**VERBS AND THEIR PATTERNS IN ACADEMIC
WRITINGS OF TURKISH LEARNERS
OF ENGLISH AS A SECOND LANGUAGE¹**

Yabancı Dil Olarak İngilizce Öğrenen Türk Öğrencilerin

Akademik Metinlerindeki Eylemler ve Örüntüleri

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Abstract

This paper investigates the interlanguage features of Turkish EFL learners in academic written discourse; particularly patterning of lexical verbs of *Academic Keyword List* (AKL) (Paquot, 2010) by Turkish EFL learners. AKL covers the non-domain specific words which entitle the characteristics of academic texts and outline the basic academic sketch. It is assumed that the level of acquisition of these words that are defined under four basic lexical categories (nouns, verbs, adverbs, and adjectives) will reveal the students' lexical repertoires of academic vocabularies as well as interpreting lexico-grammatical attributes specific to writers. The scope of this study includes conducting a corpus-based analysis of verbs of AKL. For this corpus-based study, at the first level, comparison of TICLE (Turkish sub-corpus of International Corpus of Learner English) and the LOCNESS (The Louvain Corpus of Native English Essays) corpus was utilized to define general lexical profile of the learners by preparing frequency-based list according to usage levels of the verbs in two corpora. At the second level, a detailed analysis of 10 verbs with the highest frequency was conducted within the frame of the Pattern Grammar approach. Results indicate the overuse of some specific words by non-native students while some others are underused in comparison to native speakers of English. This investigation revealed the levels of students' implicit knowledge of these particular lexical items, their awareness of register of academic verbs and to what extent they can put in use these items within the frame of functional lexico-grammatical usage.

Keywords: Interlanguage, academic keyword list, lexico-grammar, learner corpora

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Öz

Çalışmada Akademik Anahtar Kelime Listesi (AKL) (Paquot, 2010) içerisinde tanımlanan sözcüksel fiillerinin Türk öğrencileri tarafından edinimi ve kullanımı analiz edilecektir. Akademik Kelime Listesi, akademik metinlerin temel akademik taslağını ana hatlarıyla belirten ve belirli bir akademik alana özgü olmayan kelimeleri kapsar. Dört temel sözlük kategorisinde (isimler, eylemler, zarflar ve sıfatlar) tanımlanan bu kelimelerin öğrencilerin akademik kelimelerin sözcük dağarcığını ve aynı zamanda kullanıcılarına özgü bu kelimeleri ait sözcük-dilbilgisel özelliklerini hakkında bulgular vereceği varsayılmaktadır. Sözcüksel eylemlerin ayrıntılı analizi, araştırmacıların yabancı dil olarak İngilizce öğrenenlerinin Türk öğrencilerin aradıl özelliklerini tanımlamalarına yardımcı olabilir. Bu çalışmanın kapsamı, bu kelime listesi içerisinde tanımlanmış eylemlerin derlem tabanlı bir analizi ile listede tanımlanmış sözcüksel eylemlerin iki farklı derlemde, TICLE ve LOCNESS, kullanım sıklığına dayalı liste hazırlanmasını ve yapısal özelliklerinin incelenmesidir. Ayrıca Örüntü Dil bilgisi (Pattern Grammar) yaklaşımı çerçevesinde en yüksek frekansa sahip 10 fiilin ayrıntılı bir analizi yapılmıştır. Sonuçlar, anadili olmayan öğrenciler tarafından bazı belirli kelimelerin fazla kullanımına işaret ederken, bazı eylemleri anadili İngilizce olanlara kıyasla az kullanılmıştır. Bu araştırma, öğrencilerin bu belirli sözcüksel öğeler hakkında örtük bilgi düzeylerini, akademik eylemleri edinilmesi ilgili farkındalıklarını ve bu sözcükleri işlevsel sözlük-dil bilgisel kullanım çerçevesinde ne ölçüde kullanabileceklerini ortaya koymuştur.

Anahtar Kelimeler: Aradıl, akademik anahtar kelime listesi, sözlük-dilbilgisi, öğrenci derlemi

INTRODUCTION

Teaching English for academic purposes has a pivotal place in second language learning/teaching practices since the English language is a mean for a common platform for international academic settings. However, English academic language itself imposes certain difficulties to native speakers of English and even more to non-native speaker. As reported by Cortes (2002), many studies have represented that due to the distinctive nature of academic prose, it is problematic not only for those who learn English as a second or foreign language (Hinkel, 2002) but also for novice native-speaker writers. Further studies in second language writing reveal the importance of advanced linguistics competence in target language required learning to write academic prose which is supposed to display a range of lexical and grammatical skills, use of appropriate academic style, and expressing ideas in correct language forms (Nation and Waring, 1997; Hinkel, 2002, 2004).

Initially, studies aiming to fortify learners' academic language skills in English prioritize word choices and word pairings, which are proposed to be specific to academic discourse (Coxhead, 2001; Paquot, 2010). Results are a set of words consisting of primed lexical items by writers of academic texts which states the academic stance of the author, as well as sketches outline of the academic text. Additionally, regarding context depended on the nature of lexical items, certain words are utilized in certain patterns which in turn influence the semantic extension of the structure. One such case is that academic discourse requires precise constraints such as nominalization of verbs, preference of passive voice, use of discourse markers.

However, in many cases, second language writers, especially writers with low proficiency levels, demonstrate the lack of ability to present rich writing literacy and have difficulties in elaborating the ideas as reflected in their writings (Kraples, 1990; Woodall, 2002). They are mostly restricted from their limited lexical repertoire or their tendency to overuse recursive patterns. On the other hand, as Pilar and Llach (2011) emphasize, "As L2 proficiency increases, L2 writings appear to resemble more and more native productions in their use of syntactic patterns, rhetorical conventions and lexical choices" (p.46). Therefore, it should be assumed that texts written by proficient learner writers of second/foreign language are supposed to display a wider range of lexical choices as well as precision of

vocabulary. Consequently, the more proficient a learner becomes, the more his or her writing performances resemble native speakers. Presumably, learners' high proficiency levels of the second language are supposed to enable them to yield native-like writing samples and academic texts. However, such proficiency reflected upon academic writing may not be an indicator of good academic language proficiency. Academic texts in learner languages should be evaluated not only based on the learners' language proficiency levels yet also based on the academic organization and the rhetoric of the work as well as utilization of characteristics specific to academic prose.

Therefore, the current study mainly aims to investigate lexical verbs cited in Academic Keyword List (henceforth, AKL) (Paquot, 2010) in argumentative essays of both Turkish EFL learners and native speaker American University students. The AKL covers "930 potential academic words, i.e., words that are reasonably frequent in a wide range of academic texts but relatively uncommon in other kinds of texts" (Paquot, 2010). The study explored similarities and differences, if there is any, across Turkish sub-corpus of International Corpus of Learner English (henceforth TICLE) and The Louvain Corpus of Native Speaker (henceforth LOCNESS). Secondly, in this study with contrastive nature on a contrastive nature, it is aimed to investigate the interlanguage features of Turkish EFL learners. Grammatical behaviours of AKL verbs used in both corpora were analysed thus common and distinctive use of academic verbs across both corpora, later, marked interlanguage features, if any, attributed to the use of those verbs by Turkish EFL learners were provided.

Therefore, this study will try to answer the following research questions:

- 1) Do Turkish learners of English as a second language and native speakers of English language rely on academic lexical verbs presented in AKL?
- 2) What are grammatical patterns of verbs chosen as used by Turkish learners and native speakers of the English Language?

METHODOLOGY

This study primarily aims to investigate the use of AKL verbs in the learner corpus, namely, TICLE and in comparable native speaker corpus LOCNESS. Both corpora were post-tagged with Treebank Tagger available on Sketchengine (Kilgarriff, 2004) for syntactic analysis and all words were lemmatized. Finally, to overcome word class overlapping problem, all verbs listed in Academic Keyword List were searched within the corpora according to their post-tags. However, though automatic extraction of verbs and their post-tags was carried out, individual verbs were checked manually to eliminate the words belonging to other word class.

Regarding statistical analysis, overall use of AKL verbs in both corpora were investigated and total frequency and number of types of AKL verbs used in both corpora were calculated. Later, statistical analysis methods were applied to define overuse or underuse of overall AKL verbs existing in TICLE. Additionally, based on frequency counts, top ten of AKL verbs were extracted from both corpora. Furthermore, as suggested by Leech (2011) ordinal frequency analysis, lexical items according to their ranks in corpus were listed to present the frequency counts. Finally, Log likelihood calculations based on distribution proportion of overall and individual frequencies of AKL verbs were administered.

In order to carry out a detailed analysis and discover the collocational patterns of top ten verbs, individual verbs were pinpointed, and collocations were extracted. Determining the collocated patterns was based on frequency counts of items co- occurring and logDice statistical measurement carried out. The process of finding pattern structures included the

comparison of the patterns used in both corpora and defined marked patterns by Turkish EFL learners. Lastly, frequency counts of the patterns found were listed and primed nouns were selected according to their logDice scores as computed by SketchEngine. Collocational patterns whose frequency counts were below 3 were not included and logDice computations were handled according to following parameters.

Maximum number of items in grammatical relation: 30 Minimum frequency: 3

Minimum logDice score: 0

Minimum score for unary relations: 5.0

However due to limitation of place, the current study also covers in-depth pattern analysis of top five verbs in TICLE in comparison to LOCNESS. Since this study is a partial and modified version of the previously published master thesis, not all the data in the original study were included. Original study also covers semantic analysis of analysis of ten verbs, their patterns in both corpora and finally semantic analysis of nouns primed in the collocationals of *V-n* structures. Still, findings of the original study were partially provided in the discussion and conclusion section.

FINDINGS

Beforehand, the AKL verbs were searched in both corpora, and they were listed according to their part of speech tags. All words were lemmatized. Then, each lemma of a total of 233 AKL was listed according to part of speech tags derived from corpora and word classes apart from verbs were disregarded from frequency count. Finally, all instances of AKL verbs used in TICLE (L2) and LOCNESS (L1) were calculated and the total frequency of each verb was obtained. The results are as follows: TICLE, which is the learner corpus, covers 5456 tokens of the AKL verbs while native speaker corpus, LOCNESS, covers 5141 tokens. As shown in Figure 2 below, AKL verbs were overused in terms of raw frequency count.

Figure 1. The Overall Frequency of AKL Verbs Used In Both Corpora

Due to the difference in numbers of tokens across two corpora, raw frequency analysis is not to verify the significance of over / underuse density. Therefore, in addition to overall raw frequency analysis, it is crucial to show the results of normalized frequency calculation

along with total numbers of words and with type/token ratio. Table 1 shows the total numbers of running words in both corpora, the number of types of the AKL verbs used existing in TICLE and LOCNESS, and the total number of these verbs along with normalized frequency values (n per 1 million).

Table 1. Overall Comparative Distributions of the AKL Verbs On Both Corpora

	TICLE (L2)	LOCNESS (L1)
Corpus Size in words	199.350	148.516
Number of Verbs Used (type)	202	218
The overall frequency of verbs used	5456	5141
n per 10000	237,689	346,157
Type/Token ratio	0,037	0,042

n = raw frequency of verbs used

T/t ratio = Type/token ratio; the percentage of the number of AKL verbs (types) in the total number of AKL verbs used (token) in each corpus

In Table 1, corpus sizes in the number of words, total frequencies of the AKL verbs used, and their normalized frequency values per 1 million were given. Because of the significant difference between numbers of token of both corpora, total frequencies of AKL verbs used in each corpus were calculated n per 1 million. Results indicate that TICLE includes 5456 instances of AKL verbs in terms of raw frequency or 237,689 instances per 10000 of AKL verbs while LOCNESS includes 5141 or 346,157 instances per 10000. Normalized frequency measurements implied that Turkish EFL learners of English clearly outlined an underuse profile of lexical verbs covered in the Academic Keyword List. Initially, in Table 1, it was indicated that the number of different AKL verbs (types) in TICLE was 202 out of 233 AKL verbs, and the total number of running words in the corpus was 199350. Thus, the type/token ratio (TTR) value given in percentage was calculated as 0,037. On the other hand, the number of distinctive types of AKL verbs in LOCNESS was 218 out of 233 and the total number of the word in the corpus was 148516. Therefore, the TTR value of the L1 corpus was 0,042. Type Token Ratio is the relationship between the total number of running words in a corpus and the number of different words used. Also, it is dependent on the corpus size. For this case, it was calculated for the total number of running AKL verbs in each corpus and it is the ratio to the total number of types of AKL verbs in each corpus. When two corpora were compared, results stated that TICLE had a lower type-token ratio than LOCNESS. Therefore, corpus L2 (TICLE) could be said to have more repetition and thus less variation in the AKL verb use than corpus L1 (LOCNESS).

Consequently, it was claimed that Turkish EFL learners rely more on recurrent lexical choices and less lexical variation in terms of the AKL verb use in their argumentative essays when they were compared to native speakers of English. In addition to frequency analysis and type/token ratio, it is essential to measure the significance of overuse/underuse in order to validate indications of frequency calculations. Normalized frequency makes it possible to elicit comparable data; however, it is not proof that the results are significant. Therefore, Log-likelihood (LL ratio) is the statistical analysis to confirm previous claims while it can also express the significance of usage profiles. LL ratio was computed to compare the total frequencies of the AKL verbs used in TICLE and LOCNESS.

Table 2. LL Ratio Of AKL Verbs Used In Both Corpora

	TICLE	%1	LOCNESS	%2
AKLVerbs used	5456	2.44	5141	-134.54

Legend: O1 is observed frequency in TICLE, O2 is observed frequency in LOCNESS, %1, and %2 values show relative frequencies in the texts, + **indicates overuse** in O1 relative to O2, - **indicates underuse** in O1 relative to O2.

A contingency table was utilized to calculate the Log-likelihood ratio. In the table 2, O1 and O2 refer to the overall frequency of AKL verbs used in both corpora. Meanwhile, %1 and %2 represents the relative frequency of the lexical items in the texts. Thus, %1 stands for relative frequency in TICLE i.e. 2.44 indicating there are roughly 2.44 AKL verbs per 100 words in the corpus. Likewise, the relative frequency of AKL verbs used in LOCNESS is 3.05; in other terms, there are approximately 3.05 verbs per 100 words in LOCNESS. LL ratio in Table 2 clearly confirmed the significance of variables represented in Table 1. LL ratio ($p = -134.54$, $p < 0.05$) states the overall underuse of AKL verbs in TICLE was significant. There is a notable difference between two corpora in terms of the AKL verb usage. Thus, the underuse of those verbs in TICLE compared to LOCNESS was confirmed by the LL ratio. Overall results indicate; first of all Turkish EFL learners of English outline underuse profile of overall AKL verbs compared to native speakers of English. As confirmed by LL measurement, underuse phenomenon is significant, ($p < 0.05$, $p = 134.54$). Secondly, type/token ratio of AKL verbs (0,037) is lower in TICLE than LOCNESS (0,042). It can be inferred that overall AKL verb density in TICLE is inadequate compared to LOCNESS. Turkish EFL learners rely more on repetitive use of certain verbs.

1. The Most Frequent 10 AKL Verbs in TICLE and LOCNESS

A frequency list of the AKL verbs used in both corpora obtained from each corpus and their top 10 AKL verbs were listed. Table 3 reports the top ten AKL verbs in both corpora displaying their raw frequency, distribution percentage to the overall frequency of the AKL verbs used in each corpus and their ranks in other corpora.

Table 3. Overall Frequencies of Top 10 AKL Verbs In Both Corpora

Verbs	TICLE (O1)	%	LOCNESS (O2)	%	LL
<i>cause</i>	168	0.08	90	0.06	+ 6.56
<i>show</i>	131	0.07	128	0.09	- 4.74
<i>consider</i>	124	0.06	99	0.07	- 0.26
<i>suffer</i>	118	0.06	29	0.02	+ 34.76
<i>provide</i>	115	0.06	81	0.05	+ 0.15
<i>study</i>	111	0.06	18	0.01	+ 49.98
<i>prevent</i>	97	0.05	36	0.02	+13.97
<i>create</i>	95	0.05	68	0.05	+ 0.06
<i>apply</i>	86	0.04	29	0.02	+ 15.24
<i>solve</i>	85	0.04	31	0.02	+ 12.74

Initially, the two most common verbs in both corpora are “*use* and *become*”, however, due to their much higher frequencies to other verbs along with their prevalent idiomatic usages. These were replaced with *apply* and *solve* in the analysis. In Table 3, six out of the top ten verbs in TICLE also appear in the top ten list of LOCNESS, namely; *show*, *consider*, *cause* and *provide*. The remaining four verbs which are *prevent*, *develop*, *suffer* and *study* ranked in the top 50 verbs of LOCNESS. Overall results indicated consistency between two corpora in terms of the top ten AKL verbs. Except for their rank orders, six out of the top ten verbs

are identical. It can be inferred that Turkish EFL learners, to the most extent, rely on the same frequent AKL verbs as native speakers.

2. Pattern analysis of AKL verb with high frequency

In this section, the top ten AKL verbs in both corpora were analyzed in depth. However, though represented in Table 3 as first and second-ranked verbs across both corpora, *become* and *use* were disregarded for the sake of study. As they carry exceptional frequency size indicating specific markedness in TICLE, to maintain lexical diversity to be investigated, those verbs were ignored and two verbs *apply* and *solve* were added to pattern analysis list based on their ranks in TICLE.

2.1. The Verb CAUSE and Its Grammatical Behavior in Both Corpora

Overall raw frequency and ratio of distribution proportion of the AKL verb *cause* are 168, 3.0 % in TICLE, and 90, 1.75 % in LOCNESS. As seen in Table 4, the verb *cause* ranks third among top ten AKL verbs of TICLE while it ranks eighth in LOCNESS. Also, its rank order indicates the overuse of the verb in TICLE.

Table 4. Log-Likelihood Result Of The Verb Cause

Verb	TICLE (O1)	%	LOCNESS (O2)	%	LL
<i>cause</i>	168	0.08	90	0.06	+ 6.56

O1 is observed frequency in TICLE, O2 is observed frequency in LOCNESS, %1 and %2 values show relative frequencies in the texts, + indicates overuse in O1 relative to O2, - indicates underuse in O1 relative to O2.

Additionally, LL ratio on Table 4 ($p = + 6.56$, $p < 0.05$) confirms the overuse and indicates that the overuse is significant. Turkish EFL learners significantly overused the AKL verb *cause* in their argumentative essays compared to native speakers of English. Table 5 shows all collocated patterns of the AKL verb *cause* used in TICLE and LOCNESS, along with their frequencies and distribution proportions.

Table 5. Overall Patterns of the AKL Verb Cause Used in both Corpora

TICLE		LOCNESS	
Patterns (n)	%	Patterns n	%
<i>V n</i> (122)	%72.61	<i>V n</i> (72)	%80
<i>V to-inf</i> (16)*	%9.52	<i>V-ed by</i> (11)	%12.22
<i>V pro_object</i> (13)	%7.73	<i>V pro_object</i> (5)	%5.55
<i>V-ed by</i> (8)	%4.76		

The upper-case V (verb group) word-class whose patterns on focus. v: verb group, n: noun group, adj.: adjective group, adv.: adverb group, that: clause introduced by that (realized or not), -ing: clause introduced by an '-ing' form, to-inf. the clause introduced, by a to-infinitive form, wh. the clause introduced by a wh-word (including how), pp: clause introduced by a preposition, v-ed passive structures, pro_object object pronoun Asterisk * marked pattern structures in the corpus. n: raw frequency count of individual pattern. %: the ratio of frequency count of an individual pattern to overall frequency count of all patterns used.

Table 5 reports the patterns of verb *cause* used in both corpora and their frequencies. In Table 5, pattern *V n*, verb followed by a noun or noun group, ranks first in both corpora. The table shows that both Turkish EFL learners and native speakers incline towards using *V n* pattern of the AKL verb *cause* (n 122, 72.61 % in TICLE and n 72, 80 % in LOCNESS. Concordance lines below exemplify this pattern structure in both corpora.

2.2. The Verb *SHOW* and Its Grammatical Behaviour in Both Corpora

In Table 3, the verb *show* ranks fourth among the top ten AKL verbs of both TICLE and LOCNESS. Overall raw frequency and distribution proportion are n 131, 2.40 % in TICLE and n 128, 2.48 % in LOCNESS.

Table 6. Log-Likelihood Result of the Verb *Show*

Verb	TICLE (O1)	%	LOCNESS (O2)	%	LL
<i>show</i>	131	0.07	128	0.09	- 4.74

O1 is observed frequency in TICLE, *O2* is observed frequency in LOCNESS, %1 and %2 values show relative frequencies in the texts, + **indicates overuse** in *O1* relative to *O2*, - **indicates underuse** in *O1* relative to *O2*.

Though their matched rank orders in both corpora, LL ratio ($p = - 4.74$, $p < 0.05$) indicates significant underuse of the verb by Turkish EFL learners. Turkish EFL learners significantly underused the AKL verb *show* compared to American university students. Table 6 shows all the collocated patterns of *show* used in TICLE and LOCNESS, as well as frequencies and distribution proportions of those patterns.

Table 7. Overall Patterns of the AKL Verb *Show* Used in Both Corpora

TICLE		LOCNESS	
Patterns (n)	%	Patterns (n)	%
<i>V n</i> (64)	%48.85	<i>V n</i> (58)	%45.31
<i>V pro_object</i> (11)	%8.39	<i>V wh compl.</i> (13)	%10.15
<i>V to(pp)</i> (5)	%3.81	<i>V pro_object</i> (5)	%3.90

The upper-case V (verb group) word-class whose patterns on focus. v: verb group, n: noun group, adj: adjective group, adv: adverb group, that: clause introduced by that (realized or not), -ing: clause introduced by an '-ing' form, to-inf: clause introduced, by a to-infinitive form, wh: clause introduced by a wh-word (including how), pp: clause introduced by a preposition, v-ed passive structures, pro_object object pronoun Asterisk * marked pattern structures in corpus. n: raw frequency count of the individual pattern. %: the ratio of frequency count of an individual pattern to the overall frequency count of all patterns used.

In Table 7, collocated pattern verb followed by a noun or noun group *V n* of the verb *show* is ranked first across both corpora. Thus it is assumed that both Turkish EFL learners and American university students rely on identical patterns of *show* that is *V n* whose frequency and distribution percentage are n 64, 48.85 % in TICLE and n 58, 45.31 % in LOCNESS. Concordance lines below exemplify those patterns as used.

2.3. The Verb *CONSIDER* and Its Grammatical Behaviour in Both Corpora

In Table 3, the verb *consider* ranks fifth among top ten AKL verbs of TICLE and seventh in LOCNESS. Overall raw frequency and distribution proportion are n 124, 2.27 % in TICLE and n 99, 1.92 % in LOCNESS.

Table 8. Log-Likelihood Result Of The Verb *Consider*

Verb	TICLE (O1)	%	LOCNESS (O2)	%	LL
<i>consider</i>	124	0.06	99	0.07	- 0.26

O1 is observed frequency in TICLE, O2 is observed frequency in LOCNESS, %1 and %2 values show relative frequencies in the texts, + indicates overuse in O1 relative to O2, - indicates underuse in O1 relative to O2.

Although its rank across both corpora and raw frequency analysis, LL result ($p = -0.26$ $p < 0.05$) indicates underuse of the verb *consider* by Turkish EFL learners compared to American university students. However, this underuse profile, as represented by the LL result, is not significant. Table 8 shows a detailed analysis of collocated patterns of *consider* used along with their raw frequency counts and distribution percentages in both corpora.

Table 9. Overall Patterns of the AKL Verb *Consider* Used in Both Corpora

TICLE		LOCNESS	
Patterns (n)	%	Patterns (n)	%
<i>V n</i> (64)	%51.61	<i>V n</i> (51)	%51.51
<i>V as(pp)</i> (14)*	%11.29	<i>V to-inf</i> (9)	%9.09
<i>V adj compl.</i> (9)	%7.25	<i>V adj compl.</i> (8)	%8.08
<i>V to-inf</i> (8)	%6.45	<i>V wh compl.</i> (6)*	%6.06

The upper-case V (verb group) word-class whose patterns on focus. v: verb group, n: noun group, adj: adjective group, adv: adverb group, that: clause introduced by that (realized or not), -ing: clause introduced by an '-ing' form, to-inf: clause introduced, by a to-infinitive form, wh: clause introduced by a wh-word (including how), pp: clause introduced by a preposition, v-ed passive structures, pro_object. Object pronoun Asterisk * marked pattern structures in the corpus.

n: raw frequency count of the individual pattern. %: the ratio of frequency count of an individual pattern to overall frequency count of all patterns used.

Analysis results in Table 9 show collocated patterns of the verb *consider* in both corpora. Findings show that both Turkish EFL learners and American university students incline towards using AKL verb *consider* in *V n* pattern construction. Results are as n 64, 51.61 % in TICLE and n 51, 51.51 % in LOCNESS. Distribution proportions of the patterns (51,61 % in TICLE and 51,51 % in LOCNESS) are almost similar in both corpora.

2.4. The Verb *SUFFER* and its Grammatical Behaviour in Both Corpora

In Table 3, the verb *suffer* ranks sixth among the top ten AKL verbs of TICLE and fiftieth in

LOCNESS. Overall raw frequency and distribution proportion are 118, 2.27 % in TICLE and 29, 0.56 % in LOCNESS. Rank orders of the verb and proportion results alone indicate the overuse of it by Turkish EFL learners.

Table 10. Log-Likelihood Result Of The Verb Suffer

Verb	TICLE (O1)	%	LOCNESS (O2)	%	LL
suffer	118	0.06	29	0.02	+ 34.76

O1 is observed frequency in TICLE, O2 is observed frequency in LOCNESS, %1 and %2 values show relative frequencies in the texts, + indicates overuse in O1 relative to O2, - indicates underuse in O1 relative to O2.

Additionally, LL result ($p = + 34.76$, $p < 0.05$) verifies overuse and displays significant. Turkish EFL learners overused the AKL verb *suffer* in their argumentative essays when compared to American university students, native speakers of English. Table 20 displays patterns of the verb in both corpora.

Table 11. Overall Patterns of the AKL Verb Suffer Used In Both Corpora

TICLE		LOCNESS	
Patterns (n)	%	Patterns (n)	%
V n (20)	%16.94	V (13)	%44.82
V from(pp) (25)*	%21.18	V n (6)	%20.68

The upper-case V (verb group) word-class whose patterns on focus. v: verb group, n: noun group, adj: adjective group, adv: adverb group, that: clause introduced by that (realized or not), -ing: clause introduced by an '-ing' form, to-inf: clause introduced, by a to-infinitive form, wh: clause introduced by a wh-word (including how), pp: clause introduced by a preposition, v-ed passive structures, pro_object object pronoun Asterisks * marked pattern structures in corpus.n: raw frequency count of the individual patterns. %: the ratio of frequency count of an individual pattern to overall frequency count of all patterns used.

There are only two collocated patterns found across both corpora. The most common pattern in TICLE is a verb followed preposition *from* V from (pp) 25, 21.18 % and other pattern is a verb followed by a noun or noun group V n: 20, 16.94 %. The AKL verb *suffer* is not as much preferred in LOCNESS. Additionally, patterns found show distinctive usage when Turkish EFL learners and native speakers of English compared. The most common pattern in LOCNESS is the usage of intransitive verb *suffer* alone, V; n 13, 44.82 %. Secondly, other collocated pattern that is common in LOCNESS is a verb followed by a noun or noun group, V n; n 13, 20.68 %. The pattern V from was not found in LOCNESS, in contrast to its being highly primed in TICLE.

2.5. The Verb PREVENT and its Grammatical Behaviour in Both Corpora

Table 3 displays the rank orders of the AKL verb *prevent* in both corpora. It ranks ninth in TICLE while it ranks thirtieth in LOCNESS. The raw frequency of the verb across two corpora is as follows: 97 in TICLE and 36 in LOCNESS. Therefore, the AKL verb *prevent* is not among the top ten AKL verbs in LOCNESS. Additionally, distribution percentages are 1.77 % in TICLE and 0.70 % in LOCNESS, indicating overuse by Turkish EFL learners.

Table 12. Loglikelihood Result of the Verb Prevent

Verb	TICLE (O1)	%	LOCNESS (O2)	%	LL
<i>prevent</i>	97	0.05	36	0.02	+13.97

O1 is observed frequency in TICLE, O2 is observed frequency in LOCNESS,%1 and %2 values show relative frequencies in the texts,+ indicates overuse in O1 relative to O2, - indicates underuse in O1 relative to O2.

Additional LL result ($p = +13.97$, $p < 0.05$) verifies the overuse that was profoundly claimed by rank order, raw frequency, and distribution percentage and indicates this overuse is significant. Additional pattern analysis is therefore to display syntactic collocation of the verb in texts. Overall results of frequency analysis, exploration of syntactic patterns, and semantic frames of nouns collocated represent typical use of the AKL verbs by Turkish EFL learners and native speakers of English. Frequency analysis was applied to measure the overuse/underuse of the AKL verbs while it was aimed to explain preferred phraseological and lexico-grammatical patterns of these verbs as used by both Turkish EFL learners and native speakers of English. Consequently, investigation of the interlanguage features of Turkish EFL learners was the primary purpose of the current study.

DISCUSSION AND CONCLUSION

To sum, academic genre requires not only the acquisition of fine-tuned writing skills oriented toward academic language but also the acquisition of the discourse related lexical items and grammatical patterning specific to the academic context. Regarding this, as stated by Paquot (2010), the tendency to use recurrent lexical items is the result of a learner's limited range of lexical knowledge. Also, Saville-Troike (2006) claims that the non-native speakers are more likely to select and implement lexical items from a more limited lexical repertoire when they are compared to the native speakers with the same educational level. Within the frame of those indications provided in the study, the frequency analysis shows that Turkish EFL learners outline an overall underuse profile of AKL verbs compared to American university students in their argumentative essays. The log-likelihood calculation also shows that the overall underuse of AKL verbs by Turkish students is significant. Additionally, the type / token ratio shows that the AKL verb density is low in TICLE compared to LOCNESS. However, the analysis of the top-ten verb shows that six out of ten AKL verbs are identical across both corpora. Turkish EFL learners, to the most extent, rely on the same set of high-frequency AKL verbs. Therefore, this study claims that Turkish EFL learners, first of all, represent a lack of usage of AKL verbs in their argumentative essays compared to native speakers of English. Second, they incline towards recurrent usage of certain lexical items.

Analysis of 10 high-frequency individual AKL verbs shows that some of the verbs were significantly overused, namely; *cause*, *suffer*, *study*, *prevent*, *apply* while some of them overused but results are not significant in terms of statistical analysis, namely; *provide*, *create* and one of them was significantly underused namely; *show* and last one was underused but results are not statistically significant, namely; *consider*. Therefore, overuse of individual verbs shows consistency with previous claims, Turkish EFL learners of English's relying on recurrent lexical items.

Additionally, exploration of collocational syntactic patterns shows those verbs, *cause*, *study*, display more variation in terms of pattern structures in TICLE while *provide* and *solve* represent the priming of identical pattern with same rank order across two corpora. Also, other verbs namely, *show*, *cause*, *create* display similar patterns with statistically different results; additionally, the AKL verb *prevent* has one more extra pattern in TICLE. Finally, verbs namely, *suffer* and *apply* illustrate marked interlanguage attributes of

Turkish EFL learners of English. Usage of the verb *suffer* with the preposition *from* and use of the verb *apply* with the preposition *to* in TICLE is highly frequent while they are not found in LOCNESS.

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