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THE ROLE OF TERMINOLOGY WITHIN VOCABULARY ELEMENTS IN ACADEMIC TURKISH TEXTBOOKS¹

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ABSTRACT

In recent years, the desire to learn foreign languages has increased globally, and Turkish has also benefited from this trend. The teaching of Turkish as a foreign language has become an area of interest for researchers, who have increasingly focused their studies on this subject. However, studies in this field have largely concentrated on educational activities aimed at the everyday use of Turkish, while research and educational programs addressing the academic dimension of Turkish have not yet reached the desired level. Although various studies have been conducted on the vocabulary levels required by learners of Turkish as a foreign language at different proficiency levels, it has been observed that research on the vocabulary needed in academic contexts remains insufficient. It can be stated that there is still a lack of studies aimed at standardizing the vocabulary that should be included in instructional materials used in academic Turkish courses. Based on this observation, this study examines the terminology included in Academic Turkish textbooks designed for learners of Turkish as a foreign language. The study aims to determine the frequency of usage and the distribution of these terms across different fields. For this purpose, nine Academic Turkish textbooks prepared for learners of Turkish as a foreign language in Turkey were analyzed, and the books were categorized under three main themes: social sciences, natural sciences, and health sciences. The study employed the survey model, one of the quantitative research designs, with document analysis used as the data collection method. The data were analyzed using descriptive (quantitative) statistics, and the CİBAKAYA program was utilized for data analysis. The results of the academic research revealed that the terminology included in the Academic Turkish textbooks prepared for learners of Turkish as a foreign language exhibited inconsistencies in terms of both quality and quantity.

Keywords: Academic Turkish, Teaching Turkish as a Foreign Language, Terminology

¹ This study is based on the first author's doctoral dissertation supervised by the second author.

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1. INTRODUCTION

The opportunities provided by technology and the expansion of communication possibilities, individuals living outside their regions for various reasons and continuing their lives in different countries, the diversity or limitations of job opportunities, and factors such as education have significantly increased the need for foreign language learning. In recent years, Turkish has rapidly risen in the list of languages that need to be learned and has consolidated this position. While interest in Turkish has continued for years due to reasons such as health, tourism, business, and marriage, there has also been a notable increase in the number of individuals learning Turkish for educational purposes in recent years. Indeed, according to foreign language learning statistics worldwide as of 2020, Turkish has risen to fifth place among the most learned languages (URL 1).

The number of students coming to Turkey from different countries around the world for undergraduate or graduate education increases every year. However, these students must document that they have valid language proficiency to begin their university education. In this context, students need to either receive language training or take exams to prove their language proficiency. Turkish Language Teaching Application and Research Centers (TÖMER) operating within universities are among the leading institutions providing these education and examination services. Language proficiency levels in TÖMER are determined as A1, A2, B1, B2, and C1, and students are expected to receive a C1 level proficiency score to begin their university education. Students who reach C1 level earn the right to continue their undergraduate or graduate education. However, students' academic success is largely determined by their command of academic language and effective language use skills. Nevertheless, education in academic Turkish is generally seen as insufficient. To address this deficiency, academic Turkish courses have been made mandatory for international students studying with scholarships from the Presidency for Turks Abroad and Related Communities (YTB) since the 2017-2018 academic year.

Grammar rules have great importance in the process of learning a language. However, vocabulary knowledge plays a decisive role in the functionality of grammar rules and the development of an individual's communication skills. It is known that in all languages, some words are used more frequently than others. Therefore, these words have a priority position in terms of frequency of use in communication. In foreign language teaching, as Bölükbaşı (2013) states, special importance should be given to vocabulary teaching. Individuals learning a foreign language learn many words and expand their vocabulary from A1 to C1 level, depending on their daily needs, interests, and obligations. To make this process more systematic, functional, and efficient, there has been an increase in the number of studies on vocabulary and word frequency usage in the field of teaching Turkish as a foreign language in recent years. Although these studies make important contributions to meeting needs, there is still a need for qualified and comprehensive research (Göçen and Okur, 2015).

International students learning Turkish as a foreign language encounter terms, concepts, academic language, and style specific to their intended departments within academic Turkish courses after completing the C1 level. In this study, the vocabulary elements, particularly the frequency and prevalence of terms in academic Turkish textbooks prepared for international students, were analyzed; and an attempt was made to determine whether there is consistency among textbooks in this respect.

The increase in communication opportunities thanks to technological advancements, individuals living in different countries for various reasons by leaving their regions, the limitations or diversity of job opportunities, and factors such as education have significantly increased the need to learn a foreign

language. In recent years, Turkish has begun to rank increasingly higher among languages that need to be learned and has strengthened this position.

While interest in Turkish has continued for years due to reasons such as health, tourism, business, and marriage, there has been a notable increase in the number of individuals learning Turkish, especially for educational purposes in recent years. As of 2020, according to global foreign language learning statistics, Turkish has risen to fifth place in the ranking of learned languages (URL 1). There is a significant increase in the number of students coming to Turkey from many countries around the world for undergraduate and graduate education each year.

Foreign students coming to Turkey for undergraduate and graduate education must officially document their language proficiency to begin their university education if they do not have valid language proficiency. In this context, students need to either receive language training or take exams to document their current proficiency levels in Turkish. Among the institutions providing these education and examination services, Turkish Language Teaching Application and Research Centers (TÖMER) operating within universities hold an important place. Language proficiency levels in TÖMER are classified as A1, A2, B1, B2, and C1, and students are expected to demonstrate success at the C1 level. Students who meet this requirement earn the right to continue their undergraduate or graduate education.

Students' success in their academic departments is largely related to their command of academic language and their ability to use this language effectively. However, despite this direct impact of academic language, it is observed that adequate training in academic Turkish is not provided, with some exceptions. Upon recognition of this deficiency, academic Turkish courses have been made mandatory for international students studying with scholarships from the Presidency for Turks Abroad and Related Communities (YTB) since the 2017-2018 academic year.

Although grammar rules play an important role in the process of learning a language, it is known that vocabulary plays a critical role in terms of the functionality of these rules and the development of an individual's communication skills. In all languages, some words have priority over others in terms of frequency of use. Therefore, as Bölükbaş (2013) emphasizes, vocabulary teaching is among the fundamental issues that need to be focused on in foreign language teaching.

During the foreign language learning process, individuals expand their vocabulary by learning many words from A1 to C1 level in line with their daily needs, interests, and obligations. To ensure this process progresses more systematically, functionally, and goal-oriented, there has been an increase in recent years in the number of studies on vocabulary and word frequency in the field of teaching Turkish as a foreign language. However, although existing studies make important contributions to meeting the needs in this field, it is clear that there is still a need for more qualified and comprehensive research (Göçen and Okur, 2015).

International students learning Turkish as a foreign language are introduced to field-specific terms, academic language, and style that they will encounter in their undergraduate or graduate education through academic Turkish courses after completing the C1 level. In this context, this study analyzed the frequency and prevalence of vocabulary elements in academic Turkish textbooks prepared for international students and examined whether there is consistency among textbooks in this respect.

1.1 Purpose-Significance

The study aims to reveal the number of terms, their frequency of use, and their distribution across different fields in the texts of Academic Turkish textbooks.

The significance of this research is demonstrated by the absence of a study identifying the terms present in Academic Turkish textbooks and determining the similarities and differences in terms across different books and fields.

1.2 Research Question

What terms are included in Academic Turkish textbooks prepared for students learning Turkish as a foreign language, and what is the frequency of use of these terms?

1.3 Sub-questions

- 1-What is the total and distinct vocabulary count in Academic Turkish social sciences textbooks?
- 2-What is the number and frequency of terms in Academic Turkish social sciences textbooks?
- 3-What is the total and distinct vocabulary count in Academic Turkish health sciences textbooks?
- 4-What is the number and frequency of terms in Academic Turkish health sciences textbooks?
- 5-What is the total and distinct vocabulary count in Academic Turkish natural sciences textbooks?
- 6-What is the number and frequency of terms in Academic Turkish natural sciences textbooks?
- 7-What are the terms common to all Academic Turkish social sciences textbooks, and what are their average usage rates?
- 8-What are the terms common to all Academic Turkish health sciences textbooks, and what are their average usage rates?
- 9-What are the terms common to all Academic Turkish natural sciences textbooks, and what are their average usage rates?"

2. METHOD

Within the scope of this research, an attempt was made to identify which terms are present in 'Academic Turkish' textbooks prepared for foreign students, their frequency of use, whether there is commonality between textbooks in terms of terminology, and how terms are distributed across different fields. For this purpose, the survey model, a quantitative research design, was employed.

Survey models are research approaches that aim to describe a past or present situation as it exists. The subject matter, whether an event, individual, or object, is attempted to be defined within its own conditions and as it exists. No effort is made to change or influence them in any way. What is to be known exists and is there (Karasar, 2013, p. 77).

Since some of the books examined within the research were single volumes and not published as separate books according to fields, the texts in these books were evaluated as separate books by categorizing them under Natural Sciences, Social Sciences, or Health Sciences based on expert opinions. The books evaluated in this way are:

a- PATK, one of the books analyzed in the research, consists of two sections. The first section is Social Sciences, and the second is Natural Sciences. Within the research scope, Academic Turkish textbooks were evaluated in 3 basic fields: "Natural Sciences, Social Sciences, and Health Sciences." Accordingly, all themes under the Social Sciences section in PATK were evaluated as a separate book of social sciences texts, briefly called PATK Social. Since PATK did not have a separate section for Health Sciences, the "Medicine, Health, and Drugs" themes in the Natural Sciences section were evaluated as Health Sciences texts. These sections were briefly named PATK Health and PATK Science in the study.

b- Another book examined in the research is "Academic Turkish 1 for International Students" prepared by Gazi University. The texts in the GAT book were not separated by fields, so to determine vocabulary by field, the texts were categorized into Social Sciences, Health Sciences, or Natural Sciences based on their content. Texts titled "Control Center, Complementary Medicine and Alternative Medicine, War of Viruses, Water Miracle, Master of Medicine Ibn Sina" were evaluated in Health Sciences and briefly named GAT Health. Texts about physics, astronomy, technology, and engineering were evaluated in Natural Sciences and briefly named GAT Science. All remaining texts were evaluated in Social Sciences and briefly named GAT Social. All texts, activities, and table contents in the GAT Book were included in the vocabulary assessment.

c- Another book examined was "Academic Turkish 3 in Science and Health Sciences." Units on "Physics, Chemistry, Biology, Industrial Engineering, Electrical-Electronic Engineering" were evaluated under Natural Sciences and accepted as a separate book, briefly named ISFSAT Science. Texts in "Pharmacy, Medicine, and Health Management" units were evaluated under Health Sciences and accepted as a separate book, briefly named ISFSAT Health.

After categorization, the examined books were listed by fields as follows:

- Social Sciences: PATK Social, GAT Social, EATSB, ISBAT1, ISBAT2, IYIMT.
- Natural Sciences: PATK Science, GAT Science, EATFB, ISFSAT Science.
- Health Sciences: PATK Health, GAT Health, EATSAB, ISFSAT Health.

Accordingly, a total of 14 books were examined: 6 in Social Sciences, 4 in Natural Sciences, and 4 in Health Sciences.

2.1 Data Collection Tools

Document analysis was used as the data collection method in the study. Document analysis involves analyzing written materials containing information about the phenomenon or phenomena targeted for research (Yıldırım and Şimşek, 2013, p.217).

2.2 Data Analysis

Data were analyzed using descriptive (quantitative) statistics.

The CIBAKAYA program was used to determine the number of terms and reveal the frequency of use of identified terms in the analysis of data obtained from Academic Turkish textbooks. Before analyzing the data in the CIBAKAYA program, some adjustments were made to the texts due to the program's operating system. These adjustments are as follows:

1. Terms were treated as bases. "Base is the plain form of word roots and stems without inflectional suffixes" (Korkmaz, 1992). In this context, inflectional suffixes in terms were deleted, and terms were added to vocabulary lists in their root or stem forms.
2. After determining how to identify vocabulary elements, spelling errors in words were corrected using the TDK Spelling Guide as reference.
3. In the operating principle of the CIBAKAYA program used in the research, each data between two spaces is accepted as a separate word. Therefore, compound words and verbs written separately, numbers, reduplications, idioms, proverbs, conjunctions, rhymes, and riddles were connected with a "+" sign to make the program perceive these vocabulary elements as single words. After obtaining the lists, they were transferred to Microsoft Excel for necessary analyses.

4. Inflectional suffixes were removed from words. After this process, a "-" sign was added to the end of verbs to distinguish words with common roots and eliminate this problem.
5. Verbal noun suffixes that make verbs function as permanent nouns were preserved and accepted as separate words. However, gerund, participle, and negative suffixes were deleted, and verbs were marked with a "-" sign at the end.
6. Phonetic changes in word bases due to suffixation (vowel dropping, consonant assimilation, consonant devoicing, etc.) were corrected, and words were restored to their original forms using the TDK Spelling Guide as reference.
7. The conjunctions "ile, ise" written attached to words in sentences were separated and accepted as separate words.
8. Since the CIBAKAYA program used in the thesis study does not recognize "circumflex marks," meanings were written next to words with circumflex marks during data analysis, and words were restored to their original forms after obtaining the frequency list.
9. The conjunction "DA" and question suffix "MI" in Academic Turkish textbooks prepared for foreign students were written uniformly as "DA and MI" to ensure consistent representation.
10. Dates and times in texts were not included in the evaluation as they could be misleading in terms of vocabulary.
11. Personal names in Academic Turkish textbooks were not included in the examination, but proper nouns such as countries, cities, institutions, and organizations that students are expected to know in Turkish were included in the research.
12. Terms in 10% of the total distinct vocabulary in Academic Turkish textbooks were examined. If the terms in the 10% segment were not whole numbers, they were rounded up.
13. When determining terms in the 10% segment of vocabulary, each word was searched in the TUBA Turkish Scientific Terms Dictionary, and every word in the dictionary was evaluated as a term. Whether the word was used in its terminological meaning in the text was not considered.
14. In determining the vocabulary in Academic Turkish textbooks, reading, speaking, writing texts, text questions, preparation studies, and grammar exercises were included in the examination. Vocabulary from listening texts was not included in the evaluation.

3-FINDINGS

Statistics regarding the data obtained based on the sub-problem 'What is the total and distinct vocabulary count in Academic Turkish social sciences textbooks?' are shown in Table 1.

Table 1

Vocabulary Statistics of Academic Turkish Social Sciences Textbooks

	PATK Social	EATSB	GAT Social	İSBAT1	İSBAT2	İYİMT Social	\bar{X}
Total Vocabulary Count	60.469	21.909	37.866	26.793	26.402	28.615	33.676
Total Distinct Vocabulary Count	7.933	3.475	6.702	4.146	3.976	3.964	5.033
Repetition Rate of Distinct Vocabulary*	7,622	6,304	5,649	6,46	6,64	7,218	7

* Calculated by the ratio of Total Vocabulary / Total Distinct Vocabulary.

According to the results in Table 1, the total vocabulary count in Academic Turkish textbooks is: 60,469 in PATK Social, 21,909 in EATSB, 37,866 in GAT Social, 26,793 in İSBAT1, 26,402 in İSBAT2, and 28,615 in İYİMT Social. The average vocabulary count across all these books is 33,676. While PATK Social has the highest vocabulary count, EATSB has the lowest. PATK Social and GAT Social books have total vocabulary counts above average, while EATSB, İSBAT1, İSBAT2, and İYİMT Social books are below average.

When examining the findings for total distinct vocabulary count: PATK Social has 7,934, EATSB has 3,475, GAT Social has 6,702, İSBAT1 has 4,147, İSBAT2 has 3,976, and İYİMT Social has 3,964 distinct vocabulary items. The average distinct vocabulary count across all these books is 5,033. PATK Social has the highest distinct vocabulary count, while EATSB has the lowest. PATK Social and GAT Social books have total distinct vocabulary counts above average, while EATSB, İSBAT1, İSBAT2, and İYİMT Social books are below average.

Although GAT Social's total vocabulary is above average, it has the lowest repetition rate of distinct vocabulary. When examining the usage rates of distinct vocabulary within total vocabulary, PATK Social and İYİMT Social books have the highest rates. Despite having below-average total vocabulary count, İYİMT Social book has the second-highest repetition rate of distinct vocabulary.

Statistics regarding the data obtained from the sub-problem 'What is the number and frequency of terms in Academic Turkish social sciences textbooks?' are presented in Figure 1.

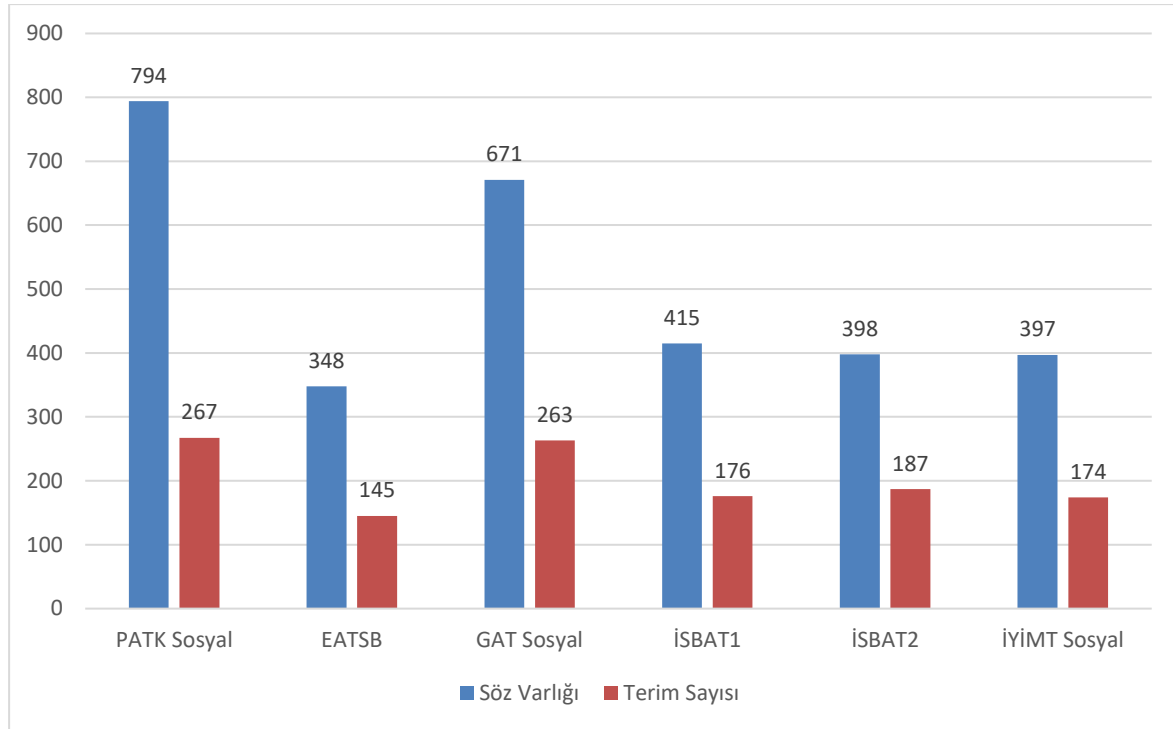


Figure 1. Statistics of the First 10% of Total Distinct Vocabulary in Academic Turkish Social Sciences Textbooks

Figure 1 visually presents statistics for the first 10% of total distinct vocabulary in Academic Turkish social sciences textbooks. According to these data, there are 794 vocabulary items in PATK Social, 348 in EATSB, 671 in GAT Social, 415 in İSBAT1, 398 in İSBAT2, and 397 in İYİMT Social. The average total vocabulary count in the first 10% frequency of the books is 504. While PATK Social and GAT Social have the highest vocabulary count, EATSB has the lowest. All books except PATK Social and GAT Social are below the average vocabulary count.

When examining the number of terms in the first 10% of total distinct vocabulary, there are 267 terms in PATK Social, 145 in EATSB, 263 in GAT Social, 176 in İSBAT1, 187 in İSBAT2, and 174 in İYİMT Social. İSBAT2 and İYİMT Social books contain the highest percentage of terms in the first 10% of total distinct vocabulary with 47%. The book containing the lowest percentage of terms in the first 10% of total distinct vocabulary is PATK Social with 33%. Although PATK Social contains the highest number of terms and vocabulary items, it has the lowest frequency of term usage.

Statistics regarding the data obtained from the sub-problem 'What is the total and distinct vocabulary count in Academic Turkish health sciences textbooks?' are shown in Table 2.

Table 2

Vocabulary Statistics of Academic Turkish Health Sciences Textbooks

	PATK Health	EATSAB	GAT Health	İSFSAT Health	\bar{X}
Total Vocabulary Count	10.700	25.771	4.306	10.458	12.808,75
Total Distinct Vocabulary Count	2.621	3.981	1.443	2.480	2.631,5
Repetition Rate of Distinct Vocabulary*	4,082	6,473	2,984	4,217	4,438

* Calculated by the ratio of Total Vocabulary Count / Total Distinct Vocabulary Count.

According to the results in Table 2, the total vocabulary count is 10,700 in PATK Health, 25,771 in EATSAB, 4,306 in GAT Health, and 10,458 in İSFSAT Health. The average vocabulary count across all these books is 12,808.75. While EATSAB has the highest vocabulary count, GAT Health has the lowest. Only EATSAB's total vocabulary count is above average.

When examining the findings for total distinct vocabulary count, there are 2,622 distinct vocabulary items in PATK Health, 3,981 in EATSAB, 1,443 in GAT Health, and 2,480 in İSFSAT Health. The average distinct vocabulary count across all these books is 2,631.5. While EATSAB has the highest distinct vocabulary count, GAT Health has the lowest. Only EATSAB's total distinct vocabulary count is above average. The ratio of total vocabulary count to total distinct vocabulary count in EATSAB is higher compared to other books. Additionally, this ratio in EATSAB is higher than the average ratio of all books.

Statistics regarding the data obtained from the sub-problem 'What is the number and frequency of terms in Academic Turkish health sciences textbooks?' are presented in Figure 2."

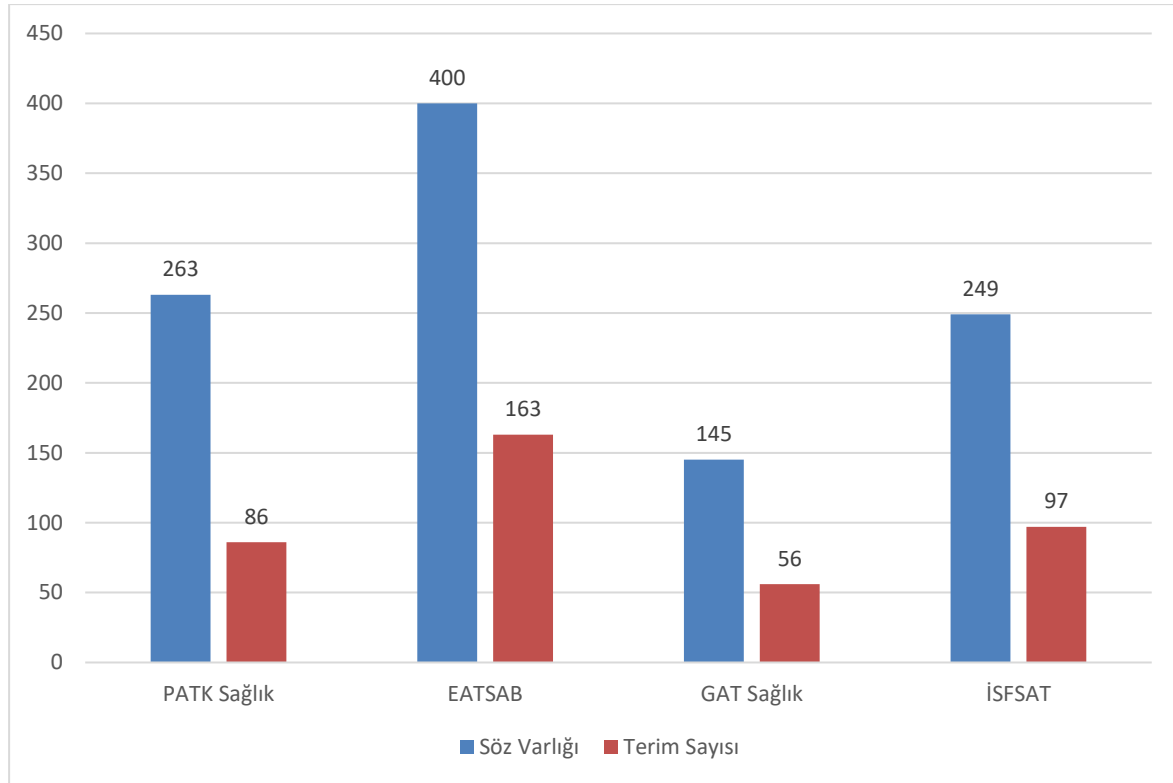


Figure 2. Statistics of the First 10% of Total Different Vocabulary in Academic Turkish Health Sciences Books

The statistics pertaining to the first 10% of the total different vocabulary in academic Turkish health sciences books are visually presented in Figure 2. According to these data, there are 263 vocabulary items in PATK Health book, 400 in EATSAB book, 145 in GAT Health book, and 249 in İSFSAT Health book. The average total vocabulary count in the first 10% frequency of the books is 264.25. While EATSAB book has the highest vocabulary count, GAT Health book has the lowest. Only EATSAB book is above the average total different vocabulary count. When examining the number of terms in the first 10% of total different vocabulary, PATK Health book contains 86 terms, EATSAB book contains 163 terms, GAT Health book contains 56 terms, and İSFSAT Health book contains 97 terms. The book containing the highest number of terms in the first 10% of total different vocabulary is EATSAB book with 41%. The book containing the lowest number of terms in the first 10% of total different vocabulary is PATK Health book with 33%. Although PATK Health book ranks second highest in terms of vocabulary count, it has the lowest proportion of terms within its vocabulary.

The statistics regarding the data obtained from the sub-problem "What is the total and different vocabulary count in Academic Turkish science books?" are shown in Table 3.

Table 3

Vocabulary Statistics of Academic Turkish Science Books

	PATK Science	EATFB	GAT Science	İSFSAT Science	\bar{X}
Total Vocabulary Count	18.325	25.548	9.019	12.596	16.372
Total Different Vocabulary Count	3.351	4.368	2.466	2.779	3.242
Repetition Rate of Different Vocabulary Items*	5,468	5,848	3,657	4,532	5,050

* Calculated by the ratio of Total Vocabulary / Total Different Vocabulary

According to the results shown in Table 3, the total vocabulary count is 18,325 in PATK Science book, 25,548 in EATFB book, 9,019 in GAT Science book, and 12,596 in ISFSAT Science book. The average vocabulary count across all these books is 16,372. While EATFB book has the highest vocabulary count, GAT Science book has the lowest. The total vocabulary counts in EATFB and PATK Science books are above the average. When examining the findings of total different vocabulary counts, it was found that PATK Science book contains 3,351, EATFB book contains 4,368, GAT Science book contains 2,469, and ISFSAT Science book contains 2,779 different vocabulary items. The average different vocabulary count across all these books is 3,242. While EATFB book has the highest different vocabulary count, GAT Science book has the lowest. The total different vocabulary counts in EATFB and PATK Science books are above the average. The ratio of total vocabulary count to total different vocabulary count in EATFB book is higher compared to other books. Moreover, the ratio of total vocabulary count to total different vocabulary count in both EATFB and PATK Science books is higher than the average ratio of all books

The statistics regarding the data obtained from the sub-problem "What is the number and frequency of terms in Academic Turkish science books?" are presented in Figure 3.

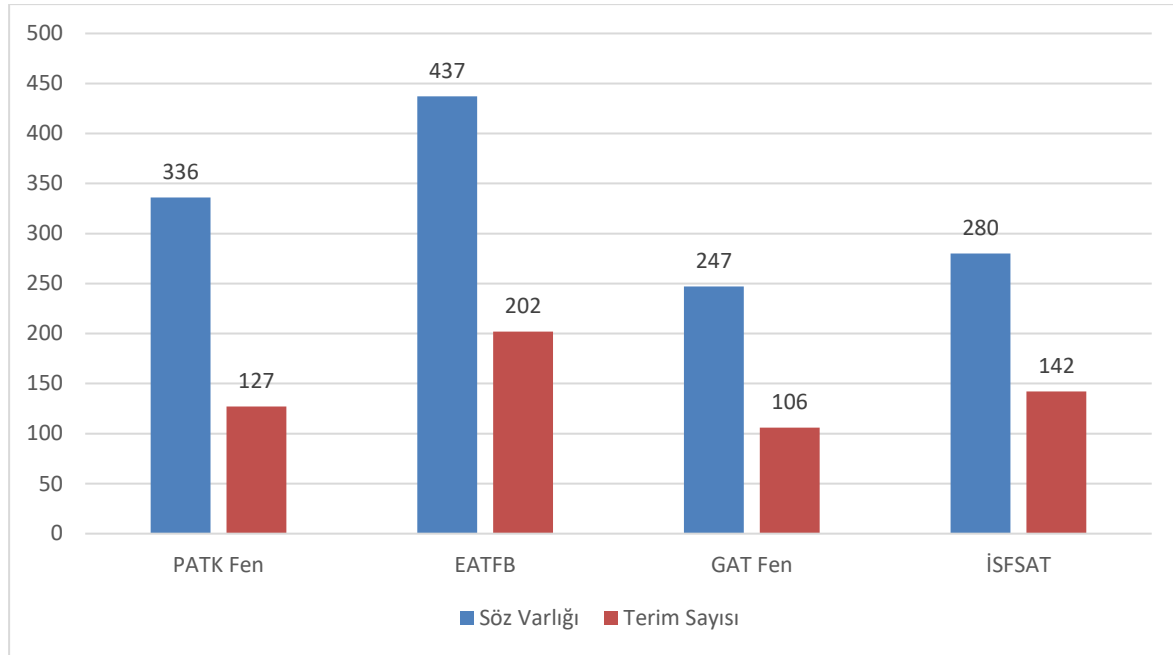


Figure 3. Statistics of the First 10% of Total Different Vocabulary in Academic Turkish Science Books

The statistics pertaining to the first 10% of total different vocabulary in academic Turkish science books are visually presented in Figure 3. According to these data, there are 336 vocabulary items in PATK Science book, 437 in EATFB book, 247 in GAT Science book, and 280 in İSFSAT Science book. The average total vocabulary count in the first 10% frequency of the books is 325. While EATFB book has the highest vocabulary count, GAT Science book has the lowest. Only EATFB and PATK Science books are above the average total different vocabulary count. When examining the number of terms in the first 10% of total different vocabulary, PATK Science book contains 127 terms, EATFB book contains 202 terms, GAT Science book contains 106 terms, and İSFSAT Science book contains 142 terms. The book containing the highest number of terms in the first 10% of total different vocabulary is İSFSAT Science book with 51%. The book containing the lowest number of terms in the first 10% of total different vocabulary is PATK Science book with 38%. Although PATK Science book ranks highest in terms of vocabulary count, it has the lowest proportion of terms within its vocabulary. While İSFSAT Science book ranks third highest in terms of vocabulary count, it has the highest proportion of terms within its vocabulary.

Based on the sub-problem "What are the common terms and their usage averages in all Academic Turkish Social Sciences books?", the following results were obtained:

When examining the terms and their frequency of use in the first 10% of different vocabulary in Academic Turkish Social Sciences books, it is observed that there are 543 different terms in total across all books. The number of terms common to all books is 35. These terms and their usage averages are as follows: text (218.17), country (126.17), information (109.83), relationship (106.33), figure (95.83), field (89.17), source (80), society (75.83), study (74.83), world (66.67), result (66.33), meaning (66), time (64), day (61.17), reason (57.67), feature (57.33), structure (56.83), question (55), thought (54.5), research (53.33), basic (52.33), form (50.67), example (48.5), system (46.83), section

(46), effect (45), education (44), concept (41.83), value (41.33), process (39.33), number (31.67), angle (29.5), environment (27.5), tool (23.33), level (23).

Based on the sub-problem "What are the common terms and their usage averages in all Academic Turkish Health Sciences books?", the following results were obtained:

When examining the terms and their frequency of use in the first 10% of different vocabulary in Academic Turkish Health Sciences books, it is observed that there are 236 different terms in total across all books. The number of terms common to all books is 22. These terms and their usage averages are as follows: text (103), disease (85.25), study (54.25), information (47.25), topic (46.5), condition (43.75), result (40.5), research (38), figure (35.5), field (33), year (31.25), medicine (29.5), cell (28), day (27.75), child (23.75), period (23), effect (23), structure (21.75), country (19.75), world (17.5), substance (16.75), living being (14).

Based on the sub-problem "What are the common terms and their usage averages in all Academic Turkish Science books?", the following results were obtained:

When examining the terms and their frequency of use in the first 10% of different vocabulary in Academic Turkish Science books, it is observed that there are 346 different terms in total across all books. The number of terms common to all books is 32. These terms and their usage averages are as follows: text (134.25), energy (71.5), study (61.25), year (55.25), result (51.25), substance (51), information (50.25), topic (48.25), source (47.75), condition (46.25), figure (46.25), type (43.5), technology (42.5), place (42.25), research (40.25), production (38), day (35.5), feature (34.75), time (33.75), system (31.25), sentence (28.6), electricity (27.25), living being (23), environment (22.5), reason (20.75), development (19.25), power (19.25), basic (18.75), nature (16.25), waste (15.8), fact (15), usage (15).

4. CONCLUSION

The lack of clear boundaries in the field of Academic Turkish, undefined needs in this area, and absence of a standardized program stand out as significant deficiencies. However, the authors of Academic Turkish textbooks have produced important works through dedicated effort, acting on their personal experiences to address this emerging need. There is no doubt that these books were prepared to best meet the academic language needs of students taking Academic Turkish courses. However, as mentioned earlier, the lack of criteria in selecting vocabulary for these books, which were prepared based on personal experiences and perspectives, leads to differences between the books. The findings obtained from the research conducted to identify these differences have been evaluated.

When examining the sub-problem "What is the total and different vocabulary count in Academic Turkish social sciences textbooks prepared for students learning Turkish as a foreign language?", it is observed that there is no consistency among the books in terms of vocabulary count. While PATK Social (60,469) has the highest vocabulary count, EATSB (21,909) has the lowest. The difference between the books with the highest and lowest total vocabulary is 38,560. The average vocabulary count across all Academic Turkish social sciences books is 33,676. When examining the total different vocabulary count, PATK Social book has the highest (7,934) and EATSB has the lowest (3,475) different vocabulary items. The average of different vocabulary items is 5,033. The book with the highest repetition rate of different vocabulary items is PATK Social (7.622), while GAT Social has the lowest (5.649).

The number of different words that learners encounter incidentally during the reading process and the frequency of word repetition in the text directly affect the learning of the relevant word. Incidental vocabulary learning is learning that occurs when the mind is engaged in communication or understanding a text (DeCarrico, 2001). In this method, words are learned while performing activities such as reading or listening (Yelbay, 2015). Based on this, we can say that to accelerate incidental learning, it is necessary to increase the frequency of exposure to words (Schmitt, 2000). The fact that the probability of remembering or learning a word when encountered once is between 5%-14% (Nagy, 1997, as cited in Schmitt, 2000) more concretely demonstrates the importance of multiple exposures to words in incidental learning. From this perspective, it can be said that the probability of learning or remembering words is higher in PATK Social book.

There is a quantitative inconsistency among all Academic Turkish Social Sciences books in terms of both total vocabulary and total different vocabulary. This inconsistency in vocabulary counts among Academic Turkish Social Sciences textbooks may stem from the lack of established criteria for vocabulary items to be taught and the authors' reliance on personal experiences in preparing the books. Göçen (2016) also noted in their research that the criteria for determining which vocabulary items should be taught in Turkish as a foreign language textbooks are not clear and may be based on personal experiences.

Based on the sub-problem "What is the vocabulary count in Academic Turkish health sciences textbooks prepared for students learning Turkish as a foreign language?", when examining Academic Turkish health sciences books, it is possible to say that there is no consistency among books in terms of vocabulary count. The highest vocabulary count is in EATSAB (25,771), while the lowest is in GAT Health (4,306). The difference between these two books is 21,465. The average vocabulary count across all Academic Turkish health sciences books is 12,808.75. In terms of total different vocabulary count, EATSAB (3,981) ranks first, while GAT Health (1,443) ranks last. The average of different vocabulary items is 2,631.5. The book with the highest repetition rate of different vocabulary items is EATSAB (6.473), while GAT Health has the lowest (2.984).

Considering the incidental learning of words, among Academic Turkish health sciences books, EATSAB stands out as the source with the highest probability of words being learned or remembered.

Based on the sub-problem "What is the vocabulary count in Academic Turkish science textbooks prepared for students learning Turkish as a foreign language?", when examining Academic Turkish science books, it is observed that there is no consistency among books in terms of vocabulary count. The highest vocabulary count is in EATFB (25,548), while the lowest is in GAT Science (9,019). The difference between these two books is 16,529. The average vocabulary count across all Academic Turkish science books is 16,372. EATFB has the highest total different vocabulary (4,368), while GAT Science has the lowest (2,466). The average of different vocabulary items is 3,242. The book with the highest repetition rate of different vocabulary items is EATFB (5.848), while GAT Health has the lowest (3.657).

Considering the incidental learning of words, among Academic Turkish science books, EATFB stands out as the source with the highest probability of words being learned or remembered.

The vocabulary count in the books includes comprehension questions, activities, exercises, etc. This might explain why the most frequent term in the books is "text." The terms in the books were searched in the TÜBA Turkish Science Terms Dictionary, and they were included in the term lists only if they appeared in this dictionary. Since determining the specific meaning context of vocabulary items in the

texts is a separate research topic, whether the relevant words were used in their terminological sense within the text was not included in the scope of evaluation.

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