VOCABULARY PROFILING OF ENGLISH TEXTBOOKS USED AT ARMENIAN PUBLIC SCHOOLS

SUSANNA NANYAN

National Academy of Sciences of the Republic of Armenia
International Scientific-Educational Center
Lecturer at the Chair of Foreign Languages
susanna.nanyan@isec.am

ANI HOVHANNISYAN

French University in Armenia
Lecturer at the Chair of Foreign Languages
h.ani19952@gmail.com

Abstract

The aim of this research was to find out what tasks were included in the textbooks of public schools to enhance students' vocabulary learning. We aimed to profile the vocabulary included in each group to see if the words formed were appropriate for each level, if they were frequently used, what kind of tasks were included to enhance the vocabulary learning process.

The participants of the current study were Armenian public-school students of the 1st, 6th and 12th grades. We profiled the vocabulary of each textbook to reach the results we were aiming at.

Keywords and phrases: vocabulary, profiling, school, textbooks, students, corpora.

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ՀՀ Գիտությունների ազգային ակադեմիա
Գիտակրթական միջազգային կենտրոն
օտար լեզուների ամբիոնի դասախոս
susanna.nanyan@isec.am

ԱՆԻ ՀՈՎՀԱՆՆԻՍՅԱՆ

Հայաստանում ֆրանսիական համալսարան

օտար լեզուների ամբիոնի դասախոս

h.ani19952@gmail.com

Համառոտագիր

Սույն հոդվածի նպատակն էր պարզել, թե ինչ խնդիրներ են ներառված հանրակրթական դպրոցների դասագրքերում՝ ուսանողների բառապաշարի ուսուցումը բարելավելու համար: Ընդհանուր առմամբ հետազոտվել է յուրաքանչյուր բառային խմբի մեջ ընդգրկված բառապաշարը՝ տեսնելու համար, թե ներառված բառերը արդյոք համապատասխանում են յուրաքանչյուր մակարդակի, և տվյալ բառերը ինչ հաճախականությամբ են օգտագործվում:

Հետազոտության մասնակիցները 1-ին, 6-րդ և 12-րդ դասարանների հայկական պետական դպրոցների աշակերտներ էին: Հետազոտվել և բաշխվել է յուրաքանչյուր դասագրքի բառապաշարը՝ հասնելու այն արդյունքին, որին մենք նպատակադրել էինք:

Բանալի բառեր և բառակապակցություններ. բառապաշար, դասագիրք, դպրոց, հետազոտություն, կրթում:

СЛОВАРНЫЙ СОСТАВ УЧЕБНИКОВ АНГЛИЙСКОГО ЯЗЫКА, ИСПОЛЬЗУЕМЫХ В ГОСУДАРСТВЕННЫХ ШКОЛАХ АРМЕНИИ

СУСАННА НАНЯН

Национальная академия наук Республики Армения

Международный научно-образовательный центр

преподаватель кафедры иностранных языков

susanna.nanyan@isec.am

АНИ ОГАНЕСЯН

Французский университет в Армении

преподаватель кафедры иностранных языков

h.ani19952@gmail.com

Аннотация

Целью данного исследования было выяснить, какие задачи были включены в учебники государственных школ для улучшения усвоения учащимися словарного запаса. Мы стремились профилировать словарный запас, включенный в каждую словарную группу, чтобы увидеть, подходят ли включенные слова для каждого уровня, если они часто используются, какие задачи были включены для улучшения процесса изучения словарного запаса.

Участниками данного исследования были учащиеся 1, 6 и 12 классов армянских государственных школ. Мы профилировали словарный запас каждого учебника, чтобы достичь желаемых результатов.

Ключевые слова и фразы: словарный запас, профилирование, школа, учебники, студенты, корпус

Introduction

Textbooks, used in public schools of Armenia, are not frequently updated. Moreover, there seems to be a need for bringing forth some valid evidence emphasizing the importance of working on the vocabulary of English textbooks. Thus, this paper aims to profile the vocabulary of English textbooks used at Armenian public schools, namely, textbooks of the fifth grade, the ninth grade and the twelfth grade, to have a general understanding of how effectively the vocabulary of each textbook is chosen and whether it enhances students' proficiency level. We also want to find out if the vocabulary of the textbooks is appropriate or not for the grade it is intended for.

The current study is important as it will bring forth the weaknesses of the textbooks under research and will create a chance for making the textbooks more useful. Through the results of the study, it will be possible to adapt the vocabularies of each textbook and make them more effective.

The research question is: "How appropriate are the vocabularies included in the fifth grade, ninth grade, twelfth grade English textbooks of Armenian public schools depending on the corresponding level?"

Literature Review

Research indicates that vocabulary is an inseparable part of learning a foreign language and languages, from the perspective of history as well as the way everyone learns their first or second languages, first appear as words [16]. However, it is very important to have a clear understanding of what knowing a word means and there are different types of vocabulary knowledge [11].

When deciding what the vocabulary goals are in case of long-term studies three main
criterion should be taken into consideration. Firstly, what the number of words in the target language is, how many words the native speakers of the language know, how many words are needed to use the language [5]. According to Hirsh and Nation [1] so as to understand a text in English, learners need to understand quite a high percentage of the vocabulary. Liu [2] also states that the larger the learner's vocabulary knowledge is, the easier it becomes to comprehend the text. As Laufer [15] asserts 95% can be enough to understand a text. However, according to the recent study done by Hu and Nation [15] the percentage goes up to 98-99% especially for written texts. Understanding 98% of a text means that the learner does not know one word among fifty words, which might still make it difficult to understand the text fully [15].

Furthermore, to estimate how difficult the vocabulary is, various measures can be implemented. The most frequently used ones are word frequency and word length [5]. Nation [5,15] states "vocabulary is learned in the order of its frequency". This means students learn the first 1000 words before learning the second 1000 words, and they learn the second 1000 words before the third 1000 words, etc [5]. Nation [5] distinguishes three types of frequency levels of word families: high-frequency words (the most frequent 2000-word families), mid-frequency words (7000word families from the third to the ninth 1000-word lists included), low-frequency words (starting from tenth 1000word list).

Consequently, it can be stated that when writing textbooks, it is undoubtedly important to take into consideration word frequencies to choose appropriate vocabulary to teach for each level. Thus, vocabulary profiling brings forth reliable information about appropriateness and usefulness of words and phrases according to Common European Framework (CEFR, nd). Moreover, when creating course books many factors should be taken into consideration. According to Dodigovic [1] it is very convenient to do vocabulary profiling using free vocabulary profiler. Through this, it is feasible to classify all the words according to their frequency

word lists: the first thousand words, the second thousand words, and the academic word list. These lists are made according to the frequencies of word usage in general and academic texts. As Nation **[5]** and Coxhead state approximately 70% of academic texts comprise the first thousand-word list, while if the second thousand-word list is added to the first thousand, it makes about 80%. Moreover, the first and second thousand-word lists combined with academic word list make the achievement of 90% of academic texts **[10].**

Textbooks are the key factors in language teaching. Nevertheless, as McGarell and Zyong Nguien **[12]** argue their effectiveness and the language included in them has been questioned many times from the perspective of usefulness. Additionally, it has become easy to find answers to such questions through corpus linguistics, which provides large data banks concerning natural texts. "The term corpus commonly refers to an electronic text" **[10, ҍ 445]**. Corpora also refers to the process of gathering texts which the researcher wants to examine. This is a great tool for quantitative method as it allows to count how frequently the linguistic phenomena under study occur **[1]**. Corpora can be a great source for identifying differences "across registers, lexico-grammatical associations, discourse variables, language acquisition" **[12, ҍ 166]**.

In addition, as research done by Quero **[14]** suggests, it is essential to use corpus comparison approach, which is using two different corpora. In order to compare word frequencies, non-technical and technical corpora can be used. Furthermore, after comparing word frequencies in both non-technical and technical corpora, words, which are frequent in non-technical corpus should be chosen. On the other hand, words, which are more frequent only in technical corpus are supposed to be technical words.

Dodigovic **[1]** did a study with the purpose of investigating the readings and identifying whether students' vocabulary knowledge corresponds with the comprehension rate. That is the researcher wanted to find out how much of the vocabulary in the readings students actually knew. All the texts used in the course were changed into electronic format. Moreover, the writings done by the students were also collected forming a different corpus. Dodigovic **[1]** used Complete Lexical Tutor to do the profiling of the materials under the study. Within one semester the researcher collected two text corpora, which were later analyzed. The results of the study showed that the vocabulary which was mainly used in the textbooks contain 6559 different vocabulary items many of them being low-frequency words.

Consequently, it was found that none of the three frequency lists included 15% of the vocabulary that the texts contained, which is a true challenge for the learners.

Liu **[2]** also did research with the purpose of finding out whether the participants' actual vocabulary size matches the new English textbook. To implement the latter, the participants did the vocabulary level test. Then, the textbook used by the students, was profiled using VP-Complete. The results showed that the textbook corresponds with the level of the students containing a small vocabulary which is slightly hard for the learners. However, as stated by Liu **[2]** it is normal to include vocabulary which is a bit beyond students' proficiency level, in a way making the students' English learning process easier. Additionally, the research also emphasized the need of academic vocabulary included in the textbook, as the students were found not to have any knowledge of academic words. Thus, such research can serve as a good source of information when choosing teaching materials for the students.   Taking into consideration the research that has been done so far and the fact that in Armenia, according to anecdotal evidence, textbooks, which are used at public schools do not contribute to the learning process as effectively as they are supposed to, we see a gap which could be filled through profiling the textbooks under our research. Besides, the main reason for students' not learning the vocabulary might be the fact that some of the words, which are included in the textbooks, seem to belong to low-frequency word list or might even be off-list. Moreover, as at Armenian schools English is constrained by time, it is undoubtedly important to include vocabulary which corresponds the level and fits.

The current study used Vocabulary Profiler as a tool to profile and analyze the vocabulary in the following textbooks:

Textbook	Publisher	Year	Author
1. ENGLISH 5	Manmar	2014	G. Gasparyan
2. ENGLISH 9	Manmar	2015	G. Gasparyan N. Hovhannisyan H. Qajberuni
3. ENGLISH 12	Manmar	2011	S. Baghdasaryan S. Gyurjayants

Table 1. Textbooks with bibliographic information

According to the curriculum of Armenian English classes at public schools (Անգլերենի ծրագիր, nd), the fifth-grade students are supposed to have a proficiency level of A1-1, the ninth-grade students are supposed to have a proficiency level of A2-2 and the twelfth-grade students B1-2. As Schmitt **[6]** mentions, there is not a magic vocabulary size.

According to Schmitt **[6]** , students in the initial stages of language learning are supposed to have a vocabulary size of not more than 2000 words, so the fifth and the ninth grades fall into the first levels of proficiency. Moreover, Alexiou & Milton **[4]** tried to classify CEFR levels according to vocabulary sizes. According to them, a thousand-word list is for A1 level, which can be maximum 1500. The fifth grade belongs to this category. While, the ninth-grade students, having the level of A2-2, are supposed to have a vocabulary size ranging from 1500 to 2500 but not more. Furthermore, the twelfth-grade students, who are B1 level, are supposed to have a vocabulary of 2750-3250.

CEFR level	Vocabulary size: English
A1	<1500
A2	1500 – 2500
B1	2750 – 3250
B2	3250 – 3750
C1	3750 – 4500
C2	4500 – 5000

Table 2. Vocabulary size estimates, based on CEFR levels

Results

The tables below depict the frequency levels of the vocabulary of each textbook. Nation **[5]** states that the most commonly used words are the K-1 words. Such words can occur in any text. While, words that have less frequency in the texts are the K-2 words. Schmitt **[7]** claims that 3000 words are considered to be high frequency words. On the other hand, Lugiyanto **[17]** asserts that the off-list words are usually names of places or people or specialized terms used in a specific discipline that students in junior high schools may not need to learn.

Freq. Level	Freq. Level	Types (%)	Tokens (%)	Cumul. token %
K-1 Words:	472 (80.00)	652 (67.49)	5393 (85.92)	85.92
K-2 Words:	82 (13.90)	89 (9.21)	241 (3.84)	89.76
K-3 Words:	6 (1.02)	6 (0.62)	15 (0.24)	90.00
K-4 Words:	15 (2.54)	18 (1.86)	35 (0.56)	90.56
K-5 Words:	6 (1.02)	7 (0.72)	18 (0.29)	90.85
K-6 Words:	2 (0.34)	2 (0.21)	7 (0.11)	90.96
K-7 Words:	1 (0.17)	1 (0.10)	1 (0.02)	90.98
K-8 Words:	2 (0.34)	3 (0.31)	4 (0.06)	91.04
K-9 Words:	2 (0.34)	2 (0.21)	19 (0.30)	91.34
K-10 Words:	1 (0.17)	1 (0.10)	1 (0.02)	91.36
K-11 Words:				
K-12 Words:				
K-13 Words:				
K-14 Words:				
K-15 Words:				
K-16 Words:				
K-17 Words:				
K-18 Words:				
K-19 Words:				
K-20 Words:				
K-21 Words:				
K-22 Words:	1 (0.17)	1 (0.10)	2 (0.03)	91.39
K-23 Words:				
K-24 Words:				
K-25 Words:				
Off-List:	??	198 (20.50)	541 (8.62)	100.00
Total (unrounded)	590+?	966 (100)	6277 (100)	≈100.00

RELATED RATIOS & INDICES
Pertaining to whole text   Words in text (tokens): 6277   Different words (types): 966   Type-token ratio: 0.15   Tokens per type: 6.50
Pertaining to onlist only   Tokens: 5736   Types: 768   Families: 590   Tokens per Family: 9.72   Types per Family: 1.30

Table 3. The textbook of the fifth grade

As the table shows, the textbook of the fifth grade beside the needed K-1 and K-2 word list includes K-3 words, K-4 words, K-5 words, etc. According to the word

lists, there are a lot of words that are not normal to teach to the fifth-grade students and do not correspond with their level. For example: *affirm, apology, core, correspond, duke, endure, mere, rage, shield, urge, urgent* (3,000 families), *alike, arrow, bead, drown, elbow, fare, fleet, fuse, hut, ladder, pill, mat, sip, sleeve, thigh, thread, wit* (4,000 families), *bait, cozy, creek, deed, fiddle, fume, gratitude, lure, paddle, stool, influenza, mattress, fiddle* (from 5,000 families), ape, *carpenter, dune, jug, juggle, lantern, mare, satire, yarn* (from 6,000 word families), etc. Such words become a burden for the students and hinder them to acquire the vocabulary needed for their level. Words, which do not correspond with the level, could easily be replaced by easier versions not to confuse the student. For instance, the word *ape* could be replaced by the word *monkey* or instead of using the word *carpenter*, it would be better to say *a person who makes wooden objects*. However, some of the words found in less-frequent lists are important to teach to the learners of the fifth grade. Words like *shorts, scarf (K5),* trousers (K4) are types of clothing which students need to know. Even though words like *grammar (K5), alphabet (K6), pupil (K3), plural (K4), adjective (K6)* do not correspond with the level, they are all technical words and are needed for the teaching process. Furthermore, for example the word *pea* was used in a short story and that word could not be replaced and was necessary for the story.

Moreover, Off-list words were found to be mostly proper nouns, which were needed to be included in the texts. Thus, they do not have much value in the current study.

Table 4. The textbook of the ninth grade

RELATED RATIOS & INDICES
Pertaining to whole text   Words in text (tokens): 10763   Different words (types): 1917   Type-token ratio: 0.18   Tokens per type: 5.61
Pertaining to onlist only   Tokens: 9911   Types: 1652   Families: 1179   Tokens per Family: 8.41   Types per Family: 1.40

Secondly, the picture of the ninth grade is quite similar to the fifth grade. For this grade, the approximate number of vocabulary is 1500-2500 **[4], [15].** However, as the results show (table 4) there are words even from K-9, K-11, K-12. There can be found words from K-16 which are already considered to be low-frequency words and are not recommended to teach. Some words, not matching the level of the students are: *absurd, acquaint, cave, flush, fond, harvest, flush, helmet, hood, incline, judicial, municipal, questionnaire,*

precious, pearl, spike, parasol (4,000 families), *abbey, badge, bait, cellar, clasp, courtyard, crook, dreadful, dye, hatred, interrogate, jog, leaflet, mint, porch, ripe, witch* (5,000 families), *attic, closet, fortress, hound, mend, plum, razor, strait, surpass, warden* (6,000 families), *broom, buff, coward, equator, raven, stale* (7,000 families), butler, com, gilt, soles, (8000 families), etc. Teaching such words to A2 level students is not appropriate which does not contribute to the students' vocabulary growth. Consequently, the words that are supposed to be in the active vocabulary of the students are not frequently met in the texts and are easily forgotten. However, based on the study some words were identified that are essential to be included in the textbook even though they belong to word-lists which are considered to be hard for the students. To illustrate, words like *grammar, vocabulary, singular (K5), adjective (K6), noun (K7), pronoun (K8)* are all necessary for the students.

Freq. Level	Freq. Level	Types (%)	Tokens (%)	Cumul. token %
K-1 Words:	834 (38.54)	1593 (41.32)	13310 (76.52)	76.52
K-2 Words:	505 (23.34)	769 (19.95)	1474 (8.47)	84.99
K-3 Words:	385 (17.79)	511 (13.26)	879 (5.05)	90.04
K-4 Words:	164 (7.58)	185 (4.80)	265 (1.52)	91.56
K-5 Words:	84 (3.88)	95 (2.46)	128 (0.74)	92.30
K-6 Words:	46 (2.13)	51 (1.32)	75 (0.43)	92.73
K-7 Words:	49 (2.26)	51 (1.32)	63 (0.36)	93.09
K-8 Words:	27 (1.25)	27 (0.70)	34 (0.20)	93.29
K-9 Words:	19 (0.88)	20 (0.52)	32 (0.18)	93.47
K-10 Words:	12 (0.55)	14 (0.36)	18 (0.10)	93.57
K-11 Words:	9 (0.42)	10 (0.26)	15 (0.09)	93.66
K-12 Words:	6 (0.28)	7 (0.18)	7 (0.04)	93.70
K-13 Words:	6 (0.28)	6 (0.16)	8 (0.05)	93.75
K-14 Words:	1 (0.05)	1 (0.03)	1 (0.01)	93.76
K-15 Words:	3 (0.14)	3 (0.08)	6 (0.03)	93.79
K-16 Words:	5 (0.23)	5 (0.13)	6 (0.03)	93.82
K-17 Words:	2 (0.09)	2 (0.05)	2 (0.01)	93.83
K-18 Words:	2 (0.09)	2 (0.05)	3 (0.02)	93.85
K-19 Words:	2 (0.09)	2 (0.05)	3 (0.02)	93.87
K-20 Words:	1 (0.05)	1 (0.03)	1 (0.01)	93.88
K-21 Words:				
K-22 Words:				
K-23 Words:				
K-24 Words:	1 (0.05)	1 (0.03)	1 (0.01)	93.89
K-25 Words:	1 (0.05)	1 (0.03)	1 (0.01)	93.90
Off-List:	??	510 (13.23)	1062 (6.11)	100.00
Total (unrounded)	2164+?	3855 (100)	17394 (100)	≈100.00

RELATED RATIOS & INDICES

Pertaining to whole text
Words in text (tokens):17394
Different words (types): 3855
Type-token ratio: 0.22
Tokens per type: 4.51

Pertaining to onlist only
Tokens: 16332
Types: 3345
Families: 2164
Tokens per Family: 7.55
Types per Family: 1.55

5. The textbook of the twelfth grade

As for the twelve grade, the proficiency level of the students must be B1 which according to Alexiou & Milton **[4]** requires the knowledge of approximately 3000 words. As the results of the profiling reveal, the textbook contains different word levels ranging from K1 to K-20. Only 76.52% of the vocabulary used in the textbook fall under the most frequently used 1000 words group (K-1). The total coverage and percentage of K-2 and K-3 words are below the required vocabulary knowledge for this proficiency level since they provide information about the difficulty of the textbook. According to the results, the number of off-list words used in the textbook reach 1062 words. However, most of the words were again proper nouns. According to the study there are some words which do not correspond with the level, nevertheless, they were necessary to teach. For instance, the words *verb* and *vocabulary* belong to K5, however, they are vital words for the students to know. Additionally, the words *violet* and *tram* belong to k7, but they can be useful when teaching colors and means of transport.

Furthermore, the words found unnecessary for the level are: *acutely, arrogance, aspiring, boast, counterparts, concession, contrary, crust, flourish, gulf, hurricane, intimidation, invaded, peculiar, slumped, savagery, spike,, wreckage* (4,000 families), *assimilate, bleak, bribe, clawing, congested, degrading, eccentric, imminent, lavishly, rag, slack, stewardess* (5,000 families), *abound, adversary, gin, grudgingly, impoverished, patronage, poachers, prominence, sage, stooped* (6,000 families,) *badger, blackmail, cunning, detract, gusty, obituary, puncture, saucer, thrift, timidly, whereabouts* (7,000 families), *beset, dormant, dreary, fad, freckles, ingenuity, invasive, molten, succinct, synagogues* (8,000 families*), atonement, crucified, jester, polio, spews, warren (9,000 families), confluence, connotation, diaspora, doted, epithet, magma, mortification* (10,000 families), etc.). Most of the words are not only difficult for this level, they are also words which are of low-frequency. Therefore, it can be assumed that the textbook might not be good material for the students to be used to enlarge their vocabulary knowledge needed for this proficiency level.

Discussion

Through the vocabulary profiler it was found out that the three textbooks applied in the study all contain vocabulary which does not match the level of the students. Similar study, done by Dodigovic **[1],** revealed that the vocabulary, used in the readings of the students, does not correspond with their comprehension level. The tool used for the study is Complete Lexical Tutor. The words included were

mostly low-frequency words which is also typical of the current study. However, Dodigovic [1] also analyzied the writings of the students forming a different corpora. Later, the data showed that the vocabulury was a true challnge for the students. The same can be said about the current study, as in all three grades students are overloaded with vocbulary.

Liu [2] carried out a study, which was quite identical with the current one. The researcher analyzed the English textbook using VP compleate to profile the vocabulary and to find out the difficulty level. Nevertheless, the results of this study vary from the current one, as they showed that the vocbalury of the textbook is appropriate for the level of the students. Though it was slightly difficult, the researcher considers it to be normal, as it can be beneficial for the students to be exposed to vocabulary which is a bit more difficult. In contrast with the current study, Liu [2] also emphasized the importance of including academic vocabulary which was missing from the textbook under the study. However, in the current study the vocabulary of the textbooks is not analyzed based on academic wordlists.

Conclusion

To conclude, as the anecdotal evidence suggested the quality of Armenian schools is not on a high level and one of the main reasons is that the textbooks which are used do not contribute to the learning process. The current study brought forth evidence that all three textbooks (used for the third, the fifth, twelfth grades) include vocabulary which is much harder than the actual level of the students. Thus, there is an inconsistence between the level of the students and the textbook that are being used to learn English.

Firstly, the textbook used for the fifth-grade students included words even from K6, K7, K8 and most surprisingly k22, when the vocabulary should have been limited by K1 and comparatively fewer words from K2. Secondly, the ninth-grade vocabulary was again found to be inappropriate for the level. It did not only include words from levels which are considered to be difficult for this grade, but also words from low-frequency levels. Thirdly, the textbook used in the twelfth grade was also found not to correspond with the level of students. Words from different frequency levels, from K1 to K20 and even from K24 and K25, were included in the textbook which can be a true challenge for B1 level students.

To sum up, based on this study, it can be recommended to consider changing the textbooks used at Armenian public schools, especially when the schools are free to choose a textbook to teach with. The current textbooks, do not foster vocabulary

learning, on the contrary, because of dense vocabulary of each book, students might feel confused. It would be better, if the books used at schools include texts with vocabulary which is appropriate for the level enabling the students to have frequent exposure to high-frequency words corresponding with their level.

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