# Frequency and Functions of Non-Finite Clauses in Native and Non-Native Academic Texts

Samet TAŞÇI Nevşehir Hacı Bektaş Veli Üniversitesi samettasci@nevsehir.edu.tr ORCID ID: 0000-0003-3925-3825

 Araştırma Makalesi
 DOI: 10.31592/aeusbed.1319337

 Gelis Tarihi: 23.06.2023
 Revize Tarihi: 22.11.2023
 Kabul Tarihi: 24.11.2023

#### Atıf Bilgisi

Taşçı, S. (2023). Frequency and functions of non-finite clauses in native and non-native academic texts. *Ahi Evran Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, *9*(3), 957-970.

#### ABSTRACT

Non-finite clauses are one of the elements considered as an index of syntactic complexity, which is a distinguishing feature of academic register. In this sense, the current study aims to reveal the frequency and syntactic functions of non-finite clauses in the academic writings of non-native and native English students. In order to reach this aim, a specialized corpus with two sub-corpora consisting of the MA and PhD theses of natives and non-natives was compiled. The native and non-native corpora were similar in terms of size and the topics of the texts. The data were analyzed using the Antconc concordancing tool, and the log-likelihood tool was used to calculate the significance of the findings. The result of the study showed that non-natives significantly underused the non-finite clauses in their academic texts compared to their native counterparts. Although there is a statistically significant difference in terms of the overall frequency of non-finite clauses, the distribution of the forms of the non-finite clauses was found to be balanced in NS and NNS texts. That is, both NSs and NNSs used bare infinitives less frequently and to infinitival most frequently in academic papers. In terms of the syntactic functions of the non-finite clauses, adjectival (adnominal) was used more frequently and nominals were used less frequently in both corpora. The findings of this study were compared with the previous findings, and educational implications were presented.

Keywords: Functions, non-finite, academic register, non-natives, corpus.

# Anadil ve Yabancı Dil konuşuru Akademik İngilizcesinde Yüklemi Çekimsiz Yan Cümlelerin Sıklığı ve İşlevleri

#### ÖZ

Yüklemi çekimsiz yan cümleler, akademik söylemin ayırt edici özelliklerinden biri olan sözdizimsel karmaşıklığın bir belirleyicisi olarak kabul edilmektedir. Bu bağlamda bu çalışma, anadili İngilizce olan ve anadili İngilizce olmayan öğrencilerin akademik yazınlarında yüklemi çekimsiz yan cümlelerin sıklık ve sözdizimsel işlevlerini ortaya çıkarmayı amaçlamaktadır. Bu amaç doğrultusunda anadil ve yabancı dil konuşuru yazarların lisansüstü tezlerinden oluşan aynı büyüklükte ve benzer konuları içeren özelleştirilmiş derlemler oluşturulmuştur. Veriler Antconc yazılımı ile analiz edilmiş ve bulguların arasında farklılık olup olmadığı log-likelihood yazılımı ile belirlenmiştir. Çalışmanın sonucu anadili İngilizce olmayan yazarların yüklemi çekimsiz yan cümleleri anadili İngilizce olan yazarlara kıyasla önemli ölçüde daha az kullandıklarını göstermiştir. Yüklemi çekimsiz yan cümlelerin genel sıklığı açısından istatistiksel olarak anlamlı bir fark olmasına rağmen, türlerinin dağılımının her iki derlemde de dengeli olduğu görülmüştür. Yani, anadili İngilizce olan ve olmayan yazarlar akademik yazınlarında en az yalın eylemliliği kullanırken en sık mastarları kullanmıştır. Yüklemi çekimsiz yan cümlelerin sözdizimsel işlevleri açısından her iki derlemde de niteleyici yan cümleler daha sık ad yan cümleleri daha az kullanılmıştır. Bu çalışmada elde edilen bulgular daha önceki bulgularla karşılaştırılmış ve eğitsel çıkarımlar sunulmuştur.

Anahtar Kelimeler: Sözdizimsel işlev, yüklemi çekimsiz yan cümle, akademik söylem, derlem.

#### Introduction

English is the most widely used language for research and publishing worldwide (Swales, 1990), and because it is "the de facto lingua franca in the research world, academic writing poses a great challenge for non-native speakers of English to participate actively in the international academic discourse community" (Chang and Kuo, 2011, p. 222). It is crucial for non-native speakers (NNSs) to possess not only a strong command of the English language but also a comprehensive understanding of the distinctive features of academic language, as noted by Schleppegrell (2002). Syntactic complexity is commonly identified as a notable construct in L2 context and considered to be an

indicator of the language proficiency of learners (Ortega, 2003). Similarly, Hyland (2002) noted that academic discourse is characterized by its syntactic complexity, which can be seen by the inclusion of a greater number of subordinate clauses.

Non-Finite (N-F henceforth) clauses are also recognized as a constituent that is indicative of syntactic complexity in academic discourse, as noted by several scholars (Granger, 1997; Hinkel, 2003; Malá, 2013; Rafajlovičová, 2008; Silva, 1993). According to Hinkel (2003), academic writing is typically expected to exhibit a high degree of text sophistication, which may be hindered by an overly simplistic structure. To address this issue, non-native speakers (NNSs) are encouraged to incorporate N-F clauses into their writing, as this can contribute to a more concise and integrated style (Hinkel, 2003). To clarify, within the academic discourse community, researchers do not prioritize simplicity, and non-native speakers of the language must acquire knowledge of N-F clauses in order to proficiently employ intricate constructions in their written works. Furthermore, the prevalence of N-F clauses at a high frequency is a notable characteristic of academic writing since "writing frees the constraints which keeps down the size of spoken intonation units, the way how speakers and writers combine words and phrases into clauses" (Chafe and Danielewicz, 1987, p. 12). Rafajlovičová (2008) has determined that a higher occurrence of N-F clauses is a characteristic feature of formal texts, including those written in academic register. Similarly, Beaman (1984) noted that the high frequency of N-F clauses is one of the distinctive characteristics of academic register. Therefore, the objective of this research is to determine the degree to which Turkish-speaking scholars of English employ N-F clauses in their academic writing, as well as to identify the most commonly utilized syntactic functions of N-F clauses in comparison to those of native English speakers.

## Forms and Frequency of Non-finite Clauses

According to Brinton's (2000) explanation, N-F clauses are characterized as a verbal component that lacks marking for person, number, or tense, and they are invariably subordinate or embedded, as the main clause necessitates the presence of a finite verb. Due to the absence of person, number, or tense, they are shorter and neater (Eastwood, 1994), economical and avoid repetition (Leech and Svartvik, 2002, p. 203). According to Quirk et al., (1985), N-F clauses are considered a useful instrument for syntactic compression as they allow for the expression of multiple messages in a shorter sentence in an economical way. This view is supported by Kaspare and Danileviciene (2014), who also noted the value of N-F clauses in this regard. N-F clauses, being invariably subordinate, improve the syntactic complexity of sentences. According to O'Donnel (1974), a higher average length of written syntactic units indicates a higher level of syntactic density in writing, which is linked to compactness. Since they help writers avoid unnecessary personal pronouns and finite verbs (Biber et al., 1999), N-F clauses are favored in academic register.

Linguists employ a system of categorization for N-F clauses based on the nature of their non-finite component and their grammatical function. However, there exist divergent perspectives among linguists regarding the classification of N-F clauses. According to Biber et al. (1999) and Gelderen (2010), N-F clauses can be categorized into three distinct groups: namely infinitives (comprising bare and full infinitives), present participles that terminate with -ing, and past participles that end with -ed or -en. Other scholars in the field of linguistics categorize them into four distinct groups. The four types of verb forms are the to-infinitive, bare infinitive (or plain infinitive), -ing participle, and -ed participle (Brinton, 2000; Quirk et al., 1985; Verspoor and Sauter, 2000). According to Verspoor and Sauter (2000), it is not uncommon for dictionaries and grammar books to exclude certain non-finite forms. This is because knowledge of the plain infinitive form alone is sufficient to deduce the corresponding present tense and present participle forms. Table 1 below presents instances of non-finite verb forms:

Table 1
Non-Finite Verb Forms

Plain infinitive	To infinitive	Present participle	Past participle
go	to go	going	gone
sell	to sell	selling	sold

(Source: Verspoor, M., and Sauter, K. (2000). *English sentence analysis: An introductory course*. John Benjamin Publishing Company.)

The studies on the frequency of N-F clauses showed statistically significant differences in terms of native and non-native texts, register variation, discipline variation, time variation, and students' proficiency (Biber and Gray, 2010; Granger, 1997; Malá, 2013; Rafajlovičová, 2013; Schwartz and Causarano, 2007; Yang 2014). For example, Malá (2013) conducted a diachronic investigation into the occurrence of N-F clauses across various academic disciplines, including psychology, economics, sociology, and newspapers. The study revealed a decline in the frequency of N-F clauses in academic writing, while a significant increase was observed in newspapers over a century. Nevertheless, the frequency of N-F clauses in academic prose remains higher than that of newspapers. Rafajlovičová's (2008) research investigated the types of sentences utilized across four different registers, including interviews, academic discourse, newspapers, and fiction. The study revealed that academic genre employed the fewest number of finite clauses yet showed the highest frequency of subordinate clauses when compared to the other registers. The research findings indicated that N-F clauses were more frequently used in academic discourse compared to finite clauses. The distribution of the forms of the N-F clause was not specified by the research. Granger (1997) conducted a study on the frequency of N-F clauses in academic texts produced by native and non-native speakers. The findings revealed that non-native speakers exhibited a lower frequency of N-F clauses compared to their native speaker counterparts. According to Granger's (1997) study, there was no statistically significant difference in the frequency of N-F clauses among English speakers whose first language was French, Swedish, or Dutch. However, non-native speakers (NNS) tended to underuse N-F clauses in their academic writings, which resulted in a 'stylistic deficiency' in their essays (p. 10). Schwartz and Causarano (2007) aimed to examine the distribution of N-Fclauses, specifically gerunds and infinitives, in the written discourse of Spanish students who were learning English as a second language. The results indicated that the frequency of infinitives was notably higher than that of gerunds, particularly in the writings of advanced-level students. However, the frequency of both types of N-F clauses remained lower than that of native English speakers (Schwartz and Causarano, 2007). In a related study, Yang (2014) aimed to investigate the distribution and frequency of N-F clauses in the writings of Chinese EFL students with different proficiency levels and found that the writing proficiency of the students and the frequency of N-F clauses significantly correlated.

#### **Functions of Non-finite Clauses**

N-F clauses exhibit comparable functions to those of finite clauses. According to Brinton's (2000) assertion, the grammatical functions of N-F clauses are identical to those of finite clauses, which include nominal, adjectival (modifier, postmodifier or adnominal), and adverbial functions. Based on Greenbaum and Nelson (2002), N-F clauses have nominal, modifier, and adverbial functions. The sentences below, from (1) to (3), show three main syntactic functions of N-F clauses.

- (1) I like cooking at home (Nominal)
- (2) The man watching the tv is my father (Modifier).
- (3) As shown in the table, there is a difference between the variables (adverbial)

Each of the main functions of N-F clauses may have other grammatical roles. For example, nominal clauses may have the roles of subject (4), subject complement (5), direct object, or preposition complement (6). Adjectival (postmodifying or adnominal) functions as modifiers in phrases, and they are usually referred to as reduced relative clauses (Granger, 1997) as seen in

examples (7) and (8). Biber et al. (1999) stated that "there are three major types of non-finite post modifying clauses: ing-clauses, ed- clauses, and to-clauses. The first two types are also termed participle clauses, and the third is also termed an infinitive clause or a to-infinitive relative" (p. 630). The function of modifiers is identical to that of adjectives and is also called adjectival (Brinton, 2000). Adverbial clauses are subordinate clauses that function as adverbials (Jeffries, 2006). Adverbial clauses are connected to the main clause, giving information about the time, manner, reason, purpose, condition, and location of the main clause. Adverbial clauses may have the functions of adjunct (9), disjunct (10) and conjunct (11).

- (4) To write an article requires reading about the topic (subject)
- (5) It is important to convince people about the topic... (subject complement)
- (6) The students didn't know what to write ... (prepositional complement)
- (7) The sentences written according to academic genre... (postmodification)
- (8) The term described by some researchers was at the core...(postmodification)
- (9) Exhausted by the long working hours, teachers feel burnout... (adjunct adverbial)
- (10) Speaking of time, we are getting late (disjunct adverbial)
- (11) Assuming that he is here, I would not thank him (conjunct adverbial)

The distribution of syntactic functions of N-F clauses was investigated by researchers across various aspects, including NS and NNS, as well as genre variations. Granger's (1997) research findings indicate that adnominal clauses are the most frequent function used in academic English, while adverbials are the second most frequent category in academic texts. Furthermore, NNSs tend to underuse adjectival and adverbial clauses compared to NSs. Similarly, Cosme (2008) conducted a study to examine the factors contributing to the underuse of participle clauses (-ing and -ed) by nonnative speakers in a trilingual translation corpus. In this study, adnominal clauses were the most frequent type in English, French, and Dutch corpora, followed by adverbials (Cosme, 2008). In her study, Rafajlovičová (2008) examined the prevalence of N-F clauses in various genres, including fiction, interviews, newspapers, and academic prose. The findings revealed that nominal clauses constituted 39% of all subordinate clauses in the corpus, with a particularly high occurrence in spoken texts. The researcher concluded that a higher frequency of nominal clauses is indicative of a less formal writing style. Additionally, the study revealed that adjectival clauses rank as the second most prevalent type, while adverbial clauses exhibit a relatively uniform distribution across all text genres contained in the corpus.

As previously mentioned, it is recommended that EFL grammars place greater emphasis on N-F clauses due to their significant presence in certain registers of the English language, particularly in academic and narrative writing (Granger, 1997). In addition, possessing the ability to use N-F clauses within academic writing can contribute to the complexity and formality that are characteristic of such texts. Despite the existence of studies that have compared the use of N-F clauses among non-native speakers (NNS) with varying first language (L1) backgrounds and native speakers (NS), there has been a lack of research on the frequency and functions of N-F clauses in academic writings produced by Turkish scholars. Acquiring knowledge regarding the frequency and syntactic roles of N-F clauses in academic texts produced by Turkish scholars can facilitate the development of learners' ability to write native-like academic texts. Therefore, the objective of the current study is to investigate potential dissimilarities between academic texts produced by Turkish non-native speakers of English and native speaker texts with respect to the frequency and functions of N-F clauses. In order to achieve the aforementioned objectives, the present study has formulated the following research inquiries:

- 1. What is the frequency and syntactic functions of N-F clauses in NNSs and NSs academic texts?
- 2. Is there any statistically significant difference between NNSs and NSs academic texts in terms of frequency and syntactic functions of N-F clauses?

# Methodology

# **Research Corpus**

A specialized research corpus was compiled to examine the frequency and functions of N-F clauses in academic texts produced by both non-native speakers and native speakers. The corpus in question is characterized by its limited size and specialized nature, as it has been stated that smaller corpora are more appropriate for pedagogical settings that require a targeted focus, such as English for Specific Purposes (ESP) or English for Academic Purposes (EAP) (Flowerdew, 2002). Moreover, compact and specialized corpora provide valuable perspectives on language usage patterns within specific contexts, establishing a stronger connection between the corpus and the circumstances under which the corpus texts were generated (Koester, 2010). The study utilized a corpus comprising two sub-corpora, namely published M.A. and PhD. theses authored by both non-native and native English writers. This selection was made on purpose, as "they represent the key genres of the academy" (Hyland, 2008, p. 47).

The non-native corpus consisted of 10 M.A. and 5 PhD theses that were approved for publication in Turkey between 2005 and 2015. These theses were extracted from the Thesis Center of Higher Education Council, which can https://tez.yok.gov.tr/UlusalTezMerkezi/. A similar procedure was followed in the creation of the native corpus. The native counterpart of the non-native sub-corpus consisted of a similar number of and PhD theses that were accessed from the ProQuest Dissertation Center (https://about.proquest.com/en/dissertations/). To ensure comparability between sub-corpora, theses with similar topics were selected. Both corpora consisted of theses written about English language teaching. In order to ensure representativeness, a selection was made of theses that employed diverse data analysis methods. In other words, if the non-native sub-corpus employs an experimental or quantitative methodology, the corresponding native sub-corpus also employs an experimental or quantitative methodology. Table 2 displays the quantity of texts and words within both sub-corpora used in this study. Even though both corpora have similar numbers of texts, the theses were not all the same length. There was a minor variation in size, but the overall number of words in the NS and NNS corpora was comparable; therefore, a normalized frequency was not utilized. While there were about 466.000 words in non-native sub-corpus, the number of words was about 453.000 for the native counterpart.

Table 2
Size of Native and Non-Native Sub-Corpora

Sub-Corpora		No. of Texts	No. of Words	Total
	M.A.	10	256.572	466.984
Non-native	PhD	5	210.412	
Native	M.A.	10	198.362	453.492
Nauve	PhD	5	255.130	

# **Data Analysis**

After collecting the texts, the files were converted to text format. References, direct quotes, tables, and figures were eliminated from each thesis. Because the technique involves identifying nonfinite sentences, information on word classes in the corpus was required to carry out the analysis. As a result, the next step was to tag all of the data. To tag all the data found in both corpora, online part-ofspeech tagger or grammatical free online tagging software CLAWS C5 tagset (the Constituent Likelihood Automatic Word-tagging System) was utulized annotate data (http://ucrel.lancs.ac.uk/claws/). The program automatically identifies parts of speech in the data in theses and articles, making it straightforward to identify grammatical word classes such as nouns, adjectives, verbs, pronouns, quantifiers, determiners and different forms of verbs including gerund, infinitive and bare forms of verbs. Antconc 3.4.3 (Anthony, 2011), a freeware corpus concordancing program, was utilized to identify data about N-F clauses. Following the identification of N-F clauses, all occurrences were categorized first in terms of type, then function. Although the program provides the frequency of N-F clauses, it does not automatically determine their functions. As a result, the functions of N-F clauses were identified manually and they were categorized. The number of instances was compared to see if there were any significant differences in frequency and syntactic functions of N-F clauses between native and non-native writers using (http://ucrel.lancs.ac.uk/llwizard.html), which indicates overuse or underuse of the instances. After examining the frequency, the functions of N-F clauses (nominal, adjectival, or adverbial) in both corpora were analyzed and compared.

#### Research Ethics

This is a corpus-based research. Therefore, there is no need to take ethical approval from any institution.

#### **Results and Discussions**

Table 3 below gives the overall frequency of N-F clauses in NNSs and NSs academic texts. As seen in Table 3 below, the total number of N-F clauses in the native corpus was 1713, while the total number of N-F clauses involved in the non-native corpus was 1128. That is, NNSs used N-F clauses less frequently than NSs in their academic papers. The log-likelihood statistics showed that this difference is statistically significant and that NNSs underused N-F clauses compared to NSs (LL=139, p < .01).

Table 3
The Frequency of Non-Finite Clauses in NSs and NNSs

	NATIVES	NON-NATIVES	
MA	876	497	
PhD	837	631	
TOTAL	1713	1128	

Although both corpora (NSs and NNSs) were similar in terms of size and thus comparable, the overall frequency of N-F clauses was found to be significantly different. NNSs significantly underused N-F clauses in their academic texts. The underuse of N-F clauses was found to be consistent in a number of studies (Granger, 1997; Koyalan and Mumford, 2011; Yang, 2014). Cosme (2008) proposed that writers with different L1 backgrounds tend to underuse N-F clauses in their English texts.

Granger (1997) explained the underuse of N-F clauses by non-native writers with several possible reasons and asserted that the lack of treatment of N-F clauses in EFL grammar might be responsible for the underuse of such structures. Granger (ibid.) explained that N-F clauses are distributed throughout various grammar sections without a specific emphasis to these structures. Furthermore, Yang (2014) revealed that the more proficient the learners are, the more frequently they use N-F clauses in their academic texts. Consequently, it can be proposed that non-natives may have inadequate knowledge about N-F clauses and might consciously or unconsciously avoid using these structures because of their grammar concern. However, in Turkey, grammar teaching is widely emphasized, and the participants of this study were professional students writing their theses. The underuse of N-F clauses in academic contexts might not be caused by the lack of attention to EFL grammar.

Secondly, Granger (ibid.) highlighted the cross-linguistic effect in justifying NNSs not using N-F clauses in their academic texts. Similarly, Cosme (2008, p. 193) justified the underuse of N-F clauses by non-natives by emphasizing the cross-linguistic effect accompanied by the factors such as "syntactic maturity, task settings, and even teaching-induced factors". However, the underuse of N-F

clauses by Turkish researchers does not seem to be an inter-language effect as Turkish language has non-finite structures contrary to the justification of Cosme (2008). Nonetheless, without a reliable cross-linguistic study, it is hard to make an accurate inference about the L1 effect.

As for the last reason for the underuse of N-F clauses by non-natives was stated to be "the fear learners might experience of using stylistically awkward constructions" (Granger, 1997, p. 188). According to Cosme (2008), N-F clauses are the distinctive characteristics of English academic texts and they are very frequent in English compared to other European languages. Thus, using an abundant number of N-F clauses may give NNSs the impression that they are using "stylistically awkward constructions". Therefore, it can be assumed that significant underuse of N-F clauses by Turkish scholars may be caused by the tendency to write simple sentences avoiding awkward structures in their academic papers.

Looking at Table 3 above, the number of N-F clauses in M.A. theses of NSs (N=876) is higher than that of their PhD (N=837); however, this difference is not statistically significant (LL=0.89, p>.01). On the other hand, the number of N-F clauses in PhD theses (N=631) of NNSs is higher compared to their M.A. theses (N=497) and this difference is statistically significant (LL=53.61, p<.01). The result suggests that while NSs used a similar number of N-F clauses in their MA and PhD theses, NNSs used a considerably different number of N-F clauses in their MA and PhD theses, and there is a significant increase in the number of N-F clauses in PhD theses of non-native speakers. This may be explained by the learning process or the academic writing experience non-native speakers gain over time. After writing their MA thesis, NNSs of English may produce more complex sentences in their PhD thesis, and they may use more N-F clauses. In a similar vein, Yang (2014) revealed that the proficiency level of the writers was a contributing reason for the increase in the number of N-F clauses in academic texts. In other words, when the proficiency level of the learners increases, the frequency of N-F clauses in their academic papers increases as well.

The following figure presents a more detailed description of types of N-F clauses (-ing, -ed, to infinitival, or bare infinitival) in NS and NNS academic texts.

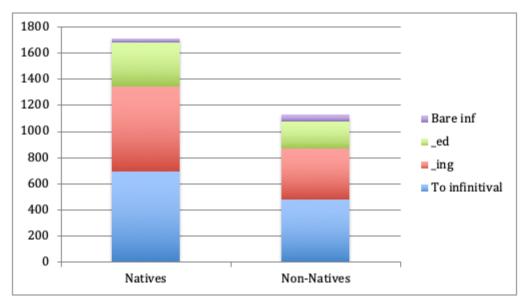


Figure 1. The Distribution of the Types of Non-Finite Clauses across NS and NNS

Although there existed a statistically significant difference in the total frequency of N-F clauses between native and non-native texts, the distribution of the forms of the N-F clauses was balanced. That is, both NSs and NNSs used bare infinitives less frequently and to infinitival most frequently in their academic papers. To infinitival (N=697) was the most frequent type of N-F clause in NS academic texts, followed by -ing (N=645), -ed (N=337) and bare infinitive (N=34),

respectively. Similarly, to infinitival (N=483) was the most frequent type of N-F clause in NNS texts, followed by -ing (N=385), -ed (N=210) and bare infinitive (N=50), respectively. The result here is supported by the statement of Biber et al. (1999) that "to clauses and -ing clauses are common in academic prose" (p. 749) and "bare infinitive clauses occur with only a few controlling verbs, and as a result they are much less common than to-clauses" (p. 699). The finding here was also in line with the findings of Schwarz and Causarano (2007). Although they did not examine the distribution of bare infinitive and -ed, Schwarz and Causarano (2007) found out that to infinitival was more frequent in the NS and NNS corpus compared to -ing clauses, and the higher the student's level is, the more frequent the use of to infinitive is. The researchers explained that because to infinitives were used more frequently in the NS corpus, NNSs also learned to use them more frequently in written discourse. In other words, although NNSs are aware of the distribution of N-F clauses, they underuse these structures compared to their native counterparts.

Table 4 below presents the frequency of the syntactic functions of N-F clauses in the NS and NNS corpora. As shown in Table 4, the syntactic functions of N-F clauses were found to be underused in academic papers of NNSs of English compared to their NSs counterpart. Adjectival was the most frequent syntactic function in NSs (N=872) and NNSs (N=615).

Table 4
The Frequency of the Syntactic Functions of Non-Finite Clauses in NSs and NNSs

<b>Syntactic Functions</b>	NS	NNS	
Adjectival	872	615	
Adverbial	591	372	
Nominal	250	141	

Table 4 shows that adjectival (postmodifier or adnominal) was found to be the most frequent syntactic function both in the NS and NNS corpora. In their study, Granger (1997) and Cosme (2008) also found that adnominal participle clauses are the most common in natives and non-natives. The reason for the frequency of adjectival (postmodifier or adnominal) in academic texts may be explained by economy. Since adjectival expresses the same meaning by using fewer words and provides economy for the writers, this was supported by the statement of Carter and McCarthy (2006, p. 271) that "they [adjectival] are often used in academic style as an alternative to longer clausal constructions". According to Biber et al. (1999), there are some reasons for the preference of full relative clauses over adjectival N-F clauses. They stated that firstly, full relative clauses are preferred "whenever tense, perfect aspect, or modality are important since these distinctions cannot be marked in a postmodifying participle clause" and secondly, "a full relative clause is preferred whenever the postmodifier is separated from the head noun" (p. 632). However, in academic prose, N-F clauses, especially adjectival N-F clauses, can be considered "important in terms of avoiding both unnecessary personal pronouns and finite elements" (Koyalan and Mumford, 2011, p. 116).

After adjectival N-F clauses, adverbial N-F clauses are the second common syntactic function found in both the NS and NNS corpora. In academic texts, researchers should justify adopting specific methodology, data analysis, and so on by stating the reasons. This may be an important determinant of using adverbial N-F clauses in their academic texts; hence, adverbial N-F clauses state the reason, time, manner, result, contrast, place, cause, purpose, conditional, etc.

The least frequently used function of N-F clauses both in NS (N=250) and NNS (N=141) sub-corpora was nominal. According to Rafajlovičová (2008), nominal N-F clauses are an indicator of formality, and when the frequency of nominal N-F clauses increases, the formality of the text decreases. As academic register is believed to be the most formal genre, it is natural to have a small number of nominal N-F clauses in both sub-corpora.

#### **Conclusions and Implications**

The main findings of the current study could be summarized as follows: First of all, NNSs underuse N-F clauses in academic texts compared to their NSs counterpart. This result is in line with the previous findings. Secondly, although there are significant differences in the frequency of N-F clause, the distribution of N-F is similar in NSs and NNSs. In other words, to infinitives are the most frequent, and bare infinitives are the less frequent type of non-finites in NSs and NNSs. As in the form of N-F clauses, the frequency of syntactic functions of N-F clauses shows a similar distribution in the NS and NNS corpora. In other words, adjectival N-F clauses are the most frequent and nominal N-F clauses are the least frequent, both in NSs and NNSs academic texts. Therefore, it can be concluded that although NNSs know how to use N-F clauses, they might not decide when to use them due to stylistic concerns. To overcome the situation, EFL teachers should emphasize the importance of N-F clauses as a means of syntactic compression in academic writing lessons. As stated by Granger (1997), sentence-combining exercises would help learners produce a more economical, compact, and integrated style. Because the high frequency of N-F clauses is one of the distinguishing characteristics of academic register, which, in turn, provides formality. However, it should also be noted that the extreme use of N-F clauses might result in obscurity. As stated by Greenbaum (1988, p. 9) "if the message is too compressed, we may lose our audience", hence the decoding of the message would be very hard. In addition to emphasizing N-F clauses in academic writing lessons, students writing their MA and PhD theses should benefit from academic corpora to compare their writing style in order to improve their writing skills.

This study also has some limitations. First of all, it was really hard to classify the N-F clauses according to their syntactic functions; another rater would provide more reliable findings about N-F clauses. Besides, the data used in this study was small-scale and idiosyncratic usage might affect the reliability of the study. The types of syntactic functions of the N-F clauses, such as subject, object, and complements, are not presented in this study due to the time constraint.

#### The Contribution of Researchers

The contribution of the researcher to this study is 100%.

#### **Conflict of Interest**

There is no conflict of interest in this study

#### References

- Anthony, L. (2011). AntConc (Version 3.4.3) [Computer Software]. *Tokyo, Japan: Waseda University*.
- Biber, D., and Gray, B. (2010). Challenging stereotypes about academic writing: Complexity, elaboration, explicitness. *Journal of English for Academic Purposes*, 9(1), 2–20. https://doi.org/10.1016/j.jeap.2010.01.001
- Biber, D., Johansson, S., Leech, G., Conrad, S., Finegan, E., and Quirk, R. (1999). *Longman grammar of spoken and written English* (Vol. 2). MIT Press.
- Brinton, J. L. (2000). *The structure of modern English: A linguistic introduction*. John Benjamin Publishing Company.
- Carter, R., and McCarthy, M. (2006). Cambridge grammar of English: A comprehensive guide; spoken and written English grammar and usage. Cambridge University Press.

- Chafe, W., and Danielewicz, J. (1987). *Properties of spoken and written language* (Technical Report no. 5), National Center for The Study of Writing. New York.
- Chang, C. F., and Kuo, C. H. (2011). A corpus-based approach to online materials development for writing research articles. *English for Specific Purposes*, 30(3), 222–234. https://doi.org/10.1016/j.esp.2011.04.001
- Cosme, C. (2008). Participle clauses in learner English: The role of transfer. In G. Gilquin, S. Papp, and M. B. Diez Bedmar (Eds.), *Linking up contrastive and learner corpus research* (pp. 177–200). Rodopi.
- Eastwood, J. (1994). Oxford Guide to English grammar. Oxford University Press.
- Flowerdew, L. (2002). The exploitation of small learner corpora in EAP materials. In M. Ghandessy, A. Henry and R. L. Roseberry (Eds.) *Small Corpus Studies and ELT: Theory and Practice*. John Benjamins.
- Gelderen, E. V. (2010). *An introduction to the grammar of English*. Philadelphia: John Benjamin Publishing Company.
- Granger, S. (1997). On identifying the syntactic and discourse features of participle clauses in academic English: native and non-native writers compared. In: Aarts, J., I. de Mönnink, E., and Wekker, H. (Eds.), *Studies in English language research and teaching* (pp. 185–198). Rodopi.
- Greenbaum, S. (1988). Syntactic devices for compression in English. *Essays on the English Language* and Applied Linguistics on the Occasion of Gerhard Nickel's 60th Birthday. Heidelberg: Julius Groos Verlag, 3-10.
- Greenbaum, S., and Nelson, G. (2002). An introduction to English grammar. Pearson Education.
- Hinkel, E. (2003). Simplicity without elegance: Features of sentences in L1 and L2 academic texts. *Tesol Quarterly*, *37*(2), 275-301. https://doi.org/10.2307/3588505
- Hyland, K. (2008). Academic clusters: Text patterning in published and postgraduate writing. *International Journal of Applied Linguistics*, 18(1), 41–62. https://doi.org/10.1111/j.1473-4192.2008.00178.x
- Jeffies, L., (2006). Discovering language: The structure of modern English. Palgrave Macmillan
- Kasparė, L., and Danilevičienė, L. (2014). Some cases of syntactic compression in English and their translation into Lithuanian. *Language in Different Contexts/Kalba ir Kontekstai*, 267-280.
- Koester, A. (2010). Building small specialised corpora. In McCarthy, M. and O'Keeffe, A. (eds), *The Routledge Handbook of Corpus Linguistics*. Routledge.
- Koyalan, A., and Mumford, S. (2011, April). Changes to English as an Additional Language writers' research articles: From spoken to written register. *English for Specific Purposes*, *30*(2), 113-123. https://doi.org/10.1016/j.esp.2010.10.001
- Leech, G., and Svartvik, J. (2002) *A Communicative Grammar of English*. Longman: Pearson Education.
- Malá, M. (2013). Notes on norms and usage of finite/ non-finite predication in written English. *Brno Studies in English*, 39(1), 27-40.

- O'Donnell, R. C. (1974). Syntactic differences between speech and writing. *American Speech*, 102-110.
- Ortega, L. (2003). Syntactic complexity measures and their relationship to L2 proficiency: A research synthesis of college-level L2 writing. *Applied linguistics*, 24(4), 492-518. https://doi.org/10.1093/applin/24.4.492
- Quirk, R., Greenbaum, S., Leech, G., and Svartvik, J. (1985). A grammar of contemporary English. Longman.
- Rafajlovičová, R. (2008). The distribution of finite and non-finite subordinate clauses according to text type. *Linguistics Journal: Discourse and Interaction*, 1(2), 64-72.
- Rafajlovičová, R. (2013). Subordinate clauses- their forms and functions in different text types. In: A. Kačmárová (ed), English Matters IV: A collection of papers by the Institute of British and American Studies, (pp. 42-48). Prešov.
- Schleppegrell, M. J. (2002). Linguistic features of the language of schooling. *Linguistics and education*, 12(4), 431-459. https://doi.org/10.1016/s0898-5898(01)00073-0
- Schwartz, M., and Causarano, P. N. L. (2007). The role of frequency in SLA: an analysis of gerunds and infinitives in ESL written discourse. *Arizona Working Papers in SLA and Teaching*, 14, 43-57.
- Silva, T. (1993). Toward an understanding of the distinct nature of L2 writing: The ESL research and its implications. *Tesol Quarterly*, 657-677. https://doi.org/10.2307/3587400
- Swales, J. (1990). Genre analysis: English in academic and research settings. Cambridge University Press.
- Verspoor, M., and Sauter, K. (2000). *English sentence analysis: An introductory course*. John Benjamin Publishing Company.
- Yang, B. (2014). Using non-finite in English academic writing by Chinese EFL students. *English Language Teaching*, 7(2), 42-52. https://doi.org/10.5539/elt.v7n2p42

# Genişletilmiş Özet

#### Giris

İngilizce, dünya çapında araştırma ve yayın için en yaygın kullanılan dildir (Swales, 1990) ve akademik yazın anadili İngilizce olmayanlar için oldukça zordur. Schleppegrell'in (2002) belirttiği gibi, ana dili İngilizce olmayanlar için yalnızca güçlü bir İngilizce hakimiyetine sahip olmak değil, aynı zamanda akademik dilin ayırt edici özelliklerine ilişkin kapsamlı bilgiye sahip olmak da çok önemlidir. Hyland'a (2002) göre, akademik söylem, daha fazla sayıda yan cümleyi içeren sözdizimsel karmaşıklığı ile nitelendirilir. Sözdizimsel karmaşıklık genellikle yabancı dil bağlamında dikkate değer bir yapı olarak tanımlanır ve öğrencilerin dil yeterliliğinin bir göstergesi olarak kabul edilir (Ortega, 2003).

Yüklemi çekimsiz yan cümleler, akademik söylemde sözdizimsel karmaşıklığın göstergesi olarak kabul edilmektedir (Granger, 1997; Hinkel, 2003; Malá, 2013; Rafajlovičová, 2008; Silva, 1993). Hinkel'e (2003) göre, akademik yazının tipik olarak, yüksek derecede metin karmaşıklığı sergilemesi beklenir. Anadili İngilizce olmayanlar daha öz ve bütünleşik bir tarza katkıda bulunabileceğinden, yazılarına yüklemi çekimsiz yan cümleler eklemeye teşvik edilir (Hinkel, 2003). Diğer bir ifade ile akademik söylem topluluğu içinde araştırmacılar basitliğe öncelik vermezler ve anadili İngilizce olmayan kişiler, yazılı eserlerinde karmaşık yapıları yetkin bir şekilde kullanmak için yüklemi çekimsiz yan cümleler hakkında bilgi edinmelidir. Beaman (1984), yüklemi çekimsiz yan cümlelerin yüksek sıklığının, akademik söylemin ayırt edici özelliklerinden biri olduğuna dikkat çekmiştir.

Yüklemi çekimsiz yan cümlelerin sıklığı üzerine yapılan araştırmalar anadili İngilizce olan ve olmayan kişilerin metinlerinde türe göre, zamana göre ve öğrencilerin dil düzeyine göre istatistiksel olarak anlamlı farklılıkların olduğunu ortaya çıkarmıştır (Biber ve Gray, 2010; Granger, 1997; Malá, 2013; Rafajlovičová, 2013; Schwartz ve Causarano, 2007; Yang 2014). Örneğin, Rafajlovičová (2008) röportaj, akademik söylem, gazete ve kurgu dahil olmak üzere dört farklı türde kullanılan cümle türlerini araştırmış ve akademik söylemde diğer türlere göre az sayıda sonlu tümce ve en fazla sayıda yüklemi çekimsiz yan cümlelerin kullanıldığını ortaya koymuştur. Granger (1997), anadili İngilizce olan ve olmayanlar tarafından üretilen akademik metinlerdeki yüklemi çekimsiz yan cümle sıklığı üzerine bir çalışma gerçekleştirmiş ve anadili İngilizce olmayanların ana dili İngilizce olanlara kıyasla daha düşük sıklıkta yüklemi çekimsiz yan cümleler kullandığı sonucuna ulaşmıştır. Granger'in (1997) çalışmasında ana dili Fransızca, İsveççe veya Felemenkçe olan İngilizce konuşanlar arasında yüklemi çekimsiz yan cümlelerin sıklığında istatistiksel olarak anlamlı bir fark olmadığı ortaya çıkmıştır. Yang (2014), farklı dil düzeylerine sahip anadili Çince olan ve İngilizce öğrenenlerin yazılarındaki yüklemi çekimsiz yan cümlelerin dağılımını ve sıklığını araştırmayı amaçlamış ve öğrencilerin dil düzeyleri ile yüklemi çekimsiz yan cümlelerin sıklığı arasında önemli ölçüde ilişkili olduğunu ortaya çıkarmıştır. Yüklemi çekimsiz yan cümlelerin sözdizimsel işlevlerinin dağılımı da farklı değişkenler dikkate alınarak araştırılmıştır. Granger'in (1997) araştırma bulguları, akademik metinlerde en sık kullanılan işlevin niteleyici yan cümle olduğunu, belirteç yan cümle işlevi ise ikinci en sık kullanılan kategori olduğunu göstermektedir. Ayrıca, anadili İngilizce olmayanların niteleyici ve belirteç yan cümlelerini anadili İngilizce olanlara kıyasla anlamlı bir şekilde daha az kullandığı sonucuna ulaşılmıştır.

Daha önce bahsedildiği gibi, özellikle akademik yazımda yüklemi çekimsiz yan cümlelere daha fazla vurgu yapılması önerilir (Granger, 1997). Ek olarak, akademik yazında sonlu olmayan yan cümleleri kullanma becerisine sahip olmak, bu tür metinlerin özelliği olan karmaşıklığa ve resmiliğe katkıda bulunabilir. Farklı anadile sahip kişilerin ürettiği metinler ile anadili İngilizce olanlar arasında yüklemi çekimsiz yan cümlelerin kullanımını karşılaştıran çalışmaların varlığına rağmen anadili Türkçe olanların ürettiği İngilizce akademik metinlerde yüklemi çekimsiz yan cümlelerin sıklığı ve sözdizimsel işlevleri hakkında araştırma eksikliği vardır. Türk akademisyenler tarafından üretilen akademik metinlerdeki yüklemi çekimsiz yan cümlelerin sıklığı ve işlevleri hakkında bilgi edinmek, onların akademik metinler yazma becerilerinin gelişimini kolaylaştırabilir. Bu nedenle, bu araştırmanın amacı, ana dili İngilizce olmayan Türk araştırmacıların anadili İngilizce olanlara kıyasla

akademik yazılarında yüklemi çekimsiz yan cümleleri ne ölçüde kullandıklarını ve sözdizimsel işlevlerini belirlemektir.

#### Yöntem

## Araştırma Derlemi

Anadili İngilizce olan ve olmayan kişiler tarafından üretilen akademik metinlerdeki yüklemi çekimsiz yan cümlelerin sıklığını ve işlevlerini incelemek için özel bir araştırma derlemi oluşturulmuştur. Çalışmada, yayınlanmamış yükseklisans ve doktora olmak üzere iki alt derlem içeren bir derlem kullanılmıştır. Akademinin temel türlerini temsil ettikleri için (Hyland, 2008) tezler özellikle seçilmiştir. İngilizce öğretimi hakkında anadili Türkçe ve İngilizce olan lisansüstü öğrencilerce yazılmış yüksek lisans ve doktora tezlerinden aynı büyüklükte ve benzer konuları içeren araştırma derlemleri oluşturulmuştur.

#### Veri Analizi

Metinler toplandıktan sonra dosyalar txt formatına dönüştürülmüştür. Kaynaklar, doğrudan alıntılar, tablolar ve şekiller tezlerden çıkarılmıştır. Her iki derlemde bulunan yüklemi çekimsiz yan cümlelerin sıklığını bulabilmek için tüm veriler CLAWS yazılımı kullanılarak etiketlenmiştir. Etiketlemeden sonra Antconc yazılımı kullanılarak yüklemi çekimsiz yan cümlelerin sıklığı ortaya çıkarılmıştır. İki derlem arasında istatistiki bir fark olup olmadığı log-likelihood yazılımı kullanılarak incelenmiştir. Yazılım, yüklemi çekimsiz yan cümlelerin sıklığını ortaya çıkarsa da işlevlerini otomatik olarak belirlemediğinden bu yapıların işlevleri tek tek belirlenmiştir ve iki derlem arasında bu bağlamda anlamlı bir fark olup olmadığı araştırılmıştır.

## Bulgular

Araştırma bulguları, anadili İngilizce olan ve olmayan öğrencilerin akademik metinlerinde yüklemi çekimsiz yan cümlelerin sıklığı açısından anlamlı bir farklılığın olduğu ve anadili İngilizce olmayan öğrencilerin bu yapıları anlamlı bir şekilde çok daha az kullandığı sonucunu ortaya çıkarmıştır. Diğer bir sonuç ise anadili İngilizce olanlar yüksek lisans ve doktora tezlerinde benzer sayıda yüklemi çekimsiz yan cümleler kullanırken anadili İngilizce olmayanlar yüksek lisans ve doktora tezlerinde oldukça farklı sayıda bu yapıları kullanmıştır. Çalışma anadili İngilizce olan ve olmayan öğrencilerin akademik metinlerinde yüklemi çekimsiz yan cümlelerin sıklığı açısından anlamlı bir fark olmasına rağmen, bu yapıların dağılımının her iki derlemde de dengeli olduğu sonucunu çıkarmıştır. Yani, her iki grup da akademik metinlerde en az yalın eylemliliği kullanırken en sık mastarları kullanmıştır. Son olarak, yüklemi çekimsiz yan cümlelerin sözdizimsel işlevleri açısından karşılaştırıldığında her iki grubun da niteleyici yan cümleleri daha sık ad yan cümleleri daha az kullandığı sonucu ortaya çıkmıştır. Ancak anadili İngilizce olmayanlar bu yapıların sözdizimsel işlevlerini istatistiki açıdan anlamlı bir şekilde çok daha az kullanmışlardır.

## Sonuc, Tartısma ve Öneriler

Anadili İngilizce olmayan öğrencilerin yüklemi çekimsiz yan cümleleri akademik metinlerinde daha az kullanmalarının sebepleri alanyazında birkaç şekilde açıklanmıştır. Granger (1997) bu yapıların dilbilgisi derslerinde yeterince ele alınmadığı için az kullanıldığını ifade etmiştir. Ayrıca Yang (2014), öğrencilerin dilbilgisi bağlamında ne kadar yetkin olursa, akademik metinlerinde yüklemi çekimsiz yan cümleleri o kadar sık kullandıklarını ortaya koymuştur. Ancak Türkiye'de yabancı dil derslerinde dilbilgisi öğretimi yoğun olarak yapılmakta ve bu yapıların Türk öğrenciler tarafından az kullanılmasında dilbilgisi derslerinde yeterince ele alınmıyor oluşları bir neden olarak değerlendirilmemektedir. İkinci olarak, Granger (1997) bu yapıların az kullanılmasının nedeni olarak diller arası etkiyi öne sürmüştür. Benzer şekilde, Cosme (2008) de diller arası etkinin yanısıra sözdizimsel bilgi ve öğretim kaynaklı faktörleri öne sürmüştür. Ancak Türk dilinin, Cosme'nin (2008) gerekçesinin aksine yüklemi çekimsiz yan cümlelere sahip olması nedeniyle, Türk araştırmacıların bu yapıları az kullanıması diller arası bir etki gibi görünmemektedir. Son olarak, bu yapıların az kullanılmasının nedeni olarak öğrencilerin biçimsel olarak garip yapıları kullanma korkusu olarak

ifade edilmiştir (Granger, 1997). Cosme'ye (2008) göre, yüklemi çekimsiz yan cümleler İngilizce akademik metinlerin ayırt edici özelliğidir ve diğer Avrupa dillerine kıyasla İngilizce'de çok sık bulunurlar. Bu nedenle, çok sayıda yüklemi çekimsiz yan cümle kullanmak, anadili İngilizce olmayan Türk öğrencilerin tarz açısından garip yapılar kullandıkları izlenimini verebilir. Türk öğrencilerin bu yapıları önemli ölçüde az kullanılmasının nedeni akademik makalelerinde garip yapılardan kaçınmak isteyip basit cümleler yazma eğiliminden kaynaklanabileceği varsayılabilir. Bu araştırmadan anadili İngilizce olmayan Türk öğrencilerin yüklemi çekimsiz yan cümlelerin nasıl kullanılacağını bilmelerine rağmen, biçimsel kaygılar nedeniyle bunları ne zaman kullanacaklarına karar veremedikleri sonucuna varılabilir.

Bu durumun üstesinden gelmek için, yabancı dil öğretmenleri akademik yazma derslerinde sözdizimsel sıkıştırma aracı olarak yüklemi çekimsiz yan cümlelerin önemini vurgulamalıdır. Granger (1997) tarafından belirtildiği gibi, cümle birleştirme alıştırmaları öğrencilerin daha ekonomik, derli toplu ve bütünleşik bir tarz üretmelerine yardımcı olacaktır. Bununla birlikte, yüklemi çekimsiz yan cümlelerin aşırı kullanımının anlamsızlığa neden olabileceği de belirtilmelidir. Ek olarak, bu çalışmanın da bazı sınırlılıkları vardır. Her şeyden önce, yüklemi çekimsiz yan cümleleri sözdizimsel işlevlerine göre sınıflandırmak oldukça zordur. Bu yapıların sınıflandırılmasında başka bir değerlendiriciden yararlanmak daha güvenilir bulgular sağlayacaktır. Ayrıca bu çalışmada kullanılan verilerin küçük ölçekli olması ve kişiye özel aşırı kullanımı çalışmanın güvenirliğini etkileyebilir.