



What do young EFL learners' written texts tell us about their productive vocabulary knowledge?

Suzan Kavanoz^{a *} , Burcu Varol^b 

^a Faculty of Education, Yıldız Technical University, Istanbul, 34210, Turkey

^b Faculty of Education, Yıldız Technical University, Istanbul, 34210, Turkey

APA Citation:

Kavanoz, S. & Varol, B. (2018). What do young EFL learners' written texts tell us about their productive vocabulary knowledge? *Journal of Language and Linguistic Studies*, 14(4), 211-225.

Submission Date:16/07/2018

Acceptance Date:24/10/2018

Abstract

Receptive knowledge of vocabulary has usually been the mostly investigated dimension of lexical assessment while the productive aspect of vocabulary has been studied to a lesser extent. There is hardly any research on the productive vocabulary of English foreign language learners in Turkish context, particularly as far as primary school students are concerned. Yet, it is utmost important to study learners' vocabulary levels in Turkey where English is taught as a foreign language (EFL). Within this context, this study seeks to address the effect of grade level variation in EFL productive vocabulary size of a group of young learners. In order to collect data, the participants were given a series of pictures (Heaton, 1966) and asked to create a story based on what they see in the pictures. The lexical frequency profiles (LFP) technique was used to estimate participants' productive vocabulary size with a focus on the differences and similarities among different year levels. The findings of the study present insights into developmental process of vocabulary acquisition of Turkish EFL learners.

© 2018 JLLS and the Authors - Published by JLLS.

Keywords: lexical frequency profile; picture story; productive vocabulary knowledge; written production

1. Introduction

Individuals need lexical knowledge to be able to express themselves in every language. Learning a foreign language is a daunting endeavor and when the burden of acquiring lexical knowledge is added, the process becomes even more difficult. The significance of teaching vocabulary was highlighted as “without grammar very little can be conveyed, without vocabulary nothing can be conveyed” by Wilkins (1972, p. 111) as early as around four decades ago. The importance attached to vocabulary acquisition is also reflected in current foreign language teaching methodologies such as Total Physical Response and Communicative Language Teaching (Nunan, 1995).

It is suggested that learners with larger vocabulary can attain communicative effectiveness more successfully than learners with a smaller vocabulary size (Meara & Fitzpatrick, 2000). The studies addressing lexical development acknowledge that vocabulary knowledge predicts reading comprehension significantly (Laufer, 1997; Henrikssen, Albrechtsen & Haastrup, 2004; Nation, 2001;

* Corresponding author. Tel.: +90-212-383-5566
E-mail address: shatip@yildiz.edu.tr

Nassaji, 2003; Ouellette, 2006), general language proficiency (Schmitt, 2008; Zimmerman, 2004), listening comprehension (van Zeeland & Schmitt, 2012), fluency in any language (Laufer, 2009), and quality of writing (Astika 1993; Stæhr, 2008; Zimmerman, 1997).

1.1. Literature review

Laufer and Goldstein (2004) classify the construct of vocabulary in two main components as receptive and productive vocabulary regarding what learners can do with the lexical item. Receptive vocabulary is defined as the set of words a learner can understand, identify, and process while reading or listening. Generally, it is regarded as the passive knowledge of words rather than the words a person can regularly use. The second component is productive vocabulary, also referred to as working vocabulary, which constitutes the words used by an individual on a regular basis in an expressive way. Productive vocabulary is an important indicator of language learning that measures the amount and the level of learner's lexical knowledge that can be used in speaking and writing (Melka, 1997). The question of what constitutes word knowledge has been an arguable one and we see several conceptualizations in the literature. Nation (2001) identifies three main areas made up of nine dimensions for defining productive word knowledge. The general areas are knowledge of form, knowledge of meaning and knowledge of use. Another general approach to conceptualizing vocabulary is the distinction between breadth (size) and depth (quality) of vocabulary knowledge. The number of words in one's lexical repertoire reflect breadth of vocabulary knowledge, while depth of vocabulary refers to how well various aspects of a word are known (Henriksen 1999; Qian 2002).

The significant role lexical knowledge plays in language skills brings the question regarding the vocabulary size of foreign language learners. It is suggested that foreign language learners learn vocabulary starting with the most frequent first 1,000 word families and then they gradually acquire the second and third 1000 word families (Nation, 2006). The receptive knowledge of vocabulary has usually been the most widely researched component of lexical assessment. The majority of vocabulary tests aim at measuring receptive vocabulary size, which is generally larger than the size of a learner's productive vocabulary (Webb, 2008). Alongside the receptive word knowledge, productive vocabulary knowledge in L2 has significant impact on learners' use of language for communication.

Research on the assessment of foreign language learners' productive vocabulary knowledge development in different contexts at different levels confirm that productive vocabulary size is proportional to the amount of vocabulary instruction and time learners are engaged with learning English (Laufer, 1998; Webb, 2008). In line with this, Laufer (2012, p. 33345) suggests "more advanced learners could use a higher percentage of infrequent vocabulary than learners of lower proficiencies". For instance, productive vocabulary size of two groups of secondary school CLIL (Content and Language Integrated Learning) students learning English in instructional contexts in Spain was measured using Lex30. The results of this longitudinal study confirmed that secondary school learners' productive vocabulary grew over a period of eighteen months (González & Piquer Píriz, 2016). Overall, global scores showed a 14% increase in the mean score at the final test with respect to the first test.

Studies looking at varying aspects of lexical richness using learner corpora and vocabulary profiling have been carried out in different settings. Yet, there is hardly any research in which this approach has been used to analyze the vocabulary knowledge of young learners of English (Pearson, Hiebert, & Kamil, 2007). The current study aimed to fill this void and add to the literature on lexical richness at primary education level by analyzing a corpus of stories written by learners between the ages of 11 and 14. This quantitative study is located within the field of corpus linguistics and computational methodologies and is conducted through a tool available online (www.lextutor.ca). Within this context, we set out to seek the effect of grade level variation in EFL productive vocabulary size of a group of

young learners. The assumption that the writing of learners would show evidence of increased lexical knowledge over time marked the starting point of our study. We believe that this study will contribute significantly to the scholarly literature on productive vocabulary use by young learners of English.

1.2. Research questions

The aim of this study is to find out in what way amount of exposure to language instruction as observed by progressive grades leads to productive vocabulary development. Therefore, we formulated the following research questions;

1. What is the productive vocabulary knowledge development of young learners (YL) of English as a foreign language?
2. What is the effect of grade level on young learners' EFL productive vocabulary knowledge?

2. Method

2.1. Context and participants

In Turkey, students generally start taking English classes in the second grade in public schools. Nevertheless, children attending private schools can begin English language studies in pre-school or in the first year of primary education. The data for this study were collected from students in a private school who have had English language classes since first grade. Actual teaching time for all the participants in this study is 12 hours a week. They have both native and non-native teachers. Native speaker of English is responsible for development of four language skills and vocabulary knowledge. Non-native Turkish teacher mostly focuses on grammatical knowledge of learners. The sample was homogeneous in terms of type of instruction. None of the participants had English as L1. All the grades share the following features: (i) equal number of hours of instruction (12 hours a week, 18 weeks per term, 36 weeks in total); ii) status of English (it is a required course) ; iii) curriculum structure concerning syllabuses, textbooks, and exams (the school follows International Baccalaureate Middle Years Program (MYP)). The sample comprises of fifth, sixth, seventh, and eighth graders between the ages of 11 and 14 considered as young learners (Nikolov & Djigunovič, 2006). The distribution of participating students across the grade levels are demonstrated in Table 1.

Table 1. Distribution of students across grade levels

Grade-Levels	N	Percentage (%)
5 th grade	55	25.5
6 th grade	59	27.3
7 th grade	54	25
8 th grade	48	22.2
Total	216	100

As the table shows, the percentages of each group represented a balanced distribution. Regarding the distribution of learners in terms of gender, there were 118 female (54.6%) and 98 male students (45.4%) that reflected a homogenous group in terms of gender distribution.

2.2. Data collection tools and procedure

There are a number of approaches to the measurement of productive vocabulary. The most famous is the Controlled Productive Vocabulary Level Test designed by Laufer & Nation (1999) which has a format similar to the C-test. However, it fails to entirely reflect the learners' productive language output and only measures vocabulary that is "available for productive use" (Laufer & Nation 1999, p. 41). Traditional vocabulary assessment tasks such as fill in the blank tasks or cued recall tasks may not be much of a help to understand the nature of productive vocabulary (Waring, 1999). It is suggested that productive vocabulary use is observed when a child articulates or writes a word such as when telling a story or writing an essay (Ma et al., 2017).

In this study instead of assessing productive vocabulary of learners based on their oral performance, we focused on learners' written production. To this end, a writing task was developed. All participants were asked to write a description of a picture story presented as a series of six pictures, which were taken from Heaton (1966). Each picture was printed on separate pages offering them ample space to express their thoughts thoroughly. Students worked individually and completed their stories during class time. Yet, to offer them enough freedom to respond, there was no time restriction. In addition to the instructions printed at the beginning of the page, prior to the writing activity, the researchers gave clear instructions orally in Turkish to ensure that learners understood what they were asked to do.

2.3. Data analysis

For the analysis of the data, we used a special computer program, Lexical Frequency Profile (LFP). LFP uses the proportion of frequent versus non-frequent vocabulary in the text to quantitatively measure lexical proficiency (Laufer & Nation, 1995). LFP tells how many words the text contains from: i. the list of the most frequent 1000 word families, ii. the second 1000, iii. 570 most-frequent academic words (the Academic Word List), and iv. words that do not appear on the previous lists by categorizing the vocabulary used in terms of frequent, less frequent, and infrequent words (see Table 2) (<https://www.lexutor.ca/vp/>). The first most frequent 2000 words are taken from General Service List (West, 1953). Word family is represented by a "head word" and all "derived forms" as in the example: work, worked, works, working. This lexical frequency profile, instead of quantifying vocabulary size, offers the percentage of words a learner uses at different frequency levels. It is estimated that a higher percentage of count of infrequent words will indicate a larger productive vocabulary size (Meara & Fitzpatrick, 2000).

Table 2. Description of LFP

Sophistication in Written Production	Lexical Frequency Profile	K1 types	Number of words used in the first 1000 most frequent words
		K2 types	Number of words used in the second 1000 most frequent words
		AWL types	Number of types included in the Academic Word List
		Off-list types	Number of types not included in three lists above

Once learners' stories written in their handwriting were obtained, they were transferred into digital environment manually by the researchers. Several corrections were done prior to processing data i. misspelled words were corrected, ii. proper names such as names of persons or places were excluded, iii. illegible words were deleted. The final corpus formed by learners' stories consisted of 47.700 running words. The stories were then analysed individually using the corpus software the LFP analyser program, renamed as RANGE (<https://www.lexutor.ca/vp/>). The results of this frequency analysis are expressed in terms of the percentage of word that belongs to each frequency band (Smith, 2005). Sample output of one learner's story generated by the LFP program is shown in Table 3.

Table 3. Sample output generated by VocabProfiler

	Families	Types	Tokens	Percent
K1 Words (1-1000):	86	99	267	86.13%
Function:	...	...	(142)	(45.81%)
Content:	...	...	(125)	(40.32%)
> Anglo-Sax	...	...	(76)	(24.52%)
K2 Words (1001-2000):	13	13	38	12.26%
> Anglo-Sax	...	...	(10)	(3.23%)
1k+2k	...	...	...	(98.39%)
AWL Words:				0.00%
> Anglo-Sax	...	...	()	(0.00%)
Off-List Words:	<u>2</u>	<u>5</u>	<u>5</u>	1.61%
	99+?	117	310	100%

From the final computation of a profile for this sample written by a seventh grader, the following values: K1 Words: 86.13% K2 Words: 12.26% AWL Words: 0% Offlist Words: 1.61% as well as families, types and tokens per each band are of interest for this study. After obtaining outputs for each text from LFP program, the data per student were then copied into an Excel file in order to run quantitative analyses. SPSS program version 21.0 was used to perform descriptive and inferential statistical analyses. Before running inferential statistics, we checked the data for normality. The sample did not meet the normality assumption at the beginning. After omitting 19 outliers, normal distribution was achieved and this allowed us to conduct parametric tests of mean comparisons.

3. Results

This section will present the results of productive vocabulary size measures. Our first research question aimed at describing productive vocabulary development of young learners as evidenced through their grade level, which is considered as an indication of their amount of exposure to language. Table 4 shows the descriptive results for four grade levels in terms of the total families, types, and tokens of words used in learners' written texts.

Table 4. Total families, types, and tokens of words used in students' written texts

	Grade levels	Mean	SD	Min.	Max.
Total Families	5	57.6	19.8	27	121
	6	57.1	16.2	32	104
	7	68.4	25.3	33	118
	8	83.2	29.1	38	139
	Total	65.9	24.9	27	139
Total Types	5	67.8	23.8	33	133
	6	68.2	20.3	34	125
	7	81.6	32.4	36	141
	8	102.1	36	45	171
	Total	79	31.3	33	171
Total Tokens	5	184.5	69.7	81	332
	6	173.7	58.1	82	310

7	203.1	83.6	80	362
8	248.1	104.7	89	463
Total	200.3	83.8	80	463

Mean values of total families, types, and tokens of words increase in parallel with learners' grade levels except for a slight decrease in the sixth grade in total families and total tokens groups. This incremental development in vocabulary size is an expected outcome, since learners receive constant exposure to the target language as they transfer to upper grades. Figure 1 displays the spread of the distribution of tokens. The bar graph also shows the linear progression in learners' productive vocabulary in terms of distribution of tokens apart from a slight decrease observed in the sixth grade.

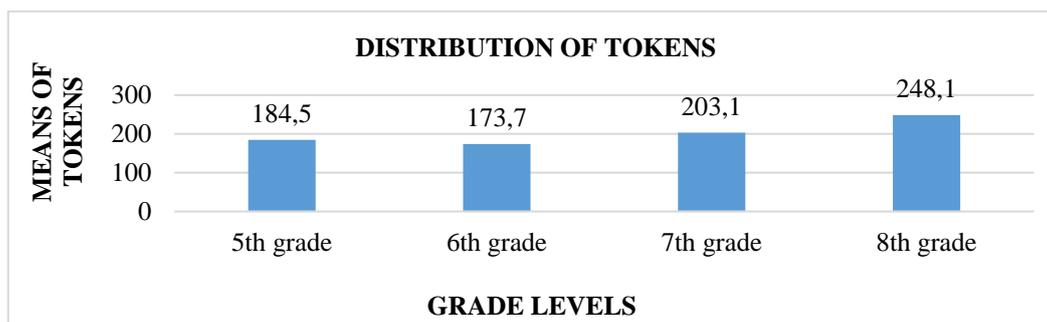


Figure 1. Distribution of tokens

For a more comprehensive understanding of learners' productive vocabulary size, the number of words belonging to K1 families, K2 families, and AWL families were also calculated. Table 5 presents the sample size in each group, means, and standard deviations of participants' productive vocabulary size.

Table 5. Descriptive statistics for K1 families, K2 families, AWL families, Total families

		N	Mean	Std. Dev.	Min.	Max.
K1 Families	5	55	50.36	17.20	23	104
	6	59	50.07	13.25	28	92
	7	54	59.63	21.28	28	103
	8	48	71.33	24.33	31	123
	Total	216	57.26	20.85	23	123
K2 Families	5	55	6.78	3.09	1	16
	6	59	7.24	3.76	2	24
	7	54	8.46	4.72	2	21
	8	48	10.85	5.13	3	25
	Total	216	8.23	4.45	1	25
AWL Families	5	15	1.40	0.83	1	3
	6	14	1.14	0.36	1	2
	7	16	1.19	0.40	1	2
	8	27	1.81	1.04	1	4
	Total	72	1.46	0.82	1	4
Total Families	5	55	57.58	19.77	27	121
	6	59	57.07	16.26	32	104
	7	54	68.44	25.27	33	118
	8	48	83.21	29.09	38	139
	Total	216	65.85	24.89	27	139

A gradual increase with a slight decrease in the sixth grade was observed in K1 families (M=50.36, M=50.07, M=59.63, M=71.33 respectively), a consistent increase in K2 families (M=6.78, M=7.24, M=8.46, M=10.85) respectively and an inconsistent spread in AWL families (M=1.40, M=1.14, M=1.19 M=1.81 respectively). The changes in K1 and K2 families reflect the evolution of the increment of word knowledge over four years. High standard deviation values in K1 families group demonstrate that the sample is very heterogeneous. This heterogeneity signifies the distribution of some learners' knowledge of very few words in English, and others possessing larger vocabulary sizes.

The second research question in this study was to find out the effects of grade level on middle school students' EFL productive vocabulary knowledge. A one-way between groups ANOVA with grade-level (Grades 5, 6, 7 and 8) as between group factor was conducted on the learners' productive vocabulary scores. Comparisons were made on two dimensions:

- i. on the number of K1, K2, AWL and Total families.
- ii. on the percentages of K1, K2, K1+K2, AWL, Offlist and AWL+Offlist.

In order to gain statistical value of the nature of the differences across grade levels, we conducted parametric tests of means comparisons for four dependent variables.

Table 6. ANOVA Summary table in terms of the number of K1, K2, AWL and Total families

Dependent Variable	Grade Effect (df=215)
K1 families	14.025*
K2 families	9.545*
AWL families	2.152
Total number of families	14.856*

* $p < .01$

Calculations of ANOVA on K1, K2, AWL, and Total families, revealed a significant difference among grade levels in K1, K2 and total number of families. The nature of these differences was further probed through post-hoc Tukey's test for related samples.

Table 7. Post hoc analysis for K1 families

Grade Levels	Tukey Pairwise Comparisons		
	Grade 5	Grade 6	Grade 7
Grade 5			
Grade 6			
Grade 7		< .01	
Grade 8	< .01	< .01	

* $p < .01$

Accordingly, the comparisons of the eighth graders to the fifth, sixth and seventh graders were found to be statistically significant. There are significant differences across grade levels except for AWL families as evidenced by one-way ANOVA results. The post hoc analysis (using Tukey) showed significant differences between the fifth (M=50.36) and eighth (M=71.33), sixth (M=50.07) and seventh (M=59.63), in addition to sixth (M=50.07) and eight graders (M=71.33) for the 1st 1000 values.

Table 8. Post hoc analysis for K2 families

Tukey Pairwise Comparisons			
Grade Levels	Grade 5	Grade 6	Grade 7
Grade 5			
Grade 6			
Grade 7			
Grade 8	< .01	< .01	< .01

* $p < .01$

A post hoc analysis (using Tukey) showed significant differences between the fifth (M=6.78) and eighth (M=10.85), sixth (M=7.24) and eighth (M=10.85), and seventh (M=8.46) and eighth graders (M=10.85) for the second 1000 values.

Table 9. Post hoc analysis for total families

Tukey Pairwise Comparisons			
Grade Levels	Grade 5	Grade 6	Grade 7
Grade 5			
Grade 6			
Grade 7		< .01	
Grade 8	< .01	< .01	< .01

* $p < .01$

Significant differences were observed between the fifth (M=57.58) and eighth (M=83.20), sixth (M=57.06) and seventh (M=68.44), sixth (M=57.06) and eighth (M=83.20), seventh (M=68.44) and eighth graders (M=83.20) for total families.

It should be noted that we first calculated the LFP by taking into account the actual number of families, not by the percentages in each word list. The main reason was to examine the actual change of vocabulary size in four different levels (K1, K2, AWL, total families) of word frequency through language proficiency development.

Nevertheless, Laufer (1995) suggests that comparisons should be carried out using the percentage of words in the four levels. Therefore, in addition to running analyses on the number of words, calculations based on percentages were also carried out to obtain valid results. Table 10 shows descriptive summaries for K1 percent, K2 percent, and K1 + K2 percent levels. The summaries presented are the means, standard deviations, minimum, and maximum values for each of the outcome measures.

Table 10. Descriptive results on K1, K2, K1+K2 percentages at each grade level

		N	Mean	Std. Deviation	Minimum	Maximum
K1 Percent	5.00	55	84.11	3.42	71.32	90.87
	6.00	59	82.67	3.85	67.50	91.36
	7.00	54	84.91	3.25	73.20	92.59
	8.00	48	85.63	2.87	78.52	91.42
	Total	216	84.26	3.54	67.50	92.59
K2 Percent	5.00	55	12.78	2.87	7.69	19.09
	6.00	59	14.00	2.90	6.58	21.01

	7.00	54	12.35	2.97	5.65	20.00
	8.00	48	10.42	3.12	0.00	19.63
	Total	216	12.48	3.20	0.00	21.01
K1+K2 Percent	5.00	55	96.89	2.30	89.19	100.00
	6.00	59	96.67	2.56	85.83	100.00
	7.00	54	95.41	13.39	1.00	100.00
	8.00	48	96.30	2.04	90.45	99.64
	Total	216	96.33	6.92	1.00	100.00

Descriptive results on K1, K2, K1+K2 percentages at each grade level demonstrate variation across grade levels rather than a gradual progress. In order to see whether the differences in K1, K2, K1+K2, AWL, Off-List and AWL+Offlist percentages across grade levels are significant, we used one-way ANOVA. Tukey pairwise comparison was carried out when necessary. Significance level was taken as 1% ($p < 0.01$).

Table 11. ANOVA summary table in terms of the percentages of K1, K2, K1+K2, AWL, Offlist and AWL+Offlist

Dependent Variable	Grade Effect (df=215)
K1 percent	7.618*
K2 percent	13.107*
K1+K2 percent	.475
AWL percent	2.152
Offlist percent	1.084
AWL+Offlist percent	1.775

Differences in vocabulary knowledge are significant for the first 1000 and the second 1000 percentages. No differences were found in K1+K2, AWL, Offlist and AWL+Offlist percentages. Post hoc tests using Tukey revealed the nature of these differences for the effect of grade level on K1 and K2 percentages.

Table 12. Post hoc analysis for K1 percentage

Grade Levels	Tukey Pairwise Comparisons		
	Grade 5	Grade 6	Grade 7
Grade 5			
Grade 6			
Grade 7		< .01	
Grade 8		< .01	

* $p < .01$

Regarding K1 percentage, a multiple comparison of the school year using the Tukey test indicated that the mean percentage of sixth grade students ($M=82.17$) was significantly lower than the ones in the seventh ($M=84.9$) and eighth years ($M=85.6$, $p < .01$). The other comparisons were not significant.

Table 13. Post hoc analysis for K2 percentage

Grade Levels	Tukey Pairwise Comparisons		
	Grade 5	Grade 6	Grade 7
Grade 5			
Grade 6			
Grade 7		< .01	
Grade 8	< .01	< .01	< .01

* $p < .01$

As for K2 percentage, the differences between Grade 5 (M=12.8) and Grade 8 (M=10.4), Grade 6 (M=14) and Grade 7 (M=12.3), Grade 6 (M=14) and Grade 8 (M=10.4), and Grade 7 and Grade 8 (M=10.4) are significant.

4. Discussion and conclusions

Our study depended on the assumption that as the number of years one spends studying English increases, his/her productive vocabulary knowledge will increase accordingly. In terms of total tokens, the comparisons of the 8th graders to the 5th, 6th, and 7th graders were significant confirming this expectation and corroborating Laufer (1995) who claims that the number of words used by beginners and advanced learners in free production is different in favour of advanced learners. The same pattern emerged in the number of K1, K2, and Total families showing that families found in eighth graders' productions were significantly higher compared to the lower grades. This result concurs with the finding that the number of words belonging to each frequency band reasonably drops as learners proceed from higher to lower frequency levels showing a consistent decrease in the number of words known between each level (Brown, 2012).

ANOVA results on the impact of grade level showed that the effect of the school year was statistically significant when K1 and K2 percentages are taken into consideration. Specifically, in the K1 percentages the differences between sixth and seventh as well as sixth and eighth were significant whereas no such differences emerged among the other levels. For the K2 percentage, an interesting pattern was observed which displayed that mean K2 percentages are ordered as $6 > 5 > 7 > 8$. Despite the differences in K1 and K2 percentages, K1+K2 percentage did not reveal significant differences across grade levels. Neither was the effect of the grade level significant based on AWL percentage. Even though learners were more likely to use fewer frequent words as they progressed from the fifth to eighth grades as demonstrated by the number of words belonging to K2 and AWL families, K2 and AWL percentages do not allow us to confidently maintain this claim.

The eighth graders produced the highest number of word families in the 2000 band. However, K2 percentage points of this group were found to be the lowest. This might have resulted from the type to token ratio since the eighth graders also had the highest numbers in terms of the total tokens produced. The number of tokens might have lowered the percentages. Based on this finding, we can conclude that the LFP measure can be used as a diagnostic tool to identify students' extent of reliance on high-frequency vocabulary. Owing to this feature, it can also serve as a pedagogical tool to detect learners who have poor productive vocabulary knowledge.

The examination of how the language repertoire of bilinguals varies at the lexical level by comparing vocabulary use across grade levels revealed that the majority of words used in these young learners' stories were from the first 1000 band displaying an over-dependence on the high frequency words for their productive abilities. Horst and Collins (2006) in Québec also obtained a similar result. The

researchers reported that young francophone learners of English use a larger variety of high frequency words (up to K1 layer) despite having 400 hours of instruction. Similarly, the first 1000 words are found to be more integral in comprehension and production than the second or third 1000 words (Webb & Chang, 2012). Overall, it is safe to maintain that there is an incremental development of vocabulary growth in terms of the number of words produced. Likewise, Catalán and Espinosa (2005) demonstrated a “gradual and cumulative increase” in young learners’ productive vocabulary knowledge by comparing type differences in the essays of fourth and fifth grade learners. However, it should also be noted that as Nikolov and Djigunovic (2006) claim, this vocabulary growth occurs at a slower rate.

Our final words will be related to questioning whether LFP can be a reliable and valid measure to safely generalize from our findings. Previously, the lexical frequency profiler developed by Laufer and Nation (1995) was criticized for producing very low percentages beyond 2000 band with low-proficiency level learners (Meara & Bell, 2001). Another drawback related to LFP is the occurrence of cases of inconsistency between the percentage points and the actual number of words (Meara, 2005). Agreeing with Smith (2005), we maintain that LFP may not be a comprehensive measure of lexical richness and hence it requires revision. In our study, we were not able to detect evidence of discriminating between learners at different proficiency levels as opposed to what Laufer and Nation (1995) claim. Our results seem to concur with the assertion that LFP may not yield reliable results with very low level learners because the percentage of words that go beyond the first 2000 words of English is very low (Meara & Bell, 2001).

5. Pedagogical Implications and Limitations

That the learners benefitted mostly from the most frequent 2000 words in their free production calls for our attention to these words in language classes through focused and explicit teaching. The knowledge of the frequency band of words used by young learners across the fifth, sixth, seventh, and eighth grades allows us to take informed decisions as to the frequency of words to be introduced across the grades of the middle school and to adopt strategies for teaching vocabulary. In this respect, LFP measure can be used for curriculum-design purposes as suggested by Laufer and Nation (1995).

In this study, only the breadth (size) of vocabulary development was the focus of our attention rather than the depth (quality) of vocabulary knowledge. For future studies, we suggest researchers should attempt to understand the qualitative traits of vocabulary such as how words are put into use in different contexts in addition to the number of productive words in the mental lexicon of learners. Another limitation is associated with the generalizability of our findings. Since we only gathered data from students at one private middle school, the findings may fail to represent productive vocabulary size of all EFL learners in Turkey. The replication of this study with larger groups from both state and private schools will help demonstrate the productive vocabulary profile of learners in this age group. Last, it should be noted that it is not possible to extrapolate overall productive vocabulary size from LFP.

Acknowledgements

We thank participating students for their time and effort and the teachers who encouraged their students to participate in our study.

A shorter version of this study was presented at the *10th ELT Research Conference* held between 25-27 April 2018, in Antalya-Turkey.

References

- Astika, G. G. (1993). Analytical assessments of foreign students' writing. *RELC Journal* 24(1), 61-70.
- Brown, D. (2012). The frequency model of vocabulary learning and Japanese learners. *Vocabulary Learning and Instruction* 1(1), 20-28. DOI: 10.7820/vli.v01.1.brown
- Catalán, R. M. J., & Espinosa, S. M. (2005). Using Lex30 to measure the L2 productive vocabulary of Spanish primary learners of EFL. *VIAL, Vigo International Journal of Applied Linguistics*, (2), 27-44.
- González, R. A., & Piquer Píriz, A. M. (2016). Measuring the productive vocabulary of secondary school CLIL students: Is Lex30 a valid test for low-level school learners? *Vigo International Journal of Applied Linguistics*, 13, 31-53.
- Heaton, J. B. (1966). *Composition through Pictures*. United Kingdom: Longman Group.
- Henriksen, B. (1999). Three dimensions of vocabulary development. *Studies in Second Language Acquisition*, 21(2), 303-317. DOI: 10.1017/S0272263199002089
- Henriksen, B., Albrechtsen, D., & Haastrup, K. (2004). The relationship between vocabulary size and reading comprehension in the L2. In D. Albrechtsen, K. Haastrup, & B. Henriksen (Eds.), *Writing and Vocabulary in Foreign Language Acquisition* (pp. 129-140). Copenhagen: Museum Tusulanum.
- Angles on the English-Speaking World, No. 4.
- Horst, M., & Collins, L. (2006). From 'faible' to strong: How does their vocabulary grow? *The Canadian Modern Language Review*, 63(1), 83-106. DOI: 10.3138/cmlr.63.1.83
- Laufer, B. (1995). Beyond 2000. A measure of productive lexicon in a second language. In: L. Eubank, L. Selinker and M. Sharwood Smith (Eds.). *The Current State of Interlanguage. Studies in Honor of William E. Rutherford* (pp. 265 – 272). Amsterdam/ Philadelphia: John Benjamins,
- Laufer, B. (1997). The Lexical Plight in Second Language Reading: Words You Don't Know, words You Think You Know, and Words You Can't Guess. In J. Coady and T. Huckin (Eds.) *Second language vocabulary acquisition: A rationale for pedagogy* (pp. 1-34). Cambridge, UK: CUP.
- Laufer, B. (1998). The development of passive and active vocabulary in a second language: Same or different? *Applied Linguistics*, 19(2), 255-271. <https://doi.org/10.1093/applin/19.2.255>
- Laufer, B. (2009). Second language vocabulary acquisition from language input and from form-focused activities. *Language Teaching*, 42(3), 341-354. DOI: 10.1017/s0261444809005771
- Laufer, B. (2012). Lexical Frequency Profiles. In Chapelle C.A. (Ed.), *The Encyclopaedia of Applied Linguistics*. (pp. 3334-3337). Blackwell Publishing Ltd.
- Laufer, B., & Goldstein, Z. (2004). Testing vocabulary knowledge: Size, strength, and computer adaptiveness. *Language Learning*, 54(3), 399-436. DOI: 10.1111/j.0023-8333.2004.00260.x
- Laufer, B., & Nation, P. (1995). Vocabulary size and use: Lexical richness in L2 written

- production. *Applied Linguistics*, 16(3), 307-322. <https://doi.org/10.1093/applin/16.3.307>
- Laufer, B., & Nation, P. (1999). A vocabulary-size test of controlled productive ability. *Language Testing*, 16(1), 33-51. <https://doi.org/10.1177/026553229901600103>
- Ma, S., Zhang, J., Anderson, R. C., Morris, J., Nguyen-Jahiel, K. T., Miller, B. & Hsu, Y. L. (2017). Children's productive use of academic vocabulary. *Discourse Processes*, 54(1), 40-61. DOI: 10.1080/0163853x.2016.1166889
- Meara, P. (2005). Lexical frequency profiles: A Monte Carlo analysis. *Applied Linguistics*, 26(1), 32-47. DOI: 10.1093/applin/amh037
- Meara, P., & Bell, H. (2001). P_Lex: A simple and effective way of describing the lexical characteristics of short L2 texts. *Prospect*, 16(3), 5-19.
- Meara, P., & Fitzpatrick, T. (2000). Lex30: An improved method of assessing productive vocabulary in an L2. *System*, 28(1), 19-30. DOI: 10.1016/s0346-251x(99)00058-5
- Melka, F. (1997). Receptive vs. productive aspects of vocabulary. In N. Schmitt & M. McCarthy (Eds) *Vocabulary: Description, Acquisition and Pedagogy*, (pp. 84-102). Cambridge, UK: Cambridge University Press.
- Nassaji, H. (2003). L2 vocabulary learning from context: Strategies, knowledge sources, and their relationship with success in L2 lexical inferencing. *TESOL Quarterly*, 37(4), 645-670. DOI: 10.2307/3588216
- Nation, I. S. P. (2001). *Learning Vocabulary in another Language*. Cambridge: CUP.
- Nation, I. (2006). How large a vocabulary is needed for reading and listening?. *Canadian Modern Language Review*, 63(1), 59-82. DOI: 10.3138/cmlr.63.1.59
- Nikolov, M. & Djigunović, J. M. (2006): Recent research on age, second language acquisition, and early foreign language learning. *Annual Review of Applied Linguistics*, 26, 234-260. DOI: 10.1017/s0267190506000122
- Nunan, D. (1995). Closing the gap between learning and instruction. *TESOL Quarterly*, 29(1), 133-158. DOI: 10.2307/3587808
- Qian, D. D. (2002). Investigating the relationship between vocabulary knowledge and academic reading performance: An assessment perspective. *Language Learning*, 52(3), 513-536. DOI: 10.1111/1467-9922.00193
- Ouellette, G. P. (2006). What's meaning got to do with it: The role of vocabulary in word reading and reading comprehension. *Journal of Educational Psychology*, 98(3), 554-567. DOI: 10.1037/0022-0663.98.3.554
- Pearson, P. D., Hiebert, E. H., & Kamil, M. L. (2007). Vocabulary assessment: What we know and what we need to learn. *Reading Research Quarterly*, 42(2), 282-296. DOI:

10.1598/rrq.42.2.4

- Smith, R. (2005). The Lexical Frequency Profile: Problems and Uses. In K. BradfordWatts, C. Ikeguchi, & M. Swanson (Eds.) *JALT2004 Conference Proceedings*. Tokyo: JALT.
- Schmitt, N. (2008). Instructed second language vocabulary learning. *Language Teaching Research*, 12(3), 329-363. <https://doi.org/10.1177/1362168808089921>
- Staehr, L. S. (2008). Vocabulary size and the skills of listening, reading and writing. *Language Learning Journal*, 36(2), 139-152. DOI: 10.1080/09571730802389975
- van Zeeland, H., & Schmitt, N. (2012). Lexical coverage in L1 and L2 listening comprehension: The same or different from reading comprehension?. *Applied Linguistics*, 34(4), 457-479. DOI: 10.1093/applin/ams074
- Waring, R. B. (1999). *Tasks for assessing second language receptive and productive vocabulary* (Doctoral dissertation, University of Wales Swansea). Retrieved on March 6, 2018 from <http://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.544366>
- Webb, S. (2008). The effects of context on incidental vocabulary learning. *Reading in a Foreign Language*, 20(2), 232.
- Webb, S., & Chang, A. C. (2012). Vocabulary learning through assisted and unassisted repeated reading. *Canadian Modern Language Review*, 68(3), 267-290. DOI: 10.3138/cmlr.1204.1
- West, M. (1953). *A general service list of English words: with semantic frequencies and a supplementary word-list for the writing of popular science and technology*. Addison-Wesley Longman Limited.
- Wilkins, D. A. (1972). *Linguistics in Language Teaching*. Hodder & Stoughton Educational.
- Zimmerman, C.B. (1997). Historical trends in second language vocabulary instruction. In J. Coady & T. Huckin (Eds.), *Second language vocabulary acquisition: A rationale for pedagogy* (pp. 5-19). Cambridge, UK: Cambridge University Press.
- Zimmerman, K. J. (2004). *The role of vocabulary size in assessing second language proficiency* (MA thesis, Brigham Young University. Department of Linguistics).

Genç yabancı dil olarak İngilizce öğrencilerinin yazılı metinleri bize onların üretimsel sözcük bilgisi hakkında neler söylüyor?

Öz

Sözcük bilgisi değerlendirilmesinde, algılayıcı sözcük bilgisi çoğunlukla araştırılan bir boyut iken, sözcük dağarcığının üretimsel yönü ile ilgili araştırmaların az olduğu görülmektedir. Özellikle Türkiye bağlamında, ilköğretim öğrencileri söz konusu olduğunda yabancı dil olarak İngilizce öğrenen öğrencilerin İngilizce üretimsel sözcük bilgisi ile ilgili araştırmalar yok denecek kadar azdır. Ancak yabancı dil olarak İngilizce öğrenen öğrencilerin İngilizce sözcük varlıklarını incelemek son derece önemlidir. Bu nedenle, bu çalışma ilköğretim beşinci, altıncı, yedinci ve sekizinci sınıflarda öğrenim gören öğrencilerin sınıf düzeyindeki değişimlerinin İngilizce üretimsel sözcük dağarcıkları üzerindeki etkisini incelemektedir. Verilerin toplanması için katılımcılara bir dizi resim (Heaton, 1966) verilerek resimlerde gördüklerine dayanarak bir öykü yazmaları istenmiştir. Öğrencilerin sözcük düzeylerindeki benzerlikleri ve farklılıkları belirleyebilmek amacıyla sözcüksel sıklık profili tekniği kullanılmıştır. Çalışmanın bulguları, Türk öğrencilerinin İngilizce sözcük edinim sürecine ilişkin iç görüler sunmaktadır.

Anahtar Kelimeler: resimli öykü; sözcüksel sıklık görüntüsü; üretimsel sözcük bilgisi; yazılı üretim

AUTHOR BIODATA

Dr. Suzan Kavanoz an instructor of Applied Linguistics currently working at the Department of Foreign Languages Education, Yıldız Technical University, Istanbul. She received her PhD in English language teaching from the Middle East Technical University, Ankara. Her research interests include academic writing, L2 vocabulary development, EFL teaching methodology, teacher beliefs, and teacher identity.

Dr. Burcu Varol is an instructor at Yildiz Technical University in the department of Foreign Languages Education. She holds a PhD in English Language Education from Boğaziçi University, İstanbul. Her research interests include cognition in language learning, the role of working memory in language learning, L2 reading and vocabulary, teacher cognition, language teacher education, online and mobile-assisted learning.