THE ROLE OF INSTRUCTIONAL STRATEGIES IN VOCABULARY TEACHING: A COMPARATIVE STUDY OF THREE STRATEGIES

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ABSTRACT
Vocabulary knowledge is very complex and learning vocabulary often requires the application of various vocabulary learning strategies (VLS). These strategies recommended by educationists and researchers are based on some theoretical principles and are considered as effective in varying degrees in different contexts. It is important to find out the comparative effectiveness of these strategies in case of the tertiary level students of Bangladesh who are not found to be very good at using VLSs. This study, thus, investigates the comparative effectiveness of three different strategies by randomly assigning 90 tertiary level students into three groups. These three groups received different treatments and were given tests to find out both the short term and long term retention rates of 16 vocabulary items. The findings show that both the short and long term retention rates were the highest when learners were taught vocabulary using the visual aids.

Keywords: VLS, visual strategies, rote learning, guessing meaning from context, long-term retention, short-term retention

INTRODUCTION
Vocabulary is considered as one of the most important components of language and normally through words the main massage in any communication is conveyed. However, teaching vocabulary throughout the history of English language teaching has received comparatively less attention in the curriculum design or classroom practice, so much so that Carter and McCarthy (1988) described vocabulary as “the neglected Cinderella” of this field. Recently, the field of vocabulary teaching has received considerable significance and many (e.g. Nation, 2001, 2005; Marion, 2008; Susanto, 2016) deem vocabulary learning necessary for the acquisition of the second language. In classroom context, vocabulary teaching includes giving instructions about the form of the lexical item, its pronunciation and the meaning it conveys. This particular task can be carried out by using various strategies, which are commonly called the vocabulary learning strategies (VLS).

These strategies recommended by educationists and researchers are based on some theoretical principles and are considered as effective in varying degrees in different contexts. It is imperative for a language instructor to understand which strategies work best for a particular group of learners in a unique situation. It is also imperative for language instructors to become familiar with the various vocabulary learning strategies learners can use to cope with new words, to motivate them to use the strategies they find effective and through their teaching introduce some of these (Hedge, 2000). Vocabulary learning, particularly in case of Bangladesh, usually involves rote learning; that is, merely memorizing lists of words without associating them with any context. While this traditional way of acquiring word meaning is sometimes workable, it normally results in poor retention rate. It is important to find out the comparative effectiveness of these strategies in case of the tertiary level students of Bangladesh.
who are not found to be very good at using VLSs. These students, who are not usually proficient in English because of their Bengali medium background, are required to carry on their higher studies in English. Particularly, reading a text becomes quite challenging for them as they have to encounter unknown lexical items quite often. It is important to investigate what vocabulary learning strategies work for these tertiary level learners and to equip them with effective strategies for both classroom and outside the class vocabulary learning. This paper, therefore, investigates the comparative effectiveness of three of the most widely known strategies: rote learning, use of visual images, and guessing meaning from context and thereby considers the classroom implications of using them.

**Vocabulary learning strategies**

Vocabulary learning strategies (VLS) are usually considered an integral part of language learning strategies which Chamot and Kuppers (1989) define as the techniques that learners employ to understand and retain skills and information. Rubin (1987: 23-27), in the same vein, defines learning strategies as “the process of obtaining, storing, retrieving, and using new information”. Language learning strategies are sub-categories of general learning strategies and language learning strategies (Abadi, Baradaran, 2013). They are defined by Gu (1994, as cited in Harvey and Goudvis, 2000) as particular strategies used by second language learners when they want to acquire new words. Ellis (1994) suggested that VLSs set off a number of actions including trying to find new words deliberately, organizing lexical items carefully, guessing meaning from context and retaining word knowledge in the long term memory. Nation (2013) mentioned the following characteristics of the VLSs:

- There are a number of strategies available from which learners can select;
- These strategies are learnt in several stages;
- Training and adequate knowledge about these strategies are required in order to use them successfully;
- These strategies need to improve learners’ ability to learn new vocabulary.

In other words, VLSs are supposed to help learners acquire information on the grammatical meanings of new words, their pronunciation, spelling and also usage in varied contexts.

**Types of VLSs**

VLSs are classified based on different criteria. Schmitt (2000), for example, makes a distinction based on learners’ receptive and productive knowledge. Schmitt (1997) earlier made the following division according to the strategy inventory of language learning (SILL) proposed by Oxford (1990):

- Discovery strategies: these strategies are related to the ones language learners apply to find out the meaning of unknown vocabulary.
- Consolidation strategies: this refers to the process in which meanings of new words are consolidated once they are encountered.

Oxford’s (1990) main categories of memory strategies that Schmitt (1997) used include-

- Rote learning (RL)
The Role of Instructional Strategies in Vocabulary Teaching: A Comparative Study of Three Strategies

- Creating mental linkage (CML)
- Applications of visuals and sounds
- Structured reviewing.

The following table which is based on Sinhaneti and Kyaw’s (2012) diagram shows the strategies and their features.

Table 1: Classification of memory strategies

<table>
<thead>
<tr>
<th>Memory strategies</th>
<th>Rote memorization</th>
<th>Creating mental connections</th>
<th>Using visuals and sounds</th>
<th>Reviewing appropriately</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Reading aloud</td>
<td>Grouping words according to their grammatical categories</td>
<td>Using images</td>
<td>Doing structured reviewing</td>
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<td></td>
<td>Writing down vocabulary items</td>
<td>Creating a link between lexical items and the context in which they are presented</td>
<td>Using semantic mapping</td>
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<td></td>
<td>Learning new words from a list</td>
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<td>Using sounds</td>
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<td>Finding out translated equivalents</td>
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Three of these strategies are discussed in detail in the following segments.

**Rote memorization**

Li (2005) defined rote learning (RL) as repetition, memorization and practicing. In this strategy generally words are repeatedly uttered aloud, sometimes with little or no comprehension of the meaning or the context. Although memorization of vocabulary lists is quite popular with some students, this traditional practice is both recommended and criticized by different practitioners. There are several studies (e.g., Barcroft, 2009; Hummel, 2010; as cited in Sinhaneti and Kyaw, 2012; Li 2008) that indicate learners not only hold positive views on rote learning strategy but also still use them. Sinhaneti and Kyaw (2012) in their study on 100 Burmese EFL students concluded that this strategy was used more than other memory strategies. These learners also gave opinions that rote learning works effectively both in the preliminary and further stages of vocabulary acquisition.

However, RL is vehemently criticized by many linguists including Schouten-van Parreren (1989) whose arguments have four strands. Firstly, learners are likely to forget even after giving considerable efforts in memorizing words in a list -as they are presented as isolated elements without any ‘cognitive hold’ in their memory. Secondly, if the word lists are arranged alphabetically or thematically, learners usually suffer from interference. This can have potentially harmful effects on learners as not only these hamper their learning of new words but also make them learn wrong meanings which later can be difficult to get rid of. Thirdly, Parreren (1989) cites Beheydt (1987) who argued that isolated words are devoid of linguistic reality since meaning of a new word is sometimes partly defined by its context. Finally, isolated
words also do not present a psychological reality as they are not capable of carrying a message. They cannot evoke an emotional involvement in learner which is considered as an important factor for long term retention (Lontjew, 1979, as cited in Hedge, 2000).

There are several factors, as mentioned by Sinhaneti and Kyaw (2012) behind these differing views on rote learning such as educational background, cultural norms, language learning environment, examination system or just the lack of proper knowledge of different vocabulary learning strategies and how they are used effectively. Learners in many Asian countries including Bangladesh still utilize rote learning, especially in case of vocabulary learning as part of their traditional teaching system. Although in Bangladesh communication has been emphasized now in case of English language learning, students are found to hold on to the traditional practices.

Visual strategies
Among the multitude of vocabulary learning strategies, visual strategy is quite popular for their effectiveness and simplicity in implementation. One visual strategy is the addition of images or diagrams while another is using strategies such as mapping. In the former simply an image or diagram is used alongside a vocabulary item to be learnt. The use of such images and especially diagram, according to some linguists (e.g. Kim and Gilman, 2008) can be effective in explaining the meaning of a new lexical item. The latter may involve the visual representation of the relationship between known and unknown words, synonyms and antonyms. This strategy is also known as semantic mapping.

Visual strategy holds importance as a necessary step in the meaning retention process. Brown and Payne (1994, as cited in Hatch and Brown, 1995) talked about five necessary steps that are involved in learning new vocabulary and the second one emphasizes on the visual image:

1. the presence of sources for encountering new lexical forms;
2. obtaining a clear picture of the forms of the new vocabulary; this image may be auditory or visual or both;
3. learning the meaning of the unknown vocabulary;
4. being able to make a strong link between the form and the meaning of the new vocabulary; and
5. using the new vocabulary item.

Different researchers have pointed out different ways in which the visual strategies can be beneficial. One reason for using such strategies is the increase of motivation of the students as this strategy allows more interaction among the learners and the teacher (Danan, 1992). Another reason pointed out by some (e.g. Mayer, 1993) is that the use of visual aids helps students concentrate better.

Different studies also indicate that teaching vocabulary with visual images is quite effective. Carpenter and Olson (2012), for example, in their study found that students remembered the meaning of words better when they learnt them with pictures rather than using them as independent words. Mayer and Sims (1994) also found that students’ learning was better when teachers used visual and verbal aids simultaneously. According to Richards, Platt and Webber (1985), learners could retain the meaning of words taught by using visual strategies both for a short and long time. Stokes (2002) in her study investigated the
effectiveness of using images to teach lexical items. She came to the conclusion that images helped learners to learn better as they could associate the unknown words with the images. Rokni and Karimi (2013) in their study with two groups of students also came to the similar conclusion. They divided 46 female intermediate students into a control group and an experimental group. The control group was asked to memorize 56 lexical items traditionally while the same number of items was taught to the learners of the experimental group by using visual elements such as images, real things and flash cards. The findings showed that learning of lexical items in the experimental group increased significantly. In addition, the members of the group also perceived the visual strategy to be an effective way of learning vocabulary.

**Guessing meaning from context**

Guessing meaning from context is one of the cognitive strategies that involve “direct mental operations” to work out the meaning of the new lexical items and retaining them in the “mental lexicon” after categorizing them (Hedge, 2000). Harvey and Goudvis (2000) claim cognitive strategies include moves that include:

- connecting existing knowledge and new information found in the text;
- raising questions during reading;
- inferring the writer’s ideas which s/he may not state directly;
- summarizing information; and
- monitoring understanding particularly when ideas are not clear.

There are many ways in which cognitive strategies can be used such as making associations, learning words in clusters, exploring range of meanings, and using key words in which a keyword is selected from the learners’ L1 which is pronounced in the same way as the unknown word in the target language. Lexical inferring or guessing lexical meaning form context is another important strategy that learners use in their attempt to find the meaning when they encounter a word for the first time. This context, in case of vocabulary learning, is defined in a number of ways. Context can be the sentence in which the new word is found or the way in which the vocabulary is presented. Others (e.g. Reed, 2000) define context in terms of the linguistic and the nonlinguistic information that learners get that is linked to the meaning of it when the new word is presented in a particular setting. When the new lexical items are presented in the context, learners can use the linguistic or nonlinguistic cues to decode or predict meaning without having to use any dictionaries (Rogers, 1996).

Guessing meaning form context is generally considered a very useful strategy especially in case of incidental vocabulary learning. Prince (1996) pointed out three major advantages of the guessing lexical meaning from context strategy. First of all, when learners have to guess meaning from context, it makes it imperative for them to develop strategies such as making inferences or anticipations which in turn slowly help them to gain self-reliance that is deemed as necessary for the development of proficiency. Secondly, when students come across new lexical items in context, it is in fact an indication that these are the words really used in a discourse for carrying out communication. Finally, when lexical items are used in context, they give an indication of how the words are used.

Inferring the meaning of a lexical item from its context can aid the retention of meaning, especially when learners decide on the meaning after more careful analysis and the length of retention will depend on the amount of emotional and mental energy invested in the process of
working out the meaning (Haastrep, 1989; as cited in Hedge 2000). A number of studies have indicated its value such as the one by Cody and Nation (1988). Fan (2003), in his study on the effectiveness of 58 vocabulary learning strategies, found guessing meaning from context as one of the most widely used and useful strategies.

However, there are also other studies that indicate quite the contrary outcomes. Back, McKeown and McCaslin (1983) pointed out that certain contexts might be deceptive, compelling learners to guess wrong meanings. Mokhtar and Rawian (2012) in their study found out that guessing strategy was preferred by students but it did not help to improve the learners’ English vocabulary knowledge. Folse (2004) in his empirical study came to the conclusion that guessing meaning form context hardly contributed to the learners’ vocabulary learning as it required learners to have the knowledge of a large vocabulary size to help them guess accurately, although this strategy did not interrupt the flow of reading.

RESEARCH QUESTIONS
The objective of this study is to investigate whether the three strategies discussed above are effective for the ESL language learners of the university where the authors teach. In Bangladesh, learners are usually found to be relying heavily on rote memorization. In schools, the Bengali medium students study two subjects in English. In the first subject a book named “English for Today” is used. The book is designed based on the principles of communicative language teaching approach with the main focus in communication practice. While in the second subject, they study grammar books written by local authors. In both the secondary and higher secondary levels, little focus is given to vocabulary instruction. The books do not contain long texts with a range of vocabulary items, nor do they include various strategies for learning vocabulary.

In the tertiary level, these students have to study in the English medium as in most universities at present English is the medium of instruction. These students with poor vocabulary knowledge have to struggle with the numerous new words they encounter everyday while they pursue their higher studies. Their lack of skills in vocabulary learning makes it imperative for them to get acquainted with the vocabulary learning strategies to find out the meaning of the new vocabulary items that they often encounter while reading texts and also to retain their meanings for a long time.

Thus the research questions of this study are:

1. How effective are the visual, rote learning and guessing meaning from context strategies for the short and long term retention of the learnt vocabulary items?
2. Which among these strategies is more effective in case of the tertiary level students of Bangladesh?

METHODOLOGY

Subjects
The subjects of this study were 90 Bangladeshi first year first semester tertiary level students of the university where the authors currently teach. These students who are majoring in different disciplines including civil engineering, pharmacy, computer science and business administration, were selected by Simple Random Sampling (SRS) method. All these students had passed their higher secondary school certificate examination from different boards of
Bangladesh before they were enrolled in the university. The students were both males and females and their age ranged from 17 to 19 years. Although the students were majoring in different subjects, they attended the same placement test for an English Language Proficiency Course (ELPC) and attained the same range of marks. This four-week course is offered to the students as a remedial course and students who achieve less than 50% marks in the placement test need to take a remedial course before they begin their first semester.

These students were further divided into three groups of each consisting of 30 students. These three groups were given three different kinds of treatments explained in the next segment of this paper. One of the researchers carried out the study during the ELPC class hours.

**The study instrument**

A passage named “A Ship in a Strom” was selected for the study and initially 20 words were selected to prepare a list for the treatment. Before the treatment began, the reliability of the test was checked by giving all the three groups of students the list to find out whether they already knew the words or not. Out of the 20 words, 4 were deleted from the list after the students admitted that they knew the words and the final list contained 16 words.

**First experiment for short-term retention**

For finding out the comparative effectiveness of the three different vocabulary learning strategies, Group A was given a reading comprehension test entitled “A Ship in a Strom”. They were instructed to read the passage and guess the meaning of the highlighted lexical items. Their answers were discussed later in the classroom and the teacher discussed the meaning of the words they found difficult to guess. An hour later they were instructed to answer 16 multiple choice questions on those words and to tick the correct answers. Their answers were checked and the number of correct answers was calculated. Based on the calculation, the students could remember 46% of the words they guessed from the context.

In Group B, the subjects were presented through multimedia projector the words and their meanings pairing them with images that relate with the meanings of those words (Appendix A). One hour after the presentation their retention of the meanings was tested by giving the subjects 16 multiple choice questions on those words and asking them to tick the correct answers. Their answers were checked and the number of correct answers was calculated. The short term retention rate was found to be 64% in this strategy.

The students of Group C were given the words meaning as a list (Appendix B) and asked to memorize the words without any kind of discussion. Sixteen multiple choice questions on those words were also given to them one hour later and they were asked to tick the correct answers. Their answers were checked and the number of correct answers was calculated. In this experiment, students could remember 51% of the meanings of the words they memorized. Figure 1 shows the results of the short-term retention experiment.
Second experiment for long-term retention

In the second phase of the experiment that took place after one week, the three groups were asked separately to answer the 16 MCQs on the words they had previously learned by using those strategies. In this long term retention experiment, it was revealed that the first group remembered 25% of the vocabulary, second group remembered 53% and the third group remembered 41% of the vocabulary respectively. The data is presented in Figure 2.

It is clearly seen that students’ retention is higher in visual representation of words. In case of short-term retention experiment Group B’s retention rate was 18% higher than that of Group A and 13% higher than that of Group C. Similarly, in the long-term retention experiment, the retention rate of Group B was 28% higher than Group A and 12% higher than Group C.
**DISCUSSION**

This study provides further strength to the claim that different strategies differ in their effectiveness in different contexts. In line with the outcomes of the previous literature (Richards et al 1985), the study puts further claims to the fact that learners are able to retain the meaning of new vocabulary items learnt with the help of visual aids both after short and long time intervals. When learners associated meaning with a visual image, the memory traces became more permanent. When learners engaged in rote memorization, on the other hand, they performed moderately well. Several reasons may have contributed to this result. First of all, these students are used to an education system (i.e. the Bangladeshi education system) that makes learners rely heavily on memorization. Students are quite adaptive to this “traditional” way of learning vocabulary. As mentioned by Barcroft (2009), Hummel (2010), and Li (2005) in their studies, learners might still hold very positive views on the rote learning strategy. Their positive attitude towards this strategy might have helped them to use it effectively.

In case of guessing meaning form contexts, however, it was found to be of little effect both in the case of short term and long term retention of meaning. There are several possible reasons why guessing meaning of unknown words form context had such a poor outcome. It is an undeniable fact that this is one of the most widely used strategies for the L1 learners for learning vocabulary incidentally. Native speakers not only possess quite impressive vocabulary knowledge but also get repeated encounters to those words as they are always exposed to the language input in natural settings. Second language learners, in contrast, are denied these repeated exposures to new lexical items over time and in a wide variety of contexts (Martin, 1984). Thus, this study, in line with Folse’s (2004) claim, reveals that merely depending on context clues may not turn to be an effective vocabulary learning strategy particularly in case of learners with low proficiency level.

**IMPLICATIONS FOR THE CLASSROOM**

Although the study was applied to a limited number of students all belonging to the same university, it nonetheless has strong implications for the language classrooms including the following:

- In cases when learners depend on memorizing words from a list, teachers need to introduce and use vocabulary learning strategies to motivate learners to work with word meanings and to retain the knowledge for a long time.
- Teachers can develop materials by using visual images with the help of the internet. Although it is difficult to find images of abstract concept, there are thousands of websites that contain a wide variety of usable images.
- Teachers also need to train the learners the skills required to guess meanings from context as this strategy is important to develop the fluency of reading.

**CONCLUSION**

Vocabulary is a key factor when learning a second or a foreign language and it is important for classroom instructors to understand which vocabulary strategies will work best for the particular group of learners they are teaching. Language instructors undoubtedly need various VLSs as arsenals to enhance the reading, writing, listening and speaking skills of the learners and also to equip them with the means to learn independently out of the classroom. This comparative study on the effectiveness of the three vocabulary learning strategies can be
promising for second language instructors, especially in the context of Bangladesh to decide on which VLS to select when teaching a particular group of learners. Despite its limitations, the study can pave the way for new research in different contexts.

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