The Study of the Effectiveness of Indirect Vocabulary Learning Strategy on the Iranian Undergraduate Students’ Reading Comprehension

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Abstract

In the last decades there has been an increasing interest in vocabulary learning strategies given that they are found to facilitate second/foreign language vocabulary learning and recall. As many learners do not develop sufficient mastery of the strategy repertoire, explicit instruction on vocabulary learning strategies may help them to become more proficient with the broad range of strategies they can use through their vocabulary learning process. The present study was conducted to study the effect of indirect vocabulary learning strategy on reading comprehension skill on EFL Iranian learners.

To fulfill the purpose of the study, a language proficiency test was administrated to one hundred male and female university students who studied in a course other than English as their major in Omidiyeh Islamic Azad University Khouzestan, Iran. Ultimately, thirty intermediate students were selected and assigned as a homogeneous group to participate in an instruction period. The students were taught vocabulary through utilizing indirect strategies (i.e., Organizing, Discussing your feelings with someone else, and Cooperating with peers) for developing their vocabulary storage in reading comprehension. After ten sessions of treatment, the students were given a post-test of an achievement vocabulary test.

Data analysis was conducted through t-test statistics. t- Test analysis revealed that there was a significant difference between the before and after instruction of indirect learning of vocabulary.
at intermediate level. So presenting the target vocabulary items in context and using indirect vocabulary learning strategies like the selected strategies make a remarkable difference in terms of overall performance for a particular group of student like intermediate level of students.

According to the findings of this study, it is suggested that material designers may develop teaching materials based on strategy-instruction especially on indirect strategies.

**Keywords**: Vocabulary Learning Strategy, Indirect vocabulary learning Strategies, Reading Comprehension

**Introduction**

According to Jo Moir and Paul Nation (2008), in the previous days it was widely assumed that vocabulary teaching is not important matter as it can happen by itself; thus, the teaching of vocabulary was not favorite (Nation, 1990). Stern (1975) and Rubin (1975) were probably among the first researchers who brought up the idea of successful language learners. The idea can probably help us with both understanding more about the nature of language learning and also to facilitate the language learning process for others. With regard to this, most of the research in the area of language learning strategies has focused on the identification, description, and classification of useful vocabulary learning strategies.

Vocabulary learning strategy is a very effective in language proficiency development because it constitutes the basis for learners' ability in other skills, such as speaking, reading, listening and writing. Griffiths (2006) points out, that recently the importance of teaching vocabulary has been acknowledged.

Cohen (1998, p. 1) states that, strategies can be very different in nature, ranging from planning the organization of one's learning (a metacognitive learning strategy) through using mnemonic devices to learn vocabulary (cognitive learning strategy) and rehearsing what one expects to say (a performance strategy) to bolstering one's self-confidence for a language task by means of "self-talk" (an effective strategy). Learning strategies plays a major role in language learning.
Strategies help language learners retrieve and store material, and facilitate their learning by structuring its environment (Gardner & Maclntyre, 1992, p. 219). Not only do LLSs facilitate learning but also accelerate it. Strategy use correlates with students’ language proficiency (Oxford, 2001, p. 170) and self-confidence (Chamot, 1994, p. 331). Concerning language learning strategies (LLSs) designed to encourage students to relate sentences to things they already know, Willingham (2006, pp. 42-43) adds that by prior knowledge, students are encouraged to apply what they know from their own lives to the text, or to consider the theme of the text before reading it, and by vocabulary comprehension relationship Willingham states that students are encouraged to use background knowledge to make educated guesses about the meaning of unfamiliar words.

Broadly speaking, there are three approaches to vocabulary teaching/learning: incidental, or indirect learning (i.e., learning vocabulary as a by-product of doing other things such as reading or listening), explicit or direct instruction (i.e., diagnosing the words learners need to know, presenting such words to the learners and elaborating on their word knowledge), and independent strategy development (i.e., practicing guessing the meaning of the words from context and training learners to use dictionaries) (Hunt & Beglar 2000, cited in Richards & Renandya, 2002). In terms of Hedge, (2000) such strategies can be either cognitive (i.e., direct mental operations to understand and store new words) or meta-cognitive (i.e., indirect strategies that facilitate the conscious efforts to remember new words). Some researchers have revealed that indirect strategy instruction is more effective in developing vocabulary learning storage (Saragi, Nation, & Meister, 1978; Jenkins, Stein & Wysoki, 1984).

Therefore, the current study is basically concerned with indirect vocabulary learning strategies to examine the impact of Iranian learners' indirect vocabulary learning strategies including Organizing, Discussing your feelings with someone else, Cooperating with peers on reading comprehension at intermediate level.

**Literature Review**
Concerning the subject of the study, in this part first vocabulary learning strategies, reading comprehension, and indirect learning strategies in reading comprehension have been reviewed briefly, followed by an overview of the experimental studies of indirect vocabulary learning strategies in English linguistic literature. These are the main areas of research directly relevant to this study.

**Vocabulary Learning Strategy**

In the last decades, researchers and scholars paid significant attention on the vocabulary learning, in the case that vocabulary learning plays an important role in learning to command on second language (Allen, 1983; Laufer, 1986; Nation, 1990; Richards, 1980; cited in Lawson and Hoghen, 1996). Although, there is no common agreements concerning what elements contribute to the acquisition of vocabulary. For instance, the effect of context use for learning vocabulary, and also to what extent students use certain strategies for their vocabulary learning during their language studies (Lawson and Hoghen, 1996).

Researchers claim that another determining factor regarding vocabulary learning is the significance of context and the value of reading (Moulton, 1966, Twaddle, 1980, Parreren; cited in Mondria & Wit-De-Doer, 1991). Different scholars identify vocabulary learning strategies differently, some of which are:

1) Memorization strategies,
2) Repetition strategies,
3) Association strategies,
4) Key word method,
5) Inferencing strategy,
6) Dictionary use (Cohen and Macaro, 2007),
7) Sematic grid strategies, and
8) word lists (Farhady, 2006). According to Farhady (2006), using special types of strategies forms an attempt to vocabulary acquisition that influences the level of foreign language proficiency.
Oxford (1996) has argued that a greater emphasis should be placed on identifying effective language learning strategies and on teaching students how to use them successfully. Many have reported the differences between successful and less successful learners based on the language learning strategies they use (Naiman, Frohlich, Stern, & Todesco, 1996; Vandergrift, 1997; Chamot & El-Dinary, 1999). Good language learners seem to be skillful in monitoring and adapting different strategies. They demonstrate flexibility in using strategies to accomplish different language learning tasks. On the other hand, poor learners cling to ineffective strategies that hinder successful language learning. They focus too much on details, whereas effective learners focus on the task as a whole (Chamot & El-Dinary, 1999).

Ahmed (cited in Ranalli, 2003, p. 11) studied the use of vocabulary learning strategies among university students of English in the Sudan using a structured interview and observation during think-aloud tasks. On the basis of school records and the subjective evaluations of school officials, he divided the learners up into several groups of ‘good’ students and ‘underachievers’. Ahmed found that, in general, among learners in the three clusters of high-achieving students, strategy use was more evident. These learners were aware of their learning, recognized the benefits of studying vocabulary in context, and were conscious of links between new and previously learned items. In contrast, learners in the two underachieving groups exhibited little use of strategies and showed little awareness of the need to integrate new and existing knowledge. The study also found that the most commonly used strategy by all respondents was note taking, while dictionary use was also prevalent. However, there was significant variation in the effectiveness with which good and underachieving learners made use of these strategies. This was one of the first studies to look at vocabulary learning strategies as a group and to try to correlate clusters of strategies (as opposed to individual ones) with success in learning.

**Reading Comprehension**

Reading can be defined as a complex system of deriving meaning from print. Within this system are a series of identified skills associated with the process of reading and comprehension. The *Language in India* [www.languageinindia.com](http://www.languageinindia.com) ISSN 1930-2940

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plethora of reading-related skills makes it difficult to discuss reading comprehension without defining reading as a construct (Hedge, 2000; Harmer, 2001; Alyousef, 2005; Gebhard, 2006). According to Camilli and Wolfe (2004, p. 11), reading skills include: recalling word meanings, drawing inferences, and following the structure of a passage. One of the most important findings of research is the realization that reading is not a simple process (Hedge, 2000; Akyel, & Salataci, 2002; Brantmeier, 2002; Yang, 2002; Razi, 2008). In other words, during the reading process, learners are engaged in various cognitive processes so as to “assign meaning to the written symbols in that text” and that they interact with the text. Thus, let alone being a receptive process, reading is in fact an extremely dynamic process. And this dynamic nature of the reading process involves the reader, the text, and the interaction between the reader and the text (Chastain, 1988; Anderson, 2003; Hadley, 2003). Reading comprehension is the process of constructing meaning from text (Anderson, 2003). The goal of all reading instructions is ultimately targeted at helping learners comprehend text. Comprehension is affected by the learners’ knowledge of the topic, knowledge of language structures, knowledge of text structures and genres. It is also affected by the learners’ knowledge of cognitive and metacognitive strategies, their reasoning abilities, and their level of engagement (Nikolova, 2004; Linse, 2005). According to Laflamme (1997, pp.372-384) research studying the strong relationship between word knowledge and reading, has been clearly established since the early part of the 20th century. Many studies on vocabulary instruction and acquisition conclude that vocabulary knowledge is a major factor influencing reading success (Beck, Perfetti, & McKeown, 1982; McKeown, Beck, Omanson, & Perfetti, 1983; McKeown, Beck Omanson, & Pople, 1985). Some researchers Like (e.g. Laflamme, 1997) go so far as to claim "vocabulary knowledge as the single most important factor in reading comprehension" (pp.372-384). If this information is true, then it must be also true that teaching a large number of vocabulary words is an important part of any reading program (Gauthier, 1991).

The purpose of Steinagel’s (2005) study was to investigate what effect reading in a second language has on the knowledge and language performance of young adult missionaries studying to learn a foreign language. It was hypothesized that reading would improve vocabulary
acquisition and reading comprehension and it was further hypothesized that reading aloud would improve language speaking performance.

*Indirect Learning Strategy*

Incidental or indirect vocabulary learning is defined as a technique of vocabulary learning which occurs without the specific intent to focus on vocabulary. Several studies have been shown the effectiveness of this way of learning word meanings from context (Jenkins, Stein & Wysocki, 1984; Nagy, Herman & Anderson, 1985). Several researchers (e.g., Craik & Tulving 1975, Schmidt 1990) have suggested that the way in which learners’ process material influences incidental learning. They stress the importance of ‘noticing’, or attending, in second language learning and maintain that incidental learning can result from task demands which cause learners to focus attention on specific features of input which are crucial for learning.

Context clue, another independent word-learning strategy, presents its own challenges. For example, Beck and McKeown (1991) noted that using context to derive word meanings is a challenging process that involves integrating different types of information (e.g., definitions, examples, and synonyms) from text to figure out unknown vocabulary. Moreover, using context clues to comprehend new words may be helpful only across time after multiple encounters with words (Nagy & Stahl, 2000). Overall, results are equivocal for teaching struggling students how to use context to derive meanings of new words (Carnine, Kameenui, & Coyle, 1984; Patberg & Stibble, 1985).

Research into the nature of vocabulary and acquisition has helped developing approaches and techniques to teach and learn vocabulary. Richards and Rodgers (2001) stated three approaches to teaching and learning vocabulary:

1. Incidental learning: vocabulary is learned via other skills such as reading comprehension and listening.
2. Explicit instruction: the teacher must identify necessary vocabulary for the learners with
particular attention to their future needs. For instance, there is a list of academic vocabulary for the college students who intend to study a course in a university where the medium of instruction is English.

3. Independent strategy development: learners are taught strategies that help them guess the meaning from the context and also retain the word meaning easily.

Hulstijn (2003) states that there is a difference between direct and indirect learning as direct learning refers to the learning condition in which learners are informed, before to their employment in a learning process, that they will be tested afterword on their retention of a particular type of information. Indirect learning refers to the method in which participants are not forewarned of an upcoming retention test for a particular type of information.

Another research study that conducted into the possible effects of instruction of metacognitive strategies as a indirect strategy on reading comprehension and vocabulary achievement by Boulware-Goode, Carreker, Thornhill, and Joshi (2007), it was found that the metacognitive reading comprehension instruction significantly improved the academic achievement of third-grade students in the domains of reading comprehension and vocabulary over the other instruction that was offered to the students in the comparison school.

Hunt and Beglar (1998) point out that great amount of vocabularies are acquired incidentally through extensive reading and listening. Consequently, motivating students to read and listen extensively can prepare them with great chances to be familiar with new vocabularies. In terms of Huckin and Coady (1999), too, except for the first few thousand most common words, vocabulary learning generally occurs through extensive reading with the learner guessing the meaning of unknown words. This process is indirect learning of vocabulary for the learning of new words and is the byproduct of the reading. However, this process of incidental learning of vocabularies occurs gradually as Anderson (1985; cited in Richards and Renandya, 2002) claims. The indirect vocabulary learning strategy, as Hunt and Beglar (1998) point out; can be a very effective approach for all language learners at all levels.
Shmidt (1990; cited in Nyiazadeh, 2009), also states that indirect learning is surely passive in that it can occur when the focus of attention is on some relevant emphasize of input. However, he believes that since indirect learning is useful in task-based language, pedagogy is still a fruitful area of investigation. He further notes that there is an argument that maintains what is learned—whether indirect or direct—is what is noticed.

Ellis and He (1999) explored the roles of modified input and output in the indirect acquisition of word meaning. Their study proved that interactional output which provides opportunities for learners to use new vocabularies strengthen to better indirect vocabulary learning.

Paribakht and Wesche (1999) also conducted research studying the relationship between reading and indirect L2 vocabulary learning. Their study established indirect acquisition of new lexical knowledge through reading of thematically related texts; hence, vocabulary knowledge may be acquired as a by-product of reading comprehension. In addition, their study displayed that among learners’ strategies, inferencing, was the main vocabulary strategy use employed.

Also, Rott (1999) studied the effect of frequency with which vocabulary occur in a reading text and the role of reading as an input resource in vocabulary acquisition. Her study examined whether intermediate learners incidentally acquire and retain unknown vocabulary by reading a text. The result of the study indicated that, regarding retention measures on productive vocabulary knowledge, only half of the subjects displayed a significant rate of retention, and on receptive knowledge, all but one experimental group retained vocabularies over four weeks.

However, the above mentioned studies did not depict specifically the extent the use of indirect vocabulary learning strategy in developing vocabulary in reading comprehension. So with the gap existing in the literature, the present study is aimed at identifying the role of organizing, discussing your feeling with someone else and cooperating with peers as indirect vocabulary learning strategies in reading comprehension among intermediate Iranian undergraduate EFL learners. The rationale underpinning the selecting of the subjects at the intermediate level for the study is that the researcher has wished to focus scrupulously on this level and investigate the role...
of indirect vocabulary learning strategy on the development of vocabulary in reading comprehension of Iranian learners.

Therefore, indirect vocabulary learning strategy instruction can be looked at as a process of learner empowerment which raises learner's vocabulary of the more effective strategies for learning the language and by enabling them to employ the strategies in learning vocabularies.

**Purpose of the Study**

According to Davies and Pearse (2000), Harley and Hart (2000) and Nation (2003), words are the tools we use to access our background knowledge, express ideas, and learn about new concepts. Learners’ lexical knowledge is linked strongly to academic success. Vocabulary size was shown to be the best predictor of reading comprehension in L1 and L2 (Coady, 1997).

The purpose of this study is an attempt to broaden our knowledge of vocabulary acquisition by investigating the effect of different modes of teaching vocabularies in terms of indirect vocabulary learning strategies to guide instructors to introduce indirect language learning strategies to learners for improvement their vocabulary on language tasks systematically. Therefore teachers can have a clear view to integrate strategy training into the classroom instructional plan to make learners aware of impact of indirect vocabulary learning strategies that they may use unconsciously, in order to learn vocabulary items effectively. Thus, this study was conducted to see the possible effects of indirect vocabulary learning strategies on reading comprehension along with the effect of vocabulary and reading strategy use, and its effect on or relationship to vocabulary acquisition of intermediate level of Iranian university students in an EFL setting.

**Research Question**

The main question to be examined in this study is as follows:
Do indirect learning strategies have any significant effect on the development of vocabulary knowledge of Iranian undergraduate intermediate students?

Methodology

Participants

The researcher selected 100 EFL university students from Islamic Azad University of Omidiyeh in Khuzestan, Iran studying non-English majors in the course of general English (mostly in the second and third semester) based on non-random judgment sampling. They participated in a homogeneity test adapted from Objective Placement Test (Lesley, Hanson & Zukowski-Faust, 2005) as a homogeneity test and finally thirty students (14 males and 16 females) whose scores were one standard deviation above and one standard deviation below the mean (M=30) were selected. The thirty selected students as the researchers interviewed with them all have the experience in participating in the Institute of English language at least four semesters because the test was designed for intermediate level. Then they received indirect vocabulary learning strategy. The age of the participants generally ranged from 19 to 25. Seemingly, they were originally from different regions of the country.

Instruments

Initially, the subjects took the Objective Placement Test of Interchange (Lesley, Hanson & Zukowski-Faust, 2005), which used as a standardized measurement to check the homogeneity level of the subjects in terms of language proficiency. The test contained 40 multiple-choice items. To be aware of reliability of the test the researcher selected twenty other students of 100 students to participate in the test as pilot study. Calculating the reliability coefficient of the test through KR-21 formula, the researcher found the reliability of the homogeneity test at (r=.78). A post-test (pre-test) including 40 items was administered to students at the end of treatment period after ten sessions. It takes eight lessons and was designed as a summative test. This test
indicated 40 multiple-choice items of vocabulary achievement test which was developed by the researcher based on the materials taught in the classrooms.

Another instrument was the reading tasks and activities as the course materials which the researcher afforded to students. These reading tasks and activities were extracted from the Select Readings (intermediate level) written by Lee and Gunderson (2002).

**Procedure**

In this study, 100 Iranian university students who study in a course other than English as their major were selected. To make sure of homogeneity of learners the researcher used Objective Placement Test as language proficiency test (Lesley, Hanson & Zukowski-Faust, 2005). Having obtained the scores and the average mean of the scores calculated. Then thirty learners whose scores were around the mean were selected. Therefore the thirty homogeneous intermediate students prepared to utilize indirect strategies (i.e., Organizing, Discussing your feeling with someone else, Co-operating with peers) for developing their vocabulary storage in reading comprehension. In doing so, the students were given a homogeneity test to gauge the level of learners’ vocabulary knowledge. This test used to locate the students into appropriate proficiency level according to their mean scores. So the subjects whose scores were homogeneous participated in the research.

In this study, the treatment period lasted for ten sessions. On the first session, the students received introduction on indirect vocabulary learning strategies. The procedure was implied by the researcher (teacher). The following sections will introduce the treatment period.

**Indirect vocabulary learning strategies**

**Organizing**
This strategy includes a variety of tools, such as creating the best possible environment, scheduling well, and keeping a language learning notebook. Following this, the learners had the right physical environment as an important factor for every language skill. It provided the learners with enough input in a comfortable, peaceful setting without too much background noise which helped establish a good classroom environment, and encouraged the students to create an appropriate setting for learning at home. On the other hand, it assisted them in developing practical weekly schedules for language learning, with plenty of time devoted to outside–of–class practice in the language skills. Finally, a language learning notebook was used as an excellent organizational aid to learners. The notebook was usefully utilized for writing down new target language expressions or structures and the context in which they were encountered, class assignments, goals and objects, strategies which work well, things to remember, and organized it for the best use (Oxford, 1990).

**Discussing your feelings with someone else**

According to Oxford (1990), language learning is difficult, and learners most of the times need to discuss this process with other people. So learners like to speak and negotiate their daily events with other people. In this study, students used diaries to understand and kept track of their thoughts, attitudes, and vocabulary learning strategies, and if they felt at ease enough, they shared their diary entries during group discussion by dividing learners in several groups in class once or twice a week. Discussions of feelings could also take place outside of class and continued it with a friend, a family, and so on (Oxford, 1990).

**Cooperating with peers**

As Oxford (1990) mentioned, this strategy involves a concerted effort to work together with other learners on an activity with a common goal. Reading activity, simulations, and other active exercises challenged students to develop their ability to cooperate with peers while using vocabulary learning strategy.
Reading, through usually considered an independent activity, was a cooperative enterprise as well. For example, one student works with his/her group on an English-language on reading activity. Each group member had part of the story to read, and together they figured out the entire story through a process of negotiating, requesting, and cooperating (Oxford, 1990).

In this research, the treatment period took ten sessions. During the sessions of treatment, students were taught eight lessons from *Select Readings, intermediate* level (Lee & Gunderson, 2002) within one and a half hour in each session. The rationale behind the use of this textbook is that the author have emphasized the role of lexical knowledge in learning the English language and have put some sections on vocabulary learning strategies in the textbook.

At the end of the treatment, in session ten, both groups took a test (post-test) that was related to the instruction; finally, the means of both groups were compared to examine the effect of indirect vocabulary learning strategy training on the learners' vocabulary achievement in reading comprehension through t-test analysis to clarify the mean differences and the treatment effect on gaining the vocabulary knowledge.

**Data Collection**

The data obtained through post-test were analyzed (using SPSS 11.5 software) in different steps. To test the research hypotheses, the researcher dealt with comparing vocabulary learning strategies regarding, a parametric technique for analyzing the descriptive data. In this way, the study investigated the role of the indirect vocabulary learning strategies through t-test analysis, in order to find out, whether these strategies influence students' vocabulary knowledge of Iranian EFL university students at the intermediate level of English reading proficiency or not.

After the treatment, to find out the effectiveness of indirect vocabulary learning strategies on reading comprehension of indirect strategies and compare the improvement, the students took part in a post-test of the vocabulary and reading comprehension test after completing the course. The reliability of the post-test was $r = .88$ based on KR-21 formula; the vocabulary items in the *Language in India* [www.languageinindia.com](http://www.languageinindia.com) ISSN 1930-2940

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test were mainly selected from the new lexical items taught and exposed to during the course of teaching.

As stated before, this study attempted to investigate the role indirect vocabulary learning strategies in developing students' reading comprehension. By giving the students pretest, it is aimed to reinforce the fact that the students don’t know the target vocabulary items. The pretest which is a complete vocabulary test the students are required to choose the correct word to complete the given sentences. Also the students are required to take post-test in the end of the instruction period that is the same as pre-test. In other hand, while preparing the test, it is aimed to provide test that consider the indirect strategies (i.e., Organizing, Discussing your feeling with someone else, and Co-operating with peers). The same test (pretest) has been given to the students again after the instruction is completed in order to compare the results. The post-test (pre-test) are included of 40 multiple choice.

**Result and Discussion**

The results obtained from analyzing the students' performance that taught vocabulary through indirect strategies (i.e., Organizing, Discussing your feeling with someone else, and Cooperating with peers) for developing their vocabulary storage on reading comprehension. The analysis went further to find out whether these strategies affect students' performance in the development of their vocabulary in reading comprehension. As Independent Samples t-test analysis was applied in this study, the pre-test scores before the instruction was (M=7.4, SD=1.02) out of 40 also showed that the students didn’t know the words before instruction. As for post-test scores, an independent-samples t-test has been conducted to compare vocabulary knowledge before and after the instruction.

The results of the post-test in the group were compared using independent samples t-test statistical procedure, whose result showed that the mean score was (M = 32.73, SD = 3.26). Also the minimum and maximum scores are 27 and 39. The results showed that the value of t before the instruction $t$ ($t= 2.000$) was less than after the instruction $t$ ($t= 6.553$) based on df = 58.
Therefore, the null hypothesis was rejected at the significant level (p<.05). In this case, there was a significant difference between the result of pre-test and post-test after the process of instruction the students. In other words, we can conclude that there was statistically significant difference in pre-test and post-test scores. So, indirect strategies were effective in teaching EFL vocabulary for intermediate level of EFL learners.

Although it is generally believed that most words are learned from context and it is a very useful and productive way to learn words, the usefulness of this method of vocabulary learning for all learners at different levels of proficiency is open to question. Waring (1995, p. 2), for instance, argues that, “Beginners need a basic vocabulary before they can even start to learn from context as they have insufficient knowledge and the text is too dense with unknown and partly known words.” In fact, they do not also possess enough knowledge of grammar and consequently cannot make use of grammatical contextual clues to guess meaning from the context. He finally recommends that guessing from context be left to a later stage when the learner has enough knowledge base from which to work. However, not all contexts are intrinsically reader friendly. For example, clues that can help L2 readers infer the meanings of unknown words from context are not always present, or if present, they are not explicitly and saliently marked in the text (Sternberg, 1987). Even when such clues are available, L2 readers’ ability to infer word meaning and comprehend the text depends in large part on their prior knowledge of numerous word families. Only when they know around 4,000 word families in academic texts, that is, they know 19 of every 20 words in the text (95%), will L2 readers be able to adequately comprehend the text and infer the meanings of unfamiliar words they encounter (Nation, 2001, p.147).

Advocates of context believe that vocabulary is best learned when it is met in some sort of context (Honeyfield, 1977, cited in Nunan, 1991; Strenberg, 1987, cited in Nist and Olejnik, 1995). Besides the target words, incidental learning of vocabulary from the context has also been reported as a side effect (e.g., Nagy, 1985, cited in Nist and Olejnik, 1995; Hulstijn, Hollander & Greidanus, 1996). There are, however, other researchers (e.g., McKeown, 1990, 1993; Miller & Gilda, 1987; Coll & Nagy, 1989, 1990 cited in Nist & Olejnik, 1995) who question the utility of
context. They especially question the utility of context in teaching low frequency vocabulary items. Hulstijn (1992) stated that language learners usually make wrong guesses about the meanings of the words from the context. Camme, Kameenni, and Coyle (1984, cited in Nist & Olejnik, 1995, p. 75) also stated that "even in studies in which subjects have been taught general rules for determining meaning from context the results have often been no significant."

**Conclusion and implications**

The major concern of the present study was to explore the effectiveness of indirect vocabulary learning strategies designed to assist students enhance their vocabulary in reading comprehension of the EFL students. This study has been carried out upon the hypothesis that teaching indirect vocabulary learning strategies is comparatively more effective than traditional teaching of vocabulary by providing only the dictionary definitions or list of words and memorizing the words. The instruction lasted for ten weeks. In the course of this time, the researcher (teacher) employed the mentioned strategies and instructed the participants how to use them in their reading comprehension. At the end of the students were administered the reading comprehension post-test and the results of the tests were compared to find the effect of training.

The results indicate that generally there is a great difference between the pre-test and post-test performances of the subjects in the learners who were instructed using indirect strategies. So presenting the target vocabulary items in context and using indirect vocabulary learning strategies like the selected strategies make a remarkable difference in terms of overall performance for a particular group of student like intermediate level of students.

The findings of this study indicated that indirect vocabulary learning strategies had positive impact on reading comprehension of EFL students because based on the results we gained and analyzed, we can conclude that there is a significant difference between pre-test and post-test vocabulary learning strategies and according to results we got the researcher can claim that indirect vocabulary learning strategies had impact on students of this study and is effective
strategies. Indirect vocabulary learning strategies are the strategies that suggested for learning vocabulary at particular level of language proficiency such as intermediate level.

Concerning the implications related to curriculum developers and material producers it can be stated that they should definitely work in cooperation with both teachers and students. Together with teachers, they should decide what learning strategies they need to identify. It should be the curriculum developers’ responsibility to allocate enough time in the curriculum for teachers to conduct strategies research in their classes.

With respect to material producers, they should produce materials that teachers will use throughout their class research. That is, the materials they produce should be congruent with students’ learning strategies and they should be appealing to students’ needs and interests. This process requires continuous evaluation of every single stage or material used. For this reason, curriculum developers and material producers should collect feedback from teachers and students in order to identify the weaknesses and strengths of their products. This will enable them not only to produce better materials but also to develop them. All in all, curriculum developers and material producers should work cooperatively with teachers and students so that they can design a better program, appropriate materials and tasks that will promote a more efficient and a more effective language learning atmosphere. According to the findings of this study, it is suggested that material designers may develop teaching materials based on strategy-instruction especially on indirect strategies.

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**Language in India** [www.languageinindia.com] ISSN 1930-2940

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*Language in India* [www.languageinindia.com] ISSN 1930-2940
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*Language in India* www.languageinindia.com ISSN 1930-2940

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*Language in India* www.languageinindia.com ISSN 1930-2940

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_Applied Linguistics_, 11(2), 129-158.


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