

The Effect of Explicit and Implicit Vocabulary Instruction on the Reading Comprehension of University Students via Online Classroom

Amir Shakouri^a, Mohsen Mahdavi^b, Yousef Mousavi^c and Ali Asgar Pourteghali^d

^aYoung Researchers Club, Tonekabon Branch, Islamic Azad University, Tonekabon, Iran

^bChabahar Maritime University

^cIslamic Azad University of Tonekabon

^dIslamic Azad University of Tonekabon

Accepted 04 May 2014, Available online 20 May 2014, Vol.2 (May/June 2014 issue)

Abstract

It is true that vocabulary is central to language teaching as well as learning and is of paramount importance to a language learner. This article attempts to find out and compare the effects of the two vocabulary teaching methods on Reading ability of 60 students studying at Islamic Azad University of Tonekabon, Iran. Experimental group received implicit vocabulary teaching while Control Group instructed through explicit vocabulary teaching. During the online lessons different explicit vocabulary presentation techniques used including mind-mapping, Persian equivalents, and English synonyms as well as definitions. Subsequently, the teacher utilized an inferred method for teaching vocabulary implicitly which means students were supposed to guess the words from the passages by using context clues. The results of T-tests and ANCOVA for the comparison of the effect of implicit and explicit instruction on reading comprehension through online sessions indicated that there was no significant difference in the two methods at .05 level of significance. The results of this study have several important implications for the classroom practice and make a strong case for explicit vocabulary instruction.

Keywords: *Explicit and Implicit Instruction, Vocabulary Knowledge, Reading Comprehension, Web-Based Instruction*

1. Introduction

Vocabulary teaching is one of the most important components of any language classroom which helps learners understand languages and express their meanings. If language structures make up the skeleton of language, then it is vocabulary that provides the vital organs and the flesh (Harmer 1993:153).

Vocabulary is a principle contributor to comprehension. Fluent readers recognize and understand many words, and they read more quickly and easily than those with smaller vocabularies (Allington, 2006; Samuels). Students with large vocabularies understand text better and score higher on achievement tests than students with small vocabularies (Stahl and Fairbanks, 1986).

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 & Nunan, 2002).

In foreign language learning, it is difficult to obtain enough language input, both in and outside of learning institutions, as is the case for first and second language learners. This lack creates the need to build a system that helps to increase the language potential of the learners in as consistently effective way as possible that will allow them to boost the acquisition and retention of functional language and beyond.

The study specifically asks questions on the effects of implicit and explicit teaching of vocabulary with strategic task on comprehension, immediate retention, delayed or long-term retention, which have important implications for language learning.

2. Literature review

This section discusses various dimensions of teaching vocabulary implicitly and explicitly in line with reading comprehension.

According to Celce-Murcia (2001), knowledge can be gained and represented either implicitly or explicitly and both contribute to language learning. There exists a central debate emerging from the studies dealt with

whether effective vocabulary learning should give attention to explicit or implicit vocabulary learning.

In implicit vocabulary learning, students engage in activities that focus attention on vocabulary. Incidental vocabulary is learning that occurs when the mind is focused elsewhere, i.e. learning without conscious attention or awareness; such as on understanding a text or using language for communicative purposes. From a pedagogically-oriented perspective, the goal of *explicit teaching* is 'to lead learner's attention', whereas the aim of *an implicit* focus on form is 'to draw learner's attention'. Moreover, individual tasks can be located along an explicit or implicit continuum, and complex tasks may combine both explicit and implicit subtasks. Most researchers recognized that a well-structured vocabulary program needs a balanced approach that includes explicit teaching together with activities providing appropriate contexts for incidental learning.

In implicit learning, the assumption is that new lexis will be grasped "incidentally", through exposure to various contexts, reading passage and other material without deliberate memorization being involved. Unplanned vocabulary learning is learning through exposure when one's attention is focused on the use of language, rather than on learning itself.

Various researchers have concluded that learners should be given explicit instruction and practice in the first two to three thousand high frequency words, while beyond this level, most low frequency words will be learned incidentally while listening or reading.

There are various methods of teaching words explicitly to learners. Duin and Graves (1987) mention that explicit vocabulary instruction can be given through providing word definitions, synonym pairs, word lists, word associations, the keyword method, semantic mapping and semantic feature analysis. Harmer (1991) states that the introduction of new vocabulary can be carried out through the use of realia, pictures, mimicry, contrast, enumeration, explanation and translation. All these vocabulary teaching techniques involve direct teaching.

However, Nagy (1997) believes that teaching vocabulary directly is time wasting. His major argument is that there are a large number of words in English and therefore a large amount of time is needed to deliberately and explicitly teach vocabulary. He concludes that direct teaching can only account for a very small proportion of native speakers' vocabulary growth.

Nation (2001) points out that in SLA, there is the distinction between high frequency and low frequency words. For non-native speakers, they need to learn the high frequency words first, which make up a relatively small group of words, which deserve time and attention.

Nation (2001) also points out that direct teaching of second language vocabulary can raise students' awareness of particular words so that they notice them when they meet them while reading. He also believes that direct vocabulary instruction has a place in SLA and

he puts forward several points supporting the notion.

First, he notes that non-native speakers beginning their study of English generally know very few English words. Because the high frequency words of the language are so important for language use and consist of a relatively small number of words (about 2,000), it is practical and feasible to directly teach a substantial number of them. Second, direct vocabulary learning is a way of trying to bridge the gap between second language learners' present proficiency level and the proficiency level needed to learn from unsimplified input. Third, direct vocabulary study is a way to speed up the second language learning process (p.157). However, he maintains that direct vocabulary instruction should be directed towards the high frequency words of the language and warns that direct instruction can deal effectively with only some aspects of word knowledge and not effectively with others, which rely on quantity of experience and implicit rather than explicit knowledge (p.97). For example, when teachers explicitly teach students to analyze word parts, students may be able to remember the spelling and also the pronunciation of the words (productive knowledge) more easily but regarding collocational and grammatical behavior of words, it may be better for learners to read in context.

Schmitt (2000) points out that learners are capable of learning large quantities of vocabulary, for example by means of word lists and the 'depth of processing' hypothesis suggests that the more a piece of information is manipulated, the more likely it is to be retained in memory (p.121). Oxford and Scarcella (1994) take the position that explicit vocabulary instruction is necessary to guide learners to learn specific strategies for acquiring words, and show students how to learn words outside of their L2 classes (p.235). In a study on Asian ESL learners, Wintergerst and DeCapua (2003) find that Asian students are more used to teacher-centered classrooms, which implies that they are more used to being given instruction by teachers although it is generally agreed that learners may become less autonomous if they are always provided with explicit instruction.

The study aims to investigate answers of the following questions:

1. Does explicit teaching of vocabulary affect Iranian EFL learners' reading comprehension?
2. Does implicit teaching of vocabulary affect Iranian EFL learners' reading comprehension?
3. Does the experimental group (which has been instructed implicitly) of the study show progress from the pre-test to post-test?
4. Does the control group (which has been instructed explicitly) of the study show progress from pre-test to the post-test study?

3. Methodology and design

3.1 Design of the study

Majority of the participants spoke Persian as their native language. This study endeavored a practical strategy that mainstream teachers can use to raise reading comprehension scores among students in reading passages through online classes. The experimental design for this study was a quantitative design. Specifically, the design was a quasi-experimental design. This research used two groups, control group and experimental group with no treatment (explicit instruction) and a treatment (implicit instruction). The two methods of instruction were compared. Pretest-posttest experimental design was used to investigate the effectiveness of using implicit and explicit modes of vocabulary introduction to enhance reading comprehension.

3.2 Participants

The participants for this study were sixty students enrolled in classes in Tonekabon University. Forty percent were male and sixty percent were female. In this sample the majority of the participants spoke Persian as their native language. The goal of this study was to provide a practical strategy that mainstream teachers can use to raise reading scores among students.

3.3 Procedure

A comparison of the mean scores of test obtained by the two groups shows that, very obviously, performance was a bit higher when the target words were taught through an implicit vocabulary instruction technique of inferred passage than when target words were associated with mid-mapping technique and synonyms and definitions in the passages. The students who participated in this study were sixty students enrolled in university in one semester. The test scores for all sixty students were collected and listed with a numerical reference rather than by name. In this study, participants took part in six vocabulary units. These units were a part of 400 must-have words for the TOEFL about the same length, and on various topics. Within this program, there were also teacher-reviewed vocabulary lists and classroom tested strategies for implicit and explicit vocabulary teaching. Each part was on the same vocabulary level and the units were designed to be of similar length. There were two different modes of instruction. In one mode of instruction, implicit instruction, the teacher utilized an inferred method for teaching a vocabulary unit. Moreover, students were supposed to guess the words from the passages by using context clues. In the other mode of instruction, explicit instruction, the teacher utilized specific strategies for (mind-mapping technique, synonyms and definitions). It distinguishes the implicit instruction strategies from the explicit instruction strategies. The independent variable for this study was the mode of instruction implicit classroom instruction versus explicit vocabulary instruction. These modes were

applied to the same group of students, but alternated on the basis of the vocabulary unit. The dependent variables for this study were the vocabulary gained and scores—both of which were collected on the basis of each vocabulary unit (approximately every week).

For the vocabulary scores, the lowest possible score was 0 and the highest possible score was 20. Since the focus of this study was to compare conditions with and without explicit vocabulary instruction, the number of words gained for each unit was used.

The instrument used to evaluate the differences in the two groups of scores was an original instrument that was designed so that the test items were in a similar format to those found on the TOEFL Test (pre-test and Posttest and OPT Test (Homogeneity Test)). For the vocabulary acquisition measures, there were two portions on the test: recognition and production. The recognition portion of the test consisted of twenty recognition items worth one point each for a total maximum of twenty points on this portion of the test. There were twenty items on the production portion of the test, each worth up to one point each, for a total maximum of 20 points on this portion of the test. In order to increase the validity and the reliability of this instrument, it was reviewed by two language teachers.

A comparison of the mean scores of test obtained by the two groups shows that, very obviously, performance was a bit higher when the target words were taught through an implicit vocabulary instruction technique of inferred passage than when target words were associated with mid-mapping technique and synonyms and definitions in the passages. The students who participated in this study were sixty students enrolled in university in one semester. The test scores for all sixty students were collected and listed with a numerical reference rather than by name. In this study, participants took part in six vocabulary units. These units were a part of 400 must-have words for the TOEFL about the same length, and on various topics. Within this program, there were also teacher-reviewed vocabulary lists and classroom tested strategies for implicit and explicit vocabulary teaching. Each part was on the same vocabulary level and the units were designed to be of similar length. There were two different modes of instruction. In one mode of instruction, implicit instruction, the teacher utilized an inferred method for teaching a vocabulary unit. Moreover, students were supposed to guess the words from the passages by using context clues. In the other mode of instruction, explicit instruction, the teacher utilized specific strategies for (mind-mapping technique, synonyms and definitions). It distinguishes the implicit instruction strategies from the explicit instruction strategies. The independent variable for this study was the mode of instruction implicit classroom instruction versus explicit vocabulary instruction. These modes were applied to the same group of students, but alternated on the basis of the vocabulary unit. The dependent variables

for this study were the reading comprehension gained and scores—both of which were collected on the basis of each reading passage unit (approximately every week).

The OPT test and pretest were administered one week apart, with the second test administered the day prior to implementation of the program. The posttest was administered immediately upon the conclusion of the study. All data were collected during the students' regularly scheduled reading and vocabulary class by the researcher who had no relationship with classroom participants .It could be one of the limitations of the study. Students in both study conditions received the same pretest and posttest. Test directions instruct students in order to receive full credit; all work must be shown, regardless of how they arrive at their answer. Students were allowed and required to utilize some techniques to answer questions on the test.

4. Data analysis and results

The dependent variable was the reading comprehension measured by the posttest scores after the treatment. The analysis would use two methods to data analysis in order to answer the research questions: the independent T-Test and ANCOVA. Independent T-tests were used to answer the first and second research question. ANCOVA was used to answer the third and fourth research questions.

Research question 1: Does explicit teaching of vocabulary affect Iranian EFL learners' reading comprehension?

As viewed in Figure 4.1, the histogram forms a symmetric shape confirming that the scores are normal. For answering question one, two sets of test scores of two groups' students were analyzed to determine whether a statistically significant gain existed. The independent t-test was used to determine if the mean gains of the two groups of scores were significantly different from one another. According to (Table 4.2), observed t value equals 2.343. A comparison made between this t value and the critical t value in the table (Table 4.4) adopted from Hatch and Farhady (1981, p. 272) shows that the critical t value equals 2. In other words the observed t is higher than the critical t value. Therefore, the null hypothesis derived from the first research question is rejected and it can be indicated that the research independent variable explicit teaching of vocabulary has effect learners' knowledge of vocabulary.

Research question 2: Does implicit teaching of vocabulary affect Iranian EFL learners' reading comprehension?

Table 4.4 shows comparisons between the pretest and the posttest mean scores for the control groups. The purpose of this comparison is to find out whether the participants in CG made changes in reading comprehension after treatment. There is not a

statistically significant difference between the pretest and posttest performance of the group ($p > .05$). This means the EG did significantly improve their vocabulary knowledge after the treatment.

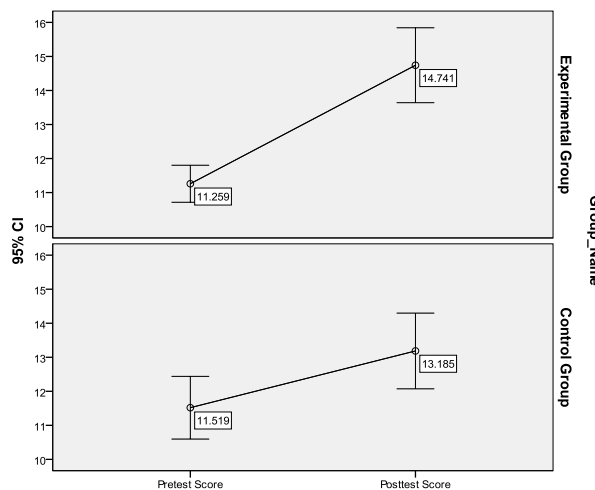


Figure 4.1: Distribution of scores

We can come to a conclusion that both the explicit vocabulary teaching technique (mind-mapping) and the implicit vocabulary teaching approach (inferred passage) brought reading comprehension gains to the students in both groups. This finding is in line with the viewpoint of Carter and Nation (2001), who suggest that both the explicit and implicit methods can be effective.

Research question 3: Does the experimental group (which has been instructed implicitly) of the study show progress from the pre-test to post-test?

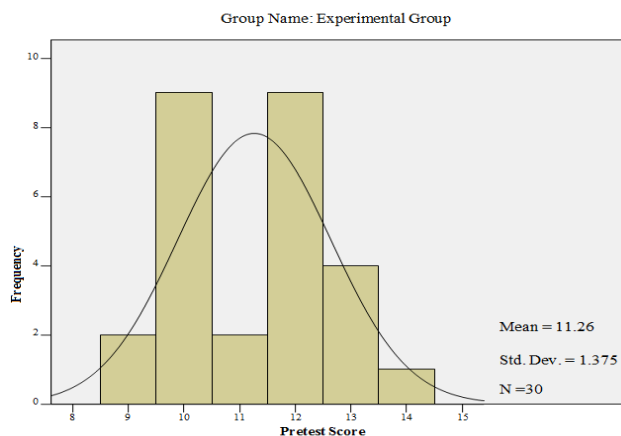


Figure 4.2: Pretest Scores in the Experimental Group with a Normal Distribution

Before answering this question and presenting the descriptive results based on the experimental group's scores on the pretest and posttest of the study, the issue of whether or not scores follow a normal distribution should be investigated. Figure 4.5 is the histogram of the

scores with a symmetrical shape showing the normality of the distribution.

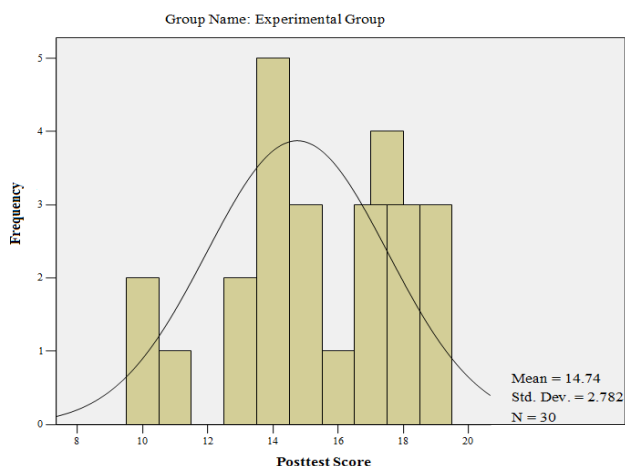


Figure 4.3: Posttest Scores in the Experimental Group with a Normal Distribution

On the basis of the table (4.7), that the F value in the treatment row equal is 18.635 above shows that there is a significant different between the two research groups (EG, CG). In addition the sig. value (.000) in the same row shows that it is above the p-value ($p > 0.5$). Hence it is stated that different between the mean scores is not haphazard or accidental and the third hypothesis supported and fourth null hypothesis is rejected.

Table 4.1: Descriptive Statistics of the Overall Comparison between Pretest and Posttest in the EG

Source	Treatment
Type III Sum of Squares	53.578
df	1
Mean Square	53.578
F	18.635
Sig.	0
Partial Eta Squared	0.246

In order to answer this question, ANCOVA was conducted for finding any significant differences in the level of progress achieved by the control group. In all of these analyses the significant level was set at $p < .05$.

Research question 4: Does the control group (which has been instructed explicitly) of the study show progress from pre-test to the post-test study?

The control group (explicit) of study does not show progress from pre-test to the post-test study. In order to answer this question, ANCOVA was conducted for finding any significant differences in the level of progress achieved by the control group. In all of these analyses the significant level was set at $p < .05$.

5. Conclusions and discussions

This study has shown that teaching vocabulary explicitly, the learners in the explicit condition showed better understanding in reading. The great portion of the immediate comprehension is explained by the fact that the modality they used provided them with most of the information needed and thus they made less mental efforts in the memorization of the target words. The limited processing associated with reading comprehension did not favor stronger memory traces. The implicit group gained a small amount of vocabulary but mostly secured understanding than the explicit group members who initially gained more comprehension. The study suggests that both the implicit and the explicit modalities have advantages in teaching reading. The implicit group appears to be the one that helps to retain more items from the test and consequently, is the best. The researcher argues 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.

The results obtained by the implicit group shows students gained reading comprehension moderately better, while the explicit group gained more vocabulary words immediately but also forgot more of them by the time of the delayed retention task. This part of the result is in line with Schmitt and Schmitt (1997) who states that newly acquired words and expressions will slip out of memory easier if they are acquired with less effort. Hunt and Beglar (2005) provide a framework, Scott (1989), Paribakht and Wesche (1997), Zimmerman (1997), Nation and Waring (1997), (Souleyman 2009), and Watanabe (1997) suggest the combination of both modalities for a better reading comprehension.

The subjects in the implicit group had retained longer than the explicit group members. This result provides reasons to consider that while striving to understand the reading passage and meaning of the target words, the subjects in the implicit group applied a deeper level of involvement and processing in learning the chosen words. These levels of involvement and processing must have created stronger memory traces in the subject’s minds; some kind of memory traces not easy to fade away. This kind of access to the target information can be considered as a justification for the slightly longer retention of most of what the implicit group members retained with the reading exercise.

Instruction maximizes the pedagogical intervention, improves learning, and needs to be structured in accordance with the expected outcome of the teaching and learning activity, and learner characteristics. In addition to the question of instruction, the results of the present study raise that of choice and adaptation of materials, definition of affective conditions in language teaching and learning, as well as the teaching and learn-

-ing environment, all around the learner.

Based on the results of the present study, it is suggested that any task that aims to provide learners with opportunities to learn subconsciously needs to be structured in a way that attracts or even pushes the subject toward noticing the individual key features that will serve to understand the information under study in order to reach the covert objective while completing the overt task and aiming at the goal of this overt task increased involvement. This configuration will focus the learner's attention into noticing the information that is, in fact, the actual objective of the overall task, and the actual objective will be achieved as a by-product of the task. (Souleyman 2009)

The results of the present study show that explicit teaching is not better than implicit teaching because it seems to be associated with more premature slippage in memory. In the end, the two modalities prove not to be notably different. In an attempt to support individual difference, the combination of the two can provide the subjects with additional learning strategies, opportunities to deeply process the information by creating in them the need to ponder over specific elements of interest such as key features, keywords, key notions, and especially key processes that will push the learners into intensive cognitive activities.

This combination is in line with Beglar and Hunt's (2005) suggestion for combining implicit and explicit teaching practices. By going through these covert steps, the cognitive mechanism will make use of more and deeper mental processes, not in relation with the time invested but rather the mental processes that allow more consistency and depth of implantation of the resulting memory traces. Obviously, when people learn, they do not intend to master the object temporarily but rather indefinitely. Learning is about storing knowledge indefinitely, and this is a defining reason for striving to find out a pedagogical procedure that may favor longer-term retention rather than gaining knowledge to only lose it not so long afterward.

Both implicit and explicit modalities need to be balanced in teaching in general and in teaching vocabulary in particular. Data in this study shows that, over time, the implicit group members lost slightly less from their immediate gain in reading comprehension than did the explicit group members. It would be a more profitable option to combine both modalities to facilitate learning of new items, and for longer retention. The researcher argues that, in teaching vocabulary, implicit teaching helps to maintain the target items over a longer period of time while the explicit teaching modality appears to favor immediate retention without the advantage of maintaining the retained items longer over time. We can come to a conclusion that both the explicit vocabulary teaching technique (mind-mapping) and the implicit vocabulary teaching approach (inferred passage) brought reading comprehension gains to the students in

both groups. This finding is in line with the viewpoint of Carter and Nation (2001), who suggest that both the explicit and implicit methods can be effective.

References

- [1]. Carter, R. and Nunan, D. (2001) Vocabulary. In *The Cambridge Guide to Teaching English to Speakers of Other Languages*. Cambridge University Press, pp.42-47
- [2]. Chamot A.U. (1998) Teaching Learning Strategies to Language Students. In Burkart, G.S. *Professional Preparation of Teaching Assistants in Foreign Languages*. Washington DC: Center for Applied Linguistics, pp.68-70
- [3]. Channel (1981). *Vocabulary Acquisition and the Mental Lexicon: Theories of Meaning and Lexicography*.
- [4]. Coady, J. (1997) L2 vocabulary acquisition through extensive reading. In J. Coady and T. Huckin (eds.) *Second Language Vocabulary Acquisition*. Cambridge: Cambridge University Press, pp.225-237.
- [5]. Craik, F.I.M. and Tulving, E. (1975) "Depth of processing and the retention of words in episodic memory" *Journal of Experimental Psychology*, 104, pp.268-294.
- [6]. Ellis, N. & Beaton, A. (1993b). Psycholinguistic determinants of foreign language vocabulary learning. *Language Learning*, 43, 559-617.
- [7]. Ellis, N. (1994). Vocabulary acquisition: The implicit ins and outs of explicit cognitive mediation. In N. C. Ellis (Ed.), *Implicit and explicit learning of languages*.
- [8]. Ellis, N. (1995) Vocabulary acquisition: Psychological perspectives and pedagogical implications.
- [9]. Ellis, Nick C. 1994c. "Vocabulary acquisition: the implicit ins and outs of explicit cognitive mechanisms". In Ellis, Nick (ed.). *Implicit and explicit learning of languages*. London etc.: Academic Press, 211-282.
- [10]. Ellis, R., & he, X. (1999). The roles of modified input and output in the incidental acquisition of word meanings. *Studies of second Language Acquisition* 21, 285-301.
- [11]. Ellis, R. (2008). *The study of second language acquisition*. (2nd ed). Oxford: Oxford University Press.
- [12]. Farhady, H. (2006). *Twenty-five years of living with applied linguistics: Collection of articles*. Iran, Tehran. Rahnama press.
- [13]. Gass, S. (1999). Discussion: Incidental vocabulary learning. *Studies of Second Language Acquisition* 21, 319-333.
- [14]. Griffiths, C. (2003). Patterns of language learning strategy use. *System*, 31, 367-383.
- [15]. Griffiths, C. (2006). *Language learning strategies: Theory and research*. Iran. ILI Language Teaching Journal 2, 1.
- [16]. Harmer, J (1991). *The Practice of English Language Teaching*. London: Longman.
- [17]. Hulstijn, J. (2005). Theoretical and empirical issues in the study of implicit and explicit second language learning. *Studies in Second Language Acquisition*, 27, 129-140.
- [18]. Hulstijn, J. H. (2003). Incidental and intentional learning. In C. Doughty & M. H. Long (eds). *The handbook of second language acquisition* (349-381). Oxford: Blackwell.
- [19]. Hulstijn, J. H., Boella, G., Damiano, R., Van der Torre, L. (2006). ACL semantics between social commitments and mental attitudes. *Agent Communication II, International Workshops on Agent Communication*. Selected and revised papers
- [20]. Marcel, Anthony J.; Bisiach, Edoardo. 1988. *Consciousness in contemporary science*. Oxford: O.U.P.

- [21]. Mayer, R. E. (2001). *Multimedia learning*. New York: Cambridge University Press.
- [22]. McCarthy (Eds.), *Vocabulary and language teaching* (pp. 97-110). London: Longman
- [23]. McLaughlin, Barry. 1990. " 'Conscious' versus 'unconscious' learning". *TESOL Quarterly*
- [24]. Nation, I. S. P. (1990). *Teaching and learning vocabulary*. New York: Newbury House.
- [25]. Nation, I. S. P. (2001). *Learning vocabulary in another language*. Cambridge: Cambridge University Press
- [26]. Nation, I. S. P., & Coady, J. (1988). *Vocabulary and reading*. In R. Carter & M. Nation, P. (2002). *Best practice in vocabulary teaching and learning. Methodology in language teaching: An anthology of current practice*. Cambridge: Cambridge University Press.
- [27]. Schmitt, N. (1997). *Vocabulary learning strategies*. In N. Schmitt & M. McCarthy (Eds.), *Vocabulary: Description, acquisition, and pedagogy* (pp. 199-227). Cambridge: Cambridge University Press.
- [28]. Schmitt, N. (2000). *Vocabulary in language teaching*. Cambridge: Cambridge University Press.
- [29]. Sokemen, J. (1997) "Current Trends in Teaching Second Language Vocabulary.
- [30]. Wesche, M., & Paribakht, T. S. (Eds.). (1999). *Incidental L2 vocabulary acquisition: Theory, current research, and instructional implications*. Special issue: *Studies in Second Language Acquisition*, 21, 175-335.
- [31]. Wode, H. (1999). *Incidental vocabulary acquisition in the foreign language classroom*. *Studies of Second Language Acquisition* 21, 243-258
- [32]. Zimmerman, C. (1997) "Historical Trends in second Language Vocabulary Instruction" In *Second Language Vocabulary Acquisition*. Cambridge: Cambridge University Press.