that when using the three presentation modes, short-term memory tests results are different. The degree of the difference between any two tests, however, has not

reached a significant level yet.

(4) Table 5.4 reports that in the long-term memory tests, the three test scores are variant when utilizing the three presentation modes respectively and the variation degree between tests 1 and 3 reaches a significant level. This reveals the vocabulary learning and retention effect in the long-term memory test when adopting Mode 3 is significantly better than that when using Mode1.

Preliminary interpretations of the major findings

Our preliminary interpretations of the major findings are proposed as follows:

(1) Comparing the characteristics of the three presentation modes, we realize that in the same period of time (20 minutes) to present the target words, the loads of information processing vary: when using the first presentation mode (without providing example sentences), the information processing load is minimal, and when using the second presentation mode (example sentences are provided by the teacher), the load is heavier than that of the first one, since subjects need to spend some extra time in noticing the example sentences (processing some extra information) in addition to the basic information presented. While when using the third presentation mode (subjects make their own example sentences), the load is surely the maximal because the subjects have to spend more time in making example sentences than just observing those provided by their teacher. Undoubtedly, the information processing loads imposed by the three presentation modes increase progressively. The information-processing load has been increased, but the time used to process the increased information does not

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change, so the effects of the information processing (in the form of test scores) decrease gradually.

By interviewing some subjects, we know that they have been accustomed to using rote memory to learn vocabulary. When using the first presentation mode, subjects have the maximal amount of time memorizing the forms and meanings of the target words, and at the same time, this presentation mode conforms to their vocabulary learning strategy, thereby they have the most effective memorization for the forms and meanings of the words presented. While as the intervention of example sentences in presentation, subjects' vocabulary learning strategy (habit) is probably disturbed, and thereafter the vocabulary learning and retention effects are influenced.

(2) Providing example sentences is an important segment in vocabulary presentation, though it increases information processing loads, it definitely ensures that learners can effectively elaborate relevant syntactic information, and thus the target words can be restored in the long-term memory in more complete forms, which leads to a better access to them (for later activation and retrieval). Meanwhile, by elaborating syntactic information, more information and possible paths are available to retrieve the vocabulary information restored, i.e. using the presentation modes involving making example sentences facilitates learning and retention.

Making example sentences encourages learners to achieve their intentional elaborating behavior, which actually enhances the whole elaboration effects, thereby the vocabulary information processing is strengthened and more effective retention (storage) of the vocabulary information and a lower rate of memory-fading can be achieved.

(3) Memory-fading is natural for human beings. After the input (new information) has been received, it is restored in the short-term memory temporarily to be forgotten or processed to enter the long-term memory. Information will be reduced (lost) at various speeds according to different degrees of processing.

As has been mentioned previously, the test scores decrease gradually in turn as the information-processing load increases. Increasing the information-processing load is actually increasing human being's cognitive effort, and the more effort is given for the cognitive activity, the deeper the information processing depth will be. That is, the information will be elaborated more effectively.

The cognitive effort needed for learning and memorizing the target words by using the third presentation mode is much bigger than those devoted to the tasks when using the first two presentation modes. To put it in another way, the subjects need to pay greater effort for the vocabulary learning activity when they are required to make their own example sentences, and comparing with this, some extra but not much cognitive effort is needed when using the second presentation mode with the example sentences provided by the teacher.

(4) As is analyzed above, memory fading occurs as time goes by, and the rate of the fading varies due to the information processing depth, the effectiveness of elaboration and some other factors. By using Presentation Mode 3, subjects are required to make their own authentic example sentences which need more cognitive effort, which leads to much deeper information processing and more effective elaboration. Therefore much solider memorization effect has been achieved, and this ensures the slightest amount of

memory fading among the three, i.e. the best vocabulary retention in the long-term memory tests.

To put it all together, the effectiveness of elaboration is greater and more obvious in the long-term memory tests, and comparing with other methods without or with little elaboration, we assume that the longer the time passes, the greater (more significant) the retention difference of the learning activities will be.

Conclusions and implications

Conclusions of the Study

Based on the major findings and the interpretations, we are now able to answer the questions raised before the experiments, and then reach the conclusions of the study.

(1) There is a close relationship between presentation modes and the vocabulary learning and retention effects. Different modes produce different learning and retention effects;

(2) Providing example sentences in presentation promotes vocabulary learning and retention. When utilizing the presentation modes which involve providing example sentences, though learners' vocabulary learning and retention effects in the short-term memory tests decrease gradually due to the increase of the information processing load, the long-term memory effects increase progressively as a result of effective elaboration and information processing,

(3) The ways of providing example sentences in presentation influence the vocabulary learning and retention effects. Generally, the effect is better when learners

make their own sentences than when the example sentences are hastily and randomly

provided by their teacher. Of course, we do not deny the possibility that ideal

presentation and elaboration effects can be achieved when the teacher carefully designs

and provides good example sentences closely related to students' life experiences, and

thus effective elaboration can be achieved, just as M. Stein and J. Bransford found in

their experiments, what is important is not who provides elaboration, but whether or not

the information to be elaborated restricts the materials to be recalled. Hence learners'

own elaborations are usually more effective since they are uniquely processed in

accordance with their own knowledge structure (schema). The experimenters, however,

can provide effective elaborations as well, by more precisely restricting and processing

the information to be elaborated (as cited in Gui, 1991, p. 175).

Implications for English VocabularyInstruction

The conclusions of the study may shed some light on English vocabulary teaching

and learning in China in terms of the following implications:

(1) Providing example sentences is a vitally important element in vocabulary

presentation, by which learners can be freed from the methods focusing on simple and

mechanical repetition and rote memorization, thereby learners' interest and confidence

can be enhanced, and the learning efficiency will be promoted. This is the principle of

"learning lexical items in sentences, and learning sentences in discourses (texts)."

(2) Though we have realized that we should avoid memorizing vocabulary lists in

isolation, we do not deny the usefulness of making a concentrated effort to memorize

vocabulary lists. The short-term memory test scores of this study show that when using the traditional method centering on forms and meanings of the target words, the subjects' learning and retention effect is better than that when using the modes involving providing example sentences. This suggests that, to some extent, it can be effective to concentrate on the relevant vocabulary items and manage to memorize them before performing some tests. In fact, both the "learning Chinese characters on a large scale" carried out in primary schools in China and the well-known "large-scale English vocabulary learning" proposed by Zhang Sizhong (an outstanding high school teacher in Shanghai, China) clearly implicate this principle.

(3) To slow down the memory-fading rate, two ways can be adopted: revision and making use of sentences. Obviously, the mechanical repetition is disadvantageous and even harmful to the acquisition of complete vocabulary knowledge. Hence, we need to make good use of sentences made by learners or extracted from reading materials. Utilizing example sentences efficiently, we are able to help learners to achieve more effective elaboration, deepen the depth of information processing, strengthen their memorization and ultimately serve the purpose of improving their vocabulary learning efficiency.

Bibliography

Carroll, D. W. (2000). *Psychology of language*. Beijing, CHINA: Foreign Language Teaching and Study Press.

Carter, R., & McCarthy, M. (1988). Developments in the teaching of vocabulary: 1945 to the present day. In R. Carter & M. McCarthy (Eds.), *Vocabulary and language teaching* (pp.39-59). New York: Longman Group UK Limited.

Gass, S. (1999). Incidental vocabulary learning. *Studies in Second Language Acquisition, 21,* 319-333.

Goodfellow, R. (1994). Design principles for computer-aided vocabulary acquisition: Implications for CALL. *Computers & Education, 23*, 53-62.

Gui, S. (1991). *An outline of experimental psycholinguistics*. Changsha, CHINA: Hunan Education Press.

Gui, S. (2000). *Psycholinguistics*. (New ed.). Shanghai, CHINA: Shanghai Foreign Language Education Press.

Hedge, T. (2002). *Teaching and learning in the language classroom*. Shanghai, CHINA: Shanghai Foreign Language Education Press.

Hulstijn, J., Hollander, M., & Greidanus, T. (1996). Incidental vocabulary learning by advanced foreign language students: The influence of marginal glosses, dictionary use, and reoccurrence of unknown words. *The Modern Language Journal, 80,* 327-339.

Jackson, R. G., & Dwyer, F. (1995). The effect of varied elaboration strategies in facilitating student achievement of different educational objectives. *Academic*

Search Premier. [Electronic database]. (2003). Available: EBSCO HOST Study

Databases (EBSCO Publishing). Item: 9510232631.

Kang, S. (1995). The effects of a context-embedded approach to second language

vocabulary   learning [On-line].   *System, 723,* 43-55.

Koda, K. (2001). Orthographic knowledge in L2 lexical processing. In J. Coady, & T.

Huckin, (Eds.), *Second language vocabulary acquisition* (pp. 35-54). Shanghai,

CHINA: Shanghai Foreign Language Education Press.

McCarthy, M. (1988). Some vocabulary modes in conversation. In R. Carter, & M.

McCarthy (Eds.), *Vocabulary and language teaching* (pp. 181-200). New York:

Longman Group UK Limited.

McCarthy, M., & Carter, R. (2002). Written and spoken vocabulary. In Schmitt, N., &

McCarthy, M. (Eds.), *Vocabulary: Description, acquisition and pedagogy*

(pp.20-39). Shanghai, CHINA: Shanghai Foreign Language Education Press.

Nation, I. S. P. (1990). *Teaching and learning vocabulary*, New York: Newbury House

Publishers.

Nation, I. S. P. (2001). *Learning vocabulary in another language*, Cambridge, UK:

Cambridge University Press.

Pearsall, J. (2001). *The new Oxford dictionary of English*, Shanghai, CHINA: Shanghai

Foreign Language Education Press.

Prendergast, T. (1864). *The mastery of languages, or, the art of speaking foreign tongues*

idiomatically. London, UK: R. Bentley.

Pulido, D. (2004). The relationship between text comprehension and second language

incidental vocabulary acquisition: A matter of topic familiarity? *Journal of*

Learning Language, 54, 3, 469. Abstract available:

http://www.blackwell-synergy.com/links/ doi/10.1111/j.0023-8333.2004.00263.x/

abs

Read, J. (2002). Vocabulary and testing. In N. Schmitt, & M. McCarthy. (Eds.),

Vocabulary: Description, acquisition and pedagogy (pp.303-320). Shanghai,

CHINA: Shanghai Foreign Language Education Press.

Son, J. B.   (2001). CALL and vocabulary learning: A review [On-line]. *English*

Linguistic Science Association of Korea, 7, 27-35. Available website:

http://www.usq.edu.au/users/sonjb/papers/ elsak01.htm.

Sökmen, A. J. (2002). Current trends in teaching second language vocabulary. In N.

Schmitt, & M. McCarthy (Eds.), *Vocabulary: Description, acquisition and*

pedagogy (pp.237-257). Shanghai, CHINA: Shanghai Foreign Language

Education Press.

Sun, X. (1998). Reflections on the current English vocabulary instruction in colleges

and universities. *Journal of Sichuan Teachers College (Philosophy and Social*

Sciences) 2, 101-106.

Swan, M. (2002). The influence of the mother tongue on second language vocabulary

acquisition and use. In N. Schmitt, & M. McCarthy (Eds.), *Vocabulary:*

Description, acquisition and pedagogy (pp.156-180).Shanghai, CHINA:

Shanghai Foreign Language Education Press.

Sweet, H.   (1899). *The practical study of language: A guide for teachers and learners*,

London, UK: Oxford University Press.

Van de Poel, K., & Swanepoel, P. (2003). Theoretical and methodological pluralism in designing effective lexical support for CALL [electronic database]. *Computer Assisted Language Learning*. July 2003, Vol. 16 Issue 2/3, p173, 39p. Abstract from: *Academic Search Premier*. Entry: 10671614.

Wilson, B., & Cole, P. (1992). A critical review of elaboration theory. *Educational Technology Study and Development*, *40,* (3), 63-79.

Yu, M. (1999). *A Selection of GMAT vocabulary.* Beijing, CHINA: World Knowledge Press.

Zhang, B. (2004). Elaboration theory and English vocabulary teaching and learning. *Teaching Research, 4,* 349-352.

Zimmerman, C.   B. (1997). Do reading and interactive vocabulary instruction make a difference? An empirical study. *TESOL Quarterly*, *31*(1), 121-140.

Zimmerman, C. B. (2001). Historical trends in second language vocabulary instruction. In J. Coady, & T. Huckin (Eds.), *Second language vocabulary acquisition* (pp.5-19). Shanghai, CHINA: Shanghai Foreign Language Education Press.