Receptive and Productive Vocabulary Level Needs: An Empirical Study of Azerbaijani English Majors

Konul Hajiyeva
University of Antwerp
Belgium

Abstract. Studies show that measuring the size of learners' receptive and productive vocabulary has to be an integral part of any needs analysis. However, this kind of study has never been conducted in Azerbaijan. To fill this gap, a quantitative study administering two vocabulary tests was carried out with 159 first-year English majors at the Azerbaijan University of Languages. The results show that the students' vocabulary size does not attain the minimum standard as proposed by Laufer and Ravenhorst-Kalovski (2010), which is defined as 4,000–5,000 word families. Their receptive vocabulary size was found to be less than 50 per cent of the minimum standard for word families, while their productive vocabulary size falls considerably below the acceptable level of word families. It is argued, consequently, that English majors in this group of Azerbaijani students need strong support in their acquisition of high-frequency words and academic vocabulary in order to be adequately and suitably prepared for their academic studies.

Keywords: receptive vocabulary; productive vocabulary; academic vocabulary; needs analysis

1. Introduction

Today modern communication technology is exposing previously isolated countries to new business, diplomatic, tourism and educational opportunities. English as the international language is seen as the gateway to these opportunities and therefore an adaptation of the teaching and learning approach to contemporary and current language needs is urgently required. However, in a country such as Azerbaijan, which is in the process of transforming from a traditional established regime into a dynamic society, facilitating this process is challenging.

This study embraces needs analysis as an efficient and effective tool in order to initiate and manage change where the needs of all stakeholders can be addressed. However, for the purpose of this study the focus is on the learners' needs and, more specifically, on their receptive and productive vocabulary needs. Data

obtained from Azerbaijani English majors will be analysed to explore this aspect and to make suggestions for further steps to be taken.

2. Background

2.1 The state of language usage in Azerbaijan
During the Soviet era, Russian was the dominant language in Azerbaijan (Shafiyeva & Kennedy, 2010: 10), although the republic was officially bilingual. After the collapse of the Soviet Union in 1991, Azerbaijani (a Turkic language) was proclaimed as the country's sole official language (Balayev, 2002). Even though a gradual transition to Azerbaijani in government bureaucracies took place, Russian was preferred as a second language in all spheres of communication. This was due to the linguistic imperialism of Russian and its elevated status as the language of nobility, prestige and of Azerbaijani intellectuals. In the past Russian therefore played an important role in the cultural development of the country and was the language in which the world of culture and literature was internalised. Furthermore, Russian was and, still is, the '*lingua franca* in communications between the various ethnic minorities' – Lezgis, Tatars and Jews – within the country as well as in interactions with other post-Soviet countries (Pavlenko, 2008, p.68).

This situation is changing, however, as Azerbaijan undergoes political, economic and social transformation. A direct result of this has been that the use and the levels of the Russian language competence have decreased. According to the 2004 CDHE report, the present 'titular population constitutes 90.6% of the country's citizens, 24% of whom use Russian actively, whereas 67% have competence in Russian' (Pavlenko, 2008, p. 68). Azerbaijan's goal of joining the European family of nations and its concomitant integration into the global economy has increasingly emphasised the importance of English as the medium of international communication. The system of education is also experiencing tremendous changes. English has replaced Russian and has become the primary foreign language studied at both secondary and tertiary education levels (Shafiyeva & Kennedy, 2010). The shift of emphasis from Russian to English requires a change in curriculum, syllabus design and material development as well as a transformation from Soviet-era methods of instruction to modern European teaching techniques.

2.2 The teaching and learning needs of Azerbaijani English majors
Current teaching of English in Azerbaijan is now more focused on the learners and, in order to meet their needs, this has been transformed from teaching the language for purposes of general usage to teaching it for academic purposes. Not only do all university students have access to English language courses but, in some instances, these courses are also designed to be directly applicable to their specific field of study. In the case of the Azerbaijan University of Languages (AUL), English is the medium of instruction as the students participating in the present study are training to become English language teachers.

After reviewing the syllabi, particularly the teaching materials, and talking to the heads of departments and instructors in the Faculty of Pedagogy at AUL, it was

found that no formal needs analysis for undergraduate students has been conducted. The lack of a formal needs analysis at an undergraduate level is the reason why lecturers at AUL collect the teaching materials and develop syllabi according to their own practices and preferences. Therefore, no unified or coherent syllabus or teaching materials exist that are geared towards meeting the learners' needs. Considering the few research studies (Dudley-Evans, T. & St. John, M, 1998; Hutchinson, T. &Waters, A., 1987) in an English for Specific Academic Purposes (ESAP) context and the nonexistence of empirical and exhaustive research available in Azerbaijan, this study attempts to conduct a needs analysis in order to suggest appropriate changes in the course materials as well as course syllabi aimed at first-year students.

Needs analysis is an integral part of any ESAP course that is used for developing materials, designing a syllabus and determining teaching methods (Dehnad et al., 2010). In an ESAP context, comprehensive programmes are particularly developed for students to fulfill academic tasks such as reading subject-specific textbooks, scholarly journals and writing essays and project work. Jordan (1997) describes subject-specific English as the language required for a particular academic subject, which in this case is linguistics, where its subject matters include the language rules and conventions, genres, vocabulary units, the particular skills needed for the subject and the appropriate academic trainings.

As an English language teacher and researcher, I have often speculated about the vocabulary needs of my students. Statistics sourced from university entrance examination results (Azimova et al., 2014: 88) show that university entrants wishing to continue their studies in language-related disciplines perform well enough in the tests based on the grammatical rules. However, the majority make mistakes in those tests that assess their use of vocabulary, their ability to sequence dialogue logically and their Azerbaijani–English and/or English–Azerbaijani sentence translations. Consequently, the students who manage to pass the entrance examinations face challenges when dealing with their subject-specific studies. This applies especially to those taught through the medium of English in subjects such as Applied Linguistics, Stylistics, History of the English Language, English Grammar and English Language Teaching.

The challenges that first-year students face in understanding and producing academic texts underlines the fact that their language-learning needs are not being met. Studies conducted to date show that knowledge of vocabulary is a good indicator of overall linguistic proficiency and correlates significantly with reading ability (Laufer, 1992; Li & McGregor, 2010; Qian, 2002). Vocabulary breadth or knowing a large number of words does not always attain high linguistic proficiency(Li & McGregor, 2010), but without a vocabulary size reaching a minimum threshold of 4,000 to 5,000 word families,[1] learners will be unable to successfully engage in either receptive or productive language use (Laufer & Ravenhorst-Kalovski, 2010; Nation, 2006; Schmitt, 2010).

---

[1] A 'word family' includes a single word's inflections, derivatives and several individual word forms (Nation, 2011a) (for example *stimulate, stimulative, stimulation, stimulator, stimulatory*).

As knowledge of vocabulary is a fundamental component of language learning and accurate vocabulary assessment tools are a necessity for foreign-language teachers (Li & McGregor, 2010) and researchers, assessing Azerbaijani English majors' actual vocabulary knowledge will be an advantage from a needs analysis perspective. Brown (1995) indicates that the sources of information for such a needs assessment include the gathering of information in order to establish how much the students already know and what they still need to learn. Stufflebeam et al. (1985) suggest using a discrepancy model in which needs are viewed as differences or discrepancies between desired student performance and how they are actually performing.

With these considerations in mind assessing students' vocabulary knowledge for diagnostic purposes as a part of a needs analysis will help to detect whether there are gaps in their vocabulary knowledge and shed light on these specific issues.

2.3 Vocabulary as an integral part of language learning

Research into vocabulary learning has focused on the number of words the language learners are likely to encounter in their reading, since there is a close relationship between success in academic reading and vocabulary knowledge (Corson, 1997; Laufer, 1997; Nation, 2001; Read, 1988). According to studies (Nation, 2006; Staehr, 2009), between 2,000 and 3,000 word families are required in order for a person to be conversant in English. Laufer and Ravenhorst-Kalovski (2010) calculated that between 4,000 and 5,000 word families are required for a 95 per cent text coverage.[2] If, however, a 98 per cent text coverage is required for reading, then this rises to between 6,000 and 7,000 word families. Nation (2006: 79) also calculated that: '[I]f learners of English as a second or foreign language wish to read unsimplified authentic texts without unknown vocabulary being a problem, they should have a vocabulary of between 8,000 and 9,000 word families.'

Research has been done worldwide in order to measure the vocabulary knowledge of English language learners with different language backgrounds. For example, Cobb (1999) estimates that students in Oman know between 500 and 1,000 word families, whereas Arnaud and Sauvignon (1997) state that Finnish school leavers gain between 1,500 and 2,000 word families. In tests conducted in an English-medium programme, Nurweni and Read (1999) found that Indonesian first-year students knew, on average, 1,226 word families. In contrast, studies by Laufer (1998) show that the receptive knowledge vocabulary of Israeli high-school graduates is 3,500 word families and their productive vocabulary encompasses 2,550 word families.

2.4 Vocabulary testing as an integral part of the needs assessment

Nation (2011b) suggested that, from a vocabulary perspective, measuring the size of the learners' vocabulary and the frequency distribution of their vocabulary

---

[2] 'Text coverage' means the number of running words in a text (Laufer & Ravenhorst-Kalovski, 2010).

knowledge both receptively and productively are integral parts of any needs analysis. According to Nation (2011b: 530), 'a needs analysis involves looking at where the learners are now in their knowledge and where they need to go in order to be able to do things that they want to do'. Richards and Schmidt (2010, p. 389) define needs assessment or needs analysis as 'the process of determining the needs for which a learner or group of learners requires a language and arranging the needs according to priorities'. In other words, conducting a vocabulary needs assessment using vocabulary tests gives the teachers a quick, practical way of profiling their students' knowledge of vocabulary in order to provide a basis for planning a vocabulary teaching and learning programme (Read, 1997: 313). Indeed, the number of words known by a learner is the measure of their progress in a language (Sinclair & Renouf, 1991). This means that measuring the size of learners' vocabulary, which involves estimating their knowledge of items in a specified list of relatively high-frequency words, is of great importance to a typical language teacher (Read, 1997). At the same time, the frequency model of vocabulary learning –the idea that the words are learnt broadly in order of their frequency – is routinely applied in language teaching, testing and research (Brown, 2012). A vocabulary frequency profile measures the amount of words known at various frequency bands (Waring, 1997). This model is a key consideration in the design and writing of textbooks and is used daily by teachers and course designers. It appears to be generally accepted that frequency criteria are fairly prominent and, therefore, placed at the top of the list of benchmarks for vocabulary selection (Gairns & Redman, 1986; Meara,1980; O'Dell, 1997; Sinclair & Renouf, 1991).

3. The study
3.1 Research questions
In the light of the above, the purpose of the current research paper, is to construct the receptive and productive vocabulary frequency profiles and the total vocabulary size of first-year English majors at AUL.

In doing so, the following research questions were addressed:

1. What receptive and productive frequency bands are mastered by first-year Azerbaijani English majors?
2. What extent of vocabulary do first-year Azerbaijani English majors possess?
3. How large is the productive vocabulary of first-year Azerbaijani English majors?

3.2 Participants
The participants were 12 groups of first-year AUL English majors at different proficiency levels that have been established previously in groups according to their entrance points. All participants are students of English, but use Azerbaijani as their first language. They have had English as a subject since the age of 11 in secondary school and at tertiary level they have had classes in English only where English is used as a medium of instruction during classes that belong to the English-specific part of the syllabus (Applied Linguistics, English Grammar, Stylistics, Lexicology, the History of the English Language)

apart from more general classes such as Philosophy, Azerbaijan History, General Linguistics, etc. Participants were recruited from the Department of Pedagogy (a total of 159 students: 7 male and 152 female) and their ages ranged from 17 to 18 years.

3.3 Research instruments and procedure

Two instruments were used to measure two dimensions of the participants' vocabulary profile: The first was the Vocabulary Levels Test originally devised by Paul Nation (1990) and validated by Schmitt et al. (2001). The second was the Productive Levels Test (Laufer & Nation, 1999). These tests are reputable as diagnostic tools and are used to measure the learners' knowledge of words from a number of distinct frequency levels. In this way, the test results can provide a profile of a learner's vocabulary, rather than just a single-figure estimate of overall vocabulary size (Schmitt et al., 2001). Thus, they are better suited in my case for identifying English majors' frequency profiles as well as the estimate of overall vocabulary size both receptively and productively.

With respect to the Vocabulary Levels Test the words were selected according to their frequency of occurrence at the 2,000 most frequent words, the 3rd thousand, the 5th thousand, the Academic Word List (AWL) (Schmitt et al., 2001), and the 10th thousand most frequent words. The AWL includes words from the second to fifth frequency levels, therefore, it cannot be considered separate from the other levels (Laufer & Ravenhorst-Kalovski, 2010). The reliability indices (Cronbach's alpha) for all of the sections of the levels are high: .920 at the 2,000 word band, .929 at the 3,000 word band, .927 at the 5,000 word band and .958 at the AWL (Schmitt et al., 2001)

The test uses a form-recognition matching format in which students are required to match groups of three words out of six with their paraphrases as in the following example:

1. copy
2. event   ___ end or highest point
3. motor   ___ this moves a car
4. pity   ___ thing made to be like another
5. profit
6. tip

Each test cluster contains 30 words in ten clusters representing the tested frequency band. In this regard, 30 words were tested on the 2,000 most frequent words, the 3rd thousand, the 5th thousand and the AWL.

The Vocabulary Levels Test is not an accurate measure of vocabulary size but rather an instrument for examining a learner's knowledge of items from particular levels and providing an estimate of vocabulary size as well as an evaluation of the learners' academic vocabulary (Laufer & Ravenhorst-Kalovski, 2010). Therefore the estimations are approximate. They were calculated on the basis of the 2,000, 3,000 and 5,000 word bands of the test. I attempted to follow the calculation formula: *Total score × 5,000 ÷ Maximum score* as suggested by Laufer and Ravenhorst-Kalovski (2010)[i] in order to identify the learners' total vocabulary size.

In the vocabulary-size test of productive ability testees were given a sentence where the first few letters of the tested word were given as a normal gap-fill and the testees had to complete the word. Eighteen items were tested through each frequency band and the University Word List making a total 72 items to be tested. For example:

Plants receive water from the soil through their ro…….. (Roots)

In the case of a vocabulary-size test of productive ability, tested items were distributed randomly in the frequency of occurrence. Different researchers investigating receptive and productive vocabulary knowledge (Fan, 2000; Laufer, 1998; Laufer & Paribacht, 1998; Waring, 1997) used the same grading criterion: awarding one point for each right answer. This could best be explained by the nature of the tests as it did not create ambiguity and confusion. However, there is a discrepancy in the scoring method for the vocabulary-size test of productive ability among the researchers. More specifically, Laufer (1998) and Laufer and Paribakht (1998) mark grammatically wrong forms and spelling errors as correct, whereas Fan (2000) considers those mistakes as incorrect. In my case, I followed the Laufer and Paribakht scoring method by marking wrong grammatical and spelling errors as correct, but at the same time I tried to use a kind of 'sensitive measure'. Those spelling mistakes which were far beyond the tested word were not considered as correct as this could lead to a new meaning not related to the target word. All in all, a score of 15 out of 18 (85%) for the productive test (Laufer & Nation, 1999) and 26 out of 30 (86.6%) for the receptive test (Schmitt et al., 2001) was accepted as indicative of sufficient word knowledge at that particular level.

Tests were organised and distributed in a booklet form. The tests were administered as part of a normal class at the start of the first academic year with the intention of establishing the learners' vocabulary distribution through frequency bands and to estimate their total receptive and productive vocabulary level. The time allocated for the tests was a 90-minute class period.

4. Results and discussion
One of the foundations for the research questions investigated in the present study is to establish the background of the receptive and productive vocabulary frequency profiles of first-year Azerbaijani English majors for the purpose of analysing the needs for materials development. This was achieved by carrying out a descriptive statistical analysis of the two tests on both receptive and productive vocabulary knowledge. The students' scores were calculated at each frequency level of the Levels Test and the Productive Levels Test. With regard to the Levels Test (receptive vocabulary), the results reveal the following pattern: the first 2,000 items are best known and each subsequent band of words is less well known (see Table 1). A consistent fall in the mean and standard deviation (SD) was revealed between 2,000 (mean = 16.8; SD = 7) and 3,000 words (mean = 11.7; SD = 6.3), with only band 5,000 (mean = 7.8; SD = 6.4) appearing to deviate slightly from the general pattern.

Table 1. Results of the Levels Test (mean scores and standard deviations for the frequency bands) (N = 159)

	2,000 word level/out of 30	3,000 word level/out of 30	5,000 word level/out of 30	AWL	Total/out of 90
Mean Score	16.8	11.7	7.8	11.0	36.3
Standard Deviation	7.0	6.3	6.4	6.6	19.7
Minimum	2	2	1	1	5
Maximum	30	27	26	28	83

To

determine whether there were any significant differences for the various word bands among the test-takers, an analysis of variance (ANOVA), with factors level (2,000, 3,000 and 5,000) was performed to statistically confirm the aforementioned assumption. The results show that there were statistically significant differences between the frequency bands at the p<.01 level as determined by a one-way ANOVA [F (2.474) = 73.37, p = .0001], which means that the probability of the difference being due to chance is less than .0001. Therefore, we can reject the idea that all of the differences between frequency bands are due to random sampling and conclude that at least one of the bands differs from the rest. Post-hoc tests were used to compare the differences between the frequency bands. The alpha was set at 0.05 and post-hoc pair-wise comparisons revealed significant differences (p < .05) between the 2,000 word level and each of the following band at 3,000 and 5,000 word level. It was found that, as expected for the students as a whole, knowledge of the words at the 2,000 word level was significantly higher and overall the students' vocabulary knowledge was related to the frequency criteria, with the proportion of words known lowering as frequency of words declined.

The students' vocabulary frequency profiles with respect to the Levels Test show that the number of students who obtained a score of 26 out of 30 (which was established by Schmitt et al. (2001) carrying out a Guttman scalability analysis using a criterion of mastery of 26 out the 30 possible per level) are: 20 students out of 159 at 2,000 level, 7 students at 3,000 level, 2 students at 5,000 word level (see Table 2). This means that only 12% of the test-takers at 2,000 level, 4.4% at 3,000 level and 1.2% at 5,000 word levels of the Levels Test could achieve the minimum score of 26 (86.6%) with respect to the frequency bands.

Table 2. The Number of students who obtained a score of 26 out of 30 with respect to the Levels Test.

Word bands	Number of successful students/out of 159

2,000 word band	20 (12.0%)
3,000 word band	7 (4.4%)
5,000 word band	2 (1.2%)

Schmitt et al. (2001), as opposed to Read (1988), argue that the words on the Academic section of the Levels Test are different to the other levels and, therefore, should not be included in the profile comparison. In fact, Schmitt et al. (2001, p. 68) state that '… the facility values of individual items and Rasch item difficulty figures suggest that the words in the academic level fit in a range between the 2,000 and the 10,000 level'. If, in the present case, the Academic section had to be accommodated somewhere between the frequency levels, on the basis of the results of this group of test-takers, the mean values 11.0 (see Table 1) for the academic vocabulary test would best place it between the 3,000 and the 5,000 word levels.

With regard to the second test – the Productive Levels Test – in terms of the frequency bands, the results show that the students have a lack of vocabulary knowledge even at the first 2,000 word band. The mean and standard deviation values (see Table 3) of the population between 2,000 (mean = 5.7; SD = 3.3); 3,000 (mean = 2.2; SD = 2.22) and 5,000 word levels (mean = 0.62; SD = 1.02) are lower than the expected results. Moreover, the results on the University Word List (UWL) test had to be eliminated as the majority of the students either did not do the tests or had extremely low scores. Since the results for the productive test were not evenly distributed, the non-parametric Friedman's test was used and the differences between the levels were found to be significant. The results show that since p-value .0001 is lower than $\leq 0.01 = \alpha$, we can say that there is a significant difference ($\chi2 = 254.6$) between the levels.

Learners' vocabulary frequency profiles were established for the vocabulary-size test of productive ability. With regard to the Productive Levels Test, Laufer and Nation (1999: 41) state that approximately 15 or 16 out of 18 (85% or 90%) for the respective band indicates that less than 150 words at that level are not readily available for productive use. I decided to follow this suggested criterion and, consequently, a learner's score on each level of 15 out of 18 was considered to be an indication of the student having satisfactory mastery of that level. The results show that none of the 159 students achieved the minimum score of 15 out of 18. The highest mark for the 2,000 level test was 13 and the lowest was 1 with 96 (60%) students scoring between 1 and 6, while 63 (39.6%) of them scored between 7 and 13 at the 2,000 level. The percentage of students that came close to the score limit at 3,000 and 5,000 word level was zero. The normal procedure in the original test is not to test students at a particular level if they have not passed the minimum established score in the previous test. Nevertheless, it was the main purpose of the current study to see how well students' productive vocabulary knowledge was distributed among frequency bands.

Table 3. Results of the Productive Levels Test (mean scores and standard deviations for words from the frequency bands) (N = 159)

	2,000 word	3,000 word	5,000 word	Total/out of

	level/out of 18	level/out of 18	level/out of 18	54
Mean Score	5.7	2.2	0.6	8.5
Standard Deviation	3.3	3.3	1.0	7.6
Minimum	1	0	0	1
Maximum	13	12	5	30

To answer the second and the third research questions to estimate the learners' total receptive and productive vocabulary size, I used the formula – *Total score × 5000 ÷ Maximum score* – as suggested by Laufer and Ravenhorst-Kalovski (2010). If I express the raw scores in terms of the numbers of word families, the total of 36.3 (see Table 1) with regard to the Levels Test represents approximately 2,091 word families out of 5,000. Figure 1 illustrates the test-takers' total receptive vocabulary size with the number of students at each frequency level (26% of the students being at the 2,000 level, 8% of them at the 3,000 level and only two (1,2%) scoring high at the 5,000 level).
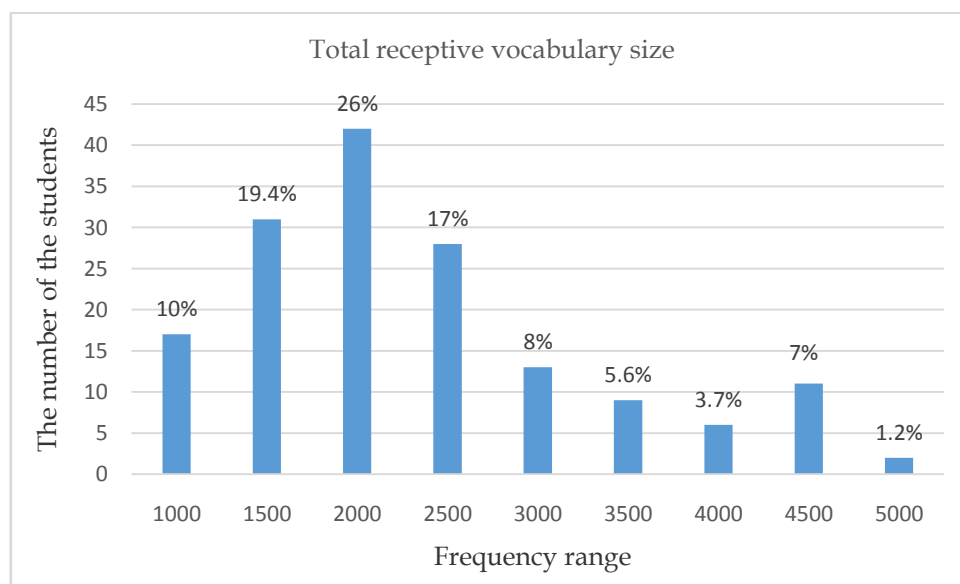

Figure 1. The total receptive vocabulary size of the students

Regarding the total productive vocabulary size, although the results indicated that students had a lack of vocabulary knowledge even at the 2,000 word level, I calculated their total vocabulary size in terms of production using the abovementioned formula suggested by Laufer and Ravenhorst-Kalovski (2010). The converted raw score of the mean value of the total productive vocabulary test of 8.52 (see Table 3) represents approximately 866 word families out of the 5,000 word families tested. Figure 2 illustrates the number and percentage of students at each frequency band with the majority of students being at the 500 and 800 word levels. We can therefore conclude that more than half of the students are below 1,000 word level.
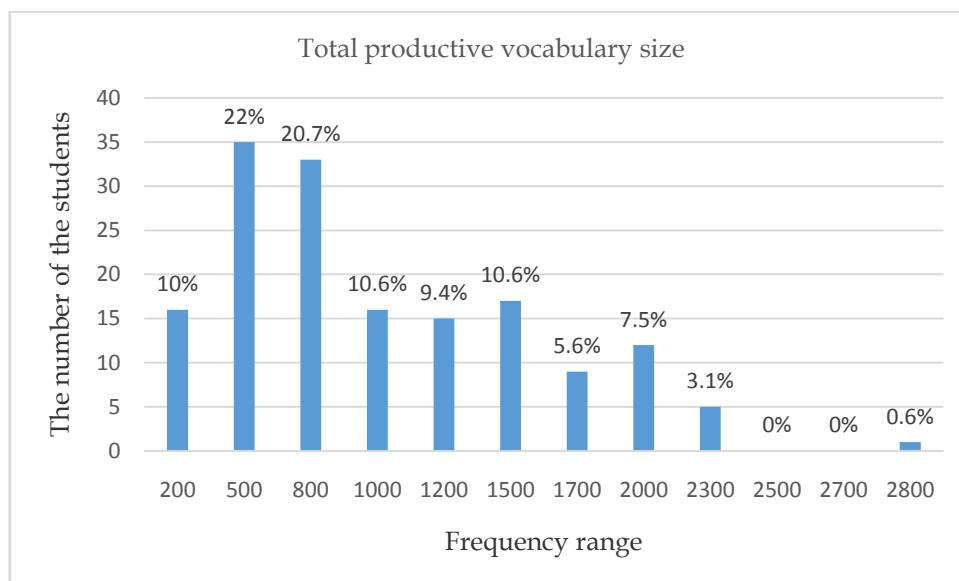
Figure 2. The total productive vocabulary size of the students

The data presented here show that English majors' vocabulary frequency profiles do not reach the minimum standards established to make these students efficient language users. If knowledge of 85% to 90% of the test words represents 'mastery' of a level (Read, 1988; Schmitt et al., 2001), the results suggest that in the present study only 12% of the test-takers at 2,000 level, 4.4% at 3,000 level and 1.2% at 5,000 word level achieve the minimum score of 26 (86.6%) with respect to the frequency levels. The learners' overall receptive vocabulary size of 2,091 word families and productive vocabulary size of 866 word families enable us to say that there should be certain changes in the input that is presented to the students if we want them to enlarge their vocabulary size and manage their academic studies. Since the knowledge of approximately 95% of words in a text is considered as a requirement for basic comprehension (Laufer & Ravenhorst-Kalovski, 2010) – which has been estimated at 5,000 word families – then the students in this study do not have sufficient vocabulary not even for basic comprehension let alone the vocabulary of 8,000 to 9,000 word families (Nation, 2006), which should enable 98% text coverage. The poor vocabulary size of 2,091 word families is expected to impede English majors in their functioning within an English-medium university environment and their success in understanding academic texts. The academic section of the Levels Tests revealed that the mean value of 11.0 out of 30 is considered inappropriate for those wishing to continue their studies in an academic environment. Academic vocabulary constitutes nine per cent of the running words in an academic text and as Nation (2011a: 19) states, wherever possible, academic vocabulary for language learners intending to pursue an academic study in English 'should be treated like high-frequency vocabulary'. Consequently, teachers should make full use of the Academic Word List and raise students' awareness of the importance of academic vocabulary in order to improve their knowledge of academic vocabulary.

5. Conclusion

In summary, the present study was carried out in response to the lack of formal needs assessment at AUL. Its aim was to identify Azerbaijani English majors'

language needs in order to set specific goals for the vocabulary component of the course programme. Accordingly, the study aimed to measure first-year Azerbaijani students' receptive and productive vocabulary frequency profiles in order to measure their total vocabulary size. The results of this study indicate that more than 50% of the students scored low on both tests: 2,091 word families in the receptive test and less than 1,000 word families in the productive test. These results are favourably higher than those reported from Oman (Cobb, 1999) or Indonesia (Nurweni & Read, 1999), and they compare positively with the averages of Finnish high-school students (Arnaud & Sauvignon, 1997). Nevertheless, taking into account the studies on the extent of the vocabulary needed to read and produce academic texts, it can be said that the Azerbaijani students' vocabulary sizes are insufficient.

Consequently, this research reveals that students enrolled at the Faculty of Pedagogy at AUL need strong support in vocabulary learning in order to enable them to succeed in their academic studies. What this seems to indicate is that this particular area of language learning requires fundamental overhauling in order to offer students appropriate vocabulary knowledge and skills. Because of the importance of vocabulary and its effects on all language skills, it may be speculated that a limited vocabulary will restrict students' reading comprehension and written production. When determining the language input to be included in language course materials, it is therefore important to take into account a balanced mixture of all frequency levels, in particular giving attention to the learners' current vocabulary profile. Another issue of theoretical significance should be noted: as these learners' vocabulary frequency profiles did not attain the suggested threshold for high-frequency words of 3,000 word families (Schmitt & Schmitt, 2012), which signals an important milestone in language development, these high-frequency word families should be explicitly addressed in the language input that meets students' needs.

6. Further research and follow-up studies
The present study raises questions that are worth exploring in follow-up studies: first, the present study considered the first-year students' receptive and productive vocabulary knowledge at the start of the academic year. A follow-up study measuring learners' receptive and productive vocabulary knowledge after one year of instruction may contribute towards gaining more insights into their vocabulary development.

Secondly, in order to satisfy the first-year students' academic needs, it is important to analyse the lexical text coverage of the academic texts studied at the Faculty of Pedagogy and explore the relationship between the students' vocabulary size and the lexical text coverage. Research done so far has focused on the number of word families needed to read authentic texts, novels, newspapers; however, no study has been carried out to estimate the vocabulary necessary to read and understand subject-specific academic texts to be studied by Azerbaijani English majors from the second year onwards. It is therefore important to analyse the relationship between the lexical text coverage, students'

reading comprehension of the subject-specific academic texts and their active vocabulary production when sitting examinations on the texts read.

Finally, these findings will lead to the development of a pedagogical word list that comprises the high-frequency words as well as terms (subject-specific terminology) that meet the inventorised needs of first-year majors. As is the case in systematic syllabus and material development, the word list will be put in practice and its effect on stakeholders – learners as well as teachers – will have to be critically assessed.

Although this study focuses on a small and very specific target audience of English pedagogical majors in Azerbaijan, the findings will have a wider applicability. Given the fact that Azerbaijan is a country in transition and embracing the use of English while doing so, it is not unique. The findings of this needs analysis as well as the curricular consequences may be equally true for former USSR countries such as Ukraine, Kazakhstan, Uzbekistan, Tajikistan, etc., where Russian once was the dominant language. Taking the considerations a step further, this study's underlying foundational thoughts may also pertain to countries where French is still the dominant language in education and administration, but where external forces also require a different and embracing approach to English, as in, for instance, the Democratic Republic of the Congo, Burundi, Rwanda, and the like. This study and its follow-up will therefore try to meaningfully facilitate academic and professional life in the expanding circle for a group of learners that not have easy access to the English.

References

Arnaud, P.J.L. & Sauvignon, S.J. (1997). Rare words, complex lexical units and the advanced learner. In J. Coady & T. Huckin (Eds) *Second language vocabulary acquisition.* Cambridge: Cambridge University Press, 157–173.

Azimova, Kh. S., Akbarli, M. A., Akbarov, V.A., Aliyev, N. L., Allahverdiyev, I.M., Bayramova, N. N. & Baladjanova G. M.(2014). Highlights and statistical analysis of examination data for the academic year of 2013/2014. In T.A. Badalov & R.G. Novruzov (Eds) *Abiturient* (special release).

Balayev, X. (2002). *Azərbaycan Dilinin Dövlət dili kimi təşəkkül tarixindən.* Bakı: Elm və Həyat.

Brown, D. (2012). The frequency model of vocabulary learning and Japanese learners. *Vocabulary Learning and Instruction* 1(1): 20–28.

Brown, J.D. (1995). *The elements of language curriculum: A systematic approach to program development.* United States: Heinle, Cengage Learning.

Cobb, T. (1999). One size fits all? Francophone learners and English vocabulary tests. *Canadian Modern Language Review* 57(2): 295–324.

Corson, D.J. (1997). The learning and use of academic English words. *Language Learning* 4: 671–718.

Coxhead, A. (2000). A new academic word list. *TESOL Quarterly* 34(2): 213–238.

Dehnad, A.; Bagherzadeh, R.; Bigdeli, Sh.; Hatami, K. & Hosseini, F. (2010). Syllabus revision: A needs analysis study. *Procedia Social and Behavioral Sciences* (9): 1307-1312. doi: 10.1016/j.sbspro.2010.12.325

Dudley-Evans, T. & St John, M. (1998). *Developments in English for specific purposes: A multidisciplinary approach.* Cambridge: Cambridge University Press.

Fan, M. (2000). How big is the gap and how to narrow it? An investigation into the active and passive vocabulary knowledge of L2 learners. *RELC Journal*: 105–119.

Gairns, R. & Redman, S. (1986). *Working with words: A guide to teaching and learning vocabulary*. Cambridge University Press.

Hutchinson, T. & Waters, A. (1987). *English for specific purposes: A learning-centred approach.* Cambridge: Cambridge University Press.

Jordan, R.R. (2007). *English for academic purposes: A guide and resource book for teachers.* Cambridge: Cambridge University Press.

Laufer, B. (1992). How much lexis is necessary for reading comprehension? In H. Bejoint & P. Arnaud (Eds) *Vocabulary and applied linguistics.* United Kingdom: Macmillan, 126–132.

Laufer, B. (1997). What is in a word that makes it hard or easy:some intralexical factors that affect the learning of words. In N. Schmitt & M. McCarthy (Eds) *Vocabulary: Description, acquisition and pedagogy.* Cambridge: Cambridge University Press, 140–155.

Laufer, B. (1998). The development of passive and active vocabulary in a second language: Same or different? *Applied Linguistics* 12: 255–271.

Laufer, B. & Ravenhorst-Kalovski, G.C. (2010). Lexical threshold revisited: Lexical text coverage, learner's vocabulary size and reading comprehension. *Reading in a Foreign Language*: 15–30.

Laufer, B. & Paribacht, T.S. (1998). The relationship between passive and active vocabularies: Effects of language learning context. *Language Learning* 48: 365–391.

Laufer, B. & Nation, P. (1999). A vocabulary-size test of controlled productive ability. *Language Testing*: 33–51.

Li, L. & McGregor, L. J. (2010). Investigating the receptive vocabulary size of university-level Chinese learners of English: How suitable is the levels test? *Language and Education* 24(3): 239-249. doi: 10.1080/09500781003642478

Meara, P. (1980). Vocabulary acquistion: A neglected aspect of language learning. *Language Teaching and Linguistics: Abstracts* 13: 221–246.

Nation, P. (1990). *Teaching and learning vocabulary.* New York: Newbury House.

Nation, P. (2001). *Learning vocabulary in another language.* Cambridge: Cambridge University Press.

Nation, P. (2006). How large a vocabulary is needed for reading and listening?. *The Canadian Modern Language Review* 63: 59–82.

Nation, P. (2011a). *Learning vocabulary in another language.* Cambridge: Cambridge University Press.

Nation, P. (2011b). Research into practice: Vocabulary. *Language Teaching* 44(4): 529–539.

Nurweni, A. & Read, J. (1999). The English vocabulary knowledge of Indonesian university student. *English for Specific Purposes* 18: 161–175.

O'Dell, F. (1997). Incorporating vocabullary into syllabus. In N. Schmitt & M. McCarthy (Eds) *Vocabulary: Description, acquisition and pedagogy*. Cambridge: Cambridge University Press, 258–278.

Qian, D.D. (2002). Investigating the relationship between vocabulary knowledge and academic reading performance: An assessment perspective. *Language Learning* 52(3): 51–536.

Pavlenko, A. (2008). Russian in post-Soviet countries. *Russian Linguistics* 32: 59–80. DOI 10.1007/s11185-007-9020-1

Read, J. (1988). Measuring the vocabulary knowledge of second language learners. *RELC Journal* 19: 12–25.

Read, J. (1997). Vocabulary and testing. In N. Schmitt & M. McCarthy (Eds) *Vocabulary: Description, acquisition, and pedagogy.* Cambridge: Cambridge University Press, 303–321.

Richards, J.C. & Schmidt, R. (2010).*Longman dictionary of language teaching and applied linguistics*. Pearson Education Limited.

Schmitt, N. (2010). *Vocabulary in language teaching.* New York: Cambridge University Press.

Schmitt, N. & Schmitt, D. (2012). A reassessment of frequency and vocabulary size in L2 vocabulary teaching. *Language Teaching*: 1–20. doi: 10.1017/SO261444812000018

Schmitt, N., Schmitt, D. & Clapham, C. (2001). Developing and exploring the behavior of two new versions of the Vocabulary Levels Test. *Language Testing* 18(1): 55–88.

Shafiyeva, U. & Kennedy, S. (2010). English as a foreign language in Azerbaijan: English teaching in the post-Soviet era. *English Today* 26(1): 9–14. doi:10.1017/S0266078409990629

Sinclair, J. McH. & Renouf, A. (1991). A lexical syllabus for language learning. In R. Carter & M. McCarthy (Eds) *Vocabulary and language teaching.* Harlow: Longman, 140–160.

Staehr, L. S. (2009). Vocabulary knowledge and advanced listening comrehension in English as a foreign language. *Studies in Second language Acquisition* 31(1): 31.

Stufflebeam, D.L, McCormick, C.H., Brinkerhoff, R.O. & Nelson, C.O. (1985). *Conducting educational needs assessment*. Boston: Kluwer-Nijhoff.

Waring, R. (1997). A comparison of the receptive and productive vocabulary sizes of some second language learners. *Immaculata (Notre Dame Seishin University, Okayama)* 1: 53–68.

---

[i] … we filled in the missing 4,000 level by averaging the scores received on the 3,000 and 5,000 word level. The score at each frequency level represents an approximate knowledge of 1,000 words, except the first 2,000; where the score represents knowledge of 2,000 words. Accordingly, if a learner received 28 on the second 1,000, 22 on the third, and 8 on the fifth, his or her score would be 28 + 28 + 22 + 15 + 8 = 101 (The figure 28 appears twice as it represents 2,000 words, while the other scores represent 1,000 words each. The figure 15 is the average of 22 and 8).Since each frequency level has 30 items, the maximum score, which represents knowledge of 5,000 words, would be 30 × 5 = 150. The score in our example would represent 101 × 5,000 ÷ 150 = 3,366 word families.