

Measuring Learners' Vocabulary Size through Exposure to Language Skills

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Abstract

While it is virtually essential to expose the language learners to as much language skills as possible in order to improve their target language, studying the effectiveness of this exposure becomes absolutely vital as well. This paper attempted to find out whether exposure to language skills noticeably increases learners' vocabulary size by measuring the written receptive vocabulary size of the second year and third year English language learners of MUFL. The free online Vocabulary Size Test (14,000) version, created by Paul Nation, Victoria University of Wellington was used. The results showed that the average vocabulary size of the second year learners was between 4000 and 5000, and the third year was between 5000-6000. According to the Common European Framework, the learners from both classes were between the level of B1 and C2. Though not much difference was found in the level, it was found out that the third year learners know more 1000 words than the second year learners. Thus it can be deduced that the exposure to language skills increases learners' vocabulary size. It is strongly recommended that a lot of results would be found out if further studies could be carried out based on learners' vocabulary size such as comparing their vocabulary size to their reading skills or to their exam achievements.

Keywords: exposure, language skills, vocabulary size, Vocabulary Size Test

Introduction

Across the centuries people have studied how foreign languages are learnt. Many experts believe that there are three main ways to learn a foreign language: exposure, focus on the form and interaction. They say that to learn a foreign language successfully we need lots of exposure to it i.e. we need to hear and read language which is rich in variety, interesting to us and just difficult enough for us. Acquisition then takes place over a period of time without our realizing that we are learning. (M. Spratt, A. Pulverness, M. William, 2011). Thus, the more exposure to the target language a language learner receives, the more familiar with it he becomes. This is a good access to achieve success in language learning.

There are two semesters in each academic year of MUFL and it takes four years for BA degree programme and seven years for MA degree programme. Each semester lasts for four months including examination period. For English language learners, they have to take such modules as Reading, Writing, Listening and Speaking skills, and Grammar as core courses and only in third year and fourth year, their courses include Translation, Literature and Research Methodology. As this paper was carried out at the end of the first semester of 2019, the second year learners have been exposed to the target language for three semesters and the third year learners for five semesters.

They are exposed to the target language mostly via from language skills: reading, writing, listening and speaking. Their improvements in these skills are assessed formally and informally like tutorials, presentations, examinations, etc.

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However, it is very rare to explore how much the learners' vocabulary has improved after they have been exposed to some extent of time. Although some studies on measuring vocabulary size of the learners have been quite popular in other countries, it is not much popular in our country yet. For instance, most teachers do not have much awareness of learners' vocabulary improvement as well as most of our students don't know their vocabulary size and some of them even don't know how much vocabulary range they should have for their level of learning. Besides, if we track the size of our vocabulary, we would be able to tell what level we are on since the number of words we know is one of the most reliable indicators of our level. That is why it is the researcher's main interest to explore the vocabulary size of those second year and third year English language learners of MUFL using Vocabulary Size Test (14,000) version, created by Nation (2001) in order to explore whether exposure to language skills noticeably increases the learners' vocabulary.

Literature Review

In this section, in order to point out the usefulness of testing vocabulary size, some related researches were summarized. Moreover, the Common European Framework will show the learners' level of English proficiency according to their vocabulary size. Finally, the Vocabulary Size Test (14,000) version by Paul Nation (2001) was presented as a main framework of this study.

Related research

In the International Journal of Social Science and Humanity Research, Vol. 4, 2016, one of the research articles "Measuring Vocabulary Size of Thai University Students" written by the author SuntipaapSunprakul, presented the investigation of the vocabulary size of Thai University students. The main purpose of this article was to establish the number of English vocabulary in the first 10,000 words most occurring word lists that Thai EFL students at the university level know receptively, and to see whether or not their word knowledge increases when they proceed to the higher year of study. (www.researchpublish.com)

In Arab World English Journal (AWEJ) Volume 8, No.2, June 2017 (Pg 279-292) the article "The Relationship between Learner Motivation and Vocabulary Size: The Case of Iraqi EFL Classrooms" investigates the relationship between learner motivation and vocabulary size in English as foreign language (EFL) classrooms at Duhok University. The 100 participants were pursuing their third year of study in an English department. The researcher employed the two instruments: questionnaires regarding Motivation for Foreign Language Learning (MFL) by Schmidt, Borale and Kassabgy, and Vocabulary Size Test (VST) by Paul Nation and David Beglar. The primary goal of this study was to determine which factors of motivation profoundly affect the foreign language learning processes of Iraqi EFL students and to what extent they should develop their depth and breadth of English vocabularies. For both groups, the results indicated no relationship between these two aspects of students' foreign language leaning.

(https://www.academia.edu/33956700/The_Relationship_between_Learner_Motivation_and_Vocabulary_Size_The_Case_of_Iraqi_EFL_Classrooms)

The next research was supported by Victoria University Research Fund gate. In this article “Measuring the Vocabulary Size of Native Speakers of English in New Zealand Secondary Schools”, two equivalent forms of the 20,000 version of the Vocabulary Size Test created by Paul Nation were used. The results suggested that most native speakers at secondary school have enough general purpose vocabulary to cope with their reading at school, and any deliberate attention to vocabulary should focus on subject specific vocabulary. (www.victoria.ac.nz) (coxhead-secondary-school-vocab-size-pdf)

In fact, these are just few related researches, and it is found out that they measured the vocabulary size of either native speakers or non-native speakers or both for different reasons. They, however, vividly highlight the need to measure our learners’ vocabulary size for certain reasons.

The Common European Framework and Vocabulary Size

The Common European Framework of Reference for Languages is a guideline used to describe achievements of learners of foreign languages across Europe between 1989 and 1996, and, increasingly, in other countries. The Common European Framework divides learners into three broad divisions that can be divided into six levels. The following table shows the six levels of CEFR and the number of base words they need.

Language Levels		Number of Base Words Needed
Basic user	A1 Breakthrough or Beginner	500
	A2 Waystage or Elementary	1000
Independent user	B1 Threshold or Intermediate	2000
	B2 Vantage or Upper Intermediate	4000
Proficient user	C1 Effective operational proficiency or Advanced	8000
	C2 Master or Proficiency	16000

(<https://en.m.wikipedia.org>) (<https://www.universeofmemory.com>)

Vocabulary Size Test

The Vocabulary Size Test is created by Paul Nation, Victoria University of Wellington and can be found at <http://www.lexutor.ca>. There are two available versions: a 14,000 version and a 20,000 version. This paper has used 14,000 version containing 140 multiple-choice items, with 10 items from each 1000 word family level. It is said that this test is freely available and can be used by teachers and researchers for a variety of purposes. It is designed to measure both first language and second language learners’ written receptive vocabulary size in English that is the vocabulary knowledge required for reading. It is not measuring listening vocabulary size, or the vocabulary knowledge needed for speaking and writing.

Its uses are explained in that for instructional purposes the results can be used to guide syllabus design, extensive reading, and vocabulary instruction. For research purposes, it can be used a measure of total receptive written vocabulary size for both native and non-native speakers. The test uses the frequency word levels based on the British National Corpus word family lists for the sampling. A

multiple-choice format with a stem plus a 4 choice is used. The words represented by the distractors fit sensibly within the stem. The distractors are the same part of speech as the correct answer, and in most cases the distractors are the meanings of words from around the same 1000 word frequency level as the correct answer.

For taking the test, it is explained that the test is a measure of knowledge not fluency, and so enough time is given to complete the test and allow learners to ponder over each item. The test typically takes around 40 minutes to sit the 140 item test, and around 30 minutes for the 100 item test. It is also said that a learner's total score on the 140 item test needs to be multiplied by 100 to find the learner's total vocabulary size. So, a score of 35 out of 140 means that the learner's vocabulary size is 3,500 word families.

In order to interpret the meaning of the score in terms of language use, it is necessary to look at the vocabulary size needed to gain a text coverage of 98% (including proper nouns) in various kinds of texts. (Nation, 2006)

Texts	98% coverage	Proper nouns
Novels	9,000 word families	1-2%
Newspapers	8,000 word families	5-6%
Children's movies	6,000 word families	1-5%
Spoken English	7,000 word families	1-3%

It is also discussed what learners should be doing to increase their vocabulary sizes. In order to work out this problem, the relationship between the vocabulary size score to the three main frequency levels of high-frequency, mid-frequency, and low –frequency words is shown as follow. (www.victoria.ac.nz)

Level	1000 word family lists	Learning procedures
High frequency	1000-2000	Reading graded readers Deliberate teaching and learning
Mid-frequency	3000-9000	Reading mid-frequency readers Deliberate learning
Low frequency	10,000 on	Wide reading Specialized study of a subject area

A complete set of test for 14,000 version used in this research is shown in the appendix.

Research Questions

1. What is the average vocabulary size of the second year English language learners of MUFL?
2. What is the average vocabulary size of the third year English language learners of MUFL?
3. What will their proficiency level be according to the CEFR?
4. Does exposure to language skills increase learners' vocabulary size when the results of the different vocabulary size of the two years are compared?

Hypothesis

1. The average vocabulary size of the second year English language learners of MUFL may be about 4000.
2. The average vocabulary size of the third year English language specialization learners of MUFL may be about 8000.

3. Their proficiency level may be B2 (Upper intermediate) and C1 (Advanced) according to the CEFR.
4. There must be considerable different results of the vocabulary size of the two years and thus the exposure to language skills remarkably increases their vocabulary size.

Method

The second year and third year English language learners of MUFL were chosen as sample for this paper. Since the modules of the third year are noticeably different from the second year, for example, new modules like Translation and Literature are included in the third year, it was hoped to discover different vocabulary size scores. There are actually altogether (51) learners in the second year and (50) learners in the third year. However, (2) learners from the second year and (1) learner from the third year were absent on that day the test was administered, so the number of the samples (49) learners from each year unintentionally became the same.

Sample of the Research

Year	No. of Learners	No. of Males	No. of Females
Second Year	49	9	42
Third Year	49	10	40

14,000 version of the Vocabulary Size Test by Nation (2001) was used to find out the vocabulary size score of the learners. There were altogether 140 multiple choice items divided by from First 1000 to Fourteenth 1000 in the test. Each total score on the 140 items was multiplied by 100 so that the total vocabulary size could be found out. The same amount of time (40 minutes) took for each year to sit for the tests, but the tests were administered on different days. To be able to keep the test confidential, the question sheets were kept back after the test and the learners were not allowed to take the photos. The use of dictionary was strictly prohibited in order to get their actual vocabulary size scores.

The procedures of the research were:

1. First, the third year learners were requested to sit for the test.
2. Then the second year learners were requested to sit for the test next day.
3. After that, the answers on the question sheets were manually checked.
4. Finally, points of central tendency, amount of variability and normal distribution were calculated and the results were compared to predict the effectiveness of the exposure.

Data Analysis

Analysing the results of the vocabulary size scores

Table 1 presents the central tendency and amount of variability of the second year learners based on their total vocabulary size on 14000 version of Paul Nation (2001).

Table 1. The central tendency and amount of variability of the second year learners

Year	No. of Students	Central Tendency					Variability	
		Mean	Max	Min	Median	Mode	Range	STDVE
Second	49	4567	8200	2800	4300	3900/ 4100	5400	12

For the central tendency, the average vocabulary size of the second year learners is between 4000 and 5000. The maximum score is 8200, but only one student gains this score. The minimum score is 2800, and two of them gain this score. The median score is 4300, so there are 24 learners whose scores are less than 4300 vocabulary size and 24 learners more than 4300. Since each four learners gain the vocabulary size score 3900 and 4100, the mode was 3900 and 4100.

For the amount of variability, the range – the difference between the maximum and minimum scores is 5400. The range was too wide since one of the learners receives 8200 scores. Since the second maximum is 6900, and the second minimum is 2900, it can be said that 80 percent of the learners' vocabulary size is between 3000 and 7000. As the standard deviation is 12, the amount of variation in this group is quite large.

Table 2 presents the central tendency and amount of variability of the third year learners based on their total vocabulary size on 14000 version of Paul Nation.

Table 2. The central tendency and amount of variability of the third year learners

Year	No. of Students	Central Tendency					Variability	
		Mean	Max	Min	Median	Mode	Range	STDVE
Third	49	5676	7500	3900	5800	4400	3600	9

For the central tendency, the average vocabulary size of the third year learners is between 5000 and 6000. The maximum score is 7500 and the minimum is 3900. The median score is 5800, so there were 24 learners whose scores are less than 5800 and 24 learners more than 5800. Since four learners get the same score 4400, the mode is 4400.

For the amount of variability, the range is 3600, so the difference between the score of the maximum and minimum seems a little bit wide. Since the standard deviation is 9, the amount of variation in this group is also large.

Table 3 compares the central tendency and amount of variation of the two groups.

Table 3. The central tendency and amount of variation of the two groups

Year	No. of Students	Central Tendency					Variability	
		Mean	Max	Min	Median	Mode	Range	STDVE
Second	49	4567	8200	2800	4300	3900/ 4100	5400	12
Third	49	5676	7500	3900	5800	4400	3600	9

According to the results, it is found out that the average vocabulary size of the third year learners is larger than the second year learners. Although the maximum score of the second year is unexpectedly higher than the third year, the minimum score and the median score of the second year are lower than the third year's. Since the range of the second year learners is wider than the third year learners', it can be said that the former's receptive vocabulary level is more variable. This can also be seen in their standard deviation.

Table (4) and (5) show the normal distribution of the vocabulary size of the second year and third year learners.

Table 4. The normal distribution of the vocabulary size of the second year learners.

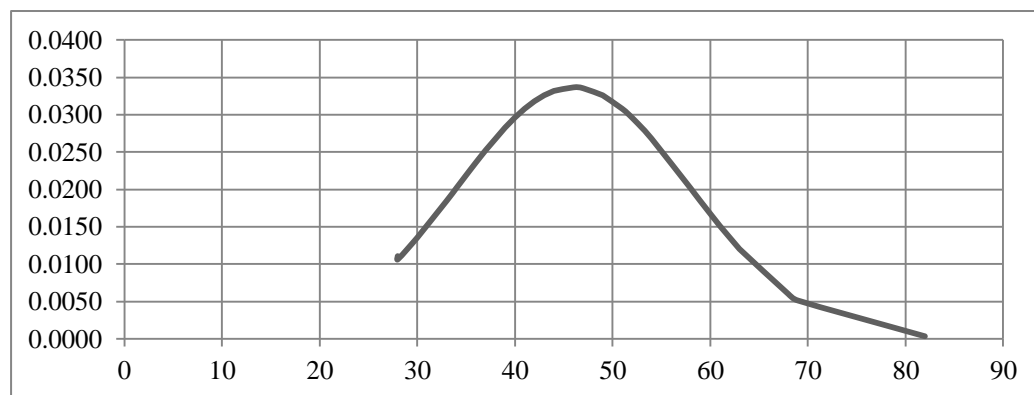
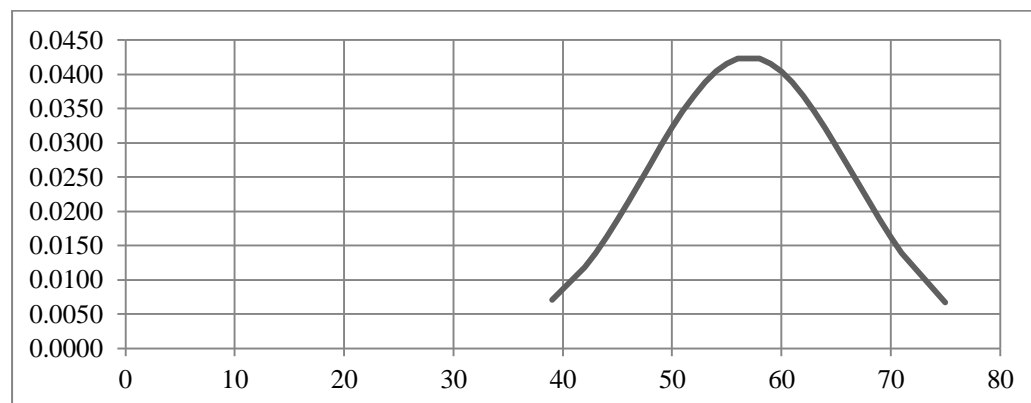


Table 5. The normal distribution of the vocabulary size of the third year learners



As it can be seen in the two tables (4) and (5), the vocabulary size scores of the second year learners are quite spread from 2800 to 8200, and the scores are scattered from the mean (average) score: this means that while some learners' scores are more than 2000 or 3000, there are some learners who score more than 4000 or 5000 or 6000 or 7000. Therefore it can be said that their variance in vocabulary range is extreme.

The variance of the third vocabulary range, however, is not quite considerable since the scores are not quite scattered from the mean score: this means that most of their scores are around 5000 and 6000. Though their variance is not as great as the second year's, it cannot be denied that there is a little bit variability in their scores.

Findings and Discussion

This study attempted to measure the vocabulary size of the second year and third year English language learners of MUFL through their exposure to language skills. According to the results, the average vocabulary size of the second year learners is between 4000 and 5000, and the third year learners' is between 5000 and 6000. The difference in vocabulary size score is found out as it was hoped, but the difference is not as much as it was assumed. According to the CEFR, the average vocabulary size of the second year and third year learners shows that they are between upper intermediate and advanced level.

By the time this paper was carried out, the second year learners have been exposed to the target language for three semesters (about 12 months) and the third year learners for five semesters (about 20 months). Although eight months are not long enough to make a big difference in their vocabulary learning, it is definitely sure that the exposure to the language skills increases learners' vocabulary size to a certain extent.

According to Nation (2006), 9,000 word families are needed in order to gain a text coverage of 98% for novels, 8,000 for newspapers, 7,000 for spoken English and 6,000 for children's movies. Since our second year learners' average vocabulary size is between 4000-5000, and there are (7) learners whose vocabulary sizes are more than 6000, it can be said that 14% of the second year learners are able to understand spoken English and children's movies, and 86% of them may have some difficulties in order to get 98% understanding of children's movies. However, the average vocabulary size of the third year learners is between 5000-6000 and there are (21) learners whose vocabulary sizes are more than 6000. Thus 43% of the third year learners can understand 98% of what children's movies they watch and what spoken English they listen to, but 57% cannot. In general, according to the results they all are not ready yet to be able to get fuller understanding in reading newspapers and novels.

It is, however, impossible to decide their vocabulary range only from the exposure point of view. It also depends on other factors. This can be seen in the result that one of the second year learner's vocabulary size score is higher than all the third year learners. This may be because of his background knowledge and learning experience of the target language.

The variability of the vocabulary size scores is also found out both in the second year and third year. Those who join the MUFL must have the limited matriculation exam marks for every language they want to specialize in. Thus it can be assumed that the vocabulary knowledge of those English language learners might not be quite different when they first join this university. There may be a lot of reasons in their different achievements though they are learning the same courses in the same class with the same teachers.

Nation (2006) also makes some suggestions to increase the learners' vocabulary size by relating the vocabulary size score to the three main frequency levels of high-frequency, mid-frequency, and low-frequency words. According to him, learners who know 1000-2000 word families are graded readers and they need deliberate teaching and learning, and those who know 3000-9000 are mid-frequency readers and they need deliberate learning. Therefore, it can be said that most of our second year and third year learners know lots of mid-frequency words, but they need deliberate learning in order to widen their vocabulary range.

In fact, it is unarguable that the learners are exposed to the target language in various ways. For instance, the target language is mostly used in teaching, discussing, doing activities and presentation. They are given very rare chance to use their mother tongue. However, all this discussion is based only on exposure in the classroom, not outside exposure of classroom. Thus this paper tries to suggest the learners that they should maximize their exposure to the target language not only in the classroom but also outside the classroom so that they will be able to understand and use even low-frequency words and their vocabulary range will become wider and wider.

Conclusion

In fact a lot of scholars have already pointed out the importance of exposure to the target language to get certain achievement in language learning. This paper can also prove that more exposure to the language skills both inside and outside the classroom is needed to increase the learners' vocabulary size.

Moreover, in Vocabulary section of Linguistics in Language Teaching (Wilkins, 1978), it is stated that while without grammar very little can be conveyed, without vocabulary nothing can be conveyed. In other words, if one knows the appropriate vocabulary, then some form of interchange of language is possible. Without the vocabulary it is impossible. These facts briefly, but significantly point out the importance of vocabulary learning. Thus vocabulary section is critically important as long as the learners wish to achieve a practical mastery of language in the long term and so this paper also hopes to point out the needs to focus on vocabulary teaching and learning both for the teachers and the learners.

Apart from exposure, there may be other factors which affect learners' vocabulary size such as their learning style, age, motivation, personality, etc. This paper tried to discuss only from the point of view of exposure. The results are very limited but, hoped to be of a little use both for the teachers and the learners. This paper expects to highlight the facts whether the teacher can give or the learners receive enough exposure to their target language and whether vocabulary section has been focused in their teaching and learning. It is strongly recommended to do further studies based on learners' vocabulary size such as comparing their vocabulary size to their reading skills or to their exam achievements.

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