Effective Word-guessing Clues with Chinese EFL Learners

Yan Qin (qy2013@yahoo.co.jp)
Nishinippon Institute of Technology, Japan
ORCID: 0000-0002-1511-0777

Rong Zhang (zhang@nishitech.ac.jp)
Nishinippon Institute of Technology, Japan
ORCID: 0000-0003-0234-8716

Abstract: This study aims to find out the frequently-used word-guessing clues by Chinese EFL learners in reading comprehension and examine the potential factors which affect their vocabulary acquisition performance. 60 Chinese students were required to complete a reading comprehension test and three questionnaires on their attitude and willingness to guess new words in an English article. The results indicate that (1) there is a relationship between Chinese learners' word-guessing accuracy and their test scores for reading comprehension; (2) strategies Chinese EFL learners most frequently used may not effective as we expected in word acquisition; (3) Chinese learners with higher English proficiency tend to show more desirable performance in vocabulary acquisition. These findings provide pedagogical suggestions to English teachers on their instruction of effective unknown word guessing.

Key words: Chinese EFL learners, effective word guessing clues, vocabulary gain and retention, TOEIC reading.

Introduction

Vocabulary acquisition is a significant activity during the second language (L2) learning process (Frederiksen, 1982; Grabe, 1991; Anderson and Freebody, 1981). Successful reading relies on L2 learners' understanding the word meanings within

a given passage (Laufer, 1997; Kinsella, 2015). The depth and breadth of vocabulary knowledge have a strong positive influence on the reading comprehension competence of EFL (English as a Foreign Language) learners (Qian, 1999). Shen (2008) describes the "delicate and complex" relationship between English learners' vocabulary size and their reading comprehension level. Moghadam et.al (2012) stresses "the dominant position" of vocabulary size in language acquisition because it affects learners' reading comprehension performance. A good vocabulary size is indispensable for a good reading comprehension skill (Shen, 2008). Therefore, it is a most challenging issue for EFL learners as to how to deal with the unknown words they encounter while reading an article.

Unknown words prevent EFL learners from better understanding the article. But it is not necessary for teachers to teach every word in class before the reading comprehension practice because many unknown words are low-frequency words in English (Nation, 1990). Not all of the unknown words need to be understood in reading comprehension because they may not be important since they are low-frequency words (Swift, 2006). Some of the unknown words can't be guessed due to the lack of sound contextual clues (Laufer, 1997). Many EFL learners simply skip the unknown words they encounter and go on with their reading. This may work in certain circumstances and learners have to endure the ambiguity in their guessing the meaning (Wen and Johnson, 1997). Unconscious word guessing is a sort of risk-taking behavior, therefore, EFL leaners need to master the technique to better guess the meaning of unknown words (Swift, 2006). Many researchers agree that effective guessing clues lead to higher possibility of accurate guessing of the meanings of unknown words in reading. On one hand, Word guessing is part of the training to develop learners' vocabulary size through reading (Gray and Holmes, 1938). On the other hand, the enhancement of word guessing contributes

to the improvement of EFL learners' reading comprehension ability (Kojima and Narita, 2004; Kern, 1989).

Word guessing skills with Chinese EFL learners have drawn the attention of many researchers. There are many studies focusing on this issue from different perspectives. Wu et. al (2013) conduct an investigation with pre-university Chinese students and find out that students should have a basic vocabulary size of 3500 words in order to employ the word guessing strategy "consciously and flexibly" during the reading process. Contextual guessing for unknown words is considered a useful learning strategy for the expansion of the learners' vocabulary size (Fan, 2003; Gu, 2003). Zhang (2001) reports that students with higher scores in the test tend to use the strategy of guessing meaning through contextual inferences rather than detailing the word meaning. He concludes that implications for training on learning strategies should be further clarified. Word guessing is an important part of incidental leaning process in a Second Language (L2). But the efficacy of different word-guessing strategies is still an unsolved issue in many specific cases (Huckin and Coady, 1999). As far as the authors are concerned, there is still no consistent conclusion on the details of different word guessing strategies employed by Chinese EFL learners. Therefore, this study aims to explore the following issues featuring word-guessing with Chinese EFL learners through a practical investigation:

(1) What are the frequently used word guessing clues by Chinese EFL learners?

(2) Is the word guessing clue which most frequently used by Chinese EFL learners effective as expected in word acquisition?

(3) What are the potential factors affecting the vocabulary acquisition performance of Chinese EFL learners?

Previous Study on Word Guessing Clues

Many previous studies have contributed to the word guessing clues used by EFL learners. These guessing clues include contextual clue, word formation, structure, inflection and background knowledge about the topic of the reading passage (Liu and Nation,1985; Takayama, 2003) Researchers even suggest that learners can take the place of an unknown word with a symbol mark such as the alphabet 'A' (Irene and Gaskins, 2004). Aizawa (1998) discovers that background knowledge, contextual situation and hints from the learners' acquired languages are important clues for word guessing. However, there are still no consistent results indicating which guessing clue is the most effective for EFL learners.

There is no doubt that a good guessing clue is the key to successful prediction of the meaning of unknown words in reading (Thornbury, 2002). Among all the guessing clues, guessing unknown words based on contextual situations is considered one of the most useful skills learners should acquire in order to improve their reading comprehension performance (Thornbury, 2002; Takayama, 2003; Liu and Nation, 1985; Mitsumochi, 1994). Takayama (2003) confirms this result through a survey with Japanese high school students. She even discovered that the students were able to use this clue without special training. Liu and Nation (1985) made comparison about the accuracy of word guessing using contextual clues between high and low proficiency students. The result shows that students with relatively higher English proficiency can do much better than the lower group. Ikeda (2006) confirms this statement in his study. He identifies that learners with higher proficiency in English tend to guess unknown words through word information and infection, while learners with low proficiency in English rely on nuance and background knowledge about the passage. The accuracy of the latter is lower than that of the former. On the other hand, some researchers disagree to the above argument and deny that word guessing through contextual clues is effective

for EFL learners. Hulstijn (1992) insists that only a small amount of information can be found within a context and such information is insufficient for word guessing.

There are studies on unknown-word guessing from other perspectives. National Reading Panel (2000) examines the correlation between successful reading and decoding unknown word with a symbol mark. Liu and Nation (1985) offer us information on this topic through the analysis of the parts of speech of the unknown words. They prove that it is easier for EFL students to guess the meaning of verbs than nouns, and nouns seem to be easier to guess than adverbs and adjectives. But the study conducted by Mitsumochi (1994) gives a different order. He states that adjectives are easier than nouns, and nouns are easier than verbs and adverbs.

Despite the quantity of study regarding unknown word guessing, it is still questionable which clue functions as the most effective method in decoding unknown words (Stahl, Duffy-Hester, and Stahl, 1998). Research suggests the importance of fast and accurate decoding. English EFL learners used to translate English words into their native language, they should do the decoding as fast as possible, or they were handicapped by their overloaded mind. (Hirsch, 2003)

As mentioned above, our primary concern in this study is to find out the effective word guessing clues for Chinese EFL learners and the potential factors which affect the accuracy of their guessing. As far as we are concerned, this question has not been sufficiently discussed in the previous study and no consistent conclusion has ever been reached up till now. Teachers need such information as evidence to enhance the vocabulary training in class and improve their pedagogical effectiveness.

Methodology

Testing questions in this study are selected from the Official Guide to the TOEIC Test (No.1~No.5), published by ETS (Educational Testing Service) for the sake of its worldwide recognized evaluation standard. According to Shen (2008), all articles can be classified into four patterns based on their writing styles: narrative passage, expositive passage, argumentative passage and practical passage. We analyze all passages from the above series of books and found that 97% of the passages fall into the fourth category. The practical articles we use for this study also entail narration, argumentation and exposition writing styles. They are mostly compact passages including letters, forms, cards, notes, advertisements and memos.

60 Chinese students from three local universities in Kitakyushu, Japan participated in the testing. All of them have studied English for at least 9 years since primary school. The whole testing consists of three steps:

(1) Reading comprehension competence testing

Participants were asked to complete a reading comprehension test consisting of four passages selected from the above mentioned books. Then they are divided into two groups based on their test scores. The full score is 100 points. 24 students with their test scores above 60 points are allocated to the high proficiency group (Group A). 36 students who score lower than 60 points are allocated to the low proficiency group (Group B).

(2) Unknown word guessing

Participants were required to write down all the unknown words appearing in the four passages and guess their meanings one by one. Then, they need mark their guessing clue for each unknown word they chose. The guessing clues listed in Fig.

1 were based on comments collected from 10 Chinese EFL learners through interview before the testing.

	Word-guessing clues
A	Contextual clue
B	Word formation such as prefix and suffix
C	Nuance of unknown words
D	Analysis of the grammatical roles of unknown words in sentences
E	Background knowledge about the passage
F	Decoding the unknown word using a symbol mark
G	Word inflection

Figure 1. Word-guessing Clues

Items	Contents
Item1	I am confident in reading comprehension tests.
Item2	I always make confirmation about the meaning of an unknown word I encounter in reading.
Item3	I think it is the fundamental task for EFL learners to enlarge their vocabulary size.
Item4	I have a notebook to memorize unknown words.
Item5	I always pay attention to the construction of a word.
Item6	I always connect my background knowledge with the topic of the reading passage.
Item7	I tend to read the passage repetitively for better understanding.
Item8	I always translate every sentence into Chinese.
Item9	When I encounter an unknown word, I always try to guess its meaning instead of looking it up in a dictionary.
Item 10	A large vocabulary size will help me improve my reading comprehension ability.

Figure 2. Questionnaire

(3) Questionnaire on learning strategy

As shown in Fig. 2, there are 10 items included in this questionnaire. Participants were asked to rate each statement using numbers 1~5, which stand for "completely agree", "partially agree", "not sure", "partially disagree" and "completely disagree". The aim of this questionnaire is to investigate 1) learners' attitudes towards learning and guessing the meanings of unknown words; 2) the skills they

use to understand an English article. In order to make sure that participants truly understand each item in the questionnaire, all items are written in Chinese.

Item 1, 6 ~ 8 were designed to figure out the skills and strategies participants use for English reading comprehension testing. Item 2~5 and item 9~10 pertain to the motivation and attitudes of the participants in learning new words.

Results

Average Rating and Standard Deviation with Questionnaire Items

Table 1 outlines the average and standard deviations of the 10 items rated on the five-point scale. The average rating for Item 1~ Item 10 ranges from 2.48~4.37 and the scope of standard deviations is 0.89~1.47. Item 3 shows the highest average score (4.37) for rating, but the smallest figure for standard deviation. This suggests that students are well aware of the importance of vocabulary in English learning. This has become a common understanding among the Chinese EFL learners and there is very little difference between individuals about this concept. On the contrary, item 4 shows the lowest average rating (2.48) and the highest standard deviation (1.47). Because Item 4 indicates a continued daily effort to remember new words. The relatively low scoring shows that participants have not contributed as much energy and time for word acquisition as desired although they have a clear awareness of the importance of learning new words in English study.

Table 1. Average Rating and Standard Deviations (SD)

Item No.	1	2	3	4	5	6	7	8	9	10
Average Rating	2.75	3.27	4.37	2.48	2.97	3.47	3.02	3.15	3.20	4.23
SD	1.07	1.08	0.89	1.47	1.33	1.18	1.04	1.06	1.03	1.02

Frequency in Use and Accuracy of Word-guessing Clues

Table 2. Accuracy Rates for Word-guessing Clues

	A	B	C	D	E	F	G	Total
Frequency of Use (Unit: times)	100	86	64	7	13	29	77	375
Correct Guessing (Unit: times)	54	67	27	2	2	7	65	224
Average Accuracy Rate	0.54	0.78	0.42	0.29	0.15	0.24	0.84	0.60

Table 2 shows the accuracy for the seven guessing clues listed in Fig. 1 from a whole. The total number of unknown words is 375, which means that participants use 375 clues for word-guessing during reading. The frequency of use ranges from 7~100 and the average accuracy rates for these clues are 0.15~0.84. This implies that Chinese English learners have strong tendency in choosing word-guessing clues and there is big difference in effectiveness among the word-guessing clues they choose.

According to Table 2, word-guessing Clue A (Contextual clue) is the one which is the most frequently used by participants. Clue B (Word formation such as prefix and suffix) and Clue G (Word inflection) rank the 2nd and the 3rd in frequency. Clue D (Analysis of grammatical roles of unknown words in sentences) and Clue E (Background knowledge about the passage) are the strategies least used for word guessing. But the accuracy rate for each guessing clue shows a different order. The accuracy of Clue G (Word inflection) is the highest (0.84), which indicates its outstanding effectiveness for word-guessing among all the seven clues. Clue B (Word formation such as prefix and suffix) and Clue A (Contextual clue) show the accuracy of 0.78 and 0.54 for word-guessing, respectively. Clue E (Background knowledge about the passage), Clue F (Decoding the unknown word using a

symbol mark) and Clue D (Analysis of the grammatical roles of unknown words in sentences) show their accuracy as 0.15, 0.24 and 0.29. Needless to say, these three are the relatively ineffective strategies for word guessing. In sum, Clue A (Contextual clue) is the most frequently used word-guessing clue but it is not as effective as expected. Clue E (Background knowledge about the passage), Clue F (Decoding the unknown word using a symbol mark) and Clue D (Analysis of the grammatical roles of unknown words in sentences) are unfavorable clues for word-guessing because of their relatively low accuracy.

In order to investigate the difference between students with high-level and low-level of proficiency in choosing in word-guessing clues, participants are divided into two groups based on their scores in the reading comprehension test. Groups A refers to participants who score more than 60 in the test, while Group B include participants who score less than 60.

Table 3. Accuracy Rates for Word-guessing Clues in Group A

Group A	A	B	C	D	E	F	G	Total
Frequency of Use (Unit: times)	43	32	23	3	6	8	33	147
Frequency of Use (Unit: times)	25	28	13	2	1	5	28	102
Accuracy Rate	0.58	0.88	0.57	0.67	0.17	0.63	0.85	0.69

Table 4. Accuracy Rates for Word-guessing Clues in Group B

Group B	A	B	C	D	E	F	G	Total
Frequency of Use (Unit: times)	57	54	41	4	7	21	44	228
Frequency of Use (Unit: times)	29	39	14	0	1	2	37	122
Accuracy Rate	0.51	0.72	0.34	0.00	0.14	0.10	0.84	0.54

Table 3 and Table 4 show the average accuracy rate for each of the seven guessing clues for Group A and Group B. Participants in Group B (228 clues) use much more strategies for word-guessing than Group A (147 clues) as a whole. The accuracy rate of Group A is a little higher than that of Group B, too. This is mainly caused by the gap in their average English proficiency. The frequency in the use of word-guessing clues shows roughly the same result as in Table 2. In both Group A and Group B, Clue A (Contextual clue) is the one which shows the highest frequency in use. Clue B (Word formation such as prefix and suffix) and Clue G (Word inflection) are the two strategies that follow Clue A. The same as in Table 2, Clue D (Analysis of the grammatical roles of unknown words in sentences), Clue E (Background knowledge about the passage) and Clue F (Decoding the unknown word using a symbol mark) are the three clues with very limited use.

Judged from the perspective of accuracy, Group A presents higher accuracy with all guessing clues than Group B. Clue B (Word formation such as prefix and suffix) and Clue G (Word inflection) rank the 1st and 2nd in effectiveness for word guessing in both groups. However, the accuracy rates of the following, the two groups show quite different results. In Group A, Clue D (Analysis of the grammatical roles of unknown words in sentences) and Clue F (Decoding the unknown word using a symbol mark) rank the 3rd and 4th, respectively, in successful guessing despite that they are the relatively infrequently used. But in Group B, Clue D (Analysis of the grammatical roles of unknown words in sentences), Clue E (Background knowledge about the passage) and Clue F (Decoding the unknown word using a symbol mark) all show very low accuracy. The accuracy of Clue D is 0.00, which is a distinct difference from Group A. Clue E (Background knowledge about the passage) does not seem to function well with participants in either group.

Although all participants prefer to use strategies of context (Clue A), word formation (Clue B) and inflection (Clue C) for word guessing, participants in Group A can implement the task more successfully. This is closely related to their relatively higher proficiency in language use. They are more skillful in analyzing the roles of unknown words in sentences (Clue D) and replacing the unknown word with a symbol mark (Clue F) to make the reading process easier. Their relatively large vocabulary size helps decrease the number of unknown words in the passage. Furthermore, their relatively high linguistic competence in English makes it easier for them to handle the unknown words by using various methods (maybe a combination) for guessing. However, in Group B, participants have less skills for language analysis. Their low proficiency in English makes them make wrong judgements easily. There is also the possibility that participants in Group A make more efforts in word guessing than Group B. They are more interested in English learning and achieve better scores in the reading test than Group B.

Correlation analysis

In order to figure out the relationship among Chinese EFL learners' word-guessing ability, their achievement in reading comprehension and attitude in learning, correlation analysis is conducted by using the compendium method proposed by Ueta (1997). Correlation between two factors is recognized when the coefficient *R* meets the following condition (Equation 1):

$$R^2>4/(n+2) \qquad \text{(Equation 1)}$$

Parameter *n* stands for the sample number. In the case of this study, the sample number is 60. Therefore, the modulus R^2 is expected to be more than 0.0645 [4/(60+2)] for a recognizable correlation relationship. Thus, the correlation coefficient *R* should be more than 0.254.

The correlation analysis is conducted through the following three steps:

(1) Correlation between Reading Test Score and and Word-guessing Accuracy

The calculation result shows that the modulus R^2 for this correlation is 0.0807, which is higher than 0.0645. Thus, we can make an inference that participants' reading test score is correlated to their word-guessing accuracy. A higher score in the reading text indicates a higher possibility to correctly guess the unknown words. Likewise, a better word-guessing skill leads to higher test scores for reading. The reciprocality between these two factors shows the importance of enhancing EFL learners' unknown word guessing ability for the improvement of reading competency.

(2) Correlation between Word-guessing Accuracy and Questionnaire Items

Table 5. Correlation between Guessing Accuracy and Items in Questionnaire

Item	R
Item 9 -- When I encounter an unknown word, I always try to guess its meaning instead of looking it up in dictionary.	0.2707

Table 5 shows the item in the questionnaire which correlates to the participants' word-guessing accuracy. Item 9 is the only item surviving the correlation calculation. This result shows implies that repetitive training for word-guessing can largely improve EFL learners' guessing accuracy. When they are highly motivated in word guessing, they tend to make more efforts to figure out the meanings of the unknown words. This positive attitude leads to more accurate word guessing. Students are encouraged to make the attempt to guess the meaning of an unknown word instead of looking it up into a dictionary. If they keep on in checking the new words in the dictionary while reading, they lose the chance to practice word-guessing. Guessing experience contributes to higher accuracy for word-guessing in their future reading.

(3) Correlation between Reading Test Score and Questionnaire Items

Questionnaire items which have correlation to the reading test score are listed in Table 6. Item 1,3,5,9,10 survive the correlation calculation because their $R>0.254$. EFL learners' confidence in reading comprehension holds the strongest correlation with their test score. The more confident they feel, they higher their test score is (Item 1). When EFL learners show a positive attitude and toward word acquisition, they tend to score higher in the reading test (Item 3, Item 5, Item 10). Students with higher scores in the reading test are more motivated and enthusiastic in unknown word guessing (Item 3, Item 9). As explained above, Item 9 is also the potential factor affecting students' word-guessing accuracy. This result indicates that training for unknown word guessing has a positive impact on EFL learners' learning outcome. In short, it is desirable that EFL learners contribute more time and energy to learn how to deal with unknown words more skillfully.

Table 6. Questionnaire Items Correlating to Reading Test Score

Item	R
Item 1 -- I am confident in reading comprehension tests.	0.5657
Item 3 -- I think it is the fundamental task for EFL learners to enlarge their vocabulary size.	0.3777
Item 5 -- I always pay attention to the construction of a word.	0.4393
Item 9 -- When I encounter an unknown word, I always try to guess its meaning instead of looking it up in a dictionary	0.2860
Item 10 – A large vocabulary size will help me improve my reading comprehension ability.	0.3430

Conclusion

This research reveals that the guessing clue which is the most frequently used by Chinese EFL learners may not be as effective as expected. They tend to use the contextual clue to guess the meaning of the unknown words they encounter in reading at the highest frequency, but this guessing clue disables them to guess the words with satisfactory accuracy. Contextual clue may not be applicate to all

situations they encounter. Instead, word formation and inflection are effective devices they should rely on in order to understand the article better.

The English proficiency of the Chinese EFL learners affects their vocabulary acquisition performance a lot (Table 3 and Table 4). Analysis skill takes on an important role in vocabulary acquisition and has great influence on learners' performance in reading comprehension. Due to the large vocabulary size of participants with relatively higher proficiency, they encounter fewer unknown words in the English articles than those in the low-proficiency group. Besides, they demonstrate higher ability in word-guessing and understanding English articles. With their high language skills, they know how to make use their background knowledge and nuance of words better during reading. Instead of focusing on the contextual clue, they may make use of several skills simultaneously. The hints they receive from this approach contribute to the relatively high accuracy for their unknown word-guessing. But for the low-proficiency group, participants who lack in language knowledge and skills are unable to process English language when encountering unknown words. Incorrect word-guessing is one of the reasons which should be responsible for their lower test scores.

Motivation in vocabulary learning is one of the factors affecting EFL learners' reading scores and their word-guessing accuracy (Table 6). They show better performance in learning when their motivation is high. This is especially the case with word guessing. When they are highly-motivated, they demonstrate a relatively higher accuracy for unknown word guessing. Although all of the participants know very well about the importance to enlarge their vocabulary size, they tend to show insufficient effort in their daily learning. A note-book for new words stands for continued efforts in overcoming the problem of new words in language learning. It is an effective learning habit for memorizing new words because it allows the learner to repeat learning in word acquisition (Center for

Teaching and Learning, the University of Alabama, 2007). Teachers need encourage students to enlarge their word sizes through accumulation. Frequent small tests will function as a device to urge the learners to repeat their efforts in memorizing new words.

Based on these findings, advices for the instruction of vocabulary acquisition are available to teachers and Chinese EFL learners. Firstly, it is of crucial significance for teachers to help EFL learners acquire a high motivation in learning English. This is the driving force for them to make substantial efforts in the improvement of their basic language skill. For instance, teachers can use picture cards or games to make English learning more interesting. Through vary kinds of games, students can not only enlarge their vocabulary size but also change their attitude towards English learning, so that their motivation in learning English also can be improved. Secondly, confidence also contributes to EFL learners' high score in reading comprehension. Students will be more active and confident in word-guessing if they have the encouragement from their teachers. Therefore, teachers should give encouragement to their students in the daily life, especially when they are facing difficulties in learning English. Teachers should help students to conscious of their shortcomings and encourage them to overcome their weaknesses. Moreover, EFL learners need receive special training for word-guessing, especially on those clues which have been proved to be effective in word-guessing and the EFL learners tend not to use frequently, such as word formation and inflection. It is necessary for EFL learners to prepare a vocabulary list. They should pay attention to words' formation and inflection when their write down the unknown words in the list. Besides, they should memorize not only the meaning of the words but also the meaning of the root.

Reference

Anderson, R.C., &Freebody, P. (1981). Vocabulary Knowledge in J.T. Guthrie (Ed), *Comprehension and teaching: Research reviews,* 77-117.

Center for Teaching and Learning (2007). How to Remember New Words. Retrieved June 30, 2015, from https://blog.csdn.net/evane1890/article/details/1955780

Chika, I. (2005). The Relation between EFL Reading Comprehension and Vocabulary Ability. *Language and Culture, 9,* 147-164.

Coady, J., &Huckin, T. (1997). *Second Language Vocabulary Acquisition: A Rationale for Pedagogy. Cambridge*. UK: Cambridge University Press.

Fan, M. Y. (2003). Frequency of Use, Perceived Usefulness, and Actual Usefulness of Second Language Vocabulary Strategies: A Study of Hong Kong Learners. *The Modern Language Journal, 87(2),* 222-241.

Frederiksen, J.R. (1982). A Componential Theory of Reading Skills and Their Interactions. Retrieved June 30, 2015, from https://www.ideals.illinois.edu/bitstream/handle/2142/17845/ctrstreadtechrepv01982i00227_opt.pdf?sequence=1

Gaskins, I, W. (2004). Word Detectives. *EDUCATIONAL LEADERSHIP, 61(6),* 70-73.

Grabe, W. (1991). Current Developments in Second Language Reading Research. *TESOL Quarterly, 25,*375-406.

Gray, W.S., &Holmes,E.(1938). *The Development of Meaning Vocabularies in Reading: An Experimental Study.* Chicago: The University of Chicago Press.

Gu, P. Y. (2003). Fine Brush and Freehand: The Vocabulary-Learning Art of Two Successful Chinese EFL Learners. *TESOL Quarterly, 37(1),* 73-104.

Gu, Y., &Johnson, R.K. (2006). Vocabulary Learning Strategies and Language Learning Outcomes. *LANGUAGE LEARNING,46(4),*643-679.

Hirsch, E.D. (2003). Reading Comprehension Requires Knowledge-of Words and the World: Scientific Insights into the Fourth-Grade Slump and the Nation's Stagnant Comprehension Scores. *American Educator, 27(1),*10-29.

Huckin, T., & Coady, J. (1999). Incidental Vocabulary Acquisition in a Second Language: A Review, *Studies in Second Language Acquisition, 21(2)*, 181-193.

Hulstijn, J.H. (1992). Retention of Inferred and Given Word Meanings: Experiments in Incidental Learning. *Vocabulary and applied linguistics*,.113-125.

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

Kazumi, A. (1998). Inferring the Meaning of Words and the Effects Contextual Supports. *Bulletin of Institute of Education, 1,* 47-56.

Kern, R. (1989). Second Language Reading Strategy Instruction: Its Effects on Comprehension and World Inference Ability. *Modern Language Journal, 73,* 135-149.

Kinsella, K., Stump, C. S., &Feldman, K. *Strategies for Vocabulary Development.* Retrieved June 30, 2015, from http://www.phschool.com/eteach/language_arts/2002_03/essay.html.

Kojima, H., & Narita. H. (2004) The Effects of Word Guessing Strategy Instruction on Reading Comprehension, *Bullet of Faculty of Education*, *91*, 75-83.

Laufer, B. (1997). The Lexical Plight in Second Language Reading. *Second Language Vocabulary Acquisition: A Rationale for Pedagogy*, 20-34.

Lawrence J.Z. (2001). Awareness in Reading: EFL Students' Metacognitive Knowledge of Reading Strategies in an Acquisition-poor Environment. *Language Awareness*,10(4), 268-288.

Juan,W.X., Abidin, M.,&Eng, L. S.(2013). A Study on the Relationship between English Vocabulary Threshold and Word Guessing Strategy for Pre-University Chinese Students in Malaysia. *English Language Teaching*,6(9),168-176.

Mitsumochi, Y. 1994. Factors Affecting Guessing Vocabulary in Context. *JACET BULLETIN, 25*,73-91.

Moghadam, S. H., Zainal, Z., & Ghaderpour, M. (2012). A Review on the Important Role of Vocabulary Knowledge in Reading Comprehension Performance. *Procedia-social and Behavioral Science, 66,* 555-563.

National Reading Panel (2000). *Teaching Children to Read: An Evidence-based Assessment of the Scientific Research Literature on Reading and Its Implications for Reading Instruction*. U.S.: Nation Institute of Child Health and Human Development.

Na.L., & I.S.P. Nation(1985). Factors Affecting Guessing Vocabulary in Context. *RELC Journal, 16 (1),* 33-42.

Qian, D. D., 1999. Assessing the Roles of Depth and Breadth of Vocabulary Knowledge in Reading Comprehension. *Canadian Modern Language Review*, *56(2)*, 282-308.

Qiufang.W., & Johnson, R. K. (1997). L2 Learner Variables and English Achievement: A Study of Tertiary-level English Majors in China, *Applied Linguistics, 18(1)*, 27-48.

Staehr, L. S. (2008). Vocabulary Size and the Skills of Listening, Reading and Writing, *Language Learning Journal, 36(2)*,139-152.

Stahl, S.A., Duffy-Hester, A.M., &Stahl, K.A.D. (1998). Everything You Wanted to Know about Phonics (But were Afraid to Ask). *Reading Research Quarterly, 33*, 338-355.

Swift, S. (2006). Inferring Unknown Words from Context(Part Two), Retrieved April 27, 2015 , from http://eltnotebook.blogspot.it/2006/09/inferring-unknown-words-from-context_29.html

Takayama, Y. (2003). Inference of Unknown Words in Reading Comprehension Among Japanese EFL High School Students. *KATE Bulletin*, *17*, 89-99.

Thornbury, S. (2002). *How to teach vocabulary*. England: Longman.

Ueta, T. (1997). Compendium Method of Juding Correlation, *Operation Research*, 42(7), 493-496.

Yoko, T. (2003). Inference of Unknown Words in Reading Comprehension Among Japanese EFL High School Students, *KATE Bulletin,17*, pp.89-99

Zhifa, Shen. (2008). The Roles of Depth and Breadth of Vocabulary Knowledge in EFL Reading Performance, *Asian Social Science, 4(12),* 135-137.