



## ASSESSMENT OF L2 ENGLISH VOCABULARY NEEDS OF TURKISH UNIVERSITY PREPARATORY CLASS STUDENTS

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### KEYWORDS

*Second language learning  
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### ABSTRACT

*This paper presents the results of a L2 English vocabulary needs assessment study carried out with Turkish university preparatory class students. A single, descriptive case study with both qualitative and quantitative approaches was adopted. The quantitative data were analyzed by descriptive statistics. The qualitative data were analyzed by thematic content analysis. The results revealed that although the participants acknowledged vocabulary knowledge as a significant aspect of language learning which deserves special attention, they were far below the university threshold level. The vocabulary needs and related goals were identified to be used in planning the vocabulary component of the course.*

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## 1. Introduction

As a result of the learner-centered focus in education, learners' individual needs have been acknowledged (Moir & Nation, 2002). In general terms, needs assessment, also called needs analysis (Brown, 1995), is defined as "a process that attempts to estimate deficiencies" (Royse et al., 2009, p.3). In the field of language education, Nunan (1988) defined it as the "techniques and procedures for collecting information to be used in syllabus design" (p. 13) and further explains that the information collected with the needs analysis can help teachers in selecting the content, grouping the learners, adjusting the syllabus and methodology according to the learners as well as identifying possible areas of conflict in the classroom. In his definition of needs analysis, Brown (1995) emphasized learners' human needs alongside their language needs and proposed that needs analysis could be defined broadly as collecting and analyzing all relevant information in a systematic way to meet students' language learning needs in a particular institution.

It is crucial to state that needs assessment is a vital activity in terms of developing a curriculum. Brown (1995) describes it as the basis and integral part of curriculum development procedure. As a result of needs analysis of a group of language learners, goals and specific objectives of the program are identified (Brown, 1995; Nunan, 1988). Nunan (1988) indicates that the identified needs are inverted to instructional goals by judging the appropriateness of the goals to learner needs, opportunities that the institution and the system provides, and the characteristics of the program. Hereby, goals and objectives based on identified needs could be used as the building blocks in other curriculum activities of tests, materials, teaching, and evaluation (Brown, 1995). In other words, needs assessment provides educators and curriculum developers with valid information that can be used through the decision-making of curriculum development (Grier, 2005).

More and more researchers attach great importance to vocabulary knowledge in second and foreign language (L2) learning (Daller et al., 2007; Laufer & Nation, 1999; Milton, 2009; Nation, 2001; Schmitt, 2008; Webb & Nation, 2017). The reason can be explained by the fact that L2 learners need to know many words to use the target language successfully (Nation, 2006; Schmitt, 2008). Receptive and productive distinction is one of the well-accepted classifications in the literature about the definition of knowing a word (Milton, 2009; Nation, 2001). Milton (2009) defines the receptive (passive) vocabulary knowledge as the words learners recognize when they hear in a conversation or see in a text, and the productive (active) vocabulary knowledge as the words learners recall and use while speaking or writing. Nation (2001) specifies that the receptive/productive distinction in terms of vocabulary knowledge is particularly useful in that it helps learners understand all the aspects of word knowledge, which broadly involves knowing a word's form, meaning and use.

According to Milton (2009), the idea of word frequency guides language learners in their vocabulary learning process. The significant distinction between high- and low-frequency words makes it essential for teachers to get an idea of their learners' state of vocabulary knowledge while designing the vocabulary component of a language teaching program as it provides useful information in terms of diagnostic, placement, and curriculum-design procedures (Laufer & Nation, 1999). High-frequency words consist of the 1st 3000 word-families, mid-frequency words include the word-families between the 4th and 9th 1000 word-families, and the words beyond the 9th 1000 level are regarded as the low-frequency words in the literature (Schmitt & Schmitt, 2014). According to Nation (2006), L2 learners need 6000-7000 word-families to understand spoken texts and 8000-9000 word-families to comprehend written texts. Webb and Nation (2017) indicate that the knowledge of the 9000 most frequent word-families (high- and mid- frequency words) is an important threshold because it gives learners 98% coverage of the most spoken and written texts and helps them to be able to cope with university-level study easily. Therefore, the knowledge of the 8000-9000 most frequent word-families was accepted as the university threshold level in this study.

In language courses selecting vocabulary that deserves direct attention in the classroom is of vital importance (Laufer, 2014; Laufer & Nation, 1999). Most researchers agree on the idea that high-frequency words should be learned first and deserve direct attention (Laufer & Nation, 1999; Nation, 2001; Webb & Nation, 2017). The reason behind this idea is that a great amount of the running words in different types of written and spoken texts are composed of high-frequency words (Nation, 2001).

There are many studies in the literature that investigate tertiary-level language learners' L2 needs from different perspectives. There are studies available investigating L2 learners' general language

needs (Akyel & Ozek, 2010; Atai & Shoja, 2011; Demiray Akbulut, 2016; Sothan, 2015; Yılmaz, 2009), needs for an English for Specific Purposes (ESP) (García Mayo & Núñez Antón, 1995; Kazar & Mede, 2014; Lepetit & Cichocki, 2002), academic and vocational needs (Ayas & Kırkgöz, 2013). Also, there exist some studies investigating the needs for the development of different L2 skills of speaking (Ulum, 2015) and writing (Pavanelli Pereira, 2020). However, few international studies (Durrant, 2014; Hajiyeva, 2014; Malmström et al., 2018) have addressed the vocabulary needs of L2 learners although vocabulary is crucial for language learning (Daller et al., 2007; Schmitt, 2008). Also, I found no previously published studies in a Turkish context investigating English L2 vocabulary needs. For this reason, this study was an attempt to fill this gap.

The purpose of this descriptive case study was to analyse university preparatory class students' English as a foreign language (L2) vocabulary needs at the beginning of the compulsory English preparatory program in a state university in Turkey. Therefore, in this needs assessment study, based on the "discrepancy view" (Stufflebeam et al. 1985, p.5), the participants' existing vocabulary knowledge and what they still need to learn was examined to identify the students' vocabulary needs in depth. Milton (2009) emphasizes that vocabulary measures can provide useful information about learners' overall vocabulary knowledge and their knowledge at different vocabulary levels although they may not provide an absolute score. Along these lines, Laufer and Nation (1999) specify that a variety of vocabulary measures is of great importance to get an extensive understanding of learners' vocabulary knowledge. So, it was believed that there was a great need to conduct research on different aspects of vocabulary knowledge such as the participants' written receptive vocabulary size, their strengths and weaknesses at different word frequency levels, their controlled-productive vocabulary knowledge, and their use of language learning strategies to be able to identify their vocabulary needs. Also, it is believed that the students' views could provide an additional data source to be considered in analyzing their vocabulary needs in greater depth. Thus, based on the aspects specified above, the research questions to be answered were as follows:

- (1) What is the students' level of vocabulary knowledge?
  - What is the students' level of written receptive vocabulary size?
  - What are the students' strengths and weaknesses at different word frequency levels?
  - What is the students' level of controlled-productive vocabulary knowledge?
  - What is the frequency of the participants' language learning strategy use?
- (2) What are the students' views about their own vocabulary needs?

## **2. Methodology**

### **2.1. Research design**

Based on Yin's (2003) case study methodology, this descriptive case study research adopted a holistic single-case study design with both qualitative and quantitative research approaches in determining preparatory class students' L2 vocabulary needs. In the quantitative part, to measure the students' existing vocabulary knowledge, data were collected through a set of standardized vocabulary tests. Data of self-reported language learning strategy use was collected using a language learning strategy inventory. Also, to analyse students' vocabulary needs in depth and to triangulate the quantitative data, students' views and perceptions about their own vocabulary needs were elicited via the standardized open-ended interviews. This interview approach was selected because it gives the researcher the advantage to use the limited time efficiently and facilitates the analysis of the data (Patton, 2002).

### **2.2. Setting and participants**

A convenience sample of 156 volunteer university compulsory English preparatory class students (out of 381 compulsory English preparatory class students) enrolled in different programs at the university participated in the quantitative phase of the study. Their ages ranged from 18 to 22 years. The preparatory class students were high-school graduates who were eligible to enter the university and had relatively similar demographic and language backgrounds. The compulsory English preparatory program is a one-year intensive English program offered by the School of Foreign Languages. It is a requirement for entrance into the undergraduate programs which are totally or partially English

medium at the university. All the students were randomly assigned to the classes by the school administration at the beginning of the academic year. In the qualitative phase, a purposeful sample of 20 students who had participated in the quantitative phase were interviewed. They were purposefully sampled using maximum variation sampling (Patton, 2002). Sample variation was maximized using dimensions such as vocabulary size, strategy use, mastery of the 1000-word level. Research ethics committee approval was obtained from the Social and Human Sciences Research Ethics Committee of the University for this study.

### 2.3. Instrumentation and procedure

To identify the students' vocabulary needs, their vocabulary knowledge was tested using The Vocabulary Size Test, The Updated Vocabulary Levels Test, The Productive Vocabulary Level Test, and The Strategy Inventory of Language Learning. Brown (1995) asserts that tests can provide a large amount of information about students; "objective needs" (p.40).

The Vocabulary Size Test (Nation & Beglar, 2007) is used to test learners' written receptive vocabulary size from the 1st 1000 to the 14th 1000-word families of English, that is, it is a proficiency measure used for determining the total number of words learners know. The test consists of 140 items in multiple-choice format. For the present sample, the internal consistency reliability coefficient, using the Kuder-Richardson Formula 20 (KR-20), was found to be 0.90 for The Vocabulary Size Test. A sample item from the 5th 1000-word level is shown below:

- WEEP: He wept.
- a. finished his course
  - b. cried
  - c. died
  - d. worried

The Updated Vocabulary Levels Test (Webb et al., 2017) is a diagnostic test measures knowledge of vocabulary at the 1000, 2000, 3000, 4000, and 5000 levels, and indicates the word frequency level that teachers should use to select words for learning. It uses a matching format with 10 3-item clusters per level and measures 15 nouns, 9 verbs, and 6 adjectives in each level. The internal consistency reliability coefficient, using the Kuder-Richardson Formula 20 (KR-20), was found to be 0.92 for The Updated Vocabulary Levels Test in this study. A sample from the 1000-word level is shown below:

**Table 1. Sample from Updated Vocabulary Levels Test**

	choice	computer	garden	photograph	price	week
<i>cost</i>						
<i>picture</i>						
<i>place where things grow outside</i>						

The Productive Vocabulary Level Test (Laufer & Nation, 1999) is a controlled-production vocabulary levels test comprised of items from five frequency levels and measures vocabulary growth. It uses a completion item format. A meaningful sentence context is presented, and the first letters of the target item are provided for each test item. The internal consistency reliability coefficient, using the Kuder-Richardson Formula 20 (KR-20), was found to be 0.90 for The Productive Vocabulary Level Test. Below is an example from the 2000-word level eliciting the word 'opportunity':

I'm glad we had this opp\_\_\_ to talk.

The Strategy Inventory of Language Learning (Cesur & Fer, 2007) is the Turkish version of Strategy Inventory of Language Learning originally developed by Oxford (1990) and identifies foreign language learners' language learning strategies. Cesur and Fer (2007) reported that Cronbach's alpha reliability coefficient for the total scale was 0.92 and it ranged from 0.59 to 0.86 for the subscales. In this study,

the Cronbach Alpha internal consistency coefficient was calculated to be 0.96 for the total scale, 0.90 for the memory strategies subscale, 0.85 for the cognitive strategies subscale, 0.65 for the compensation strategies subscale, 0.85 for the metacognitive strategies subscale, 0.65 for the affective strategies subscale, and 0.80 for the social strategies subscale.

Also, a standardized open-ended interview form was constructed by the researcher for the follow-up interviews for exploring the students' subjective views and perceptions about their own vocabulary needs. Nunan (1988) also mentions both objective information (age, nationality, mother tongue etc.) and subjective information (learners' perceptions, goals, and priorities etc.) collected via needs analysis. The questions in the interview form in this study were based on the literature review and the purpose of the study, allowing the researcher to get subjective information about the learners by probing the students' thoughts and perceptions on their vocabulary knowledge. Brown (1995) indicates that individual interviews help the researchers get the participants' real views confidentially. The interview questions were improved and validated through two referees from the department of Curriculum and Instruction. The questions were piloted with two preparatory class students not involved in the actual study to ensure that the questions were clearly understood. After the pilot study, minor changes were made to ensure clarity. The final form of the standardized open-ended interview form contained 5 open-ended questions to investigate the students' perceptions and opinions about (1) the importance of vocabulary knowledge in language learning, (2) the types of words they would like to learn, (3) the amount of vocabulary they think they need to learn to manage university study, (4) the amount of time they think they should allocate for vocabulary learning, and (5) the vocabulary learning strategies they claim to use.

The data were collected at the very beginning of the English preparatory program. The vocabulary tests and the language learning strategies inventory were administered during the regular class period by the researcher in the first week. The administration of the tests took between 45 and 60 minutes to complete. The interviews were conducted by the researcher on the first day of the second week, took between 13-25 minutes and audio recorded. The students were informed that the participation was voluntary, and the data obtained would remain anonymous. The interviews were conducted face to face in the participants' native language (Turkish) to avoid any language barriers. All the interviews were transcribed verbatim and translated in English by the researcher for the content analysis.

## 2.4. Data analysis

The quantitative data were analyzed by using descriptive statistics. The qualitative data were analyzed inductively by four-phase thematic content analysis procedure. According to Yıldırım and Şimşek (2008), it includes phases of coding the data, identifying the themes that emerge, the arrangement of the codes and themes, and definition and interpretation of the findings. The coding was performed by the researcher and one independent coder separately. Intercoder reliability was calculated by using Miles and Huberman's (1994) formula in which reliability equals the number of agreements divided by the total number of agreements and disagreements. The initial intercoder reliability was .90 and consensus on the categories was reached via discussion of the categories of disagreement. The participants' names were coded as S1, S2...S20 in the data analysis.

## 3. Results

### 3.1. The vocabulary size test results

Students' level of written receptive vocabulary size was tested using the Vocabulary Size Test.

**Table 2. Students' Mean Receptive Vocabulary Size**

<i>n</i>	Minimum	Maximum	<i>M</i>	<i>SD</i>
156	500	5500	2004	1003

As shown in Table 1, the students' mean receptive vocabulary size was 2004±1003 word-families. The minimum vocabulary size was 500, while the maximum was 5500-word families.

**Table 3. Students' Receptive Vocabulary Size Frequency**

Vocabulary Size	<i>f</i>	%	Cumulative Percent
0-1000	21	13.5	13.5
1001-2000	69	44.2	57.7
2001-3000	45	28.8	86.5
3001-4000	12	7.7	94.2
4001-5000	6	3.8	98.1
5001-6000	3	1.9	100.0
Total	156	100.0	

As Table 2 shows, 13.5% (21 students) of the students had a vocabulary size up to 1000 word families, 44.2% (69 students) of them had a vocabulary size between 1001- and 2000-word families, 28.8% (45 students) had a vocabulary size between 2001 and 3000 word families, 7.7% (12 students) had a vocabulary size between 3001- and 4000- word families, 3.8% (6 students) had a vocabulary size between 4001 and 5000, and 1.9% (3 students) had a vocabulary size between 5001 and 6000-word families.

### 3.2. The updated vocabulary levels test results

Students' strengths and weaknesses at different word frequency levels were identified using The Updated Vocabulary Levels Test.

**Table 4. Students' Vocabulary Level Test Scores (N= 156)**

Word Frequency Levels	Minimum	Maximum	<i>M</i>	<i>SD</i>
1000	1	29	17.0	6.1
2000	0	22	6.8	4.4
3000	0	11	2.2	2.6
4000	0	12	3.7	2.9
5000	0	10	2.0	2.8

As shown in Table 3, the students' mean score was  $17.0 \pm 6.1$  words for the first 1000 level,  $6.8 \pm 4.4$  for the 2000-word level,  $2.2 \pm 2.6$  for the 3000-word level,  $3.7 \pm 2.9$  for the 4000-word level, and  $2.0 \pm 2.8$  for the 5000-word level. Also, it was found that only 6% of the students (9 students) achieved mastery of the 1000-word level when the cutting point of 29/30 (96.7%) at the 1000, 2000, and 3000 levels was adopted as recommended by Webb et al. (2017). Moreover, none of the students achieved mastery of the 2000-, 3000-, 4000-, and 5000-word levels when the cutting point of 24/30 at the 4000- and 5000-word levels was accepted as suggested by Webb et al. (2017).

### 3.3. The productive vocabulary level test results

Students' level of controlled-productive vocabulary knowledge was determined by the productive Vocabulary Level Test.

**Table 5. Students' Level of Controlled-Productive Vocabulary Knowledge (n= 156)**

Word Frequency Levels	Minimum	Maximum	<i>M</i>	<i>SD</i>
2000	0	5	1.9	1.2
3000	0	3	0.4	0.8
5000	0	1	0.2	0.4
University Word List (UWL)	0	1	0.1	0.3
10000	0	0	0.0	0.0

As table 4 shows, the students' mean score was  $1.9 \pm 1.2$  for the 2000-word level,  $0.4 \pm 0.8$  for the 3000-word level,  $0.2 \pm 0.4$  for the 5000-word level,  $0.1 \pm 0.3$  for the University Word List (UWL) level. None of the students answered any of the questions correctly at the 10000-word level. As it is clear in Table 4, none of the students had satisfactory mastery of any of the levels in the Productive Vocabulary Level Test when the cutting point of 15 or 16 (85% or %90) out of 18 words for the 2000-word level was adopted as suggested by Laufer and Nation (1999).

### 3.4. The strategy inventory of language learning results

The frequency of the participants' language learning strategy use was identified by The Strategy Inventory of Language Learning.

**Table 6. Students' Language Learning Strategy Use Frequency**

	<i>f</i>	%	Cumulative Percent
<b>Memory</b>	3	1.9	1.9
<b>Cognitive</b>	12	7.7	9.6
<b>Compensation</b>	33	21.2	30.8
<b>Metacognitive</b>	84	53.8	84.6
<b>Affective</b>	12	7.7	92.3
<b>Social</b>	12	7.7	100.0
<b>Total</b>	156	100.0	

As Table 5 shows, metacognitive strategies (53.8 %) were used the most frequently among the students, followed by compensation (21.2%), cognitive, affective, and social (7.7% each), and memory (1.9%) strategies, respectively.

**Table 7. Students' Degree of Language Learning Strategy Use**

	Minimum	Maximum	M	SD
Memory	1.8	4.1	3.1	0.5
Cognitive	2.0	4.5	3.1	0.5
Compensation	1.5	5.0	3.3	0.7
Metacognitive	2.2	4.7	3.5	0.6
Affective	1.7	4.7	3.0	0.7
Social	1.7	4.5	3.1	0.6

As seen in Table 6, the mean score of metacognitive strategies was 3.5±0.6, compensation strategies was 3.3±0.7, memory and cognitive strategies was 3.1±0.5, social strategies was 3.1±0.6, and affective strategies was 3.0±0.7. As Table 4 shows, metacognitive strategies were used at a high level, while memory, cognitive, compensation, affective and social strategies were all used at a medium level according to Oxford's (1990, p.300) classification of language learning strategy use.

### 3.5. Interview results

Students' views and perceptions about their own vocabulary needs were examined by the standardized open-ended interview form. The following six primary themes were identified from the analysis of the interview data: (1) level of vocabulary proficiency (2) the importance of vocabulary knowledge in language learning, (3) the types of words the students would like to learn, (4) the amount of vocabulary the students need to learn to manage university study, (5) the amount of time the students would like to allocate for vocabulary learning, and (6) the vocabulary learning strategies the students reported using the most. Qualitative findings were presented thematically under the summarized tables and illustrated with verbatim quotes from the participants.

#### *Students' level of vocabulary proficiency*

**Table 8. Students' Views About Their Own Vocabulary Proficiency**

Level of vocabulary proficiency	f	%	Participants
I have insufficient vocabulary knowledge.	11	55	1,4,5,8,9,10,12,14,15,16,17
My vocabulary knowledge is moderate.	5	25	2,7,11,13,18
I have sufficient vocabulary knowledge.	2	10	3,19

Although not asked explicitly, most of the students noted about their own level of vocabulary proficiency. As Table 7 shows, 55% of the students believed they had insufficient vocabulary knowledge, 25% stated that they had moderate level of vocabulary knowledge while only 10% of the students said their vocabulary knowledge is sufficient. 10% of them did not mention their own level of vocabulary proficiency. Some sample quotes:

S1 "In fact, I think, vocabulary learning is the basis of language learning but unfortunately my vocabulary knowledge is not enough. I need to improve my vocabulary knowledge because grammar is never enough; unfortunately, we have been learning grammar for years. I do not know enough vocabulary, that is why I cannot speak English."

S19 "I think I must study vocabulary the most because we will learn new words every day, so I must revise them after the lesson. Also, my vocabulary level is good because when we were in high school, we learned lots of words and I like listening to English music a lot, so I can learn new words easily."

S2 "Vocabulary knowledge is particularly important for me. I want to speak English like the native speakers do but I cannot, and I think that is because I do not know enough vocabulary. In fact, my



vocabulary knowledge is not bad, but I need to know more words to be able to speak English just like the native speakers.”

*The importance of vocabulary knowledge in language learning*

**Table 9. Students' Views About the Importance of Vocabulary Knowledge**

Importance of vocabulary knowledge	f	%	Participants
Vocabulary is the key to success in language learning.	13	65	1,3,4,7,8,10,11,13,14,16,18,19,20
Vocabulary is important in language learning.	7	35	2,5,6,9,12,15,17
Vocabulary is important for the improvement of other skills.	14	70	3,5,6,7,8,10,11,12,13,14,16,17,18,20
Vocabulary plays an especially important role in the exams.	12	60	1,3,5,7,8,9,10,12,15,17,18,19
Vocabulary is important for communication.	9	45	2,4,7,11,12,13,14,16,20

In response to the question about the importance of vocabulary knowledge in language learning, all the participants (100%) explicitly stated that vocabulary knowledge is important in language learning. As Table 8 shows, 65% of the students described vocabulary as being the key component in language learning, while the rest (35%) believed that vocabulary learning is essential and beneficial for successful language learning to occur. For example, S4 states that “I think vocabulary knowledge is the most important thing in learning English, at least it is particularly important for me. Personally, I believe that as my vocabulary knowledge improves, my English level will also improve. So, I can say that vocabulary knowledge is essential to my achievement in the preparatory class this year. So, I have some plans about it.” Similarly, S18 said “The importance of vocabulary knowledge... Yes, of course it is crucial for us. I think without enough vocabulary knowledge you can never say that you know English. For example, I know grammar rules very well, but my vocabulary knowledge is not that good, I mean it is so so.”

While stating the importance of vocabulary, the students also addressed its importance in terms of other aspects of language learning. For example, most of the students (70%) believed that vocabulary knowledge is essential to the development of the four basic language skills of reading, writing, speaking, and listening. One other matter the students mostly mentioned in relation to vocabulary knowledge was their performance in both national and school exams. More than half of the students (60%) stated that they were supposed to have a high level of vocabulary knowledge to do well in the national language exams as well as the preparatory class exams. For example, student 3 said “In my opinion vocabulary is really the most important point in learning English. We need an adequate level of vocabulary to be able to read and write academic texts when we start our study at the faculty. Also, our lessons will be conducted in English, so we need to understand and participate in the lessons in English. After all, I think without adequate vocabulary, it is impossible to succeed in the exams and lessons and ...” Student 10 said “I can say that vocabulary is the most important thing if you are learning a foreign language. You need to know lots of words to read or speak in English. You cannot write and understand other people speaking English if you do not know enough vocabulary. Also, that is the reason why I am here now. If I knew lots of words, I would not be here now, I could pass the proficiency test and start from the first class.” Considering the exams, student 15 said “I would like to be a teacher at the university after graduation. Therefore, I must get high marks at school and, I need to pass the English language exam to be an academican (means YDS which is a national language proficiency test in the country). Also, a great deal of the students (45%) expressed that a large vocabulary is important for communication in English. Student 12 particularly emphasized the importance of vocabulary in terms of communication “I am a student at an English-medium department at the university and most of the courses next year will be in English. So, without enough vocabulary I cannot understand the lessons and express myself in the class, I mean I cannot communicate effectively. Therefore, I must do my best this year to improve my vocabulary knowledge.”

*The types of words they would like to learn*

**Table 10. Students' Views About the Types of Words They Would Like to Learn**

Types of words	f	%	Participants
Academic words	13	65	1,2,3,5,6,7,9,11,13,15,17,18,19
Technical words	6	30	3,4,8,10,15,19
Everyday vocabulary (High-frequency words)	16	80	1,2,4,5,6,7,8,9,10,11,12,13,14,16,17,20
Content words	5	25	1,4,14,16,20

Regarding the question about the types of words they would like to learn, it is clear in Table 9 that most of the students (80%) pointed out the importance of everyday vocabulary which are used frequently in everyday English. Although they did not mention the expression of “high-frequency words”, they emphasized that they would like to learn the words which are used frequently in authentic texts and conversations in everyday language. Interestingly, 25% of the students, who also mentioned everyday vocabulary, manifested that they would like to learn the “the words which have meaning” or “meaningful words” which they refer to everyday content words. In addition to everyday vocabulary, 65% of the students expressed that they wanted to learn academic words to manage their university study and 30% of them stated that they also wanted to learn technical words of their subject area as they were registered at an English-medium department. Some sample quotes are as follows:

S14 “As for me, I would like to learn the words which I can use in everyday life. Because to communicate well with people in English, I need to learn those words, I mean the words which are used in daily life, but not the grammar words, I mean the words which have meaning. Because you learn the grammar words in the lessons in any case. I believe that if you can communicate well in English, you can continue learning English on your own, I mean you can learn new words out of the lessons.”

S7 “Which words? Firstly, I want to learn daily words which we hear in daily conversations, on the television or read in the newspapers. I think first we must learn the words native speakers use while they are speaking. Then, I want to learn academic words. Because next year I will read and write academic texts because of my department at the university.”

S8 “I think it depends on the situation. In daily life we need to use everyday English. We need to speak in English with the teachers and the other students during the lessons, so we must learn everyday English. But it is not enough. I am a ... (he mentions his department) student, hence I must also learn technical words of my field to do well at school and be successful in my job.”

*The amount of vocabulary they think they need to learn to manage university study*

**Table 11. Students' Views About the Amount of Vocabulary They Think They Need to Learn**

The amount of vocabulary knowledge	f	%	Participants
Enough vocabulary to be able to communicate orally.	20	100	All the participants
Enough vocabulary to cope with university-level texts.	12	60	2,3,5,6,7,8,11,13,14,16,17,20
Enough vocabulary to be able to write sufficiently well.	7	35	2,5,8,11,13,16,17

When the students asked about the amount of vocabulary that they think they need to learn to manage university study, all the responses indicated that having sufficient amount of vocabulary knowledge necessary for university study was associated with respectively high level of oral communication competence without specifying exact amount of vocabulary. As Table 10 shows, all the students (100%) reported that they wanted to learn enough vocabulary to be able to communicate properly and easily. Moreover, more than half of the students (60%) indicated that they needed to

learn enough vocabulary to read and comprehend the university-level texts both about their field of study and varied topics, while some of the students (35%), who also suggested that they needed to learn enough vocabulary to read and understand written texts, reported that they needed a certain amount of vocabulary to be able to write texts as well in acceptable English. Some sample quotes are as follows:

S5 “In fact I do not know how much vocabulary I know but I think it is inadequate. I think at the end of this year I should speak English at intermediate level and express myself in English in the class. I should understand the texts I read during the lessons and write something in English on my own. I hope so because if I cannot, I cannot pass the preparatory class or even though I passed the class, I cannot do well next year.”

S11 “I do not know exactly how much vocabulary I need to learn, but I would like to speak English more fluently. And, next year when I start studying at the department, I must understand the lessons, I must read and understand the textbooks in English. Also, I need to write properly in English in the exams, you know everything will be in English.”

*The amount of time they think they should allocate for vocabulary learning*

**Table 12. Students’ Views About the Amount of Time Allocated for Vocabulary Learning**

The amount of time that should be allocated for vocabulary learning	f	%	Participants
I should study vocabulary every day.	19	95	All the participants except 4
Vocabulary requires more time than grammar.	17	85	All the participants except 4,9,17
I should study vocabulary more than other skills.	9	45	1,4,6,10,12,14,16,17,19

Regarding the question of how much time they should allocate for vocabulary learning, it was found that none of the participants gave a specific time range. As Table 11 shows, nearly all the participants (95%) affirmed that they should study vocabulary everyday as it is of great significance in language learning, while being a challenge for them because of the large amount of vocabulary they were supposed to learn. Also, nearly all the participants (85%) emphasized that vocabulary learning requires much more time than grammar while learning English. 45% of them believed that they should allocate more time for vocabulary learning than all the other skills as it is a basis for the development of other skills. Sample quotes are presented below:

S6 “To be honest, I do not know how much time I should allocate for vocabulary learning exactly, but I am fed up with grammar, we have been learning grammar at school for years. As I said earlier, if you learn a lot of vocabulary, you can understand what you read better, you can speak better, you can understand what you listen to in English. So, I think I must revise the new words we learn at school daily. I believe knowing a lot of vocabulary is prior to other things for me because if I know lots of words, it might somehow improve other skills. I do not know if I am right, but that’s what I think.”

S20 “How much time? I think teachers will inform us about it, I mean how to study and how much time we need to study. But I plan to study new words everyday regularly. We always studied grammar when we were in high school, but it does not work, you know, so I will try to learn lots of vocabulary from now on, I will not study grammar a lot.”

*The vocabulary learning strategies they claim to use***Table 13. Students' Views About the Vocabulary Learning Strategies They Claim to Use**

The vocabulary learning strategies	<i>f</i>	%	Participants
I use dictionaries.	20	100	All the participants
I make and use word lists.	14	70	1,2,4,5,6,8,9,11,13,14,16,17,18,20
I watch movies and listen to songs in English.	11	55	2,4,5,7,9,10,12,13,16,18,20
I use vocabulary notebooks.	7	35	3,6,8,10,15,17,19
I chat on the internet.	5	25	1,7,11,12,14
I read books.	4	25	8,14,15,19
I prepare word cards.	4	20	1,3,6,19
I study new words with my friends.	2	10	11, 17

As shown in Table 12, not surprisingly, dictionary use (100%) was the most preferred vocabulary learning strategy among the students. Moreover, more than half of the students reported to prefer word lists (70%) and watching movies and listening to songs in English (55%). Besides these, 35% of the students claimed to prepare vocabulary notebooks for themselves, 25% of them reported to chat on the internet, 25% preferred reading, 20% reported using word cards, and only 10% of the students stated to study new words with their friends. Some sample quotes are as follows:

S9 "I generally use the dictionary in my mobile phone, I downloaded ... (mentions the name of the dictionary) dictionary in my mobile, so it is really easy to use. Also, I like making list of new words, highlighting the new words on it, it really helps me remember. And I enjoy listening to songs and watching films in English in my free time. It is the most enjoyable way to study for me."

S17 "I enjoy studying vocabulary with friends because it gets more enjoyable in that way and helps me remember them. If I am at home, I use online dictionaries but certainly take some notes in my vocabulary notebook because otherwise I forget them very quickly. I sometimes make a word list especially before the exams. That's the way I study new words."

#### 4. Discussion

This study tried to explore the university preparatory class students' L2 vocabulary needs at the very beginning of the English preparatory program. One of the important findings of the study was that the students' mean receptive vocabulary size was 2004±1003 word-families at the beginning of the preparatory program. This was in line with the results of a study conducted by Hajiyeva (2014) which also reports low-level receptive vocabulary size among students. To get 98% coverage of vocabulary which is needed for unassisted comprehension (Hsueh-chao & Nation, 2000), learners need around 8000-9000 vocabulary size to be able to deal with written texts, and around 6000-7000 vocabulary size to deal with spoken texts (Nation, 2006). Similarly, Nation and Beglar (2007) emphasize that the vocabulary size around 8000 is a critical goal for learners to be able to comprehend varied unsimplified spoken and written texts. Considering the participants' vocabulary size in this study, one of the vocabulary needs identified can be stated as the need to have a total receptive vocabulary size around 8000-9000 word-families. I suggest that the learners in this study are far from this critical goal.

Another important finding of the study indicated that only 6% of the students (9 students) achieved mastery of the 1000-word level receptive vocabulary knowledge, while none of the students achieved mastery of the 2000-, 3000-, 4000-, and 5000-word levels. The most frequent 3000 word-families, or the high-frequency words (Schmitt & Schmitt, 2014), are regarded as a key vocabulary learning goal which provides 95% coverage of the spoken texts and where teachers should attach priority by providing both incidental and direct learning opportunities in the teaching-learning process (Webb &

Nation, 2017). Schmitt and Schmitt (2014) also suggest that teaching of at least the 2000 most frequent words should be emphasized in English language programs. In this study, most of the learners did not even have the mastery of the 1000-word level vocabulary knowledge. The qualitative findings support this result that the participants reported they wanted to learn the everyday English words, revealing that the participants perceived the value of the high-frequency words for them. For this reason, I suggest that the vocabulary program should start with the high-frequency words. Therefore, considering the participants' vocabulary knowledge at different frequency levels, another vocabulary need can be stated as the need to have the knowledge of the 3000 most frequent word-families (the high-frequency words) starting with the 1000 most frequent word-families. Again, we can say that the participants are far from this goal.

The qualitative findings revealed that a great deal of students wanted to learn academic words, also called sub-technical vocabulary (Nation, 2001), to manage their university study besides the high-frequency words. The importance of academic words for the students who plan to study in English-medium universities is emphasized in the literature (Coxhead, 2000; Nation, 2001; Webb & Nation, 2017). Webb and Nation (2017) highlight the positive impact of the academic words on the comprehension of academic books and discourse, so they recommend teaching of these words after the high-frequency words. As the preparatory class students are expected to continue their study in their degree programs, it seems important for the participants to learn the academic vocabulary to succeed at university-level English-medium study. Therefore, one of the needs identified in this study is the need to have the knowledge of the academic words.

Webb and Nation (2017) indicate that the knowledge of the 9000 most frequent words (both high- and mid-frequency words together) helps learners get around 98% coverage of most texts and enables them to cope with university-level English medium study. Similarly, Schmitt and Schmitt (2014) are of the opinion that mid-frequency vocabulary, which is often neglected, can yield good profit in terms of authentic purposes on the part of the learners such as watching movies, reading of novels and magazines, and reading English textbooks (a purpose the participants in this study would particularly need to achieve) and so deserves attention in the language programs. Considering the mid-frequency vocabulary, Webb and Nation (2017) suggest that teachers should train the learners in terms of vocabulary learning strategies and encourage learner autonomy as this group of words is too large to deal with in class. Researchers (Laufer & Nation, 1999; Nation, 2001) recommend teaching of strategies such as guessing from context, memorization, knowledge of word parts, and word cards, among others, to cope with the mid- and low-frequency words instead of teaching those words directly in the class. Qualitative findings showed that dictionary use, word lists, and movies and songs in English were the vocabulary learning strategies mostly used by the participants in this study. Therefore, regarding the literature mentioned as well as the qualitative findings about the participants' vocabulary learning strategies, one other need can be identified as the need to have the knowledge of the various vocabulary learning strategies that foster autonomous vocabulary learning to deal with mid- and low-frequency words.

The most conspicuous finding of the study was that none of the students had satisfactory mastery of any of the word levels in the Productive Vocabulary Level Test. It shows that the participants' level of controlled productive vocabulary knowledge, defined as "the ability to use a word when compelled to do so by a teacher or researcher" (Laufer & Nation, 1999, p.37), for producing L2 words while speaking or writing was less than expected. This result coincides with the results of a previous study by Hajiyeva (2014) which reported considerably low-level productive vocabulary size. In terms of Nation's (2001) productive knowledge and use perspective, we can say that the participants in this study might have difficulty with productive aspects of knowing a word such as spelling, pronunciation, using the right word parts, producing the word itself as well as its synonyms and antonyms, and using the word in a sentence, among others. This finding also supports the idea that learners have more receptive vocabulary than productive (Milton, 2009; Webb & Nation, 2017) as the participants' receptive vocabulary size, despite being inadequate, was better than their productive vocabulary level in this study, which can be explained by the fact that it is more difficult to achieve productive vocabulary than receptive vocabulary (Laufer, 2005; Webb & Nation, 2017). This finding was also in line with the qualitative data of the study, which showed that all the participants associated having enough vocabulary knowledge necessary for university study with high level of oral communication competence and they reported that they wanted to learn vocabulary sufficient to communicate in

speaking properly and easily. On this basis, one of the vocabulary needs can be stated as the need to have a productive vocabulary size of the 3000 most frequent word-families.

Regarding the participants' language learning strategy use, metacognitive strategies were the most frequently used strategies, while memory strategies were the least often used ones among the participants. Oxford (1990) explains that metacognitive strategies are used for "coordinating the learning process" (p.15), and therefore organize learners' strategy use too (Cohen, 2003). Thus, the finding that metacognitive strategies were the most frequently used ones is surprising and suggests that the participants are good at focusing, planning, and evaluating their language learning process (Oxford, 1990). However, the finding that memory strategies, used for "remembering and retrieving new information" (Oxford, 1990, p.14), were the least often used ones suggests that the participants do not create mental linkages, apply images and sounds, review well, and employ action at an expected level and this, in a way, explains the participants' low level vocabulary knowledge in this study. In a study on Turkish preparatory class students, Ünal et al. (2011) suggest that teaching of memory, cognitive and affective strategies are crucial in Turkish context. It was also found that the participants in this study employed memory, cognitive, compensation, affective and social strategies at a medium level, and metacognitive strategies at a high level. When the literature reviewed, studies (Demirel, 2012; Kılıç & Padem, 2014; Onursal Ayırır et al., 2012; Ünal et al, 2011) often report that Turkish preparatory class students use language learning strategies at an average level in line with this study although few studies (Bekleyen, 2006; Hamamcı, 2012) exist reporting high-level strategy use. Studies (Cohen, 2003; Demirel, 2012; Oxford, 1990) show clearly that use of language learning strategies in an effective way facilitates language learning process. Moir and Nation (2002) specifically indicate that use of memory and cognitive strategies has significant influence on the long-term retention of vocabulary. Based on the literature and the findings, another need can be identified as the need for students to use language learning strategies especially the direct strategies of memory, cognitive and compensation strategies at a high level.

The findings lead to several implications for the L2 vocabulary component of the English university preparatory program. Apart from the issues noted above, the qualitative data analysis further revealed that most of the study participants believed that they had inadequate vocabulary knowledge, which is in line with the quantitative findings, although all the participants consider vocabulary knowledge as a significant aspect of language learning which contributes to the improvement of other language skills, deserves special attention, and requires more time especially than grammar. Therefore, the qualitative data shows that the learners are considerably aware of the importance of vocabulary knowledge in terms of language proficiency and, as Webb and Nation (2017) note, should expand their vocabulary size because it is of vital importance in terms of developing other language skills of listening, speaking, reading, and writing. However, it should not be forgotten that, as the vocabulary learning is only one of the sub-goals of language learning, direct vocabulary learning should not exceed 25% of the learning time in a balanced language course (Nation, 2001). Consequently, special attention should be focused on planning the vocabulary component of the preparatory program.

Brown (1995) remarks that inverting identified needs into program goals before identifying specific objectives is the expected result of a needs identification procedure and can help organize teaching-learning process in an efficient way. Based on the needs identified and supported by the results of the study, the following goals can be defined for the vocabulary component of the program as follows:

By the end of the compulsory preparatory program, the students will be able to:

- (1) Have a total receptive vocabulary size around 8000-9000 word-families.
- (2) Have the knowledge of the 3000 most frequent word-families (the high-frequency words) starting with the 1000 most frequent word-families.
- (3) Have the knowledge of the various vocabulary learning strategies that foster autonomous vocabulary learning to deal with mid- and low-frequency words.
- (4) Have a productive vocabulary size of the 3000 most frequent word-families.
- (5) Use language learning strategies especially the direct strategies of memory, cognitive and compensation strategies at a high level.
- (6) Have the knowledge of the academic words.

However, it is crucial to point out that the difference or the so-called discrepancy between the participants' desired vocabulary knowledge and their actual level of vocabulary is considerably large

that it does not sound realistic to change the participants' vocabulary knowledge from their existing vocabulary level to the level sufficient for starting English-medium university study in an academic year of two 16-week semesters. In other words, it would be practically unrealistic to achieve the defined goals in an academic year. The participants' low level vocabulary knowledge can be attributed to the problems in language teaching in Turkey which have been emphasized in a great deal of studies (Balci, 2018; British Council and TEPAV, 2015; EF English Proficiency Index, 2020). Webb and Nation (2017) indicate that L2 learners can learn high-frequency words in three to four years. However, it seems that the participants had not reached the expected vocabulary level, although they start learning English in primary school. In this respect, the author has some suggestions. First, I believe that the large discrepancy mentioned above can be resolved to a large extent by extending the preparatory program to two academic years of four 16-week semesters, so the program could be built-up with additional learning materials and opportunities. Therefore, a curriculum renewal could be undertaken considering the identified needs. Second, students can be required to demonstrate a specified level of English proficiency as a prerequisite for being accepted into an English-medium program at the university.

The present study has some limitations. First, it was conducted with the preparatory class students only in one university and therefore is not representative for the whole preparatory class population in Turkey. However, it should not be forgotten that, as Royse et al. (2009) emphasize, needs assessment studies, by their very nature, are focused on a particular population, so it is something expected that the results are not generalizable to all settings. Therefore, it is believed that the results could provide guidance for other L2 preparatory program educators and administrators in Turkey and the study will hopefully serve as an example of a needs assessment effort in language teaching context. Secondly, because of the relatively small sample size, further research with a larger sample is recommended. Besides, further needs assessment studies could be carried out to analyse language learners' needs in the other aspects of language learning as well as their academic needs in the target language.

## 5. Conclusion

The results revealed that on the average the students were far below the university threshold level in terms of vocabulary knowledge. Considering the specific results of this needs assessment study, following L2 vocabulary needs of the compulsory preparatory program were identified as follows:

- (1) The need to have a total receptive vocabulary size around 8000-9000 word-families.
- (2) The need to have the knowledge of the 3000 most frequent word-families (the high-frequency words) starting with the 1000 most frequent word-families.
- (3) The need to have the knowledge of the various vocabulary learning strategies that foster autonomous vocabulary learning to deal with mid- and low-frequency words.
- (4) The need to have a productive vocabulary size of the 3000 most frequent word-families.
- (5) The need to use language learning strategies especially the direct strategies of memory, cognitive and compensation strategies at a high level.
- (6) The need to have the knowledge of the academic words.

In conclusion, these results can be helpful in the design of L2 preparatory class curriculums in a Turkish context and for the other L2 curriculum studies in different tertiary-level contexts. This study shows that carrying out a detailed vocabulary needs analysis at the beginning of university English preparatory program could produce essential information to the teachers and other stakeholders to identify students' strengths and weaknesses considering vocabulary knowledge and provide an insight for teachers to design an effective vocabulary program meeting vocabulary needs of a particular group of students with a learner-centred focus.

## 6. Disclosure statement

No potential conflict of interest was reported by the author.

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