Review Article

A Deeper Understanding of L2 Vocabulary Learning and Teaching: A Review Study

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To cite this article:
Fooziyeh Rasouli, Khadijeh Jafari. A Deeper Understanding of L2 Vocabulary Learning and Teaching: A Review Study. International Journal of Language and Linguistics. Vol. 4, No. 1, 2016, pp. 40-46. doi: 10.11648/j.ijll.20160401.16

Abstract: Teaching vocabulary is one of the most important ways of developing students’ vocabulary knowledge. This paper provides a thorough review of vocabulary learning and teaching from a research perspective. A great body of scientific research has supported the fact that vocabulary is one of the most significant components of any language which must be dealt with much care and attention in early stages of second/foreign language learning. As an introduction, we describe the role and importance of vocabulary in second language learning. Then, how different methods and approaches have dealt with teaching vocabulary in the classrooms are discussed. Then, two types of vocabulary, incidental and intentional, are thoroughly described. Finally, we elaborate vocabulary learning strategies and explain in detail four factors affecting vocabulary learning strategies of second/foreign language learners.

Keywords: Vocabulary Learning, Vocabulary Teaching, Second Language Acquisition

1. Importance of Vocabulary in Language Learning

Language includes four basic skills: listening, speaking, reading and writing. Apparently, it seems that everyone who intends to master a language, either L1 or L2, must only attempt these four skills. But in addition to these skills, the fact is that language has three more components: vocabulary, pronunciation and grammar. Vocabulary is fundamental to English language teaching. Without adequate vocabulary, students cannot understand others or express their own thoughts. Vocabulary is defined as the words of a language, including single items and phrases or chunks of several words which convey a particular meaning (Lessard-Clouston, 2013). Regarding the critical role of vocabulary in communication, Wilkin (1972, pp. 111-112) pointed out that “while without grammar very little can be conveyed, without vocabulary nothing can be conveyed.” Lewis (1993, p.89) also wrote that “lexis is the core or heart of language”. The importance of vocabulary in language learning is also known to students. As Schmitt (2010, p.4) stated, “learners carry around dictionaries and not grammar books”.

Generally, vocabulary means knowledge of words as well as explanations of meanings of words. Word refers to a sound or combination of sounds which communicates a meaning and is represented in written or spoken form (Schmitt & Schmitt, 2005). But knowing a word is far beyond knowing the meaning of the word. Nation (1990) suggested that word knowledge includes the mastery in several sets of information:

- **Meaning**: to know the explicit and implicit (if any) meaning of a word.
- **Written form**: to know the spelling or dictation of a word.
- **Spoken form**: to know the pronunciation of a word.
- **Part of speech**: to know if the word is noun, verb, adjective, etc.
- **Frequency**: to know if the word is old-fashioned, common or rare.
- **Collocations**: to know the certain words that accompany a word.
- **Register**: to know if the word is formal or informal; general or technical.
- **Associations**: to know how does a word relate to other words.

Therefore teachers and learners are expected to learn these aspects of each new word which is technically referred to as
vocabulary depth. On the other hand, the number of words that learners must learn is also an important issue which is called "vocabulary breadth". In addition to vocabulary depth and breadth, there are other challenges that teachers, learners, and educationalists deal with. McCarten (2007) refers to a number of needed words as well as an appropriate list of words besides other challenges in the field.

According to Zimmerman (2009), it is not easy to find out how many words are there in English because, as he exemplifies, items such as differ, difference, differently are considered one word or four? A major problem with counting word families is deciding what should be counted as a member of a word family. The most conservative way, according to Nation (2000), is to count lemmas. A lemma is a set of related words that consists of the stem form and inflected forms that are all the same part of speech. So, differ, differs, differed, and differing would all be members of the same lemma because they all have the same stem—all are verbs. Despite such difficulties, researchers have attempted to find out how many words native speakers know, so that they can realize the number of words needed for EFL or ESL learners. An estimation is that native speakers of English know between 12,000 to 20,000 words depending on their educational level. Gouden, Nation and Reed (1990) believe that native graduate students of university know about 20,000 words. These native speakers of English obtain 4,000 to 5,000 words when they are five years old and then they roughly learn 1,000 words each year. But it does not mean that communication in English language with limited word knowledge is impossible. It is said that a large section of texts in English can be understood by relatively little vocabulary and this is good news for non-native speakers of English since their vocabulary knowledge cannot exceed 5,000. Francis and Kucera (1982) claim that learners who know 5,000 words can understand 87.7 percent of an average text.

To put more emphasis on importance of vocabulary knowledge, Laufer and Ravenhorst-Kalovsky (2010) show that vocabulary knowledge is a key predictor of reading success and the great deal of vocabulary growth is a direct result of reading. According to Hu and Nation (2000), learners need to know about 98% of the words in an oral or written text to comprehend it. Therefore, Schmitt (2008 a) concludes that a vocabulary size between 8,000 and 9,000 words is needed to comprehend novels and newspapers. Schmitt continues, to have 98% coverage of spoken English, between 6,000 and 7,000 words are needed.

Selecting the words that must be taught is not an easy task. When it comes to the question of which words must be taught, teachers tend to differentiate between two types of vocabulary:
- Increasing vocabulary
- Establishing vocabulary

Considering Nation’s (1990) idea that “old material in any lesson is the most important” (P.7), it is wise to give more attention to known words. Therefore, teachers prefer to teach the words that are familiar for their students but students cannot use them in their own production. The choices of target vocabulary, as Zimmerman (1997) explains, must consider the learners’ needs, their level of learning and their academic or professional goals. The choice of words must be done with regard to three factors:
- Word frequency
- Salience in course content
- Corpus (Zimmerman, 1997)

A word with high frequency is an important word in language. To have access to a solid body of frequent English words, teachers deal with different word lists such as GSL (General Service List), UWL (University Word List) or AWL (Academic Word List). GSL is a high frequency word list including 2000 word families in a variety of contexts, such as conversations, novels, news programs, etc. Nation (2001) believes that 80% of written texts and 90% of conversations are made up of GSL word list. For general academic preparation, there is another word list known as academic word list (AWL) which is selected from a 3.5 million corpus. AWL contains 570 word families in the fields of business, humanities, law, the physical and life sciences.

Words that are selected to be studied in EFL or ESL classes must have a key role in the content of the passage. So a word is salient when it is of central importance in a given context. Unnecessary and unimportant words rarely motivate the students to learn them (Mehring, 2005). Core words of a context encourage the students to frequent retention, repetition, and discussion of such words.

The final factor for choosing the words is corpus. Corpus is the “large, principled collection of naturally occurring texts (written or spoken) stored electronically” (Reppen, 2010, P.2). In conducting research on vocabulary and also in providing word lists to teach in EFL/ESL classes, corpus plays a vital role and gives the following set of information:
- Frequency: which words, phrases or expressions are more frequent than others;
- Differences in speech or writing: which words are used in spoken context and which words in written ones;
- Contexts of use: the situations and conditions in which people use special words;
- Collocations: which words usually accompany one another; and
- Strategic use of vocabulary: which words or expressions are more suitable for certain classrooms (McCarten, 2007).

2. A Historical Look at Vocabulary Instruction

The role of vocabulary in second language instruction has changed over the time. In order to show the fluctuations in the function and importance of vocabulary instruction in EFL/ESL classes, Schmitt (2000) investigates the vocabulary instruction in six main approaches to language learning. The following paragraphs will demonstrate the role and function of vocabulary from the early twentieth century onwards: Grammar-Translation Method. In this approach, the
primary goal is to prepare the students to study literary works and to be able to pass standardized language exams. In GTM, students are not required to use language for communication purposes. Teachers ask the learners to translate a classical text into their own mother tongue, and vocabulary instruction is limited to a definition of the word and its etymology. Little attention was given to other aspects of word knowledge such as pronunciation, collocation, register, etc. One of the achievements of this approach which is related to vocabulary is bilingual dictionaries as reference tools for translation from target language into learners’ native language.

Reform Approach: In contrast to GTM in which sound or phonetic training is completely ignored, in the reform approach the emphasis is on phonetic training or oral language fluency. Vocabulary selection is made according to word simplicity and usefulness. Since in this approach the focus is on sentence rather than isolated words, the words are simple and practical, such as names of different parts of an automobile, or articles of clothing, because phonetic training of such simple words is easier than complex technical words.

Direct Method: Both the direct method and reform approach were reactions against the grammar-translation method. DM can be said to be the first approach that emphasized a communicative role in language. The purpose of this approach is to train students who can communicate in a foreign language, and the mechanism of choosing vocabulary is their familiarity and their use in classroom interaction. Therefore, the classroom context is the criteria for both vocabulary selection and students’ interactions.

Reading Approach: Extreme attention to and complete ignorance of a language skill or component is proved to be ineffective in teaching or learning practice (Richards & Rodgers 2000). In the reform approach, complete attention is given to pronunciation and in the direct method oral communication is the primary concern. The reading approach is a response to declining reading scores in the U. S. schools. To select the target language context, the advocates of reading approach favored a scientific and quantifiable perspective in language classes. They criticized that focusing on speech without selecting the content in a principled way is not useful. They believed that vocabulary expansion can lead to reading improvement. It can be said that the reading approach played a great scientific role in drawing attentions to vocabulary. Vocabulary Control Movement is a result of this approach which later led to the advent of frequency-based word lists. Vocabulary was emphasized in language instruction and they were selected according to their usefulness and frequency. West (1953) introduced a General Service List of English words which includes 2000 most frequent words in English.

Audiolingualism: Based on the behavioristic view of habit formation, the audiolingual approach emphasized listening and speaking skills as well as syntax and language structure. Charles Fries, the founder of ALM, believed that language learning starts with syntactic structure. According to Fries, vocabulary is an object of illustrating grammatical points. In this approach, too much focus on words must be avoided because learners may mistakenly believe that they know the language because they know some words of that language (Richards & Rodgers, 2000).

Communicative Language Teaching: This approach includes various methods and its central belief is that language is a means of communication. CLT advocates believe that understanding the structures of language is not as important as the ability to communicate by language. Vocabulary is selected from authentic materials according to their usefulness in real life communicating situations. But what is certain now is that experts of language teaching and learning consider a strategic role for vocabulary in language learning success.

3. Learning Vocabulary in SLA Context

Undoubtedly, learning vocabulary is an essential part of language mastery (Schmitt, 2008). Developing rich vocabulary is a necessity for both L1 and L2 learners but due to incremental nature of word learning, it is an on-going challenge. Therefore, so far there has not been a method that best enhances vocabulary learning (Yongqui – Gu 2003; Schmitt, 2008 b).

3.1. Intentional and Incidental Learning

Word learning involves both intentional (explicit) learning which is the focused study of words and incidental learning. Incidental learning happens when the words are picked up while the learner’s attention is on language use (Zimmerman in Celce-Murcia, 2014, p. 297). There are different ideas about the best way to learn vocabulary. Nation (2001) believed that form, collocation and word classes should be taught / learned incidentally but aspects of meaning, register and other constraints are better learned through direct explicit instruction. Schmitt (2008 b), however, puts more emphasis on intentional learning.

Brown et al. (2008) and Mins (2008) state that vocabulary gained from reading is relatively small and not necessarily efficient. Conscious attention and noticing are generally the first steps of learning but it is highly possible that while reading, learners may not notice the unknown words. That’s why incidental vocabulary learning through reading is not always successful. To improve the effectiveness of incidental learning, Bowes (2004) suggests using gloss because it helps to direct learners’ attention to particular words.

3.2. Effective Vocabulary Instruction

As mentioned earlier, vocabulary learning is an on-going challenge which demands much time to achieve a mastery level. Relying on different research studies, there are four tasks for vocabulary learning:

- Repetition
- Focus on both meaning and form
- Engagement
- Interaction and negotiation

Repetition: repeated exposure to target word is of great importance for vocabulary learning. There is a lot to learn about a single word, so the learners need to meet it several times in a few contexts.
times to gain the required information. Webb (2007) explains that for each repetition of a word, at least one piece of word knowledge is acquired; therefore, a typical learner should meet a word about 8 to 10 times to obtain full word knowledge. What is worth mentioning here is the intervals between the repetitions. Nation (2001) refers to the conducted studies on memory and reports that “most forgetting takes place immediately after first encounter with new information. That is, the older the piece of knowledge, the more slowly it will be forgotten. This suggests that the first several encounters should be close together, with later encounters spaced farther apart” (p.24).

Focus on meaning and form: Learners should be provided with opportunities to focus both on form and meaning. Nation (2008) has introduced the idea of “the four strands” which proposes a balance between form and meaning:
- Focusing on meaning-focused input
- Focusing on meaning-focused output
- Focusing on language-focused learning
- Focusing on fluency development

Nation believes that it is necessary to provide the learners with opportunities to focus on these four strands so that they can produce a word and focus on its form and meaning.

Engagement: When learners reflect on words and their use, it means that they thoughtfully analyze the words. This is technically referred to as engagement. When learners pay enough attention to a task and have to manipulate it, they learn or do the task more effectively and this is true also for word learning. Stirling (2003) found that “learners who used target words in a writing task remembered them better than those who saw them only in a reading task, partly because they needed to understand a linguistic aspect of the word to complete the task and they were required to search for the information” (p.4).

Interaction and negotiation: the other effective task for vocabulary instruction is interaction and negotiation. As discussed in the previous paragraphs, word learning is a consequence of exposure, attention, time, and manipulation. Oral interaction and negotiation can effectively include exposure, attention, time and manipulation. Zimmerman (1997) explains that learners typically acquire the words that are commonly used in interaction; and there is no improvement of the words that learners see only on worksheets.

4. Vocabulary Learning Strategies

According to Nation (2001, p.217), vocabulary learning strategies (VLS) are part of “general learning strategies” (p. 217). Cameron (2001, p.92) also defines VLS as “actions that learners take to help themselves understand and remember vocabulary” (p. 92). VLS deal with lexical dimension of language learning and are usually measured through four methodological approaches: questionnaire, interview, self-report and think aloud (Niyokos & Fan in Cohen & Macaro, 2007, p.8). Ahmed (1989) observes that his Sudanese students used 38 strategies in vocabulary learning, and classifies them into four groups: 1) strategies of memorization, 2) strategies of practice, strategies of dictionary, 3) strategies of note-taking and 4) strategies of group work.

Gu and Johnson (1996) studied the strategies used by Chinese students and came up with a list of 91 vocabulary learning strategies (VLS). They classified these 91 VLS into two groups: Metacognitive VLS and cognitive VLS. Schmitt (2000) introduced and differentiated between discovery strategies (strategies for learning the meaning of unknown words) and consolidation strategies (strategies for both learning word meaning and integrating it into the vocabulary), and then he added another group of strategies called "determination of meaning strategies". These VLS classifications combine direct strategies (memory, cognitive, compensation) with indirect strategies (metacognitive, social, and affective) that were introduced by Oxford (1990) and O’Malley and Chamot (1990). Niyokos and Fan (2007) introduced four factors that affect VLS use:
- Proficiency level of the learner
- Individual variation and gender
- Strategy use development
- Learning environment

4.1. Proficiency Level of the Learners

Hosefeld (1997) studied the behavior of good readers and bad readers of texts and observed that good readers read at the phrasal level and can keep a general meaning of the passage in mind while skipping and ignoring unessential words. Hosefeld understood that good readers do not use the glossary and guess the meaning of words by the help of the context. On the other hand, poor readers read the text word by word (unlike good readers who read at the phrasal level). It was also reported that instead of guessing the meaning from the context, they frequently referred to glossary.

Sanaoui (1995) indicated that successful learners follow a structured approach while learning new words. For example, successful students actively monitored and reviewed the words they were learning. In their free times, they used every opportunity to practice and review the newly-learned words. Predictably, unsuccessful learners did not have any structured approach and instead of spending time to review the new words, they wasted their time doing actions that were not required by the course and had little contribution to their learning.

Vocabulary knowledge cannot be taught and transferred only by the teacher. The greater part of the vocabulary learning success depends on the learner himself/herself. Activities outside the classroom lead to more effective vocabulary learning and this is what was shown by Kojic-Sabo and Lightbown (1999). They investigated the participation of 47 ESL and 43 EFL learners and found out that more frequent and more elaborate strategy use, such as practicing the vocabulary outside the classroom context, leads to higher levels of vocabulary learning.

Ahmed (1989) also supports the idea that more successful language learners use more complicated vocabulary learning strategies. He believes that good learners differ from unsuccessful learners in terms of their frequent use of
‘practice’ strategy category. According to him, when successful language learners learn a new word, they use it in real or imagined situations; while less successful or weaker learners showed little awareness of what they could learn about new words. Another common behavior among less successful learners was that they were not interested in learning or using new words in context or real situation.

In another context, to study the strategy use among more proficient students, Fan (2003) used a VLS questionnaire and a simultaneous vocabulary test. 1067 Hong Kong ESL students who have been newly admitted to the universities took part in her study. The results of the study revealed that more proficient students plan to learn the vocabulary both inside and outside the class. They used both guessing strategies and dictionary strategies. Guessing strategies they used were along with their knowledge of grammar and morphology. Dictionary strategies they used included searching for English definitions of the new vocabulary, pronunciation and appropriate use of those words in sentence.

Teng (2015) examined the relationship between vocabulary learning strategy use and vocabulary knowledge. The researcher explored the correlation between direct and indirect vocabulary learning strategies along with the depth and breadth of vocabulary knowledge. To measure the breadth of vocabulary, the Vocabulary Levels Test (Schmitt et al., 2001) and to measure the depth of vocabulary repertoire, Word Associates Test (Read, 1993) was administered for 145 low proficiency students. Concerning the vocabulary learning strategy use, another questionnaire was used to gather data about the learners’ preferred strategies. This study lead to these findings: (a) direct strategies were more favored by EFL students (except for direct cognitive analyzing strategy), and (b), indirect strategies were less frequently used strategies. A significant and positive correlation was also found between the participants’ scores in strategy use and breadth and depth of vocabulary knowledge. Another finding was that EFL students with a higher level of depth and breadth of lexical repertoire tended to use strategies that were more indirect; therefore in Thailand’s context, use of indirect strategies, e.g., self-planning, self-monitoring, and self-evaluating were reported to be highly important and effective.

To sum up the findings of these studies, it can be concluded that more proficient students apply a greater range of strategies in the process of learning new words, compared with less proficient learners.

4.2. Individual Variation and Gender

Individual differences play an important role in the process of language learning (Domyei, 2005). More proficient language users use a more diverse set of vocabulary learning strategies. It should, however, be mentioned that even among proficient learners, VLS use differs due to their gender and individual variations. Gu (2005) reported that the performance of female students was significantly better than that of male students in both general proficiency and vocabulary size.

Catalan (2003) showed that female students use a greater range of VLS including formal rule-related strategies, input elicitation (social elicitation strategies), planning and rehearsal strategies and consolidation strategies than the range used by males (cited in Cohen and Macaro 2007, p.257). Therefore, when very different students are equally successful in a given task or situation, the justification would be the implementation of various vocabulary learning strategies (Gu, 2003).

4.3. Strategy Use Development

Another aspect of vocabulary learning strategies is related to time. The related literature in the field does not provide us with enough proof that whether strategy use changes over the time or not. Schmitt (2008 b) compared different age groups of students at high school and university. These participants reported that at the early stages of word learning, they were dependent on word repetition, word spelling, word lists, textbook vocabulary activities and flashcards. But as they became more proficient, the use of these strategies were decreased and replaced by using bilingual dictionaries, guessing form context, asking teachers for more explanations, paying attention to parts of speech and establishing relations or connections between the words and their own personal experiences.

Harley and Hart (2000) explored the VLS use from elementary up to advanced level among 9th grade and 11th grade early immersion French class. 9th grade students favored doing list learning and English translation which was regarded as useless by 11th grade learners. Thanks to their greater proficiency, 11th grade students preferred using L1-like strategies (strategies that L1 students use to learn vocabulary). For 11th grade students, hearing a new word in spoken English context was more helpful than reading that word in a reading context, but 9th grade students found reading new words in context to be more useful than hearing them in oral context because they needed more processing time. Finally, it is wise to conclude that as the proficiency improves, the learners tend to use more meta-cognitive strategies.

Seddigh (2012) conducted an empirical study to investigate vocabulary learning strategies of medical students in Iran where English is considered as foreign language. She administered a questionnaire to 120 medical students (53 males, 67 females) to collect a couple of data: 1) the effective types of vocabulary learning strategies used by the learners and 2) the differences in vocabulary strategy use based on gender. The results revealed that guessing and dictionary strategies were the most frequently used VLS and study preference strategies were the least used ones. A statistically significant difference was observed in the mean scores of the eight vocabulary learning strategies. From the gender perspective, the females utilized more VLS than males especially in the case of guessing and note-taking strategies. She finally figured out that there is a significant difference between the students’ gender and their choice of VLS.

4.4. Learning Environment

There is a relationship between learning environment and strategy use that reflects the communicative demands and
learning opportunities of these radically different environment (Takeuchi, Griffiths and Coyle, 2007 in Cohen and Macaro, 2007). ESL learners have better conditions and more opportunities to learn English than EFL learners (Ellis, 2008). Various reasons can support this what? For example, Kojic-Sabo and Lightbown (1999) believe that ESL learners have access to more extra-curricular English language activities and their learning is not limited to classroom context.

While EFL learners mainly use the review strategies to learn new vocabulary, ESL students benefit from their environment and outside the class context. In other words, ESL students compensate for their linguistically poor environments by reviewing the reading passages and words, while ESL learners have opportunities to use those words in their daily conversations. Differences between ESL and EFL learners’ patterns of behavior have been also shown in Chinese context. Fan (2003) found out that Hong Kong ESL students use newly learned words in English speaking environments. This group of English preferred guessing strategies rather than word lists and memorization strategies. But Chinese EFL students relied on memorization strategies.

But when EFL learners find an opportunity to enter an ESL context, some changes happen in their strategy use. Leeke and Shaw (2000) discovered that two thirds of EFL learners who enter an L2 environment stop using vocabulary list learning strategies and improve their reading and proficiency level. When EFL learners are in ESL context, they ignore word list learning strategy and use it only for difficult words and other words that are needed to be quickly added to their active vocabularies.

5. Conclusion

The key role of vocabulary in language acquisition is acknowledged by many L2 researchers. Teaching vocabulary is one of the most important ways of developing learners’ vocabulary knowledge; however, teaching vocabulary is not only about teaching the words but also about other aspects. Deeper understanding of different aspects of vocabulary enables both teachers to teach it and learners to acquire it effectively and practically. As discussed in this paper, vocabulary is far beyond merely memorizing one or two equivalents for each new word; instead it requires a cohesive set of information including, spelling, pronunciation, part of speech, etc. Numerous studies have shown that various strategies, not only one strategy, contribute to learning vocabulary. Therefore learners can apply the strategy which suits them best.

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