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Vocabulary Learning Strategies of Azerbaijani Students and its Relation to their Academic and Technical English Vocabulary Knowledge

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Abstract

With English turning into a global language among the people in all parts of the world, it has played a similarly essential role in the educational system of Azerbaijan. Vocabulary is a vital and inseparable part of the four language skills in the activity of language learning. This research was aimed at investigating the use of various vocabulary learning strategies (VLSs) among Azerbaijani engineering students. Moreover, the overall frequency of strategy use was explored by Azerbaijani learners as high strategy users, medium strategy users, and low strategy users. The study also investigated the students' academic and technical English vocabulary knowledge, finding that the vocabulary learning strategy use is done in relation to students' academic and technical English vocabulary knowledge. The descriptivequantitative research design was employed in this study. Two kinds of research instruments were utilized. A 60-item academic and a 30-item technical vocabulary test and an online questionnaire of vocabulary learning strategies with 23-item were employed. The findings demonstrated that there is not a significant relationship between VLSs and academic and technical English vocabulary knowledge of Azerbaijani engineering students. The research also indicated that meta-cognitive strategies included the most and least frequently used strategies among Azerbaijani learners. Consequently, Azerbaijani engineering students were high strategy users. It is obvious that vocabulary should not be treated as an additional material; on the contrary, syllabus designers and instructors have to put it forward as a vital ability in second or foreign language learning.

Keywords: English, Vocabulary, Vocabulary Learning Strategies, Academic Vocabulary, Technical Vocabulary.

Introduction

Vocabulary is the basic component of language and an essentially important aspect of language development. Vocabulary is widely investigated in the field of second language learning and teaching by many scholars throughout the years. Russian was

the powerful language in Azerbaijan in the Soviet era. After the collapse of the Soviet Union, this circumstance has rapidly been changing. It seems that the situation has increasingly highlighted the importance of English and the system of education is also undergoing great changes. Russian has been replaced by English and English is the most preferred foreign language in Azerbaijan (Hajiyeva, 2014; 2015b; Karimova, 2017). The change from Russian to English demands a change in curriculum, syllabus design, and materials used. In Azerbaijan, since English is not the official language, it is taught as a foreign language both in schools and higher educational institutions. Learners' English background has a strong effect on their progress in English language learning. Furthermore, learners' age, the system of study, mass media usage, teachers' methods are closely associated with English language proficiency.

In recent years, the number of students, whose majors are in English, in Azerbaijan universities has grown significantly. Therefore, students for whom English is not their first language can encounter challenges in the education system of Azerbaijan. This can be a difficulty not only for the students but for the systems of state and private universities. A proper vocabulary is an initial point for success in learning a second language because the complex functions cannot be utilized in the second language without mastering fundamental vocabulary knowledge (Nizonkiza & Dyk, 2015).

Over the decades, measuring vocabulary size is labelled via various vocabulary tests and has resulted in remarkable elicitations for both learning and teaching. The Academic Word List (AWL) is widely used in preparing non-native speakers for academic courses. Cobb and Horst (2004) assume that the words in the Academic Word List are very essential for the comprehension of English academic texts (as cited in Masrai & Milton, 2018). On the other hand, technical vocabulary is the main consideration for learners who have special purposes in language learning. Technical vocabulary is a subject related, occurs in a special domain. There are no well-known approaches for determining which words are technical terms and which are not. The meanings of technical terms are closely related to a particular subject area. The more specialized vocabulary is often seen as being of great concern regarding the vocabulary component of many English for Specific Purposes (ESP) courses (Cunningham, 2011).

Askar (2016) mentions that language learners are rarely taught to reach effective vocabulary knowledge to devise meaningful sentences. Teaching vocabulary learning strategies is also given notable attention to discover the meaning of new words and remember them. Effective vocabulary learning strategy users are considered good language learners. Vocabulary has a distinct relationship with reading comprehension. The link is shared that sufficient knowledge of reading

comprehension encourages someone to acquire more words. Poor vocabulary items cease learners from manifesting their ideas and beliefs. Furthermore, as Wilkins (1972) stated, "Without grammar, very little can be conveyed but without vocabulary nothing can be conveyed" (as cited in Askar, 2016). As a consequence, teachers and linguists commonly understand the importance of vocabulary learning and are investigating ways of developing it more productively. Many investigations have been carried out on vocabulary or on learning strategies, however, limited study has been done in relation to vocabulary and learning strategies in one study which is our focus of attention in this research.

Students who learn their second or foreign language (ESL or EFL learners) may encounter difficulty due to the lack of vocabulary knowledge. Azerbaijani university students have some difficulties in both inputting and outputting information in English. It is closely related to their vocabulary size which seems insufficient for communication and meeting the requirements of the universities. The principal aims and objectives of the present study are to explore the use of different vocabulary learning strategies (VLSs) among Azerbaijani engineering students and identifying the most and least frequently used VLSs by learners. In addition, the research explores the overall frequency of strategy use by Azerbaijani learners as high strategy users, medium strategy users, and low strategy users. Furthermore, the study investigates and reveals students' academic and technical English vocabulary knowledge and finds out the vocabulary learning strategies use in relation to students' academic and technical English vocabulary knowledge. Thus, the research hypothesis is that *there is a significant relationship between vocabulary learning strategies (VLSs) and academic and technical English vocabulary knowledge of Azerbaijani engineering students. Consequently, high vocabulary learning strategy users are more successful academic and technical English learners.*

Research Questions:

1. *What are the most and least frequently employed categories of vocabulary learning strategies (VLSs) by Azerbaijani EFL engineering students?*

2. *Are Azerbaijani students, high, medium, or low vocabulary learning strategy users?*

3. *Is there any relationship between vocabulary learning strategies (VLSs) and academic and technical English vocabulary knowledge of students?*

Literature Review

Vocabulary and Vocabulary Knowledge

The skills of reading, writing, listening and speaking in the target language are influenced and supported by the vocabulary knowledge. The concept is supported by

McCarthy's statement as (1990), "no matter how well the student learns grammar, no matter how successfully the sounds of L2 (second language) are mastered, without words to express a wider range of meanings, communication in L2 just cannot happen in any meaningful way" (as cited in Boonkongsaen, 2012). Channel (1988) stresses that the vocabulary improvement results in language acquisition (cited in Hui, 2004). Çelik and Toptaş (2010) consider vocabulary as the main communication tool and often regarded as a problematic area by various language teachers (Farjami & Aidinlou, 2013).

As we all know, the word has an influential status in language teaching and learning. Words are necessary components of written and spoken communication in our regular life. It is estimated that the more vocabulary a learner acquires, the more proficient he or she is. However, knowing and using vocabulary is a clearly different issue (Baskin et al., 2017). For instance, Hajiyeva's (2015b) study investigated the relationship between receptive and productive vocabulary knowledge among Azerbaijani English majors and demonstrated that there was no significant growth in their receptive vocabulary knowledge, but their productive vocabulary knowledge advanced importantly. The results of the study show that students scored low and they mastered 2091 word families in the receptive test and less than 1000 word families in the productive test. Moreover, taking into consideration the fact that the extent of the vocabulary needed to read and produce academic texts, it seems that the Azerbaijani students' vocabulary sizes are inadequate. Despite the fact that the study concentrated on a limited and specific audience in Azerbaijan, the results have more widespread applicability.

The Classification of Vocabulary

Cunningham (2011) described four various types of vocabulary in a standard academic text defined by Paul Nation. The four categories of words identified by Nation are high-frequency words, academic words, technical words, and lowfrequency words (as cited in Cunningham, 2011). Nation also reports two types of specialized vocabulary as technical and academic vocabulary. According to Martin (1976), vocabulary is identified from three sources; items submitted by students, items submitted by instructors, and items frequently occurring in journals (as cited in Cunningham, 2011).

High-frequency Words

High-frequency words are words that occur very frequently in all kinds of language uses. They are used frequently in formal or informal situations, written and spoken text such as newspapers, conversations, novels, and academic texts. High-frequency word list that West (1953) names A General Service List of English words comprises about 2000-word families. They comprise 80% of the running words in numerous written texts and 90% of the running words in spoken texts.

Academic Words

Academic words are not from the list of 1000 or 2000 of high-frequency words. These words occur quite often in a newspaper, very formal conversation, children's books, academic writing, and other kinds of special texts. This group of words contains 570-word families and is called Academic Word List (AWL) by Coxhead (2000). The 570 of academic words are very important for those who are using English for academic study like in universities, or in schools.

The Academic Word Lists

Significant efforts have been dedicated to distinguishing the most useful academic vocabulary which students could seek to study (Coxhead and Hirsch, 2007). One of them is Praninskas' American University Word List (1972) of 507-word families that were formed as a basis for vocabulary course for Arabic speaking students. Xue & Nation (1984) formed The University Word List (UWL) that covered 836 families on average 8.5% of written academic texts. Afterward, the Academic Word List (AWL) replaced the UWL (Coxhead, 2000) which has 570-word families with a coverage of 10%, lately, Gardner and Davies's (2013) Academic Vocabulary List (as cited in Nizonkiza & Dyk, 2015).

The Academic Word List (AWL) was published in 2000 by Averil Coxhead from the School of Linguistics and Applied Language Studies at Victoria University of Wellington, New Zealand. The list includes 570-word families selected by analyzing a corpus of millions of words from over 400 academic texts. The AWL was formed from a freely assembled corpus of 3.5 million words of written academic English, including 28 subject areas across four academic disciplines, such as arts, commerce, law, and science. There were three principles for the selection of words for the AWL. They were range (the word families appeared in more than 15 of the 28 subject areas), frequency (the word families appeared more than 100 times in the corpus), and uniformity or specialized appearance (the words appeared at least ten times in each of the four disciplines). The AWL is applied in many countries in curriculum and materials development in EAP. Coxhead categorized the AWL items into 10 sub-lists according to their frequency; in Sub-list 1 with the most frequent 60 words, in Sub-list 10 to the least frequent words. The most frequent 2000 words of English described by West (1953) were excluded. The list has the headwords for all 570words. The AWL accounts for about 10% of the total words in academic texts, yet only 1.4% of the total words in a fiction collection of the same size. This indicates that the AWL is academic in nature. Academic words are found in different kinds of academic areas such as in Linguistics, Biology, Physics, etc. (Sudarman & Chinokul, 2018). Measuring students' vocabulary size can help teachers identify what they should focus on. The AWL was created to provide learners of academic English with target vocabulary in various disciplines (Coxhead, 2000).

Technical words

There are words that are even more specific to each subject area. These special words are very special to the subject area that people will know what subject area these words come from. Principally, the technical words can only be located in one specialized area (Chung & Nation, 2003; 2004). However, some words also occur in other subject areas and may have the same or a diverse meaning. Technical vocabulary is subject related words occurring in a specialist domain. Technical vocabulary often appears more in Economic textbooks than usual compared to another group of specialized texts from other areas (Chung & Nation, 2003). Nevertheless, little attention is given to such vocabulary, because of deciding which words are technical terms and which are not. The aim of the study done by Chung & Nation (2004) is to analyze different methods to classifying technical vocabulary. This can be calculated how large a technical vocabulary might be, how often and with what density these words occur in a text, moreover, how teachers and learners should handle them. Chung & Nation (2003) defined four ways to identify technical vocabulary. The first way is to use a rating scale, employing a technical dictionary, utilizing clues provided in the text. The second way is to ask experts for identification. The third way is to utilize some hints in the texts given by writers, such as definitions of the words. The last way is to use software to look for words that are specific to a discipline. Moreover, technical words seem to cause more challenges for the students than general and academic vocabulary. Nevertheless, educators and researchers have given more attention to more academic vocabulary than technical vocabulary in English for Specific Purposes or English for Academic Purposes (ESP/EAP) class.

Low-frequency Words

They contain a big number of word families, and indeed the biggest compared to the other vocabulary levels. However, they seldom appear in most texts. If we estimate every single word item, English may have more than 100000-word families. Yet the native speakers themselves may not recognize all of them. Normally native English speakers have vocabulary mastery of around 20000 words. The low-frequency words may occur only 2% of the running text, or it is only nearly one word in every 50 running words.

The Importance of Academic and Technical Vocabulary

The study conducted by Masrai & Milton (2018) demonstrates that the knowledge of the AWL is regarded to be influenced by the frequency of these words in general corpora. According to Chung and Nation (2003), identification of technical vocabulary provides an important starting point for looking at how learners and teachers should deal with technical vocabulary. Shabani & Tazik (2014) tried to explore the word frequency and text coverage of AWL on 80 research articles in English across two Asian EFL and ESP journals. The study classified 438 words as

the academic words and 144 new academic words added to the list that was named Revised Academic Word List (RAWL). Taking into account the findings of this study, it can be assumed that academic words play a significant role in academic texts; ESP articles contain higher coverage of academic words; some words involved in the AWL are specific to the fields; paying direct attention to these words the syllabus designers and teachers can reach a better comprehension of these words.

Over the years, the main principle of English for Specific Purposes has grown to "Tell me what you need English for and I will tell you the English that you need" (Mihalacho, 2010). Numerous researchers have initiated a study of one particular area of scientific study alone. For instance, Ward (1999) investigated engineering texts to define the number of words students need to know. Ward's word list was designed using engineering texts that a targeted word list of 2000-word families which is stated 95% coverage of the engineering corpus. Suryati & Fadilah (2019) estimated the English vocabulary knowledge of engineering students in an Indonesian university. The results revealed that EFL engineering students have adequate receptive vocabulary sizes, though they cope with the productive vocabulary test. The findings proposed that these participants needed more precise instruction and practice. Many educators explore the fact that a number of students have not learned well while in high school and elementary grades.

Vocabulary Learning Strategies (VLSs)

As a part of language learning strategies, vocabulary learning strategies are getting more attention since the 1970s. According to Nation (2001), a large number of vocabulary could be obtained with the help of vocabulary learning strategies. Studies conducted by O'Malley & Chamot (1986) confirm that most language learning strategies can be used for vocabulary tasks (as cited in Bai, 2018). Cameron (2001) represents vocabulary learning strategies (VLSs) as the actions that help learners understand and recall vocabulary items. Intaraprasert (2004) marks VLSs as "any set of techniques or learning behaviors, which language learners reported using in order to discover the meaning of a new word, to retain the knowledge of newly learned words, and to expand their knowledge of vocabulary" (as cited in Bookongsaen, 2012).

Classification and Taxonomies of Vocabulary Learning Strategies

There have been several taxonomies of vocabulary learning strategies suggested by various researchers in different studies, for instance, Oxford (1990), Stoffer (1995), Gu & Johnson (1996), Schmitt (1997), and Nation (2001). Oxford classifies learning strategies into two main groups: direct strategies and indirect strategies. Direct strategies refer to those that are directly included in the target language. They need mental processing of the language that contains memory strategies and compensation strategies. Indirect strategies belong to the strategies that give indirect help for

language learning by using opportunities, managing anxiety. Another remarkable classification has been suggested by Stoffer (1995) (as cited in Çelik & Toptaş, 2010) who developed a Vocabulary Learning Strategy Inventory (VLSI) containing fewer items than Schmitt's (1997) taxonomy. According to Stoffer (1995), the 53 items on the VLSI are grouped into nine categories that are vocabulary learning strategy inventory including strategies for authentic language use; strategies for selfmotivation; strategies for organizing words; strategies for creating mental linkages; memory strategies; strategies for creative activities; strategies involving physical activity; strategies for overcoming anxiety and auditory strategies.

Gu & Johnson (1996) have represented numerous VLS strategies based on their vocabulary learning questionnaire items and divided them into two different parts: cognitive and metacognitive strategies which were classified as guessing, using a dictionary, note-taking, rehearsal, encoding, and activating (Baskin et al., 2017). In addition to this, Schmitt's vocabulary learning strategy taxonomy is widely acknowledged among scholars and authors in the field of vocabulary acquisition and learning. Schmitt (1997) has divided the strategies into discovery strategies and consolidation strategies. The discovery strategies are strategies that learners employ to identify the meaning of new words when they first face them and the consolidation strategies are used to consolidate meanings when learners encounter the words again. There were 58 individual strategies in total. The discovery strategies refer to determination and social strategies while consolidation strategies involve social, memory, cognitive, and metacognitive strategies. Schmitt's taxonomy includes five sub-categories that are given and explained below (as cited in Baskin et al., 2017):

- *Determination strategies (DET)* are used by individuals to find a word's meaning without talking to other people. Students attempt to guess and discover the meaning of the new words by using context, structural knowledge, and source material. That means they find the meaning of the words on their own;

- *Social strategies (SOC)* are a way to study a new word by communicating with other people. It may also encourage students to advance strategies, and ways to become more motivated and independent learners. Teachers and researchers will be successful if they are able to understand students' vocabulary learning strategy use and this understanding will enable them to design relevant materials and activities to help their students improve their lexical competence. Social strategies include learning the definitions of words with the help of teachers, classmates, and native speakers;

- *Memory strategies (MEM)* include associating the word with previously acquired information or by grouping. It highlights that utilizing visual materials is much more helpful and practical than using verbal

materials. Grouping is a powerful way of bringing learned vocabulary knowledge back (Schmitt, 1997). Memory strategies include repetition, word lists, flashcards to master vocabulary;

- *Cognitive strategies (COG)* are alike to memory strategies except concentrating on a manipulative mechanical process. The main rule of this strategy is repetition and that includes mechanical approaches such as word lists, flash cards to master vocabulary;

- *Metacognitive strategies (MET)* are methods of learning and deciding about devising, observing, and assessing the best way to study. They are used to determine which words to learn, make a plan consciously. This is used to find the most efficient learning method and that gives learners control and to evaluate their own learning. It presents an intentional overview of the learning process;

Once words are discovered, the next step is to use social strategies, memory strategies, cognitive strategies, metacognitive strategies to consolidate their vocabulary knowledge. According to Nation (1997), group work can also be applied to practice words as well as finding words. Another classification has been given by Nation who developed a comprehensive classification of vocabulary learning strategies (Nation, 2001). The first one is 'planning' that learners should know what their vocabulary purposes are and determine what vocabulary to concentrate on regarding their chosen goals. Next, learners should also have a distinct approach for determining what vocabulary to concentrate on and where to locate this vocabulary. The second vocabulary learning strategy is about 'sources.' To deal with new vocabulary and to learn unknown vocabulary, learners have to be able to learn information about the words. Being familiar with the stems and affixes can give useful knowledge for understanding connections between related words, making guesses from context. The third vocabulary learning strategy is about 'processes' that are building vocabulary knowledge. That includes ways of memorizing vocabulary and making it accessible for use.

Previous Studies on Vocabulary Learning Strategies

Farjami & Aidinlou (2013) state that students face some obstacles when they are mastering words. To make vocabulary learning interesting and easy for learners, language learning strategies can be used. If learners know which strategies are appropriate for them, they can be their own mentor. Many attempts have been made by several researchers to highlight the significance of using vocabulary learning strategies. Learning the vocabulary in the second language, students need to be trained with vocabulary learning strategies (Asgari et al., 2010). Zhu (2017) was among them to investigate technical vocabulary learning strategies used by engineering students and found a significant difference in using determination,

memory, and cognitive strategies used by learners. Afshar et al., (2012) have investigated the differences between EAP students of Humanities and Engineering regarding their vocabulary strategy choice and found the most and the least frequently used vocabulary learning strategies used by them. Çelik and Toptaş (2010) intended to investigate vocabulary learning strategies adopted by Turkish EFL students and concluded that the participants' general use of vocabulary learning strategies was slightly insufficient. More recent evidence has shown that a number of vocabulary learning strategies are used by Asian EFL learners. Learning strategies affect the teaching and learning process. The variety of learning strategies raises the quality of the process by enhancing the learning and teaching process (Baskin et al., 2017). Heng (2011) carried out research in the Cambodian context and tried to increase both teachers' and students' awareness of the importance of strategies for vocabulary learning. Besides, this study may also help teachers to guide their learners to use vocabulary learning strategies as effectively as possible in the context of Cambodian classrooms. Baskin et al., (2017) have widely studied to determine the vocabulary learning strategies of the students in Turkey. They reported that the students' language levels were sufficient in defining the vocabulary strategies. Students in the study used determination strategies the most but cognitive strategies the least. Besides, Doczi's research study (2011) investigated the role of Vocabulary Learning Strategies (VLS) in Hungarian secondary and tertiary educational institutions. According to his findings, it is noted that social and metacognitive strategies are less frequently used by the participants. Similarly, in the Malaysian context, Asgari et al., (2010) have investigate the type of vocabulary learning strategies used by ESL students and concluded that strategies related to memory, determination, metacognitive strategies are popular strategies such as the learning a word through reading, the use of a monolingual dictionary, the use of various English language media.

The Methodology

Due to the lockdown and quarantine caused by COVID-19 resulting in the shutting down of all the educational institutions, the descriptive-quantitative research design was employed. The subjects of this study were students studying at the School of Science and Engineering at Khazar University. The samples of this study were selected using convenience sampling techniques. There are two kinds of research instruments in the study. Firstly, a 60-item academic and a 30-item technical vocabulary test were used, and additionally, the online questionnaire of vocabulary learning strategies with 23-item was used. The questionnaire and the test were created as an online form, to be conducted completely anonymous. There was no time limit for completing the test and questionnaire. However, it takes about 10-15 minutes for completing the VLSQ and 40-45 minutes for the test. The data of this

study has been analyzed using descriptive statistics where frequency counts would be tabulated and converted to percentages.

An Online Questionnaire of Vocabulary Learning Strategies (VLSQ)

The online questionnaire was adapted from the taxonomy of vocabulary learning strategies by Schmitt (1997) to elicit participants' vocabulary learning strategies. The questionnaire consists of two parts. The first part includes the participants' gender, age, year of university study, and level. The second part contains the questions related to the vocabulary learning strategies given in five categories: *Determination, Social, Memory, Cognitive, and Meta-cognitive*. A questionnaire consists of 23 items for all the strategy groups to elicit participants' vocabulary learning strategies. To estimate the frequency of each strategy, Schmitt's Yes/No choice questions were changed to a five-point Likert scale which is employed with the alternatives ranging from never, seldom, sometimes, often, to always. The first five items include ***determination strategies***. Six, seven, eight, ninth items estimate ***social discovery*** and ***consolidation strategies.*** Ten, 11, 12, 13, 14th items contain ***memory strategies.*** 15, 16, 17th items include ***cognitive strategies.*** 18, 19, 20, 21, 22, 23rd items estimate ***meta-cognitive strategies.***

To explore the overall frequency of strategy use by Azerbaijani learners as high strategy users, medium strategy users, and low strategy users, Language Learning Strategy use in English divided into three levels according to Oxford (1990) was used. High users choose 'always' or 'often' options. On the other hand, medium users select the option of 'sometimes.' Furthermore, low users choose 'seldom' or 'never'.

Academic and Technical English Vocabulary Test

The test has been used by the researcher to investigate academic and technical English vocabulary knowledge of Azerbaijani EFL engineering students due to the fact that the test is quick and easy to take, easy to assess, consequently, the results are easy to interpret. It is a matching test in which the items are selected from the Academic Word List (Coxhead, 2000) with six items in 20 clusters and Technical English vocabulary from Brieger & Pohl (2002) with six items in 10 clusters. In particular, the researcher chose 12 words from Sublist 1; 11 words from Sublist 2; 14 words from Sublist 3; 15 words from Sublist 4; 10 words from Sublist 5; 12 words from Sublist 6; 13 words from Sublist 7; 15 words from Sublist 8; 11 words from Sublist 9; seven words from Sublist 10. Consequently, 90 target words were selected to be asked to match including technical vocabulary. Three target items and three distractors were given for each cluster. Participants are asked to match words to equivalent definitions. The test provides a rough estimate of a learner's receptive academic and technical vocabulary. Good academic and technical English vocabulary learners were determined according to the overall scores on the vocabulary test. The researcher gave one point for each correct matching of a word

and its definition. The full score is 90. The test uses a matching format in which students are required to match groups of three words out of six with their definitions given below:

___enough to serve a particular purpose a. Similar ___the most important part b. Core

___coming after something in time c. Precise

d. Subsequent

e. Sufficient

f. Relevant

This format tests receptive vocabulary knowledge rather than productive. The format decreases subjectivity in measuring academic and technical English vocabulary knowledge. The clarity of definition was considered and therefore, definitions were taken from Cambridge Dictionary.

Research Ethics

Due to their willingness and availability, the participants were kindly asked to participate voluntarily in this research. They were also informed about the purposes of the study, and the maintenance of the anonymity and confidentiality of their information and scores. The information provided by them would be considered valuable to Azerbaijani EFL teachers and students who are interested in learning more about vocabulary learning strategies and the importance of academic and technical English vocabulary in the academic context, in spite of the fact that students would not be able to get any extra credits from this research. More significantly, their information may shed some light on vocabulary learning strategies in the Azerbaijani EFL context.

Results and Discussion

The Findings from the Questionnaire

36 subjects from the School of Science and Engineering completed and sent back the questionnaire. Over 60% of them were females and participant students aged 17-23. Some statements were not even reacted by some of them though that took only few minutes to complete. Due to the limitation of an online questionnaire, they did not have any chance to clarify statements which are complicated or incomprehensible to

them. Therefore, the statements might seem difficult for some of them whose English proficiency level is insufficient. However, the overall results unexpectedly show that even elementary students are quite able to comprehend statements made on vocabulary learning strategy items.

The categories of VLSs are given and interpreted below. Table 1 shows the frequency of use of the Determination strategies by Azerbaijani EFL engineering students whose majors are in English.

Table 1.

Determination Strategies

Strategy items	Responses (%)					Total
	Never	Seldom	Sometimes	Often	Always	
1. I guess the meaning of new words from context.		2 (5.6%)	20 (55.6%)	10 (27.8%)	4 (11.1%)	**36**
2. I analyze affixes and roots to acquire English vocabulary.		3 (9.1%)	20 (60.6%)	7 (21.2%)	3 (9.1%)	**33**
3. I learn English vocabulary by using reference materials, for instance, applying a bilingual dictionary.	1 (2.8%)	4 (11.1%)	16 (44.4%)	7 (19.4%)	8 (22.2%)	**36**
4. I use the dictionary to find out the pronunciation of the word.	3 (8.3%)	6 (17.7%)	13 (36.1%)	9 (25%)	5 (13.9%)	**36**
5. I look up definitions, synonyms, antonyms, etc. by using online dictionaries to learn English vocabulary.	1 (2.8%)	3 (8.3%)	14 (38.9%)	6 (16.7 %)	12 (33.3%)	**36**

According to the above-mentioned table, it is obvious that guessing from context is pretty popular among Azerbaijani students. 20 responses out of 36 reported this

strategy item use as sometimes which shows their medium level of strategy use. Interestingly, there was no one that selected never as an option to use strategies such as "guessing from context" and "analyzing affixes and roots to master vocabulary." On the other hand, using bilingual dictionary is preferred by the students. Here it is definitely clear that translation still matters for Azerbaijani learners while learning vocabulary comparing to defining words. However, using dictionary as a pronunciation tool seems less favorite by them. Only five of them chose always as a frequency of usage. Moreover, three of them did even not to look at pronunciation of words which make them less proficient in terms of speaking and listening basically productive skills. As it is known, productive skills are signs of production what you recognize and use simultaneously. The fifth item definitely demonstrates and emphasizes the importance and accessibility of online dictionaries which are highly reported by many participants as of top priority, 38.9% as sometimes and 33.3% as always. Additionally, the second statement "analyzing affixes and roots to acquire English vocabulary" was rated less, 33 out of 36, than other strategy items. It proposes that analyzing affixes and roots is not widely accepted strategy by Azerbaijani students or they might have challenged to understand the meaning of affix.

Table 2.

Social strategies

Strategy items	Responses (%)					Total
	Never	Seldom	Sometimes	Often	Always	
6. I ask a teacher for a translation of new words to learn English vocabulary.	3 (8.3%)	7 (19.4%)	12 (33.3%)	7 (19.4%)	7 (19.4%)	**36**
7. I ask a teacher for paraphrase or a synonym of a new word to memorize English vocabulary.	5 (13.9%)	4 (11.1%)	15 (41.7%)	6 (16.7%)	6 (16.7%)	**36**
8. I ask classmates or friends for the meaning of a new word in group discussions to master English vocabulary.	1 (2.9%)	11 (31.4%)	14 (40%)	4 (11.4%)	5 (14.3%)	**35**

9. I acquire English vocabulary by interacting with native speakers and their culture.	10 (28.6%)	6 (17.1%)	15 (42.9%)	3 (8.6%)	1 (2.9%)	**35**

Table 2 presents the results on Social strategy use by participants. As the table displays, "asking teachers for a translation of new words" and "asking teacher for paraphrase or a synonym of a new word" were reported as preferred strategies by the students. Nevertheless, "asking for translations" is more preferable than "asking for paraphrase". Students also reported that "asking classmates or friends for the meaning of a new word" is occasionally employed strategy by them and in the same way, some of them are eager to ask, 25.7% of them. On the contrary, "interacting with native speakers and their culture" is the least used strategy item in Social category. 10 students never employ and six of them rarely use. Only one of them always uses this strategy.

Table 3.

Memory strategies

Strategy items	Responses (%)					Total
	Never	**Seldom**	**Sometimes**	**Often**	**Always**	
10. I classify words based on their forms or topics to memorize them.	6 (17.1%)	2 (5.7%)	15 (42.9%)	10 (28.6%)	2 (5.7%)	**35**
11. I acquire English vocabulary by associating new words with prior experiences.	1 (2.9%)	5 (14.3%)	15 (42.9%)	11 (31.4%)	3 (8.6%)	**35**
12. I study the spelling of the words to learn them and speak out loud the words while learning.	6 (17.1%)	5 (14.3%)	9 (25.7%)	7 (20%)	8 (22.9%)	**35**
13. I use words in sentences to remember them.	1 (2.9%)	5 (14.3%)	11 (31.4%)	12 (34.3%)	6 (17.1%)	**35**
14. I attempt to memorize the sentence where the word is used while learning English vocabulary.	6 (17.1%)	5 (14.3%)	11 (31.4%)	12 (34.3%)	1 (2.9%)	**35**

Table 3 indicates that Memory strategies, overall, are utilized frequently by the participants. "Studying the spelling of the words and speak out loud the words", "memorizing the sentence where the word is used" and "using words in sentences to remember" are reported as highly used strategy items in this category. However, there are students who mentioned not to use or rarely use them. Furthermore, "classifying words based on their topics", 15 (42.9%), and "associating new words with prior experiences", 15 (42.9%), are demonstrated as medium level use by the learners.

Table 4.

Cognitive strategies

Strategy items	Responses (%)					Total
	Never	**Seldom**	**Sometimes**	**Often**	**Always**	
15. I use newly learned English words in verbal presentations and academic discussions to master them.	4 (11.4%)	5 (14.3%)	19 (54.3%)	6 (17.1%)	1 (2.9%)	**35**
16. I make word lists and I go through my vocabulary list several times and try to remember all the words on the list.	2 (5.7%)	6 (17.1%)	12 (34.3%)	9 (25.7%)	6 (17.1%)	**35**
17. I write the new words and their translations down over and over again to master them.	2 (5.7%)	8 (22.9%)	10 (28.6%)	7 (20%)	8 (22.9%)	**35**

According to Table 4, "using words in verbal presentations and academic discussions" illustrates that 54.3% (19) of the students are employing this strategy as a medium user. Similarly, they reported that "making word lists" and "writing new words and their translations down over and over again" are preferred. As results show, they are high strategy user of Cognitive strategies.

Table 5.

Meta-cognitive strategies

Strategy item	Responses (%)					Total
	Never	**Seldom**	**Sometimes**	**Often**	**Always**	
18. I regularly do vocabulary tests to master English vocabulary.	2 (5.7%)	10 (28.6%)	12 (34.3%)	8 (22.9%)	3 (8.6%)	**35**

19. I use finding out lexical familiarization devices to learn words,	1 (2.9%)	3 (8.6%)	13 (37.1%)	14 (40%)	4 (11.4%)	**35**
such as definitions and examples, synonyms, opposite meanings, etc.						
20. I improve my vocabulary by reading, for instance, academic texts, journals or magazines, and newspapers, etc.	2 (5.7%)	3 (8.6%)	11 (31.4%)	10 (28.6%)	9 (25.7%)	**35**
21. I use Englishlanguage media to learn new words (songs, movies, videos, etc.).			6 (17.1%)	9 (25.7%)	20 (57.1%)	**35**
22. I try to concentrate on words that are directly related to examinations.		2 (5.7%)	14 (40%)	7 (20%)	12 (34.3%)	**35**
23. I pass the words that do not seem familiar to me while reading or listening.	11 (31.4%)	9 (25.7%)	12 (34.3%)	2 (5.7%)	1 (2.9%)	**35**

As Table 5 illustrates, Meta-cognitive strategies are mostly used by Azerbaijani learners. In detail, "using English-language media", 29 out of 35, "improving vocabulary by reading", 19 out of 35, "concentrating on words that are exam related", 19 out of 35, "finding out lexical familiarization devices", 18 out of 35, are considered frequently and most used by students. Comparing to previously stated ones, students definitely reported that they would never use "passing unknown words while reading or listening". In brief, concentrating on the words that are directly related to examinations has its demerits. It activates students' exam related memory and most of them forget almost everything after the exam.

In order to identify learners as high, medium or low level, Oxford's division (1990) was used. Table 6 summarizes the level of vocabulary learning strategy use of Azerbaijani students. Aforementioned 23-item strategies were classified according to their category and level of strategy.

Table 6.

Overall Vocabulary Strategy Use

Strategy Items	Category	Percentage (%)	Strategy Use
21	***MET***	82.8	**HIGH**
2	***DET***	60.6	**MEDIUM**
23	***MET***	57.1	**LOW**
1	***DET***	55.6	**MEDIUM**
20	***MET***	54.3	**HIGH**

22	***MET***	54.3	**HIGH**
15	***COG***	54.3	**MEDIUM**
13	***MEM***	51.4	**HIGH**
19	***MET***	51.4	**HIGH**
5	***DET***	50	**HIGH**
9	***SOC***	45.7	**LOW**
3	***DET***	44.4	**MEDIUM**
12	***MEM***	42.9	**HIGH**
17	***COG***	42.9	**HIGH**
10	***MEM***	42.9	**MEDIUM**
11	***MEM***	42.9	**MEDIUM**
16	***COG***	42.8	**HIGH**
7	***SOC***	41.7	**MEDIUM**
8	***SOC***	40	**MEDIUM**
4	***DET***	38.9	**HIGH**
6	***SOC***	38.8	**HIGH**
14	***MEM***	37.2	**HIGH**
18	***MET***	34.3	**MEDIUM**

The data presented above in Table 6 revealed that Azerbaijani engineering students were high strategy users. Subsequently, it indicates that meta-cognitive strategies are most preferred by learners.

Analyzing all the strategies categorized under the abovementioned categories of strategy revealed the most and least frequently employed strategies are illustrated and highlighted in Figure 1 and Figure 2.

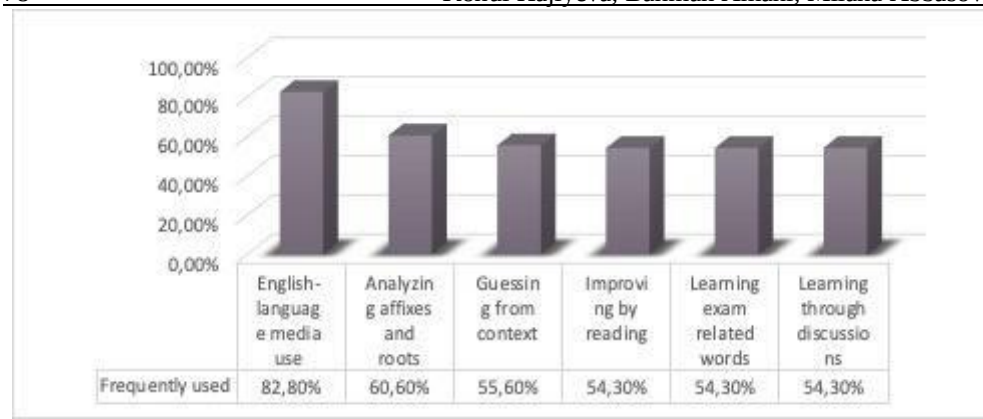

Figure 1. *The six most used strategies by Azerbaijani engineering students*

Figure 1 shows the six most used strategies by Azerbaijani students. It was found that 82.2% reported "using English-language media to learn new words (songs, movies, videos, etc.)" as the most used strategy item above all the category. Besides, "analyzing affixes and roots to acquire English vocabulary", "guessing the meaning of new words from context", "improving vocabulary by reading, for instance, academic texts, journals or magazines, and newspapers, etc.", "concentrating on words that are directly related to examinations", "using newly learned English words in verbal presentations and academic discussions to master them" are clearly stated as the most preferred strategy items.

Moreover, the study revealed the six least employed strategies by students and Figure 2 presents results in detail with percentages.

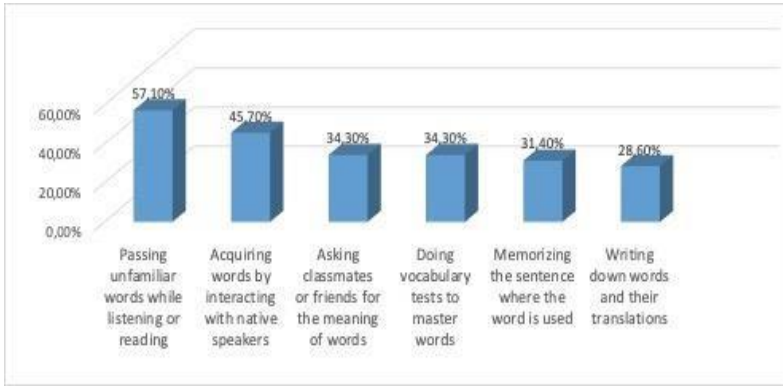

Figure 2. *The six least used strategies by Azerbaijani engineering students*

As reported above, 57.1% of the students showed that passing words which are unknown while reading or listening is not widely accepted and known strategy for them. On the other hand, 47.7% presented that communicating with native speakers is one of the least strategies used. Additionally, asking friends and classmates for words that are unfamiliar, doing vocabulary tests to acquire words, trying to

remember the whole sentence where the target word is used, taking notes of words and their translations are listed as the least frequently used VLS. However, contrary to the findings from cognitive strategy "writing the new words and their translations down repeatedly", social strategy "asking a teacher for a translation of new words" was indicated as one of the most used strategies by students.

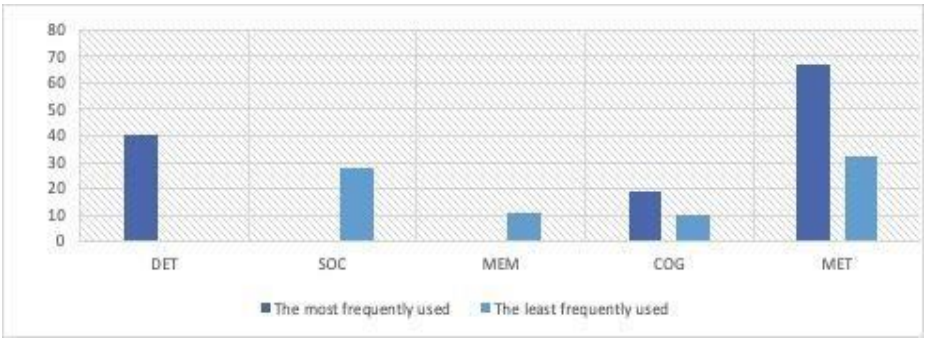

Figure 3. *The most and least frequently employed categories of VLS*

It is apparent from Figure 3 that meta-cognitive, determination and cognitive strategies are among the most frequently used strategies. Apart from this, the least frequently used strategies include meta-cognitive, social, memory, and cognitive strategies.

The Findings from the Vocabulary Test

To determine whether vocabulary learning strategy use has a significant contribution to learners' academic and technical English vocabulary knowledge, vocabulary test was designed that consists of two separate parts, academic and technical vocabulary test. Interestingly, we got many more responses, 41 students participated, comparing to VLSQ. The results shows that 68% (28) of the participants were females and 32% (13) were males. As illustrated below in Figure 4, 54% of the participants aged 18. Only 2% of them were 23 years old. We note that majority of the participants, 25 (61%) were in their second year of university study. Moreover, the first-year engineering students follow the second-year learners accordingly. However, only five of them were either in their third or fourth years. As it is seen from the findings, 46.3% (19) of the participants of this study defined themselves as intermediate students. It was followed with elementary students (26.8%), upper intermediate students (19.5%), advanced students (7.3%).

Before interpreting our results regarding detailed description of academic and technical English vocabulary, Figure 4 summarizes the scores students got from the Vocabulary Test.

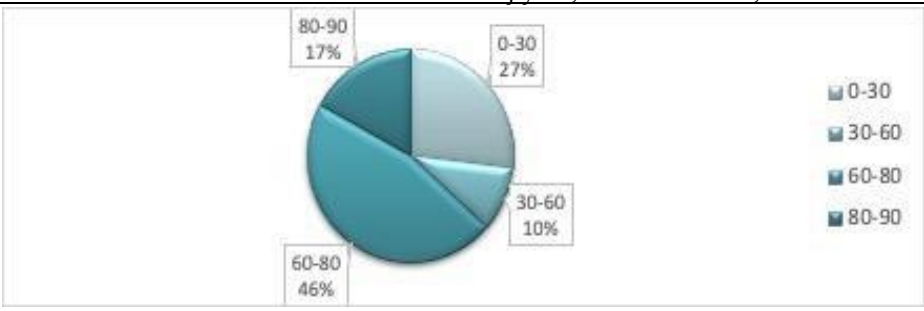

Figure 4. *The results from the Test Scores*

The overall scores are presented above, and it clearly reveals that students who got 60-80 made of great proportion of the data. 19 (46%) students' scores ranged from 60 to 80. Seven students out of 41 scored 80-90. 27% got 0-30, besides, 10% scored 30-60. 88 was the highest score and 3 was the lowest score according to students' performance on the test. All in all, 55.46 was the average score. Furthermore, the table given below is revealing words from Academic Word List that are answered wrongly by most of the participants of this study.

Table 7.

Frequently wrong answered words in Academic English Vocabulary section

Words	Responses (N)	Correct answers
Ensure	36	**14 (38.9%)**
Correspondence	36	**15 (41.7%)**
Distribute	35	**17 (48.6%)**
Found	35	**17 (48.6%)**
Sustain	36	**17 (47.2%)**
Undertake	37	**17 (45.9%)**
Commission	36	**19 (52.8%)**
Comprehensive	36	**20 (55.6%)**
Compatible	34	**21 (61.8%)**
Trigger	34	**22 (64.7%)**
Circumstance	35	**22 (62.9%)**
Implement	36	**22 (61.1%)**
Reveal	36	**22 (61.1%)**
Approximate	37	**22 (59.5%)**
Diversify	36	**23 (63.9%)**
Ultimate	36	**23 (63.9%)**
Substitution	35	**24 (68.6%)**
Sufficient	38	**24 (63.2%)**
Crucial	36	**25 (69.4%)**
Scope	36	**25 (69.4%)**
Consent	**38**	**25 (65.8%)**

Table 7 presents that 'ensure', 'correspondence', 'distribute', 'sustain', 'undertake',

'commission', and 'comprehensive' are the least frequently answered words by Azerbaijani engineering students. The words 'ensure' and 'commit' were confused by the students. Although 14 (38.9%) of them correctly defined, 13 of them matched the definition of 'ensure' with 'commit'. Surprisingly, 'distribute' (48.6%) was also confused with 'contribute' (31.4%). Participants mixed up 'correspondence' and 'illustration' too. 'A close similarity' was defined as 'illustration' by 14 (38.9%) students instead of 'correspondence' by 15 (41.7%). Interestingly, 'commission' was the word with low level of familiarity and at the same time the word confused students and some of them (28.6%) matched the definition 'a fact or condition' with 'commission'. 'To establish or originate' was also identified incorrectly and confused by 9 (25.7%) with 'innovate', but by 7 (20%) with 'detect'. Therefore, 'found' was one of difficult words that challenged students, only 17 students could define that appropriately.

Table 8.

Commonly known words by students

Words	Responses (N)	Correct answers
Reinforce	38	**35 (92.1%)**
Encounter	36	**34 (94.4%)**
Seek	36	**33 (91.7%)**
Resolve	36	**31 (86.1%)**
Element	36	**30 (83.3%)**
Prohibit	36	**30 (83.3%)**
Random	36	**30 (83.3%)**
Priority	37	**30 (81.1%)**
Community	37	**30 (81.1%)**
Abandon	37	**30 (81.1%)**
Utilize	37	**30 (81.1%)**
Underestimate	**33**	**28 (84.8%)**

Table 8 also highlighted the most commonly known words by Azerbaijani engineering students. Words such as, 'reinforce', 'encounter', and 'seek' were answered above 90%. Despite the fact that 'underestimate' was validated by a larger sample size, 33 students out of 41 were able to answer that.

Table 9.

Commonly wrong answered words from Technical English Vocabulary section

Words	Responses	Correct answers
Industrial engineering	39	**14 (35.9%)**
Forge	37	**18 (48.6%)**
Anneal	37	**17 (45.9%)**

Found	36	**11 (30.6%)**
Excavation	36	**15 (41.7%)**
Emission	35	**11 (31.4%)**

Table 9 focuses on the technical words that are mostly answered incorrectly by Azerbaijani EFL engineering students. 'The use of machines to manufacture products' was defined inappropriately as 'mechanical engineering' by 15 (38.5%) students. On the other hand, the correct answer 'industrial engineering' was responded by 14 (35.9%). Unexpectedly, although the word 'soften' was presented obviously as 'to make something softer' still confused some of the participants, 5 (12.8%). 'Forge' and 'anneal' were also among puzzling words. Subsequently, 'forge-shaping metals by heating and then hammering' was being employed instead of 'anneal-making materials hard by cooling them slowly'. In this section of test, 'found' was also used, however, the meaning 'to melt metal and then pour it into a form' was different from the one used in Academic section. The correct answer was 11 (30.6%) for that word and 'harden' (38.9%) seemed to be confused with 'found'. Moreover, 'excavation' with 15 correct answers confused participants and 'dredger' was involved with 11 (30.6%). 'Emission' and 'transmission' were the confusing words for engineering students. Accordingly, 31.4% defined 'the production of radiation by a radio transmitting station' as 'emission', however, 40% reported as 'transmission'.

As the focus of the study was on Technical English, defining words that are commonly known by most of the students also appears to have a comprehensive contribution to the research. The table given below indicates that 'manufacturing', 'tough', 'fuel', 'tanker', 'drill', and 'scheme' seem likely common technical words that are widely known among students.

Table 10.

Commonly known words from Technical test part by students

Words	Responses	Correct answers
Manufacturing	37	**32 (86.5%)**
Tough	37	**30 (81.1%)**
Fuel	37	**30 (81.1%)**
Tanker	37	**30 (81.1%)**
Drill	37	**30 (81.1%)**
Scheme	33	**27 (81.8%)**

Table 10 also revealed that there was no word with correct answer above 90%. The highest percentage was 86.5 with the word 'manufacturing'.

Comparison between the Present Results and Past Studies

As vocabulary is the essential component of language, vocabulary has been widely explored in the field of second language learning and teaching by many researchers over the years. We believe that our study has highlighted the importance of

vocabulary and vocabulary learning strategies use by Azerbaijani university students. Moreover, as apparently stated in the introduction, investigating engineering students' academic and technical English vocabulary knowledge has been intended to make a contribution to the system of education, curriculum, syllabus design and materials used by English language instructors, especially teaching English for Academic and Special purposes, in Azerbaijan.

The findings of an online questionnaire of vocabulary learning strategies employed by Azerbaijani EFL engineering students presented that "guessing from context" and "analyzing affixes and roots to master vocabulary", additionally, using bilingual dictionary is preferred by Azerbaijani students. Nevertheless, using dictionary as a pronunciation device seems to appear less preferred. Sadly, this might influence the correct pronunciation of the newly learned words and might cause problems in productive skills, speaking and listening. The importance and popularity of online dictionaries were also proved by this research study. On the other hand, social strategies such as "asking teachers for a translation of new words" and "asking teacher for paraphrase or a synonym of a new word" were presented as preferred strategies by the most of Azerbaijani students. Asking for translations has always been a popular strategy. Students reported that making word lists especially with their translations in their own language make them memorize in long terms. In contrast, interacting with native speakers was reported as the least used strategy item in social category. Furthermore, memory strategies are also frequently employed category of strategy by the participants. "Studying the spelling of the words and speak out loud the words", "memorizing the sentence where the word is used" and "using words in sentences to remember" are highly used strategy items in this category. It might imply that learning how words are written has a great impact on students whose learning vocabulary abilities are also influenced. Classifying words based on their topics might help learners to memorize the words newly acquired, therefore, learning words in isolation is insufficient to produce them. We need a sentence, basically real context to apply those words. As a consequence, it is not surprising that students learn more in discussions what they have learned or experienced and giving verbal presentations regarding the topics newly covered. Seeing English in context or strategically called as using English-language media and boosting vocabulary balance while reading. Students are always tend to learn words which are supposed to be asked in the examination. It is not totally bad because learning with a specific goal makes learning easier and smoother. However, this also makes them learn in a day and forget after that method, this is very famous method used among Azerbaijani learners whether in English or in any other language. Although it was reported by them that they would not pass unfamiliar words while listening or reading, the reality is that they always do it instead of looking up a word in a dictionary. They would either pass or trying to guess from the context. Guessing from context would also demand good skills in English and in the topic being read or listened. Meta-cognitive strategies are used quite often by Azerbaijani students.

According to the findings, meta-cognitive, determination and cognitive strategies are the most frequently used strategies by Azerbaijani engineering students. Besides, meta-cognitive, social, memory, and cognitive strategies were the least frequently used strategies. Zhu's study (2017) investigated technical vocabulary learning strategies used by engineering students and found that determination, memory, and cognitive strategies are frequently used by learners. In Turkish context, Çelik & Toptaş (2010) investigated vocabulary learning strategies adopted EFL students and came to the conclusion that the participants' general use of vocabulary learning strategies was not enough. They also made it clear that Turkish EFL students with upper-intermediate level used determination strategies more than elementary learners. Similarly, Azerbaijani EFL learners with intermediate level also preferred determination strategies and they seemed to be considered as medium user of determination strategies. Unlike our study, Çelik and Toptaş found that the intermediate level learners used more memory strategies than the elementary level learners. Memory strategies are one of the least frequently used vocabulary learning strategies among Azerbaijani engineering students.

To analyze what vocabulary test revealed about Azerbaijani engineering students' academic and technical English vocabulary, data was presented and students' scores were clearly low regarding the point that majority of them were in their second year. The researcher hoped to find much more satisfying results that their majors in English and university has many requirements to fulfill. They would have demonstrated much better scores especially on Academic English test. As we all know, Academic vocabulary should have covered even before entering university and in order not to struggle with understanding authentic materials related to their majors. On more thing should be noted that, still most of the participants of this study defined themselves as intermediate students, their scores cannot match with this level of proficiency. However, it cannot be denied that many students who defined themselves as elementary learners projected great results on the test. The overall scores reveals that students who got 60-80 were in large in number. However, it was highlighted significant variances between students' productive academic vocabulary and receptive academic vocabulary (Pecorari et al., 2018). The results from our study could only investigate receptive vocabulary of Azerbaijani learners, so further research expected to investigate not only receptive vocabulary but also productive vocabulary among different learners, in various educational institutions, both in high school and tertiary education in Azerbaijan.

Conclusion

As the basic component of language, vocabulary has been widely investigated in the field of second language learning and teaching by several researchers throughout the years. Without mastering essential vocabulary knowledge, a second language cannot

be acquired and used efficiently. A relevant vocabulary is considered an initial point for success in learning a second language. As the limited study has been done in relation to vocabulary and learning strategies in one study, this research study has a significance in the scope of vocabulary learning and teaching, additionally, vocabulary learning strategies. By conducting this research with Azerbaijani engineering students we made an attempt to answer our research questions. Lack of sufficient vocabulary may cause troubles in language use for ESL or EFL learners. As Azerbaijani students have some difficulties in both inputting and outputting information in English, our study aimed at investigating the use of different vocabulary learning strategies (VLSs) among Azerbaijani engineering students and identifying the most and least frequently used VLSs by learners. Furthermore, Azerbaijani learners as high strategy users, medium strategy users and low strategy users were explored and the overall frequency of strategy use was presented. As a result of the analysis, findings both from VLSQ and Academic and Technical English Vocabulary Test revealed students' academic and technical English vocabulary knowledge and found that there is not a significant relationship between vocabulary learning strategies (VLSs) and academic and technical English vocabulary knowledge of Azerbaijani engineering students. Consequently, high vocabulary learning strategy users are not more successful academic and technical English learners.

Coming back to our research questions, we managed to find the answers to all of our questions. Going back to those questions and remember what each of them sought to discover would be great:

> ✦ *Azerbaijani EFL engineering students' most and least frequently employed categories of vocabulary learning strategies (VLSs)* ✦ *Defining Azerbaijani students as high, medium, or low vocabulary learning strategy users* ✦ *Showing the relationship between vocabulary learning strategies (VLSs) and academic and technical English vocabulary knowledge of students*

The inferences are drawn from our findings:

- Answer to research question 1 obviously indicates that meta-cognitive strategies include the most and least frequently used strategies. Using English-language media use such as, songs, videos, etc. was the most used one by Azerbaijani engineering EFL students. From the same category, but different strategy item that passing words which is unknown while reading or listening was the least frequently employed strategy by learners. So, knowing which strategies are appropriate for them will provide students more authority for their learning. Here it is also apparent that translation is still important for Azerbaijani learners

while learning vocabulary comparing to defining words. Furthermore, asking for translations is more preferable than asking for paraphrases.

- Answer to the research question 2 reveals that Azerbaijani engineering students were high strategy users and concludes that participants' general use of vocabulary learning strategies is considerably sufficient in the Azerbaijani context. Subsequently, it is obvious from the research study that meta-cognitive, determination and cognitive strategies are among the most frequently used strategies. Apart from this, metacognitive, social, memory, and cognitive strategies are among the least frequently used ones.
- Analysis of data suggests the answer to research question 3 that high vocabulary learning strategy use does not necessarily contribute to the level of academic and technical English vocabulary knowledge. Yet the students with low scores on test appeared to use VLS quite frequently. As a result of these implications, it does definitely not prove the hypothesis put forward in the beginning of this study, in introduction part.

All in all, it is obvious that language instructors are expected to teach some strategies to assist their students' vocabulary learning skills. Ultimately, vocabulary learning strategies play an influential role in acquiring more vocabulary and helping learners be more independent. Moreover, knowing students' academic and technical English vocabulary knowledge can also serve teachers in designing instructional programs and assessing students' growth in the academic environment by understanding what their students need.

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