Explicit and Implicit Learning in Vocabulary Acquisition

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ABSTRACT---- Vocabulary learning is central and dominant in language acquisition and crucial to the learners’ overall language acquisition. One of significant reason of the review is learners encounter difficulties with text and reading. This review is an attempt to investigate the significance of vocabulary knowledge and explain its techniques (explicit/implicit, incidental/intentional) and their effects on reading comprehension, and it can be said that, this review attempts to explain the previous studies on explicit or intentional versus implicit or incidental learning vocabulary. During the review, different explicit and implicit vocabulary techniques is used and explained. The results of this study have important implications for the classroom and make a strong case for implicit and explicit vocabulary instruction.

Keywords--- Explicit learning, Implicit learning, Vocabulary acquisition

1. INTRODUCTION

In contemporary societies the need for communication and access to information becomes continuously an increasing part of every field of human initiative. Moreover, multiculturalism is also a fact in today’s societies, making it necessary for people to be fluent in many languages.

In this respect, learning a foreign language rapidly can play a significant role in everyday interactions. For many students, vocabulary instruction consists of looking up words in the dictionary, copying the definitions (usually the shortest ones), and writing sentences using the word. Usually, they are only memorizing a definition and not learning meaning or word acquiring knowledge. Word knowledge is much deeper than simple definition knowledge. Vocabulary is core of a language and has basic importance so that Ellis (1994) claims that "the cornerstone of L2 is its Vocabulary. In old days of language acquisition, vocabulary learning was given little importance (Alemi and Tayebi, 2011). For years, the popular methodology for learning a second language was to focus on grammar and sentences first and then on vocabulary. Lexical competence is currently acknowledged by many vocabulary specialists to be a core component of communicative competence (Coady & huckin, 1997; Harley, 1996; Richards & Renandya, 2002).

Learning of implicit vocabulary involves indirect or incidental while the explicit method involves direct or intentional. As a matter of fact, explicit learning of vocabulary is conscious and is aware of what has been learned but implicit learning of vocabulary is non-conscious and without awareness of what has been learned. Vocabulary learning strategies can also be divided into those that involve (1) explicit, direct or intentional learning and (2) those involving implicit, indirect or incidental learning. There is good reason to believe that both explicit and implicit learning contributes to vocabulary development. Thus, vocabulary learning is most components of a language which helps learners to understand the text and can express the meanings. Second language vocabulary acquisition process involves several different learning processes and, hence, is a very complex phenomenon. Defined generally, explicit and intentional learning are characterized by the consciousness involved in the learning process, and both include the study of decontextualized vocabulary and using dictionaries and glossaries (Rashidi & Ganbari Adiv, 2010).

Ellis (2008) defines explicit and implicit knowledge in this way:

“Explicit knowledge is intuitive, procedural, systematically variable, automatic, and thus available for use in fluent unplanned language use. It is not verbalizable. ... Explicit knowledge is conscious, declarative, anomalous, and inconsistent (i.e., it takes a form of fuzzy rules inconsistently applied) and generally accessible through control processing in planned language use. It is verbalizable ... like any type of factual knowledge it is potentially learnable at any age” (p.258).
Incidental learning is said to be an effective way of learning vocabulary from context (Day, Omura, & Hiramatsu, 1991; Jenkins, Stein, & Wysocki, 1984; Nagy, Herman, & Anderson, 1985; Saragi, Nation, & Meister, 1978). Research has shown that such explicit attention to vocabulary can positively affect the second language vocabulary acquisition (Schmidt, 1990; McLaughlin, 1987). Schmidt (1994a) argues that attention to input is necessary for explicit learning. According to Harmer (2003), Nation (2001), extensive reading is a pleasurable reading situation where a teacher encourages students to choose what they want to read for themselves from reading materials at a level they can understand. In general, of “intentional” study, related to memorizing thousands of words, their meaning, pronunciation and spelling. The other view holds that much of the burden of intentional learning can be taken off the shoulders of the language learner by such processes as ‘incidental’, ‘implicit’, ‘accidental’, ‘subconscious’, or ‘peripheral’ learning which involve picking up of words, grammar, and sentence patterns simply by engaging in a variety of communicative activities during which the learners may hardly use their focal attention or their complete awareness. So, there are some devices that can be used to improve the vocabulary competence. As wireless, mobile, portable, and handheld devices are gradually finding their ways into every sector of education in both developed and developing countries (Traxler, 2007). Thus, investigating the best techniques (explicit or implicit) to learn vocabulary effectively is aim of the study that is supported by the review of researchers’ study. Therefore, how vocabulary is acquired in the real context in field of second language acquisition to promote effective acquisition is issue of current investigation.

2. WHAT IS VOCABULARY AND VOCABULARY KNOWLEDGE?

Modern trends accept that the main field of linguistics is the vocabulary and that the field of grammar conforms to the “vocabulary” structures, which are of primary importance (Mitsis, 2004). In other words, the meaning of words (vocabulary) is the first step of learning a language and the structure of the sentences (grammar) is set as a second step. Obviously, the two steps are complementary; however it is impossible to create a correct sentence in a language without knowledge of the appropriate words and their meaning.

It can be said that the meaning of the vocabulary includes a set of lexemes, including single words, compound words and idioms. It also can be claimed that vocabulary knowledge is not an all-or-nothing relationship, but a systematic procedure in which various types of knowledge are learned until all aspects of knowledge are known for an item. A vocabulary usually develops with age, and serves as a useful and fundamental tool for communication and acquiring knowledge.

Nation itemized and explained nine different types of vocabulary knowledge that are required to know a word as follows:

1. Knowledge of the spoken form of a word.
2. Knowledge of the written form of a word.
3. Knowledge of the parts in a word which have meaning.
4. Knowledge of the link between a particular form and a meaning.
5. Knowledge of the concepts a word may possess and the items it can refer to.
6. Knowledge of the vocabulary that is associated with a word.
7. Knowledge of a word's grammatical functions.

3. THE IMPORTANCE OF A VOCABULARY

- An extensive vocabulary aids expression and communication.
- Vocabulary size has been directly linked to reading comprehension.
- Linguistic vocabulary is synonymous with thinking vocabulary.
- A person may be judged by others based on his or her vocabulary.

4. PRODUCTIVE VS. RECEP TIVE VOCABULARY

All productive or active vocabulary involves words that we apply when we speak or write. According to Nation, productive use of vocabulary is defined as "wanting to express a meaning through speaking or writing and retrieving and producing the appropriate spoken or written word form". On the other hand, receptive or passive vocabulary is composed of words that we recognize when we hear or see (Hamzehlou Moghadam, Zainal, & Ghaderpour, 2012, p.115).

The first major distinction that must be made when evaluating word knowledge is whether the knowledge is productive (also called achieve) or receptive (also called receive). Words that are generally understood when heard or read or seen
constitute a person’s receptive vocabulary. When a child learns to speak or sign, however, the child’s active vocabulary begins to increase.

It is possible for the productive vocabulary to be larger than the receptive vocabulary, for example in a second-language learner who has learned words through study rather than exposure, and can produce them, but has difficulty recognizing them in conversation.

However, research on learning word pairs sheds some light on this issue. Research on learning from word pairs suggests that the type of learning, receptive or productive, affects the type and amount of knowledge gained (Griffin & Harley, 1996; Schneider et al., 2002; Waring, 1997).

Nation (2001) gives a detailed definition of receptive vocabulary. He defines receptive vocabulary use as that of “perceiving the form of a word while listening or reading and retrieving its meaning” (p.34). In other words, receptive knowledge is the language input that learners receive from others through listening or reading and try to understand it. Productive knowledge, on the other hand, is the language output that learners convey messages to others through speaking or writing. Productive vocabulary, therefore, generally refers to words which can be produced within an appropriate context and match the intended meaning of the speaker or signer. As with receptive vocabulary, however, there are many degrees at which a particular word may be considered part of an active vocabulary. Knowing how to pronounce, sign, or write a word does not necessarily mean that the word has been used to correctly or accurately reflect the intended message of the utterance, but it does reflect a minimal amount of productive knowledge. On the whole, the findings of Webb’s extensive study have shown that both productive and receptive tasks are very effective, as well as time-efficient methods of acquiring vocabulary knowledge. This gives rise to suggestions that it may be wise for researchers to use both receptive and productive tests since one task contributed to greater gains in one area while the other task achieved greater gains in another area (Choo, Lin, & Pandian, 2012).

The first experiment of Webb (2005) showed that, when the same amount of time was spent on both tasks, the receptive task was superior, a finding which contrasts with Griffin and Harley (1996), Mondria and Wiersma (2004), and Waring (1997) who claim receptive learning to be more effective in contributing to receptive knowledge, whereas productive learning may be better suited to increasing productive knowledge, but it is in line with Schneider et al. (2002). And the second experiment showed that, when the allotted time on tasks depended on the amount of time needed for completion, with the productive task requiring more time, the productive task was more effective (Shahraki, & Kassaian 2011).

5. THE EFFECTS OF VOCABULARY KNOWLEDGE ON READING COMPREHENSION

There are several studies that have shown the relationship between vocabulary knowledge and reading comprehension (Joshi, 2005; Joshi & Aaron, 2000; Manyak& Bauer, 2009; Martin-Chang & Gould, 2008; Ricketts, Nation, & Bishop, 2007). Joshi and Aaron (2000) find that vocabulary knowledge is a strong predictor of reading ability when factoring reading speed with decoding and comprehension.

The relevance of the lexical facet in language learning has resulted in a substantial amount of theoretical and empirical studies in the area. In other words, as much as vocabulary is no longer neglected in the classroom, the same goes for its status in the realm of research.

Joshi and Aaron (2000) find that vocabulary knowledge is a strong predictor of reading ability when factoring reading speed with decoding and comprehension. Martin-Chang and Gould (2008) find a strong correlation both between vocabulary and reading comprehension and between reading rate and primary print knowledge. Vocabulary knowledge is essential in reading comprehension because it has a similar function to background knowledge in reading comprehension. Vocabulary knowledge helps students in decoding, which is an important part of reading (Qian, 2002).

A number of EFL studies have demonstrated the relationship between vocabulary knowledge and reading comprehension performance. Zhang and Anual studied the role of vocabulary in reading comprehension with 37 secondary students learning English in Singapore. The Vocabulary Levels Test was used to measure students’ vocabulary knowledge. Result showed that students’ vocabulary knowledge at the 2000-word and the 3000-word levels were correlated with their reading comprehension. This shows a close relationship between vocabulary knowledge and English reading comprehension.
6. TYPES OF VOCABULARY LEARNING

An overall review of literature leads us to the fact that generally four types of vocabulary learning can be distinguished; namely, incidental, intentional, implicit, and explicit. The incidental/intentional and implicit/explicit distinctions are straightforward.

7. EXPLICIT VOCABULARY LEARNING VS. IMPLICIT VOCABULARY LEARNING

Explicit learning is associated with learning vocabulary ‘out of context', e.g. from word lists. But it can also occur ‘in context', for example when we look up words in the dictionary while reading, or review new words in a text after reading and note down their meanings. It is also can be said that explicit learning, is a more conscious operation where the individual makes and tests hypothesis in a search for structure (N. Ellis, 1994a, pp. 1-2).

According to Ellis’ (1994) terminology, implicit learning is typically defined as acquisition of knowledge by a process which takes place naturally, simply and without conscious operation, while explicit learning is said to be characterized by more conscious operation where the individual makes and tests hypotheses in a search for structure. Among the many features of implicit learning, one can readily refer to the unconscious status of the knowledge acquired by learners (Reber, 1989); another feature of implicit learning which is more contingent is the extent to which implicit learning is related to attention. Implicit learning is associated with learning vocabulary ‘in context', e.g. when we learn words while reading or listening without paying special attention to them. But it can also occur ‘out of context'. For example, when we repeatedly review a vocabulary list, our knowledge of the words and their meanings tends to become ‘automatic' Reading appears to be the best method for implicit learning - people who read a lot tend to have large vocabularies.

In the field of vocabulary acquisition, incidental learning is largely defined as the learning of vocabulary as a by-product of any activity not explicitly geared towards vocabulary learning (Rieder, 2003). In contrast, intentional vocabulary learning is defined as any activity geared at committing lexical information to memory (Hulstijn, 2001).

Implicit knowledge is intuitive, procedural, systematically variable, automatic, and thus available for use in fluent unplanned language use. It is not verbalizable. … Explicit knowledge is conscious, declarative, anomalous, and inconsistent (i.e., it takes a form of ‘fuzzy’ rules inconsistently applied) and generally accessible through control processing in planned language use. It is verbalizable … like any type of factual knowledge it is potentially learnable at any age.

There has been much discussion in the literature on whether vocabulary is best learned through direct study or incidentally through reading. The evidence suggests, however, that both are effective in different ways. On the other hand, explicit vocabulary learning through reading depends a great deal on the learner’s ability to guess the meaning of words from the context, which means that we need to know the words in the context.

In vocabulary acquisition studies, one key research direction is to explore the points at which implicit vocabulary learning is more efficient than explicit vocabulary learning, to ask what are the most effective strategies of implicit learning, and to consider the implications of research results for classroom vocabulary teaching (Carter and Nunan, 2002).

We know that certain basic techniques help explicit learning. There are many techniques which help one acquire new vocabulary explicitly.

Synonyms: Newton (2001) holds that synonym is the derivative of the Greek word with the roots referring to the words that are different but have the same or similar meaning. As a result, these words are called synonymous; for instance, seek is synonymous with hunt. Synonyms are also an important resource for euphemisms that help in language usage. Synonyms can be used to reduce the repetition of certain words that reduces monotony of over using a certain way. A good knowledge of synonyms will help you express the same idea in very many ways.

Memorization: Although memorization can be seen as tedious or boring, associating one word in the native language with the corresponding word in the second language until memorized is considered one of the best methods of vocabulary acquisition. By the time students reach adulthood, they generally have gathered a number of personalized memorization methods. Although many argue that memorization does not typically require the complex cognitive processing that increases retention (Sagarra & Alba, 2006), it does typically require a large amount of repetition, and spaced repetition with flashcards is an established method for memorization, particularly used for vocabulary acquisition in computer-assisted language learning. Other methods typically require more time and longer to recall.
The value of mnemonic techniques, or techniques to enhance memory, is less certain. One popular mnemonic technique is the ‘keyword’ method in which an L2 word is attached to an L1 word by an image. These tend to show that mnemonic methods work, but not that they are more effective than other methods. Comparisons are also often made complicated by the need for training and the intervention of other variables. Studies of this kind conducted in Hong Kong have rarely come to any positive conclusion. It is sometimes argued that vocabulary learning is best organized in terms of lexical sets. For example, we may learn words connected to a particular theme (such as pets) together - including synonyms, antonyms and hyponyms. The problem is that related words can easily be confused - for example, the difference between two synonyms may be difficult to grasp if both words are new or the meanings of antonyms may be reversed. Mnemonics as aids to memory has fascinated philosophers, psychologists, teachers, and learners ever since antiquity (Wittrock, 1988). Mnemonic devices in foreign language vocabulary learning in modern times were boosted by a whole robust line of research inspired by Atkinson (1972, 1975) and Atkinson and Raugh (1975).

**Guessing** word meanings from context should probably be called inferring (i.e. guessing based on evidence). According to Laufer (1997), inferring meanings from context is more difficult than it appears at first sight and depends upon a relatively large sight vocabulary (words that cause us no problems when we see them).

Ample evidence suggests that children learn a large proportion of their L1 vocabulary incidentally from reading and listening (Nagy, Anderson, & Herman, 1987; Nagy & Herman, 1987; Nagy, Herman, & Anderson, 1985). Nagy, Anderson, and Herman (1987, p. 262) estimated an average vocabulary growth of 1,000 words a year for the children in their study. A well-quoted study of adults by Saragi, Nation, and Meister (1978) showed an average of 76% mastery of the 90 tested “nadsat” words of Russian origin.

### 8. INCIDENTAL VS. INTENTIONAL VOCABULARY LEARNING

The use of the terms incidental and intentional learning in the psychological literature goes back to the beginning of the twentieth century and has been used in experimental psychology for a long time (Lafer and Hulstijn, 2001, p. 10). It is widely believed that most vocabulary, in both first and second language, is acquired incidentally i.e. as a by-product of such receptive activities as reading and listening while the focus is not vocabulary learning but some other purposes (Cho and Krashen, 1994).

Incidental vocabulary learning is associated with more natural language learning, that is, outside formal classroom instruction, whereas intentional vocabulary learning is assumed to be typical of practices and behaviors within it. As will become apparent, incidental vocabulary learning is actually an impracticable and not very useful term for current empirical research into vocabulary development in L2 pedagogy.

The notion of incidental learning is distinct from the notion of implicit learning, which takes place outside of awareness. While implicit learning can be incidental only, explicit learning can be both intentional and incidental. This view is different from others, where incidental learning is considered to occur when the object of learning is not the focus of attention.

Hunt and Beglar (1998) point out that many vocabularies are learned incidentally through extensive reading and listening. The incidental vocabulary learning, as Hunt and Beglar (1998) point out, can be a useful approach for all language learners at all levels. Shmidt (1990; cited in Nyiazadeh, 2009), also points out that incidental learning is definitely passive in that it can happen when the focus of attention is on some relevant features of input. As Cahoon (1995) points out, in the case of incidental learning while a learner gets involved in a core activity which is his/her main concern, such a learner often gets busy with some sorts of unintentional or unplanned activities which are learned incidentally. To put it clearly, learners in the secondary school can still remember such features as their teacher’s voice, the color of his shirt or her dress, or behavior in class related to the time when they studied in elementary school.

Incidental vocabulary learning occurs all of the time when we read. Based on the way a word is used in a text we are able to determine its meaning. While you may not know what a specific word means, many times you can determine its meaning based on what the rest of the sentence focuses on. Adults should model this sort of incidental vocabulary learning for children to help them develop their own skills.

Incidental Vocabulary promotes deeper mental processing and better retention. The learners get themselves fully involved in the process of deciphering the meaning through the clues available in the text. They think and rethink about the new words involving cognitive process which helps the learners retain the words for a longer period of time.
The results garnered were in favour of the experimental group, revealing significant incidental vocabulary gains in comparison to the outcome of explicit instruction. It is observed that the findings appear to be inconsistent with past research (Laufer, 2005; Laufer and Yano, 2001; Cho and Krashen, 1994; Knight, 1994) in which more credit was accorded to explicit vocabulary instruction.

9. CONTEXT SKILLS

Context skills are the strategies that a reader uses for incidental vocabulary learning. Texts are full of “clues” about the meanings of words. Other words in a sentence or paragraph, captions, illustrations and titles provide readers with information about the text that they can use to determine the meanings of unfamiliar words. These features are often referred to as “context clues” because they are contained within the context of the piece of writing rather than outside it. Young readers should be taught to find and use context clues for learning new vocabulary words. Adult modeling and practice are key for helping children develop this important reading skill.

In a comprehensive review of research on incidental vocabulary learning in mostly L1 contexts, Krashen (1989) concluded that incidental vocabulary learning, or “acquisition”, achieves better results than intentional vocabulary learning. A prerequisite for effective incidental vocabulary learning through reading is, as mentioned earlier, reading ability, an ability beginning foreign language learners possess only to a very limited extent. This problem would be exacerbated when the L2 being learned is of a totally different orthography, e.g., Chinese EFL students learning English, where differences in writing system pose serious challenges to the development of reading ability and therefore to vocabulary learning through reading (Haynes, 1990). Moreover, where learners have little target language input and insufficient reading materials at their disposal, an exclusive incidental vocabulary learning program will stifle the language development of these learners. In spite of the fact that incidental and intentional learning might seem similar to implicit and explicit learning, respectively, these two dichotomies are not identical. As Paradis(1994a; cited in Hulstijn 2002) points out, since implicit competence is incidentally acquired, is stored implicitly and is used automatically, it means more than incidental learning. Therefore, while incidental vocabulary learning of vocabulary may be a useful way of acquiring vocabularies for most advanced learners, intentional/explicit instruction is essential for beginning learners whose reading ability is limited (Hunt and Beglar, 1998).

In fact there is already evidence in recent studies of second language learners that a combined approach is superior to incidental vocabulary learning alone. Zimmerman (1994), for example, found that 3 hours a week of explicit vocabulary instruction plus some self-selected reading were more effective than reading alone. Paribakht and Wesche (1997) also found that reading plus explicit instruction led to superior gains over a period of three months.

10. DISCUSSION

The study aims were to investigate the explicit and implicit vocabulary learning and their effects on vocabulary knowledge. This review shows that vocabulary knowledge plays a very significant role in vocabulary learning and acquisition. Vocabulary knowledge is important obstruction to communication. The studies show that implicit/explicit and incidental/intentional has important role in vocabulary learning and the study suggests that both the implicit and the explicit modalities have advantages in teaching vocabulary. The researchers argue that combining the implicit and explicit modalities would be more beneficial for the learners than using only one modality, as the use of a dual modality would favor and address dual learning strategies. Nagy & Anderson (1987) suggested that children learn a large portion of their L1 vocabulary incidentally rather than intentionally.

Based on some of the findings of the researches we learn that the performance of learners in incidental vocabulary is better than that of intentional vocabulary learning. Indeed, it could be deduced that a considerable amount of vocabulary knowledge was gained from the exposure to the context. It is probably here that the true benefit of reading words in the context really occurs. Researches also show that the absence or presence of a learning intention does not play a decisive role as vocabulary acquisition is first and foremost determined by the nature and frequency of the processing of new words.

In order to avoid asking repeatedly very similar research questions on various approaches to vocabulary presentation and retention, this following section will attempt to turn our attention to avenues for further research:
1. Vocabulary acquisition research in the linguistics tradition has largely concentrated on vocabulary (target: what is to be learned; or product: what is learned) rather than acquisition (how is vocabulary learned, the learning/acquisition process) (Crow, 1986; Meara, 1980).

2. Much of the emphasis on incidental vocabulary learning has centered on how useful incidental learning is and how much can be learned incidentally, often overlooking the fact that a lot can be learned intentionally during reading with the help of a range of strategies (e.g., guessing, dictionary use, note-taking, activation, as well as intentional repetition).

3. While theory building is certainly in order so that future empirical research receives clearer guidance (Laufer & Hulstijn, 2001; Meara, 1998), more bottom-up empirical effort on different aspects of vocabulary learning at different stages of acquisition for different learners in various cultural and educational contexts will help us answer so many other research questions beyond the presentation and retention of words.

**11. REFERENCES**
