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## The Effect of Different Approaches to Learning Strategy Instruction on Vocabulary Development

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### Abstract

This research falls within the area of teaching English as a foreign language (FL). It focused on the short-term effects of memory and cognitive strategies on learning vocabulary and shed light on the approaches adopted by EFL teachers while teaching these strategies. It investigated whether these strategies were taught implicitly or explicitly or both. To conduct this mixed research, two main tools were applied: the first was a questionnaire to evaluate the memory and cognitive strategies used by EFL teachers and intermediate learners; the second was a vocabulary test to investigate the effect of using memory and cognitive strategies on vocabulary learning. These tools were applied to the sample that included 36 intermediate learners who were divided into experimental (15 students) and control (21 students) groups and 30 EFL teachers. The data obtained were dealt with descriptively and analytically. The findings show that training students to use memory and cognitive strategies explicitly enhances vocabulary learning more than implicit instruction.

### Keywords

Cognitive strategies, memory strategies, vocabulary learning strategies

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## Introduction

Many language instructors consider vocabulary is the bedrock of learning a new language. "Without grammar, little can be conveyed, without vocabulary, nothing can be conveyed" (Wilkins, 1972, p.111). Vocabulary learning is considered the mediator through which one can acquire various types of linguistic knowledge. According to the National Reading Panel (NRP, National Institute of Child Health and Human Development, 2000), readers' command of vocabulary is strongly related to their understanding of the text. Also, it emphasizes that vocabulary instruction is also essential to the development of literacy: learning vocabulary will enhance learning in general. Schmitt and McCarthy (1997), for example, state, "it seems that virtually anything, that leads to more exposure, attention, manipulation, or time spent on lexical items adds to students' learning" (p.122).

To promote language learning, Oxford (1990) argues that learning strategies are widely recognized for the contribution they can make to the process. Likewise, Schmitt and McCarthy (1997) insist on the key role of investigating learning strategies to make the process of learning vocabulary easier. The close connection between vocabulary and learning strategies has been studied thoroughly by researchers (Abdelrahman, 2013; Bolukbas, 2009). However, even though of the ample of research in the field of language learning strategies (LLSs), the approaches of teaching these strategies (explicitly or implicitly) did not get much attention. To that end, the researcher aspired to shed light on the impact of these different approaches on learning vocabulary by using memory and cognitive strategies.

This research falls within the area of teaching English as a foreign language (FL). It focused on the short-term effects of memory and cognitive strategies on learning vocabulary and sheds light on the approaches adopted by EFL teachers while teaching these strategies. To achieve the purpose of the study, the following research questions guided this study: (1) What are the effects of teaching memory and cognitive vocabulary strategies (explicit/implicit) on learning vocabulary? (2) Which group (experimental/control) used vocabulary memory strategies the most? Which group (experimental/control) used vocabulary cognitive strategies the most? What are the applied approaches used by EFL teachers at HLI for teaching vocabulary learning strategies (explicitly, implicitly or both)?

## Literature Review

### *What is vocabulary? And criteria for the selection of vocabulary*

Vocabulary is the essential pillar of learning any language and is a basic element in learning reading, writing, speaking, and listening. Schmitt & McCarthy (1990) argue that "no matter how well the student learns grammar, no matter how successfully the sounds of L2 are mastered, without words to express a wide range of meanings, communication in an L2 just cannot happen in any meaningful ways" (p. ix). Merriam Webster's Collegiate Dictionary (2004) defines vocabulary as "a list or collection of words and phrases usually alphabetically

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arranged and explained or defined.” Many researchers have established certain criteria to help teachers decide what vocabulary to select. In her online-article *Teaching and Learning Vocabulary: An Introduction for English Students*, Campillo (1995) (pp.40-42) suggests the following criteria:

**Frequency**, learning a word means learning the frequency of occurrence of this word. The frequency of a word has been regarded as a key element in a given word's difficulty. Haynes (1993) argues that vocabulary's frequency is probably a greater factor in word difficulty. It is reasonable to teach the most frequently-used words, especially if they refer to objects from learners' surroundings, such as colors, food, days of the week, and classroom instructions. Nation (2001) states that there are four forms of words in a text: 1) High-frequency words: These vocabularies are almost 80% of the running words in texts; 2) Academic words: normally, these words constitute about 9% of the running words in the text; 3) Technical words: These words form about 5% of the running words in the text; 4) Low-frequency words: These are the words of moderate frequency that did not manage to get into the high-frequency list. They make up over 5% of the words in an academic text.

**Range**, Vocabulary development is a basic aspect of making the transition from lower levels to more advanced levels in language proficiency. Some learners seem to have attained a learning plateau, and this can result from the overuse of lower-level vocabulary and inability to attain advanced level vocabulary.

**Availability and/or expediency**, "Words may be learned or taught because they are seen to be of special relevance to particular situations" (Wallace, 1988, p.16, as cited in Campillo, 1995, p.41). Thus, students have to know words such as 'chalk' and 'duster', because they apply to the context in which they find themselves, although they have a very low frequency and restricted range.

**Specific need/interest on the learners' part**, knowing a vocabulary also means learning when to employ it in a formal or informal situation. Words selected could not be just the ones mentioned in the course book; they might be chosen to address the requirements of the learners who want to voice their subjective views and opinions about a specific issue like 'sport'. Thus, it is suggested that instructors bear in mind this idea into and stipulate their learners with the appropriate words for the sake of motivation. Teachers might think of postponing the instruction of certain items that could be very difficult for young learners, whether in their pronunciation and spelling - such as 'archaeology' and 'architecture' or in the distinction between close meanings such as 'do' and 'make'.

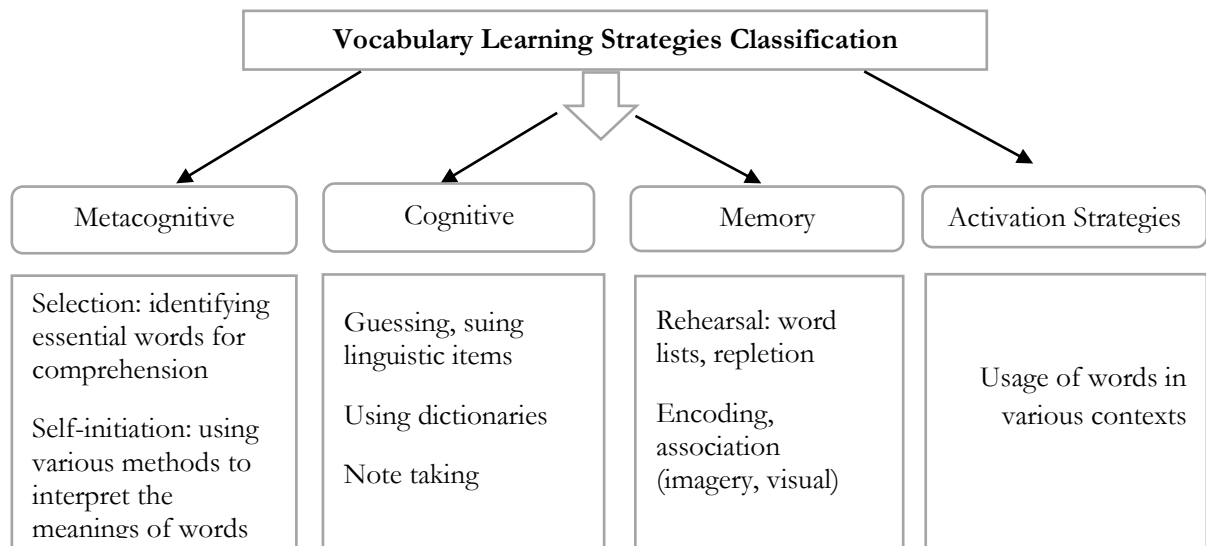
**Cultural factors**, Cultural factors should also be taken into consideration while teaching vocabulary. Even though you hear 'ice storm' a lot in Canada, and 'sleet' in Brazil, it is not useful to teach them to Syrian learners, for example, because these words are far away from students' culture and experience where words like 'sea', 'mountain', and 'rain' will make more sense.

### ***Classification of vocabulary learning strategies***

EFL students may utilize different strategies to learn the vocabulary of the intended language. According to Griffith (2013, p. 15), "language learning strategies are activities

consciously chosen by learners to regulate their language learning strategies". These strategies have been linked to successful language learning (Chamot & O'Mally, 1994; Oxford, 1990). A very essential constituent of language learning strategies is vocabulary learning strategies which were examined by Gu and Johanson (1996) who classified them into four main sections: metacognitive, cognitive, memory, and activation strategies.

**Figure 1.** *Vocabulary learning strategies' classification*



**Metacognitive strategies** made up of selective awareness and self-initiation strategies. Language learners who employ selective awareness strategies understand which words are essential for them to learn and are important for adequate comprehension of a text. According to Gu and Johnson's taxonomy (1996), **cognitive strategies** entail guessing strategies, masterful use of dictionaries and note-taking strategies. Learners using guessing strategies draw upon their past experiences (schemata) and use linguistic clues like grammatical structures of a sentence to guess the meaning of a word from the context.

**Memory strategies** are categorized into practicing and encoding categories. Word lists and repetition are examples of practicing strategies. Instructing strategies compromise strategies such as association, imagery, visual, auditory, semantic, and contextual encoding as well as word-structure (i.e., analyzing a word in terms of prefixes, stems, and suffixes). **Activation strategies** involve strategies in which the students use new words in various contexts. For instance, learners may create sentences by using the words they have just learned. Gu and Johnson (1996) subdivided these vocabulary learning strategies into eight types: Beliefs, Metacognitive Regulation, Guessing Strategies, Dictionary Strategies,

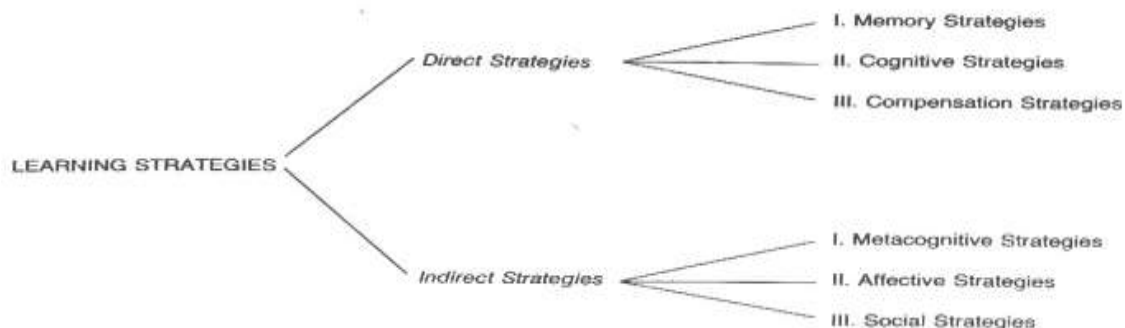
Note-taking Strategies, Rehearsal Strategies, Encoding Strategies, and Activation Strategies. Table 1 shows these categories and their sub-categories.

**Table 1.** *Categories and sub-categories of vocabulary learning strategies (Gu & Johnson's, 1996)*

1. Beliefs	a. Words Should Be Memorized b. Acquire Vocabulary in Context c. Learn Vocabulary and Put It to Use
2. Metacognitive Regulation	a. Selective attention b. Self-initiation
3. Guessing Strategies	a. Using background knowledge/wider context b. Using context cue/immediate context
4. Dictionary Strategies	a. Dictionary strategies for comprehension b. Extended dictionary strategies c. Looking-up strategies
5. Note-taking Strategies	a. Meaning-oriented note-taking strategies b. Usage oriented note-taking strategies
6. Rehearsal Strategies	a. Using word list b. Oral repetition c. Visual repetition
7. Encoding Strategies	a. Association/Elaboration b. Imagery c. Visual encoding d. Auditory encoding e. Using word-structure f. Semantic encoding g. Contextual encoding
8. Activation Strategies	

*Oxford's Taxonomy (1990)*, the present study mainly depended on Oxford's learning strategies classification and adopted them while training students to use memory and cognitive strategies. Oxford (1990) classified learning strategies into two main sections: direct strategies and indirect strategies.

**Figure 2.** *Language learning strategies*



*Direct strategies*, as stated by Oxford (1990), are mental processing strategies that encompass using the aimed language. They contain three sub-categories: memory, cognitive and compensation. Memory and cognitive strategies are the focus of this research. *Memory strategies* are also recognized as Mnemonics. Memory strategies echo a very basic principle that is, organizing information in your memory. Memory strategies are divided into the following strategies: A. creating mental linkage, B. Applying images and sounds, C. Reviewing well and D. Employing action. *Cognitive strategies* are essential in acquiring any language. They vary from repeating, analyzing expressions to summarizing. Their unified task is to alter and transmute the target language by the learner to be learned and memorized. There are four main groups: A. Practicing, B. Receiving and sending messages, C. Analyzing and reasoning and D. Creating structure for input and output. Oxford (1990) states that compensation strategies will help learners to know the new words' meaning despite the lack of the needed knowledge. These strategies are distributed into two main sub-sets: Guessing intelligently and overcoming limitations in speaking and writing. *Indirect strategies* consist of three categorizations according to Oxford (1990). The first category consists of metacognitive strategies, which concentrate on teaching students to use their cognition that is regulating the learning process by using functions such as centering, arranging and planning. Effective strategies are included in the second category that helps learners to regulate their emotions and motives. The last part of the indirect strategies is the social strategies that qualify learners to learn new words by interacting with other students.

### ***Teaching Vocabulary***

Schmitt (2000) confirms that vocabulary should be taught gradually over a while from various resources. Teaching vocabulary might be affected by the adopted method of teaching English. In the Syrian context, there are two approaches to teach vocabulary. The first one is the teacher-centered approach (the traditional approach). This approach mainly depends on the Grammar-Translation Method. Most teachers, who adopt this approach, write a list of words and their meanings, and the students have to memorize them. The second approach, which is adopted at the Higher Language Institute, is the student-centered approach. This approach, which is derived from the Communicative Approach, concentrates on asking students about the meaning of a new word, guessing their meaning from the context or using a dictionary as a last resort. There has been no unanimity on the ideal way to teach vocabulary. Schmitt (1997) claims, "There is no "right" or "best" way to teach vocabulary. The best practice in any situation will depend on the type of student, the targeted words, the school system and curriculum, and many other factors" (p. 132). Nevertheless, learning vocabulary could not happen in a vacuum. It should be planned. Schmitt (1997) suggests that the initial stage in vocabulary acquisition is to establish a form-meaning link, which is what the most of vocabulary materials and activities seek to do. On the other hand, Graves (2006) offers a framework for successful vocabulary programs that support effective teaching and students' development of word knowledge. The foundation of his instructional program includes a four-part approach to developing robust

vocabularies: (1) Provide rich and varied language experiences, (2) teach individual words, (3) teach word-learning strategies, and (4) foster word consciousness (pp. 4–8).

### *Teaching Vocabulary Learning Strategy (VLS)*

Hatch & Brown (1995) argue that teaching strategies are related to everything teachers do or should do to help their learners learn. Which teaching strategy an instructor will utilize relies on the available time, the content (i.e. the knowledge which the learners have to gain), and its value for the learner (i.e. which learning strategy the learners have to learn or apply). Several approaches for teaching vocabulary used to be applied in several contexts, and the Communicative Language Teaching Approach (CLT) was amongst the most effective ones. CLT focused on teaching strategies hand in hand with teaching language elements (Brown, 2000). Several factors mentioned in the literature prove to have a negative effect on vocabulary learning. They are described as "lack of strategy training" which has been found out to have a strong connection with the proficiency level of learners (Bolukbas, 2009). Training students to use vocabulary learning strategies is a vital part of the process of teaching vocabulary. Oxford (1990) suggests three types for the strategies training model. The first type is called awareness training. Awareness training depends on conscious-raising and familiarization. Students should be conscious of the significance of using strategies and their important effect on the process of learning. One-time strategy training is the second type of training strategy. It is mainly built on learning and practicing one or more strategies in the usual language tasks. This sort is the adopted type in this research. The third type is long-term strategy training. What distinguishes this type from the one-time strategy training is that it is extended to a longer period, and it covers most of the learning strategies.

### *The indirect /implicit approach*

Implicit/indirect teaching means teaching without raising conscious attention or awareness. In the implicit teaching model, the hypothesis is that the new vocabulary will be comprehended "incidentally", by exposure to diverse contexts, reading texts and other materials without intentional memorization. Accidental vocabulary strategies' teaching is teaching throughout exposure when learner's attention is concentrated on language use, rather than on the process of learning itself. Teachers who adopt this approach tend to teach VLS indirectly. Most of the time, teachers depend on their textbooks to provide the needed exercises to practice these strategies indirectly. For example, teachers will indirectly teach students how to guess the meaning of the new vocabulary. Teachers who follow this approach claim that teaching vocabulary strategies indirectly would save time to practice the other skills of (listening, reading, speaking, and writing). Hatch & Brown (1995) argue that unplanned vocabulary activities take less time than planned vocabulary teaching strategies.

### *The direct /explicit approach*

Explicit teaching aims to lead the learners' awareness. Oxford & Scarcella (1994) state, "explicit vocabulary instruction is necessary to guide learners to learn specific strategies for acquiring words, and show students how to learn words outside their L2 classes" (p.235). Followers of this approach are expected to present VLS systematically founded on delicate consideration of the needs and goals of the learners, and other influencing factors such as age and culture. Learners are also trained to be conscious of the importance of VLS and the process of learning and practicing them. Moreover, substantial emphasis on the significance of using VLS inside and outside the class is confirmed in this approach. Vocabulary learning activities are contextual (e.g., word association, visuals, and semantic mapping). Advocates of this approach highlight the importance of the time and efforts that are spent on enhancing VLS will reflect its value afterward.

### **Methodology**

#### *Research design, participants, and locale of the study*

This is a mixed study (experimental followed by a survey) that was held at the Higher Language Institute (HLI), Damascus University. In this research, two main classes of intermediate learners were under investigation. The rationale for choosing this level, in particular, is because this research aims at examining the problem of ineffective use of vocabulary learning strategies. Therefore, the intermediate level was chosen since learners who belong to this level have acquired certain communicative abilities that could not be found in lower levels, and they need to learn many words in a short period. O'Malley et al. (1985) confirm that using strategies may be related to the level of knowledge because beginners cannot successfully utilize the strategies that require higher levels of foreign language knowledge. Therefore, it can be deduced that proficient learners of the target language (English) can employ strategies to use more successfully. The coursebook series being taught at the (HLI) is Face 2 face, Cambridge University Press Publication. An important point is that HLI learners are not taught vocabulary learning strategies directly since the course book uses indirect teaching strategies. Each course at The Higher Language Institute consists of 25 sessions, each lasts for two hours (50 hours in total), and two exams; one takes place in the middle of the course (mid-term exam) and consists of four sections: listening, reading, writing, grammar, and structure. The other one is the final exam, which includes the same sections of the mid-term exam, in addition to a speaking test that is held the day after the final exam. Therefore, all four skills are tested explicitly, and vocabulary is usually tested in the grammar section. All the participants signed consent forms to use their data in this research.

The sample of this research consisted of two groups: The first group of participants contained EFL intermediate learners taking courses at the HLI: 15 intermediate learners in



the experimental group who were trained explicitly to use memory and cognitive strategies. In addition, 21 intermediate learners in the control group were trained implicitly to use these learning strategies. 40% of the sample in the experimental and control groups are males, while 60% of the samples were females. The second group of participants was 30 EFL experienced teachers. 24% of the samples in the teachers' group were males, while 76% of the samples were females.

### ***Questionnaires' and test validity and reliability***

To confirm the validity of the used questionnaires, four referees were requested to check their validity as designed and organized by the researcher depending on Oxford's Taxonomy in classifying memory and cognitive strategies. The rationale behind checking the validity is to confirm that all the elements in the questionnaire are accurate and suit the topic of the research. Three out of the four referees agreed on the suggested elements. One of the referees suggested replacing the word "approach" with the word "method" because it will minimize the scope of the question, and it was changed upon approval of the supervisor of this research. Therefore, the validity of the used questionnaires was confirmed by the three referees' rating.

To confirm the validity of the vocabulary test, three teachers at the Higher Language Institute were asked to proofread the tests and give the researcher any other comments. The first question was modified to suit the purpose of the research. Then, the pre-tests were passed on to 15 intermediate learners. Next, a few items were modified to exclude vocabulary which was answered correctly by the majority of the learners.

Cronbach's Alpha test was used to check the reliability of the two questionnaires and the results of the teachers' questionnaire are as the following: the first section is 92; the second section of the test is 77. The results of the learners' questionnaire are as follows: the first section is 84, and the second section is 78. This means that the stability condition is fulfilled and the two questionnaires are reliable.

### ***Data collection and analysis***

Two tools were used in this study to gather data: a vocabulary test and two questionnaires (one for the learners and the other is for the teachers). The content of the vocabulary test and the two questionnaires all aim at answering the research questions concerning the used teaching techniques by the vocabulary learning strategies used by the learners.

***Teachers' questionnaire***, the questionnaire is divided into two main parts. Section one is allocated to collect general information about the age and professional background of teachers. The open-ended questions were intended to investigate in general the used methods in teaching vocabulary learning strategies. The second section consists of 30 items to explore the most and least used memory and cognitive strategies which are proved to be easily analyzed according to Edwards and William (1998). The choices presented in the

questionnaire were: I always use it - I often use it - I sometimes use it - I seldom use it - I never use it. These choices are included to investigate the different levels of using these strategies. Language learning strategies mostly inspired the items of the questionnaire: *What every Teacher Should Know* by Oxford (1990). Section II of the questionnaire is divided into two parts: the first one is about memory strategies and the second one is about cognitive strategies. Memory strategies are covered in items 1, 2, 3, 4, 5, and 6, which are about creating mental linkage, and then items 7, 8, 9, 10, 11, and 12, which are about applying images and sounds. Item 13 is for reviewing well, while items 14 and 15 are for employing action. Items 16 and 17 are for practicing. The second part is talking about cognitive strategies: items 18, 19, and 20 are about receiving and sending messages. Items 21, 22, 23, 24, 25, 26, and 27 represent the section on analyzing and reasoning strategies. Items 28, 29, and 30 focused on creating the structure for the input and output.

**Learners' questionnaire**, the second questionnaire used in this research was directed to Intermediate EFL learners at the Higher Language Institute (HLI). This questionnaire was written in English then translated into Arabic. The questionnaire was divided into two main sections. The first section concentrated on general information about the learners. Section II consisted of 28 items representing the employed memory and cognitive strategies. The choices presented in the questionnaire were: I always use it - I often use it - I sometimes use it - I seldom use it - I never use it. These alternatives are included in an attempt to investigate the different levels of using these strategies. Language Learning Strategies mostly inspired the items of the questionnaire: *What every Teacher Should Know* by Oxford (1990). Section II is categorized into two main parts: the first one is about memory strategies and the second one is about cognitive strategies. Memory strategies are covered in items 1, 2, 3, 4, 5, 6, and 7, which are about creating mental linkage, and items 8, 9, 10, 11, 12, and 13, which are about applying images and sounds. Item 14 is for reviewing well, while item 15 is for employing action. The second part is talking about cognitive strategies: items 16 and 17 are about practicing learning new words, while items 18, 19, and 20 are about receiving and sending messages. Items 21, 22, 23, 24, and 25 represent the section on analyzing and reasoning strategies. Items 26, 27, 28 focused on creating the structure for the input and output.

**Vocabulary test**, a vocabulary test was implemented by the researcher at the end of the course to both the experimental and control classes, to evaluate the new vocabulary knowledge of learners and to investigate the extent to which these words were learned. This test was piloted, and three questions were changed to meet the research need. The 33 vocabulary questions were based on the course book material. They were designed by the researcher to suit the research purpose. The vocabulary test was given on the final day of the course to both the experimental and control classes to investigate also the effect of teaching vocabulary learning strategies explicitly to the experimental group and implicitly to the control group. 33 vocabulary questions were distributed to investigate the effect of using vocabulary strategies on enhancing learners' vocabulary learning.

To analyze the data, the SPSS program was used. The data were analyzed by adapting descriptive statistics to investigate the effects of using memory and cognitive strategies on

vocabulary learning. In the teachers and learners' questionnaires, 5 selections were given for every statement: I always use it - I often use it - I sometimes use it - I seldom use it - I never use it. Teacher and learner's answers were calculated and transformed into percentages. The result of each research question was presented and displayed directly after the question. Moreover, the results were classified and displayed in suitable tables and figures.

***Ethical considerations***

To conduct this study, the higher education board at Damascus University has granted the researcher a written permission statement to carry out this research at the Higher Language Institute. In addition, Informed consent was obtained from all the participants.

**Findings**

To examine the effect of memory and cognitive strategies on learning vocabulary a t-test was conducted. The results of the t-test are presented in table 2.

**Tables 2.** *T-test results comparing experimental and control groups' vocabulary test's results*

T-test	N	M	SD	Std. Error Mean
Control	21	26.57	4.51	.98
Experimental	15	29.93	2.86	.73

**Table 3.** *Vocabulary test statistical information for control and experimental groups*

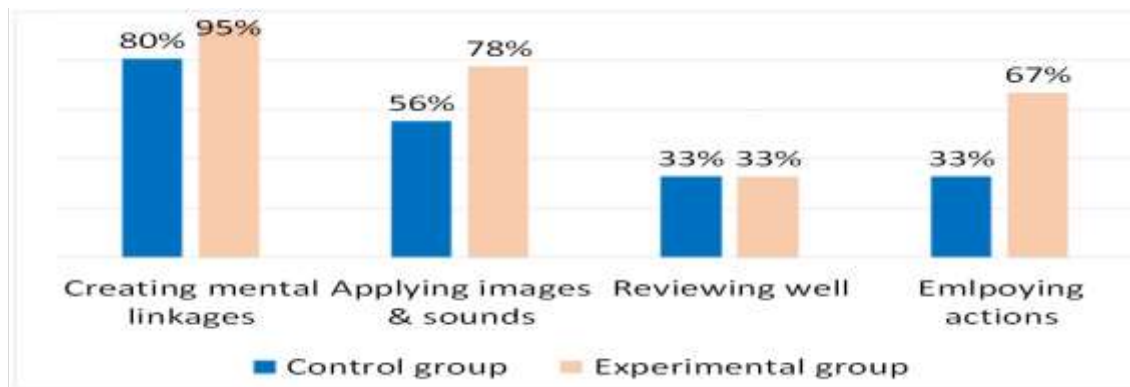
T-test	Levene's Test for Equality of Variances		t-test for Equality of Means	
	F	P	T	Df
Equal variances assumed			-2.538	34
Equal variances not assumed	5.068	.031	-2.730	33.640

As shown, tables 2 and 3 show that the mean score of the control group in the vocabulary test was 26.57 with a standard deviation of 4.51, whereas the experimental group mean score was 29.93 with a standard deviation of 2.86. This indicates that the difference in the mean scores between the control group and the experimental group was statistically significant ( $p= 0.031$  at 0.05 level of significance). According to these statistics, it can be inferred that the experimental group outperformed the control one in the vocabulary test. This result shows that explicit training to use memory and cognitive vocabulary learning strategies is important to learn vocabulary. This goes in line with a study conducted by Rasekh and Ranjbary (2003). Their research included two groups of EFL language learners at the intermediate proficiency level. The learners were distributed into a control and an experimental group. These two groups were trained on vocabulary learning strategies for 10 weeks. However, the experimental group received metacognitive strategy training during the

course of the semester. The research results manifest that explicit metacognitive strategy training has a significant positive effect on vocabulary learning.

A statistical comparison between the control and the experimental groups regarding the implementation of memory vocabulary learning shows that memory vocabulary learning strategies were more used in the experimental group, as they were taught explicitly except for the strategy of reviewing well which was used equally in both groups. Figure 3 demonstrates a comparison between the control and experimental groups while using memory strategies.

**Figure 3.** Memory strategies used by the experimental and control groups according to the way they are trained



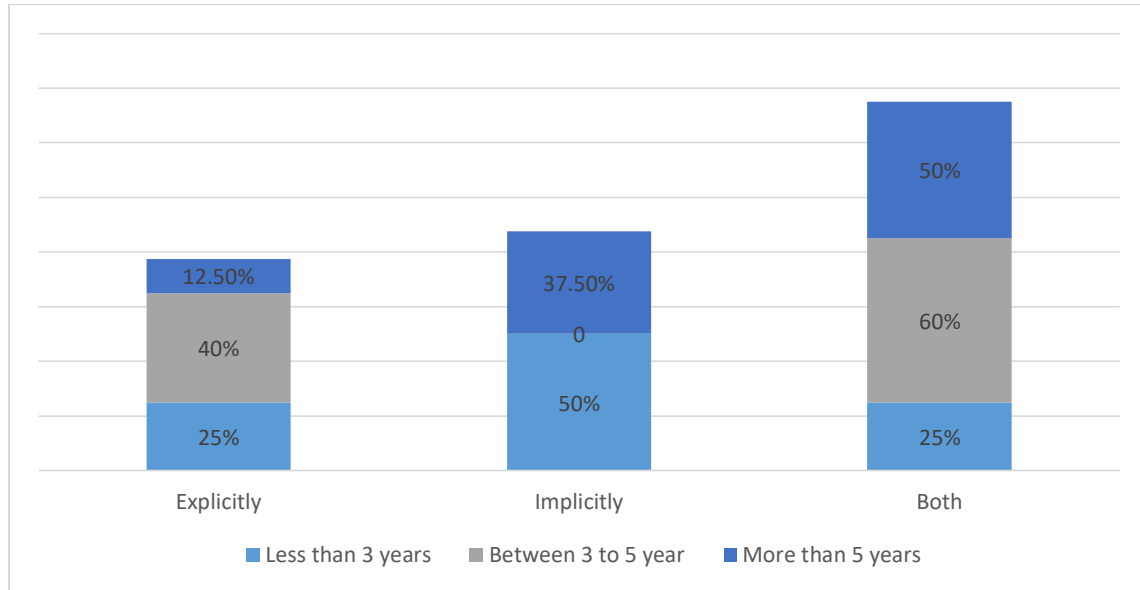
A statistical comparison between the control and the experimental groups regarding the implementation of cognitive vocabulary learning shows that cognitive vocabulary learning strategies were more used in the experimental group as they were taught explicitly, except for the strategy of *Creating Structure* which was more used in the control group. Figure 4 shows the comparison between the control and experimental groups while using cognitive strategies.

**Figure 4.** Cognitive strategies used by the experimental and control groups according to the way they are trained



The statistical analysis of the used approaches by EFL teachers at HLI for teaching vocabulary learning strategies (explicitly, implicitly or both) will be shown in figure 5.

**Figure 5.** *Adopted approaches by teachers in teaching learning strategies: explicitly, implicitly or both*



24% of the teachers at the HLI teach vocabulary learning strategies explicitly. Specifically, 25% of teachers who have less than 3 years of experience, 40% of teachers who have 3-5 years of experience, and 12.5% of teachers who have more than 5 years of experience teach vocabulary learning strategies explicitly. When asked why? Teachers replies varied; for example: Teacher 1 said: "Explicit teaching of vocabulary enables us to familiarize students with the strategies to acquire new words easily."

36% of the teachers at the HLI teach vocabulary learning strategies implicitly. Specifically, 50% of teachers who have less than 3 years of experience, and 37.5% of teachers who have more than 5 years of experience teach vocabulary learning strategies implicitly. Teacher 2 says: "I teach vocabulary learning strategies implicitly because it is easier for students, and the time factor is also an important cause." 40% of the teachers at the HLI teach vocabulary learning strategies both explicitly and implicitly. Specifically, 25% of teachers who have less than 3 years of experience, 60% of teachers who have 3-5 years of experience, and 50% of teachers who have more than 5 years of experience teach vocabulary learning strategies both explicitly and implicitly. Teacher 3 says: "I mix between the two methods. It depends on the type and level of the students."

Figure 5 shows the percentages of the teachers who train their learners explicitly, implicitly or both. According to the statistical data, only 24% of the participants train learners to use memory and cognitive strategies explicitly, whereas 40% of them use both implicit and explicit approaches and the remaining 36% train students implicitly. This result

can be ascribed to the fact that teachers at the HLI are concerned with teaching the other skills at the expense of teaching learning strategies in general. Also, the taught course book (Face 2 Face) does not contain a specific section on how to teach these strategies. The development and adaptation of instructional materials that provide learning strategy instruction either as a supplement to the core second/foreign language textbooks or as an integrated system included in core textbooks should be considered. Many researchers recommend that instruction in learning strategies be direct rather than embedded (Palincsar & Brown, 1984; Wenden, 1987; Weinstein & Mayer, 1986) or that direct instruction is added to a curriculum or instructional materials designed with embedded strategies (Derry & Murphy, 1986).

### **Discussion**

The first question in this research aims to investigate the effect of memory and cognitive strategies on learning vocabulary. An independent-samples t-test was used to compare the results of learners who were trained to use memory and cognitive strategies explicitly with learners who were trained to use these strategies implicitly. The results show the superiority of the group that was trained explicitly. The result of the first question is in line with other studies that investigate the impact of language learning strategies (LLS) on vocabulary learning in the field of teaching English as a second or foreign language. For example, Tassana-ngam's study (2004) demonstrated a good impact on vocabulary learning strategies, namely: 'Dictionary work', 'Keyword method', 'Semantic context', 'Grouping word families', and 'Semantic mapping', on vocabulary learning. Ghorbani (2011) also researched the impact of memory strategies. The findings of this study revealed a positive correlation between memory strategies and long-term retention. Tavakoli and Gerami's study (2011) investigated the effect of keyword methods on EFL Learners' vocabulary learning and retention. This research shows great significant results for the keyword strategy training on vocabulary learning. This study is in line with another study that was conducted by Bolukbas (2009) to examine the effect of language learning strategies on learning vocabulary of Turkish as a foreign language. The results showed positive results of strategy training. However, this study manifested the psychological side of language learning training. The participants in this study were stressed because they were not exposed to the strategy's training before. Another study, which was done by Rahimay and Shams (2012), showed that learners who did better in the vocabulary test use more strategies than low-score learners. The high-score group used VLSs the most. These strategies were cognitive, memory, and determination strategies. The metacognitive and social strategies were the least often used ones. Another study specialized in the effect of semantic mapping was conducted by Abdelrahman in 2013. The focus was to explore the effect of this strategy on the EFL students' acquisition of the lexical items. Only semantic mapping, which is considered one of the most effective memory strategies (direct strategies), was used. The results revealed significant differences between the experimental and control groups in favor of the experimental group. Likewise, the main concern of Ostovar-Namaghi's MA thesis (2013)

was to investigate the effect of strategy training on the vocabulary development of EFL Learners in public high schools of Iran. Similar to the conclusion drawn by Rahimy and Shams (2012), the results were better for the group that got vocabulary strategy training over the group that learned vocabulary through prescribed by textbook activities

Interestingly, the current study's findings reveal the connection between the mode of teaching and the students' use of LLSs. The data from the second and third questions show that students in the explicitly trained group used memory and cognitive strategies more than the implicitly trained one. This result can be attributed to the fact that learners from the cognitive style continuum are class-oriented (Witkin, 1976). It means that learners tend to develop skills that they are trained to use. As O'Malley et.al (1985) put it, "Students without metacognitive approaches are essentially learners without direction or opportunity to review their progress, accomplishment, and future directions." (p.561). For that reason, O'Mally & Chamot (1990) support the inclusion of learning strategies in the classroom discourse as it fosters the learning process.

This study also aims to highlight the role of the teachers in fostering LLS. Hall (1997) highlights the teacher's role as a bedrock in fostering strategy development. According to Hismanoglu (2000), the teachers' role can exceed the mission of training the students on using LLS but it also includes analyzing the course-books to determine whether LLS training is included or not; in case of being neglected to look for extra material to foster LLS. Hall (1997) confirms that explicit strategy training is fruitful while approaching language as problem-solving, he states:

The role of questioning and reflective tasks is important as through asking oneself 'How did I learn that?' that awareness of one's' plans' is developed. The reflection can be part of skills development in such often-neglected areas as note-taking. If one examines this one skill as an example, one can find an important area for strategy training. Given that notes are a means by which learners focus on what they are trying to learn it is useful to point out to auditory learners how highlighted information is weighted by stress and tone. Visual learners can be taught the relationship between the heard information and the user of color to learn salient pieces of information. (p.7)

Hall (1997) also stresses the importance of the evaluation of how teachers and learners process information. He states that teachers' self-evaluation can be a model for learners.

### **Conclusion and Implications**

This study aims at exploring the effect of teaching memory and cognitive strategies explicitly and implicitly on vocabulary learning for intermediate learners at the (HLI). It attempts to find out if the results differ depending on the teaching method. This research also seeks to identify the preferred method used by teachers while using memory and cognitive strategies. The findings of this research are based on the data obtained from EFL intermediate learners, in addition to EFL teachers at the Higher Language Institute (HLI) while teaching one course (Intermediate level 1). The results of this research are linked to the

findings of previous similar studies in the field of vocabulary learning strategies, and it confirms the positive correlation between explicit LLS training and vocabulary learning.

A number of limitations to the research must be taken into consideration. The research has investigated the effect of teaching memory and cognitive strategies on learning vocabulary for EFL Intermediate learners from different points of view, which aimed at distinguishing it from previous research in the same field. However, the research has only concentrated on memory and cognitive strategies due to the lack of time. The study was conducted on two classes at the intermediate level. Investigating other levels may add more insights into using these strategies. Only the short-term effects of both memory and cognitive strategies were investigated. Other studies can investigate the long-term effects of those strategies such as compensation and metacognitive strategies. The study was conducted at the HLI. It would add more value to the research if it were applied at the university level since it concentrates on adult learners. To conclude, a number of limitations, as the aforementioned points demonstrate, are due to time limitations. Some recommendations for further research in the field are suggested in the following section.

Based on the findings of this research and its limitations, the following can be taken into account to build upon the results of this research and the previous studies: the effect of memory and cognitive strategies can be investigated from the elementary level to the advanced one to investigate the effect of using these strategies from different angles and detect any other varieties at different levels. Researching memory and cognitive strategies can include a greater number of both learners and teachers to gather various viewpoints. To gather more rich data, interviewing both learners and teachers can add a wider scope on the effect of using memory and cognitive strategies implicitly or explicitly. More weight can be given to the learning strategies proposed section by assigning it certain marks in the Language test. Further research on memory and cognitive strategies might be studied in different contexts. Future research can investigate memory and cognitive strategies in different contexts and compare the results of teaching those strategies in these contexts.

#### **Disclosure statement**

There is no conflict of interest reported by the authors.

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