

Growing Active Maritime English Phrase Knowledge through Multiple Exposures: A Case of Iranian Port and Maritime ESP Learners

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Abstract

Growing active vocabulary knowledge is one of the most important aspects of learning English Language. However, despite utilizing common vocabulary learning strategies, learners may end up only with a passive level of vocabulary knowledge (recognition or recalling the meaning), and in most cases they may not be able to actively use the target vocabulary items in required situations. Some researchers believe in effectiveness of multiple exposures on deep retention of vocabulary items. However, some raise doubt about it. The aim of this study was to investigate the effect of multiple exposures technique on active vocabulary knowledge growth in the field of maritime English. The participants were 21 ESP learners from the Port and Maritime General Directorate of Sistan and Baluchistan whose work and educational background were related to maritime field. They were instructed 14 vocabulary items in a related subject (maritime incidents), half of them through traditional word list repetition and the rest through multiple exposures. The learners were asked at the end of the course to take notes for a presentation in the same subject matter, using the vocabulary they have already learnt. It was revealed that vocabulary items taught through multiple exposures appeared significantly more frequently in the learners' notes, than those taught through traditional learning method. This implies that exposing vocabulary items in different contexts increase the learners' ability to their use.

Key words: Active Vocabulary, ESP, Exposures

INTRODUCTION

Most researches done in relation to good vocabulary instruction have found consistently that students need multiple exposures to a word to learn it properly (Lawrence, 2009; Nagy, Herman, & Anderson, 1985). Archer (2014) expressed that one of the elements of effective vocabulary instruction is for teachers to ensure that their students have repeated exposures to key vocabulary. Vocabulary and conceptual knowledge are built gradually over time, and multiple exposures offer opportunities to revisit words and information and to relate words and ideas to one another. If students are to build a deep understanding of key vocabulary and its appropriate use, a single

exposure will prove insufficient. Rather, students need to practice with words across lessons and in different contexts. Armbruster (2002) also found that repeated exposures to vocabulary in many contexts improve word learning, as the instruction that promotes active engagement with vocabulary. Maritime English is a sub-category of English for specific purpose (ESP) and or English for Academic purpose (EAP) in which learning technical as well as semi-technical words and phrases is of utmost importance. Laflamme (1997) in his discussion about different strategies about learning vocabulary in general, and Academic vocabulary in particular, came into conclusion that the most effective strategies for teaching academic vocabulary involve multiple exposures to new words in a variety of contexts. This type of instruction leads to deep understanding of words and concepts.

However, despite these supportive results, some other studies raised doubts about the effectiveness of this technique. For instance, Hall (1992) observed that there is a considerably low correlation (.36) between number of exposures to the words and their retention. Zahar et. al (2001; as cited by Joe, 2010) conducted an investigation in order to have a comparison between the quality (richness of context) and quantity of vocabulary encounters in input, which concluded that there is no such a reliable evidence showing that rich, directive contexts led to greater vocabulary enhancement.

The aim of this study is to evaluate the effectiveness of multiple exposures technique in teaching Maritime English words and phrases. The results of this study clarify the truthfulness of different views and findings about the significance of this technique. This in fact reveals to what extent the teachers and learners of ESP/EAP in general and Maritime English in specific, can rely on this technique.

RESEARCH QUESTION

- Does multiple exposures technique results in higher active vocabulary growth in maritime English courses?

LITERATURE REVIEW

Definition of “knowing a word”

Different researchers give different definitions of how to “know a word”. Kersten (2010) defined knowing a word as including knowing its form and meaning. Active vocabulary knowledge and passive vocabulary knowledge are often distinguished as receptive and productive knowledge (Kersten, 2010). Vocabulary can be separated into two main categories of knowledge: the quantity of words one knows or vocabulary breadth and the quality of how well one knows those words or vocabulary depth (Nation, 1990). Word knowledge includes many components: the word’s pronunciation, spelling, morphology, syntax, meaning, as well as its use in terms of its functions, collocations and constraints (Nation, 2001). According to Batty (2012), some researchers claim that the depth of vocabulary knowledge lies in the semantic networks in which learners link a word with other necessary information to truly understand and use them. Learners are encouraged to map out the words learnt and engage in semantic network building,

for example, creating intentional links between the target word and other words the learner knows, including morphological similarity, syntactic similarity and, of particular relevance to the present study, collocation similarity (Henriksen, 1999). Subasi (2014) added that one of the vocabulary learning strategies that learners can adopt is to link new words to their L1, as their L1 serves as a threshold as well as a scaffold for vocabulary learning. From there, learners can gain more L2 words and over time become full L2 users who rely minimally on their L1.

However, some researchers contend that the knowledge of the form–meaning relation is the most important component of word knowledge (Laufer & Girsai, 2008). To define the form—meaning relation in a more detailed way is the ability to retrieve the meaning of a given word form, and the ability to retrieve the word form of a given concept (Laufer & Girsai, 2008). Both recall of meaning and recall of form will be tested in this study by active and passive recall tests. The active and passive recall test, also called receptive and productive test, has also been studied by many other researchers (Mondria & Wiersma, 2004).

"Multiple Exposures" vocabulary technique

Most researches done in relation to good vocabulary instruction have found consistently that students need multiple exposures to a word to learn it properly (Lawrence, 2009; Nagy, Herman, & Anderson, 1985). In fact although some students may come to a basic understanding of a word after one encounters, all students need multiple exposures in different contexts to ensure that they grow rich orthographic, phonological, and semantic knowledge of the word (Perfetti & Hart, 2002). McKeown, Beck, Omanson, and Pople (1985) came up with the conclusion that students who had 12 instructional encounters with target words learned the words more effectively than those who had only four.

To provide the multiple experiences students need, Lawrence, White, and Snow (2010) suggest that teachers should select just five to seven words to focus on each week, planning at the start of each week how to embed the word into writing or debate prompts, homework assignments, quizzes, and lessons. They also added based on the finding of their research that cross-content teaching teams can work together, with teachers in each content area taking responsibility for providing instruction on the target words one day of the week. Armbruster (2002) also found that repeated exposures to vocabulary in many contexts improve word learning, as the instruction that promotes active engagement with vocabulary.

Archer (2014) expressed that one of the elements of effective vocabulary instruction is for teachers to ensure that their students have repeated exposures to key vocabulary. Vocabulary and conceptual knowledge are built gradually over time, and multiple exposures offer opportunities to revisit words and information and to relate words and ideas to one another. If students are to build a deep understanding of key vocabulary and its appropriate use, a single exposure will prove insufficient. Rather, students need to practice with words across lessons and in different contexts. Multiple exposures to

vocabulary can be achieved through various ways, such as: independent reading, partner activities and teacher-led discussions.

Laflamme (1997) in his discussion about different strategies about learning vocabulary in general, and Academic vocabulary in particular, came into conclusion that the most effective strategies for teaching academic vocabulary involve multiple exposures to new words in a variety of contexts. This type of instruction leads to deep understanding of words and concepts. Among different strategies such as learning in context, categorization, learning word parts and six-step strategy, Marzano (2009) decided that the later one provides multiple exposures to a word in a variety of contexts and is most effective when all the steps are used.

Vocabulary knowledge grows slowly and incrementally, and this requires multiple exposures to words (Stahl, 2004), which means seeing them in different contexts and not simply their repetition along with their definitions or synonyms. This is what Sedita (2005) expressed that in order to fully learn a vocabulary item and its connotations; a learner needs multiple exposures to that item in a variety of contexts. In fact whenever one encounter a vocabulary item in a specific context; s/he remembers some aspects of it. As one encounters it repeatedly, s/he learns more and more about it until s/he has a vague concept of what it means. By the time s/he will be able to define that word. "Vocabulary knowledge seems to grow gradually moving from the first meaningful exposure to a word to a full and flexible knowledge" (Stahl, 1999).

The importance of repeated exposures become clear, when considering the fact that receptive and productive knowledge of a word involves attention to its forms, meanings, and uses in a range of contexts (Nation, 2001). Obviously without a considerable amount of exposure, it would not be possible to develop these different dimensions of vocabulary knowledge. Experimental research on implicit learning (Ellis, 1995) has concluded that repeated exposure to words' formal features in input is crucial if words are to be internalized in learners' lexicons. Moreover, in a study of incidental reading that compared frequency and contextual richness, Zahar et al. (2001) came to the conclusion that vocabulary acquisition is a function of frequency. Likewise, Horst's (2005) research tracking long-term retention of words from repeated readings of simplified novels in case studies has shown how repeated exposure to words within these reading books accelerates vocabulary acquisition process. Hulstijn (2001) put forward the idea that frequency should be considered in parallel with depth of cognitive processing while investigating vocabulary enhancement. Elley's (1989) research suggests that frequency of exposure is a vital factor for learning new words. It was found in his two researches that there is a significant correlation (.43 and .60) between the number of occurrences of a word and the gain score, leading him to write that:

Clearly, for new learning to occur the text must contain some vocabulary beyond the pupils' present understanding [...] and there should normally be more than one exposure to each word (p.184).

However, despite these supportive results, some other studies raised doubts about the effectiveness of this technique. For instance, Hall (1992) observed that there is a considerably low correlation (.36) between number of exposure to the word and their retention. Zahar, Cobb, and Spada (2001) as cited by Joe (2010), conducted an investigation in order to have a comparison between the quality (richness of context) and quantity of vocabulary encounters in input, which concluded that there is no such a reliable evidence showing that rich, directive contexts led to greater vocabulary enhancement. Likewise, Nagy et al (1985) think that even in a single exposure to a word, a "substantial if partial" knowledge can be gained.

Contributing factors in vocabulary growth

Bearing in mind the incremental nature of vocabulary acquisition, Joe (2010) believes that longitudinal studies that track learners' exposure to words in specific contexts can shed some light on how learners approach vocabulary learning, both inside and out of the course. They may also enable us to identify possible different types of vocabulary encounters, contributing to long-term retention of vocabulary, i.e. their lexical form and meaning as well as their generative use.

Joe (2010) classified the contributing factors to vocabulary learning in three categories: quality of input, quality of output, and frequency of occurrences with target vocabulary items. He criticized what he perceived as the shortcoming of related studies by saying that they investigate only one or two of these contributing factors, and none of them have ever investigated all three together.

Phrase learning in ESP/EAP

As Kavaliauskienė and Janulevičienė (2001) expressed, teaching specialized vocabulary is a primary goal in English for Specific Purposes (ESP) courses. Equally, there is a general perception that the more words a learner know, the larger the learner's vocabulary knowledge is. However, there is aspect of vocabulary knowledge that has to be taken in consideration - namely, how far a learner is familiar with the combinatory possibilities of a word. In fact a native speaker knows a range of other words, which can occur with any given word. This dimension of vocabulary knowledge has been largely neglected. Nowadays corpus analysis of the English language by computer has revealed a widespread occurrence of lexical patterns in language use. They are called 'lexical phrases', some researchers prefer to name them as 'multi-word chunks' or just 'chunks' of language. Whatever the term, they are an important feature both in language use and language acquisition and offer advantages for language teaching, particularly for teaching ESP.

Lewis (1993) objects the common view of dividing language teaching into grammar and vocabulary by claiming that language consists of lexical items. He treats them as belonging to four major categories. A relatively small group of lexical items is the words and poly-words. They have usually been considered as essential vocabulary for learners to memories. A second category is collocations. Collocation is understood as the way in

which words typically occur with each other, i.e. combinations of words in natural speech with a certain frequency. Native speakers intuitively 'know' which words frequently combine and which do not. To a native speaker, they just do not sound right. Knowing frequent collocations is essential for accurate, natural English. There are specific types of collocations in ESP which cause students' errors due to a lack of translational equivalence between the first language (L1) and the second language (L2). Teachers must help the learner become familiar with ESP collocations, and such familiarity will develop best when the learner is consciously aware of this tendency of words to go together (Lewis, 1993). In Lewis's approach, a third category is fixed expressions, and fourth, semi-fixed expressions. Collocations and expressions are thought to be the most important types of lexical phrases. Native speakers retain many prefabricated lexical items in their memory. Language fluency and accuracy is achieved largely by retrieving and combining ready-made chunks of language. 'The ability to chunk language successfully is central to understanding of how language works' (Lewis, 1997).

Based on the results of their study, Kavaliauskienė and Janulevičienė (2001) concluded that ESP lexical phrases may be treated similarly as other chunks as ready-made, or prefabricated language units which, once they are learnt, are easily retrievable and accessible. Moreover, they are context-bound and occur quite frequently, which makes them highly memorable for learners. They are invaluable for developing students' competence in language, i.e. knowledge of language and ability to use it. They also believe that learning ESP in multi-word chunks means a change for the better in the L2 vocabulary acquisition. It is not only desirable and beneficial, but also indispensable, because learners become involved in the process of becoming aware of and identifying lexical phrases, processing them orally or in writing, distinguishing between high-frequency and low-frequency lexical items.

Nattinger and DeCarrico (2000) conclude that "lexical chunks are some lexical phrases with varying length, loaded with communicative and discourse functions, and lexical chunk is multi-word lexical phenomena that exist somewhere between the traditional poles of lexicon and syntax, conventionalized form/function composites that occur frequently and have more idiomatically determined meaning" (p.1). Nattinger and DeCarrico (2000) suggest that learners can creatively build sentences and increase the fluency of language use because phrases are stored and used as whole chunks in the brain.

Phrase comprised of one or more words which means EST learners can spare fewer efforts to memorize more words and they don't need to memorize word by word in the vocabulary list in an isolated way. In this sense, lexical trunks are considered to form their own contexts with concrete meanings, which make them much easier to remember than those words out of contexts. Through the above analysis, they conclude that the lexical trunks are very helpful to enlarge EST learners' vocabulary.

METHOD

The method of this study is quasi-experimental in nature, and the data are gathered in quantitative form.

Participants

21 staff of Chabahar port and maritime organization with maritime educational background participated in this study, as a maritime ESP course. Their national language was Persian, and their English language competency was at the low-intermediate level.

Instruments

Instruments required for this study consists of two phrase lists of A and B, as well as some relevant sources, as it will be explained in procedure section.

Procedure

As the first step, the participants were taken a general English test in order to make sure that their English proficiency levels are almost in the same range. This test was simply an interview and a simple speaking as well as a sentence writing test. Then, 14 technical and semi-technical phrases in relation to Maritime English in general and “maritime incidents” in specific, was selected and divided in two different lists of A and B. the selected phrases were not very common, so they were expected to be new for the participants.

Pretest: the participants were taken a pretest of the two phrase lists of A and B in order to know the number of already known phrases among the participants.

Treatment: the treatment was done as a part of the maritime ESP course which took 8 sessions. Among the other activities of the class for the rest subject matters of the course, the participants were told to repeat the phrase in the list A, only once per session. But the phrases of list B were instructed in a different way. In each session they were given some short texts from textbooks, magazines, websites as well as newspaper headlines, graph explanations, etc. in which the phrases of list B appear. The frequency of their occurrence kept equal to the number of repetition for the items of list A, I.e. 8 times for the whole period of the treatment.

Posttest: since the study aims to evaluate the effects of different treatments on growth of active vocabulary knowledge rather than passive one, therefor the participants were required in posttest step to produce and use the learnt phrases in an appropriate context, rather than simply translating them in their first language. To do this, they were given a scenario as bellow: “suppose you are the head of a maritime incident investigation comity who have to announce the results of the comity’s findings, in front of officials or reporters. Take note of the key points of your lecture in English, using the phrases you have learnt in this ESP course as much as you can remember.” Then the number of phrases appeared in their notes would determine their active vocabulary growth.

RESULTS AND DISCUSSIONS

The progress of the participants in each of the two phrase lists is calculated as what the below tables show:

Table 1. Mean Results of the two techniques

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	A	2.714	7	1.889	.714
	B	5.571	7	1.618	.611

Table 2. comparison between the results of the two techniques

Paired Differences							
Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	d f	Sig. (2-tailed)
			Lower	Upper			
-2.857	2.035	.7693	-4.739	-.974	-3.714	6	.010

The P value of 0.010 in the table 4.2. which is higher than 0.05, indicates that the difference between the outcomes of two techniques is significant. at the first glance, the mean scores in Table 4.1. reveals that multiple exposures technique have been more effective than traditional rote learning. But the main surprise reveals when we look at the mean differences shown in table 4.2. which is 2.857. This indicates that multiple exposures technique has been at least 2 times more effective than rote learning. This difference is illustrated in Figure 4.1.

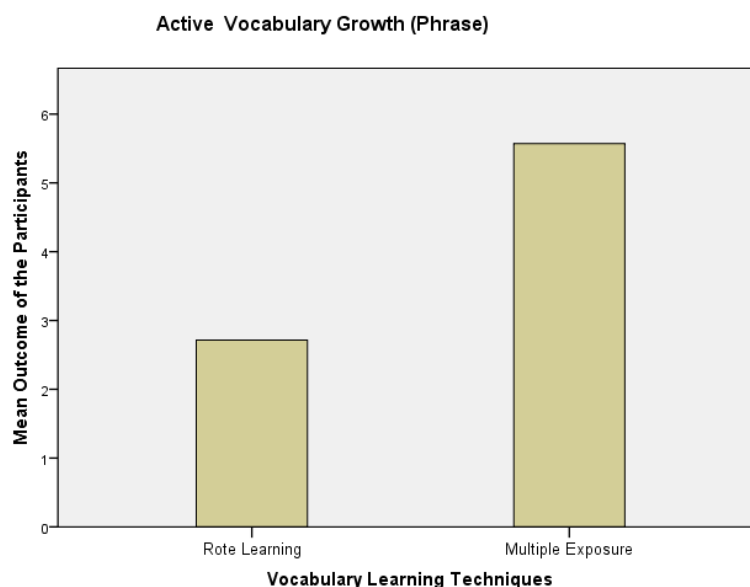


Figure 1. Mean differences in Active Vocabulary Growth by two different techniques

Multiple exposures technique with the mean results of 5.571 has proved its absolute superiority upon the rote learning with a mean result of 2.714, in the case of learning phrases for the purpose of active vocabulary use. The amount of P value (0.010, as

shown in the table 4.2) is higher than 0.05, which implies that the difference between the outcomes of two techniques is significant. The results in fact are surprising, in that the mean results of multiple exposures technique is two times higher than the one of rote learning. But what can justify this very significant effectiveness of multiple exposures? It is assumed that this superiority of this technique in this specific situation might rise from a synergetic combination of two factors:

A- the internally decontextualized nature of phrases which facilitate their remembrance as well as use, in contrast to single words which are absolutely decontextualized. In other words, if the vocabulary items were single words, the result of the study might be different.

B- The opportunities that multiple exposures technique provides for the learners to be familiar with different situations in which a specific vocabulary could be used. In other words, exposing the learners to the situations when a vocabulary is used, increase the probability of its use afterwards, given an appropriate context. On the other hand, learning a vocabulary merely through repetition gives no chance of familiarity with the situations of its use.

In order to come up with a more comprehensive conclusion, it is suggested this technique should be investigated for different levels of proficiency, different forms of vocabularies, as well as different fields of ESP. It would also be a good idea to compare the effectiveness of multiple exposures with some other techniques, other than rote learning which was already investigated. Learning through collocations, word root analysis, word mapping, keyword method, writing practice of words in a sentence, elaboration of words using different vocabulary definitions as well as using examples are some of suggested technique in this contest.

CONCLUSION AND IMPLICATIONS

Multiple exposures technique produced surprising results and appeared to be two time more effective than its contestant, rote learning, when active use of phrases was the purpose of learning. Apart from the technique itself, one additional factor may refer to the notion of contextualization. In contrast to single word which is completely decontextualized, phrase gains of having a kind of internal contextualization, which facilitates its remembrance as well as use. It could be concluded that multiple exposures technique is a more appropriate choice, where the purpose of learning is to enhance the capability of learners to use their vocabulary repertoire (active vocabulary knowledge).

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