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INSTITUTE OF SOCIAL SCIENCES
DEPARTMENT OF FOREIGN LANGUAGE EDUCATION
DIVISION OF ENGLISH LANGUAGE TEACHING**

**THE USE OF ACADEMIC VOCABULARY IN ARGUMENTATIVE
ESSAYS OF THE TURKISH ELT STUDENTS AND THE NATIVE
SPEAKERS OF ENGLISH: A CORPUS-BASED STUDY**

Master of Arts Thesis

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ANADİLİ TÜRKÇE OLAN İNGİLİZ DİLİ EĞİTİMİ ÖĞRENCİLERİ
VE ANADİLİ İNGİLİZCE OLAN ÖĞRENCİLERİN TARTIŞMACI
YAZILARINDA AKADEMİK SÖZCÜK KULLANIMI: DERLEM
TEMELLİ BİR ÇALIŞMA

Hazırlayan
Hatice BİRİNCİ

Tez Danışmanı
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To my beloved family...

TEZ ONAY SAYFASI

Hatice BİRİNCİ tarafından hazırlanan “The Use of Academic Vocabulary in Argumentative Essays of the Turkish ELT Students and the Native Speakers of English: A Corpus-Based Study (Anadili Türkçe olan İngiliz Dili Eğitimi Öğrencileri ve Anadili İngilizce Olan Öğrencilerin Tartışmacı Yazılarında Akademik Sözcük Kullanımı: Derlem Temelli Bir Çalışma)” başlıklı bu çalışma aşağıdaki jüri tarafından oy birliği ile 28/02/2023 tarihinde yapılan savunma sınavı sonucunda Amasya Üniversitesi Sosyal Bilimler Enstitüsü Yabancı Diller Eğitimi Ana Bilim Dalı İngiliz Dili Eğitimi Bilim Dalı’nda Yüksek Lisans Tezi olarak kabul edilmiştir.

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ETİK BEYAN SAYFASI

Tezimin içerdği yenilik ve sonuçları başka bir yerden almadığımı ve bu tezi AÜ Sosyal Bilimler Enstitüsünden başka bir bilim kuruluşuna akademik gaye ve unvan almak amacıyla vermediğimi; tez içindeki bütün bilgilerin etik davranış ve akademik kurallar çerçevesinde elde edilerek sunulduğunu, ayrıca tez yazım kurallarına uygun olarak hazırlanan bu çalışmada kullanılan her türlü kaynağa eksiksiz atıf yapıldığını, bu tezde sunduğum çalışmanın özgün olduğunu bildirir, aksinin ortaya çıkması durumunda aleyhime doğabilecek tüm hak kayıplarını kabullendiğimi beyan ederim. 28/02/2023

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İmza

ABSTRACT

THE USE OF ACADEMIC VOCABULARY IN ARGUMENTATIVE ESSAYS OF THE TURKISH ELT STUDENTS AND THE NATIVE SPEAKERS OF ENGLISH: A CORPUS-BASED STUDY

Hatice BİRİNCİ

Amasya University, Institute of Social Sciences

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Academic vocabulary refers to the words traditionally employed in both written and spoken academic discourse and have been recognized from an academic texts corpus. Some academic vocabulary lists summarize the frequency of each term or word family used in academic texts (Coxhead, 2000). Researchers suggest that one word out of ten or one out of seven in a line of academic writing may be an academic word (Coxhead, 2000; Gardner & Davies, 2014). Studying academically at English-medium institutions requires a larger amount of reading and writing and comprehension of academic discourse; students need to know a significant number of academic vocabulary. Considering the importance of academic vocabulary, the current study aims to investigate academic vocabulary usage in argumentative essays written by English Language Teaching (ELT) Department students in Türkiye. For the study, a specialized learner corpus was compiled a corpus named Turkish Learner Corpus (TLC), with 140 first-year students studying at the English Language Department of Amasya University, Gaziantep University, and Trabzon University. The TLC includes argumentative essays written in the Writing Skills Course during the 2021-2022 Spring Semester. As a reference corpus, the Louvain Corpus of Native English Essays (LOCNESS), the corpus of native speakers of native university students, was investigated. For this corpus-based study, in the first part, AntConc 3.5.8, a corpus software, was used to see the general lexical profile of the writers in the TLC and the LOCNESS by preparing a frequency-based academic vocabulary list. In the second part of the study, it was examined whether there was a statistical difference in lexical diversity in TLC compared to LOCNESS. In addition, the over and/or underuse of academic vocabulary used in TLC compared to the LOCNESS corpus was examined. The study's results revealed that when we analyzed the top words in Academic Vocabulary List (Gardner & Davies, 2014), the most frequently used and least used academic words were the same in native and non-native corpora. The words used in Turkish ELT learners' writing were more varied than in native English learners. Furthermore, the investigation of academic vocabulary showed the overuse

of some academic vocabulary (e.g. *result, experience, provide*) by Turkish ELT students while others (e.g. *role, effect, group*) were underused compared to native speakers of English.

Keywords: Corpus linguistics, learner corpus, academic vocabulary, LOCNESS, TLC



ÖZET

ANADİLİ TÜRKÇE OLAN İNGİLİZ DİLİ EĞİTİMİ ÖĞRENCİLERİ VE ANADİLİ İNGİLİZCE OLAN ÖĞRENCİLERİN TARTIŞMACI YAZILARINDA AKADEMİK SÖZCÜK KULLANIMI: DERLEM TEMELLİ BİR ÇALIŞMA

Hatice BİRİNCİ

Amasya Üniversitesi, Sosyal Bilimler Enstitüsü

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Akademik sözcük terimi, hem yazılı hem de sözlü akademik söylemde geleneksel olarak kullanılan ve akademik metinler derleminden elde edilen sözcükleri ifade eder. Bazı akademik sözcük listeleri, akademik metinlerde kullanılan her terimin veya sözcük ailesinin sıklığının bir dökümünü sunar (Coxhead, 2000). Araştırmacılar, bir akademik yazı satırındaki on sözcükten birinin veya yedi sözcükten birinin akademik bir sözcük olabileceğini öne sürmektedirler (Coxhead, 2000; Gardner & Davies, 2014). Eğitim dili İngilizce olan kurumlarda akademik olarak eğitim almak, daha fazla miktarda okuma ve yazma gerektirir ve akademik söylemi kavramak için öğrencilerin önemli sayıda akademik sözcük bilmesi gerekir. Akademik sözcük bilgisinin önemi göz önünde bulundurularak yapılan bu çalışma, Türkiye'deki İngiliz Dili Eğitimi (ELT) Bölümü öğrencileri tarafından yazılan tartışmacı denemelerde akademik sözcük kullanımını incelemeyi amaçlamaktadır. Çalışmanın amacına yönelik olarak Amasya Üniversitesi, Gaziantep Üniversitesi ve Trabzon Üniversitesi İngilizce Bölümü'nde öğrenim gören 140 birinci sınıf öğrencisi ile Turkish Learner Corpus (TLC) adlı özel bir öğrenen derlemi derlenmiştir. TLC, 2021-2022 Bahar Dönemi'nde Yazma Becerileri dersinde yazılan tartışmacı denemeleri içerir. Bir referans derlemi olarak, anadili İngilizce olan üniversite öğrencileri derlemi olan Louvain Corpus of Native English Essays (LOCNESS) incelenmiştir. Derlem tabanlı bu çalışmanın amacı doğrultusunda, ilk bölümde, TLC ve LOCNESS derlemindeki yazıların genel sözcük profilini görmek için bir derlem yazılımı olan AntConc 3.5.8 kullanılarak frekans tabanlı bir akademik sözcük listesi hazırlanmıştır. Çalışmanın ikinci bölümünde ise TLC'de LOCNESS ile karşılaştırıldığında sözcüksel çeşitlilik açısından istatistiksel bir fark olup olmadığı incelenmiştir. Ek olarak, TLC'de kullanılan akademik sözcüklerin LOCNESS derlemine kıyasla fazla ve/veya yetersiz kullanımı incelenmiştir. Araştırmanın sonuçları, Akademik Sözcük Listesi'nde (Gardner & Davies, 2014) en çok kullanılan sözcükleri incelediğimizde, yerli ve yabancı derlemlerde en sık kullanılan ve en az kullanılan akademik sözcüklerin aynı olduğunu ortaya koymuştur. Türk ELT öğrencilerinin

yazılarında kullanılan sözcükler, anadili İngilizce olan öğrencilere göre daha çeşitlilik göstermiştir. Ayrıca, akademik sözcük araştırması Türk ELT öğrencileri tarafından bazı akademik sözcüklerin aşırı kullanıldığını (örneğin; *result, experience, provide*) bazılarının ise (örneğin; *role, effect, group*) anadili İngilizce olanlara kıyasla daha az kullanıldığını göstermiştir.

Anahtar Kelimeler: Derlem dilbilim, öğrenci derlemi, akademik sözcük, LOCNESS, TLC



FOREWORD

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ABBREVIATIONS

Abbreviations	Explanation
AVL	: Academic Vocabulary List
AWL	: Academic Word List
BC	: Brown Corpus
BNC	: British National Corpus
BoE	: Bank of English
CL	: Corpus Linguistics
COBUILD	: Collins Birmingham University International Language Database
COCA	: The Corpus of Contemporary American English
CPSA	: THE Corpus of Professional Spoken American English
EAP	: English for Academic Purpose
EFL	: English as Foreign Language
ELT	: English Language Teaching
ICLE	: International Corpus of Learner English
KWIC	: Keyword in Context
L2	: Target Language
LL	: Log-Likelihood
LLC	: London-Lund Corpus
LOCNESS	: The Louvain Corpus of Native English Essays
MICASE	: The Michigan Corpus of Academic Spoken American English
SEU	: Survey of English
SLA	: Second Language Acquisition
SSE	: The Survey of Spoken English
TLC	: Turkish Learner Corpus
TTR	: Type-Token Ratio

CHAPTER I

1. INTRODUCTION

Corpus linguistics is one of the most rapidly expanding fields of modern linguistics. Linguists have been using computerized corpora, or large systematic collections of electronic texts, to aid descriptive language analysis since the mid-1960s. These texts are typically illustrative of a particular language, dialect, or linguistic subdivision (Hunston, 2002). According to Granger (2002), corpus linguistics is a linguistic technique that employs electronic collections of original texts. Although this is not a new field of theory, she emphasized in her work that its distinctiveness makes it a highly effective instrument with the power to change people's perceptions of language. McEnery and Wilson (2001:1) define corpus linguistics as "the work of language using real-life source samples and the corpus provides natural data on the usage of language." Because it contains real-life examples of the sources, linguists emphasize that exposing learners to authentic language in context encourages teachers to use inductive teaching techniques where appropriate. As a result, language instructors started implementing corpora directly to facilitate language acquisition (Balunda, 2010).

Developing a mental lexicon is crucial for language learners to convey meaning in the target language (L2). It has been suggested by McCarty (1990) that communication in the target language can only proceed in a serious direction with words even if students learn all the target language rules. Besides, it is extensively agreed that lemma cognition of the L2 plays a crucial role in pupils' academic success. Antonacci et al. (2014) observe that having an academic vocabulary repertoire promotes learners' success. Biemiller (2005) asserts that having a good vocabulary is not a guarantee of success; however, lacking it can lead to failure. It also has to be noted that words in academic settings differ from English in informal social circumstances. Cambridge Advanced Learners' Dictionary (2008) describes vocabulary as the words a person comprehends and puts into practice and all of the lexica in a particular language or topic. On the other hand, Paquot (2010:28) defines academic vocabulary as a group of expressions for the actions that delineate academic work, systematize scientific discourse, and develop the elocution of academic writing.

Academic vocabulary is an important part of academic style. According to Coxhead (2000), in terms of learning and teaching vocabulary, English for academic purposes (EAP) is one of the most intriguing parts of the process, and the selection of the words needs extra attention during study time both in and out of the class. For learners, academic vocabularies

are intriguing because students are not familiar with those technical words in their profession. Secondly, academic lexical elements appear less frequently than general-service vocabulary items. Academic writing necessitates students' ability to generate an effectively organized and completely formed answer using analytical, evaluative, or creative reasoning in the time allotted. Their writing should include facts that support and deepen the piece's core theme, as well as evidence that these learners can utilize precise language and a range of sentence structures to interest the audience to whom they are intended to speak (Loomis & Bourque, 2009: 10).

1.1. Background of the Study

1.1.1. Corpus Linguistics

A corpus is a huge, well-organized set of naturally occurring language examples preserved electronically. Corpus linguistics tries to find possible answers to some questions, such as what features are linked to lexical or grammatical characteristics and, alternatively, how you tell the difference between patterns in various types and registers (Bennet, 2010). The instrumental nature of the corpus ties it to modern computational methodologies. Even though it is possible to study a language by hand, computer technology is arguably the only technique to achieve the level of analysis and depth of understanding of recorded language use. Computational technology allows for quick searches and in-depth statistical analysis of data sets, including hundreds of millions or billions of words. Thus, since the 1960s, corpus linguistics has rapidly expanded due to advances in computational techniques that can preserve, extract, and evaluate high amounts of linguistic data (McEnery et al., 2019).

1.1.2. Learner Corpora

Learner corpora are compiled linguistic data of second language learners or those studying a target language electronically. This resource, which is still quite new, is tremendously beneficial for target language acquisition studies and teaching foreign languages. In order to understand the procedure of language acquisition, learner corpus research uses a variety of corpus linguistic approaches and techniques. The development of educational tools that address learners' issues is done using learner corpus, which identifies target language learners and language variants (Granger, 2019). Learner corpus research examines the dynamics and effects of language learning processes using digitized compilations of natural or almost natural texts written by second or foreign-language learners. Thus, this specific area

that has developed into a grounded research field with a strong community could not solely utilize universally useful advanced foundations, yet has been occupied with the formation of their own uniquely custom-fitted arrangements, including the group of their information and the formation of the mentioned in learner corpora as language assets for their undertakings (Frey et al., 2020).

1.1.3. Academic Vocabulary

Academic vocabulary is the words used in written or spoken academic discourse chosen from a corpus of academic literature (Coxhead, 2000). Academic vocabularies are different from high-frequency words, which are learned indirectly via everyday experience because they represent complex concepts; for this reason, they must be taught directly through academic texts. Gottlieb et al. (2006: 18) define academic vocabulary as the words which are “used to acquire a new or deeper understanding of content related to the core curriculum areas and communicate that understanding to others; it is the language that students must use to effectively participate in the classroom environment.” Nation (2001) suggests academic words as a set of terms that can be used across numerous disciplines and fit within academic discourse (spoken or written). Likewise, Gardner and Davies (2014) prove that as academic vocabularies exist 50% more frequently in academic publications than in texts from other disciplines, they are commonly present across all academic fields and are not particularly popular in any one area.

1.2. Statement of the Problem

According to an increasing amount of research, academic language proficiency is becoming more critical for accessing the content of academic texts and academic conversations. (Bailey & Heritage, 2008). The mass of academic vocabulary study has been driven by students learning English as a second or foreign language and getting ready to enroll in higher education. Academic vocabulary is one of the most visible parts of academic language, and a lack of mastery of academic vocabulary has long been highlighted as a barrier to student success (Snow & Kim, 2007). Hyland (2002) highlights that rather than simply assessing competency or lexical quality, academic writing should be evaluated by analyzing the work concerning its particular context, record, and community of academic discourse.

Some studies have been conducted in corpus linguistics and academic vocabulary. For example, Jakobsen et al. (2018) studied Danish's general and high-frequency academic

vocabulary. Similarly, Knight et al. (2020) carried out the CorCenCC (Corpus Cenedlaethol Cymraeg Cyfoes – The National Corpus of Contemporary Welsh) project. Moreover, Cons (2012) tried to re-identify the students who are fluent in terms of English proficiency, and to achieve this purpose; she examined the academic vocabulary usage of learners who study at secondary school. The researcher studied the frequency of academic vocabulary used by students and the potential mistakes of individual word tokens. The results of the study showed that students used academic vocabulary considerably incorrectly and which caused to decrease text's overall quality. Reid (1990) tried to compare the texts that were written for different topics and in different types, and the outcomes of the study revealed that students used vocabulary differently in terms of the length of the word, lexical density, and pronoun usage.

Even though the studies conducted previously have helped raise awareness of using academic vocabulary in various genres, registers, contexts, and by diverse groups, or levels of a writer, there needs to be more attention on the use of academic vocabulary in the ELT context. In this regard, as academic vocabulary usage is important for non-native writers to sound native-like when writing their text, in this study, we would like to look into the academic vocabulary profiles of the Turkish ELT Department students. The present study also aims to analyze the overuse and/or underuse of academic vocabulary in Turkish ELT students' argumentative essays compared to the native speakers of English.

1.3. Aim and Research Questions

In light of the issues mentioned above, the purpose of the current study was (a) to identify the academic vocabularies in a specially designed learner corpus TLC, which consists of 140 argumentative essays (61,216 words) written by Turkish ELT students who are studying at Amasya University, Gaziantep University and Trabzon University, (b) to explore the most frequently used academic vocabularies in argumentative essays by native speakers of English and Turkish ELT students. (c) to examine whether there is a statistical difference in lexical diversity in TLC compared to LOCNESS, and (d) to investigate the over and/or underuse of academic vocabulary used in TLC compared with LOCNESS.

Therefore, the study aims to find out the answers to the following research questions:

1. What is the distribution of academic vocabulary usage from the most frequently used to the least in participants' argumentative essays regarding Gardner and Davies' (2014) Academic Vocabulary List?

- a. What are the frequently used academic words in native English students' argumentative essays?
 - b. What are academic words frequently used in Turkish ELT students' argumentative essays?
2. Compared to native English learners, is there a statistical difference in the lexical diversity of the words used by Turkish ELT students?
3. Do Turkish ELT students overuse and/or underuse academic vocabulary in their argumentative essays compared to native students?

1.4. Significance of the Study

The current study is significant in many aspects. First, it is a corpus-based study and indicates the actual language use of academic vocabulary. The study investigates and reveals Turkish ELT learners' academic vocabulary profiles in their argumentative essays. In order to portray the academic vocabulary profile, a new corpus, TLC, has been created by collecting argumentative essays from students from three different state universities in Turkey.

Secondly, from a contrastive point of view, the current study addresses the distribution of academic vocabulary from the most frequently used to the least among native speakers of English and Turkish ELT students. To analyze similarities and differences between native English speakers and Turkish ELT students, LOCNESS has been scanned to provide a native speaker stance for the natural uses of academic vocabularies. LOCNESS portrays natural occurrences of language use amongst natives, who are regarded as the language's standard providers. The reason for choosing LOCNESS as a reference corpus is that LOCNESS is the most often utilized and proposed native speaker corpus for comparison in different researchers' works. As a result, the current research uses corpus evidence to compare the academic vocabulary use of non-native speakers to native speakers.

Therefore, the current study represents a notable effort to investigate the academic vocabulary usage of Turkish writers in their argumentative essays to compare them with native writers. In this case, analyzing the TLC data of the students contributes to discovering some evidence of Turkish ELT learners' progress toward the target language. Thanks to learner corpora, it is possible to see learners' language use in an authentic context. Thus, looking at the learner corpora gives clues on how well students perform concerning the target language. Authentic language data helps instructors get a gist of difficulties that learners face and find solutions for learners' errors.

Concisely, the current study helps to learn more about Turkish EFL learners' use of academic vocabulary in order to contribute to linguistics and educational fields.

1.5. Limitations of the Study

There are some limitations of the present study regarding the generalizability of the results. First, the number of essays was limited. Because it is a corpus-based study, more essays would be better to generalize the results. Second, the only academic genre included in the study was an argumentative essay. So, to arrive at more generally applicable conclusions and draw consequences, different academic genres can be included in further study.



CHAPTER II

2. REVIEW OF LITERATURE

2.1. Introduction

An overview of related literature was given in this chapter. Firstly, the definition of corpus and corpus linguistics was introduced. Secondly, the types of corpora were reviewed along with their characteristics. Thirdly, the connection between corpus and language teaching was presented with the history of corpus and the role of the corpus in language education. Moreover, the study covered information on descriptions and some explanations about academic vocabulary, and the list of academic vocabulary was focused on detail. Finally, the importance of teaching academic vocabulary and some studies on academic vocabulary were discussed.

2.2. Corpus and Corpus Linguistics

From an etymological point of view, derived from the Latin corpus means "body" (Dash & Arulmozi, 2018: 4). In linguistics, it refers to the body of the text (McEnery & Wilson, 1996). Recently, the corpus has been specified as a machine-readable form of authentic texts. Kennedy (1998) defined corpus as large data representing the whole language and was produced to examine linguistic features. Other researchers revolve around similar insight into the definition of the corpus. For example, Bennett (2010) points out that a corpus is a huge, well-organized set of naturally occurring language examples preserved electronically. The discipline tries to find possible answers to some questions, such as what features are linked to lexical or grammatical characteristics or the differences between these patterns in different varieties and registers. Likewise, a corpus, as defined by Sinclair (2004), is a group of texts chosen and arranged by clear linguistic standards for use as a language sample.

Besides the definitions above, McEnery and Wilson (2001) tend to have more specific connotations for corpus. In their view, four primary categories—sampling and representativeness, finite size, machine-readable form, and a standard reference—are used to analyze the term corpus. These terms have been explained in detail below:

The first characteristic is sampling and representativeness, which states that in the case of data collection, it is impractical for researchers to analyze every utterance in a language variety. Some languages have a huge text population, and the utterances are increasing daily. That is why analyzing every single utterance is an unending task. Due to this impossibility, it

is necessary to build a sample of a language variety researchers work with. In creating a corpus, scholars are looking for a sample that is as comprehensive of the variety under investigation as feasible, that is, one that gives us the most accurate image of the variety's tendency, including proportions. In order to provide a somewhat accurate representation of the entire language community, scholars look for samples from a broad range of writers and genres that, when compiled, can be thought of as average (McEnery & Wilson, 2001: 29).

Finite-size is another issue. A corpus should only contain a certain amount of words. A corpus project's design will outline how the linguistic diversity will be sampled and how many samples of how many words will be combined to arrive at a particular overall count. Monitor corpus is an exception for these characteristics because monitor corpus is an open-ended entity. The monitor corpus is always updated with new texts, which grows as more samples are uploaded (McEnery & Wilson, 2001: 30).

The machine-readable form is worth mentioning; the word corpus almost invariably includes the term machine-readable. As opposed to the original written or spoken forms, machine-readable corpora have a variety of benefits. The biggest and most significant benefit of machine-readable corpora is the ability to search and modify them in ways that are impossible with other forms. Their second advantage is the ability to swiftly and easily update machine-readable corpora with new information (McEnery & Wilson, 2001: 31).

A corpus does not need to be specified, but it is usually assumed to act as a standard reference for the range of languages it represents. Additionally, a standard corpus indicates the use of continuous data, which means that variations in findings between researchers are more likely to be attributed to the suitability of the methods and assumptions employed in the study than to differences in the data utilized. (McEnery & Wilson, 2001: 32).

These qualities allow a corpus to be distinguished from being a collection of texts. Naturally, spoken or written texts must be included, as well as texts that reflect a variety of the language under study, for the researcher to expose the trends of this range as accurately as possible (McEnery & Wilson, 1996).

With the advance in technology in the 1980s, corpus linguistics first appeared as a subfield of linguistics and focused on the principles and applications of employing corpora in language studies (Leech, 1992). The main purpose of corpus linguistics is to probe the language used in authentic texts (Koteyto, 2006). Similarly, Hunston and Francis (2000) define corpus linguistics as a method of scrutinizing the vast amount of naturally occurring language data using software. In general, corpus linguistics represents several facets of a language using collections of literary or non-literary texts and provides extensive information on how that

language is used. In order to ascertain the degree to which language is produced in a specific spoken or written text, it studies the context factors affecting the overall linguistic diversity of language elements (Kök, 2019). It should be noted that there is not only one particular definition for corpus linguistics; according to the perspective of scholars, corpus linguistics is also allowed to be delineated in many different ways. Some researchers claim that corpus linguistics is a methodology instead of a subfield of linguistics. For instance, Granger (2002) states that corpus linguistics is a methodology using an electronic collection of authentic texts. She asserts that its unique feature of authenticity makes it a different methodology rather than a branch of linguistics. In the same way, Kennedy (1998: 7) claims that "corpus linguistics has come to embody methodologies for linguistic description in which quantification is part of the research activity." On the other hand, Tognini-Bonelli (2001) assures that corpus linguistics fulfills much more than this methodological role and emerges as a separate academic discipline. According to McEnery and Hardie (2012), corpus linguistics deals with various areas of language. Instead, it is a discipline that revolves around a series of processes or methods for learning languages. Mahlberg (2005) puts forward another opinion about the definition of corpus linguistics, and in this definition, corpus linguistics is described as a "corpus theoretical method" with its theoretical framework. Corpus linguistics (CL), if given a broad definition based on the definitions of all linguists, could be characterized as either a branch of linguistics or as a method that employs computers to track how frequently words are used in written or spoken texts for a given purpose before analyzing and comparing them.

2.3. History of Corpus Linguistics

It is widely held that corpus is a new research topic, yet, the proof in literature establishes corpus's existence by pointing to the first concordance as biblical writings. In 1230, Hugh of St Cher and five hundred monks created the first Latin Vulgate Bible concordance, which included an index of the locations of each word's occurrences. Compiling huge amounts of text manually was labor-intensive, so Roberto Busa built the first machine-readable corpora in 1951 (McEnery & Wilson, 2001). This was a milestone for corpus linguistics because it made it possible to apply this technique to any of the texts. In the 1960s, the first computer-generated concordances using the punched-card storage approach were created (Parrish, 1962). After the 1980s, substantial improvements happened in technology, which helped corpus linguistics flourish.

The history of corpus linguistics can be divided into three periods: The first period, which began before the 1950s; the second period, which lasted from the 1950s to the 1980s; and the third period (after the 1980s) (McEnery & Wilson, 2001).

2.3.1. The First Period of Corpus Linguistics

Before the 1950s, corpus linguistics arose from a lack of focus on a certain research subject and has yet to become prominent in linguistics research on language. In early times, the collection of data was made by hand. The purpose was to make it simpler to arrange Bible words in alphabetical order with references to the passages they appeared in (McCarthy & O’Keeffe, 2010). The first known concordance was Biblical writings created by Hugh of St Cher with the help of 500 monks. The first corpus-based comprehensive dictionary of English was created in 1755 by Samuel Johnson, and later the Oxford English Dictionary was compiled manually over fifty years. When we came to the 18th century, we saw Samuel Becket, who manually created “A Concordance to Shakespeare” in 1787. With the lack of computer access, the researchers faced extremely severe workloads. As a result, they sought help from others because it was challenging for researchers and linguists to collect a corpus or conduct a corpus-based study in the early stages of corpus linguistics. That is why; scholars were not interested in corpus linguistics (McEnery & Wilson, 2001).

One of the most crucial points in early times was the Chomskian criticism of corpus linguistics. Chomsky's criticisms of corpus linguistics were crucial in shaping generative linguists' perspectives on corpus linguistics. According to Chomsky, linguists do not require corpora since they must instead use introspection to simulate language use rather than performance. In other words, Chomsky believed that the linguist was modeling competence rather than performance because the performance was only a poor reflection of competence. Competence is our embodied expertise in a language. In contrast, performance is the observable indicator of language proficiency. In the sense of Chomskian criticism, it is emphasized that performance cannot be the complete reflection of our competence (McEnery & Wilson, 2001). Another crucial point is that the frequency of words and sentences in a language must be determined using a corpus technique. The underlying presumption highlighted the impossibility of collecting and counting all sentences in a language using corpus-based methods. This assumption is supported by the fact that natural languages have endless sentences. Given that languages have an infinite number of words, natural languages also have infinite sentences (McEnery & Wilson, 2001).

Following, beginning in the 1950s and lasting until the middle of the 1980s, was the second stage of corpus linguistics.

2.3.2. The Second Period of Corpus Linguistics

Corpus linguistics has a long history from the thirteenth century to the 1950s. During this time, its approach has undergone steady improvement and criticism from the linguistics community. During the 1950s, corpus linguistics lost its popularity; however, in the late 1950s and the early 1960s, corpus linguistics flourished thanks to substantial advancements in computer-based studies. In the early 1960s, the availability of machine-readable texts marked the genuine triumph in corpus linguistics. The Brown Corpus, created in 1961, is the first contemporary corpus of the English language. The number and variety of texts produced for computer analysis have multiplied dramatically since the 1970s and 1980s. Since then, especially from the 1980s onward, corpora and corpus-based studies have grown significantly in size and number.

Since then, there have been many scholars who have studied corpus linguistics. For example, Quirk planned the Survey of English Usage (SEU) in 1960, and Francis and Kucera began work on the Brown Corpus in 1961 (BC). A million or more words from various sources, the Brown Corpus was a meticulously produced collection of contemporary American English. The Survey of Spoken English (SSE) project at Lund University, then known as the London-Lund Corpus (LLC), was initiated by Jan Starvik fourteen years after Brown Corpus in 1975. The main objective was to computerize the spoken corpus data that SEU had gathered and transcribed to make it accessible in machine-readable form (Johnsson, 2008).

In the first part of the twentieth century, corpus became popular in second language instruction because it presented many vocabulary lists for non-native speakers and became a trend at the time. This new trend made contrastive analysis possible in different languages. The capacity to compare the usage of any language-related patterns collects linguistic samples from around the world in various dialects and societies.

2.3.3. The Third Period of Corpus Linguistics

The third period begins in the 1980s and lasts through the present day. During this period, the terms "corpus" and "machine-readable corpus" are used interchangeably. Data is processed extraordinarily quickly with the help of computers, and users can obtain millions of words with a single mouse click, which is considerably less expensive than when managing the data. It

provides near-perfect accuracy statistics tailored to the demands of linguists, teachers, and students (Akbana, 2011). The first wholly corpus-based dictionary, COBUILD, which stands for Collins Birmingham University International Language Database, was released in 1987.

Data is quickly processed with computers, and users can obtain millions of words with a single mouse click. Additionally, it is much less expensive than in the days when linguists had to engage a large number of analysts to handle data. It provides information that almost perfectly satisfies linguists', teachers', and students' needs. Also, technological advancements have made it simpler to classify words, divide them into their various categories, calculate word frequency, and spot collocations. Researchers now have access to language patterns that were not previously available because modern computer technology can quantify the frequencies and carry out statistical investigations swiftly and dependably (Baker, 2010). Finally, digitalization has ushered in a new era.

2.4. Types of Corpora

Corpus linguistics has made a significant contribution to the field of language research. For this reason, it has been divided into many categories to meet the needs of different research areas. As a corpus is a text collection instrument, it is a good idea to discuss the many types of text collection. Baker et al. (2006) stated that in corpus linguistics, seven corpora classifications are employed. These corpora have been scrutinized while considering the objective or justification for creating a corpus.

2.4.1. General/ Reference Corpus

Sinclair (1991) defines general corpus as collections of material that are generally homogeneous but is drawn from a range of sources, masking the uniqueness of each source unless the researcher isolates a specific text. He also asserts that the first stage in constructing a corpus is to create a general corpus. It includes various representative language samples that can be utilized for linguistic and educational reasons. Evans (2018) states that due to this goal, the corpus is relatively vast and comprises a good mix of texts from various spoken and written language fields. According to Dash (2008), a general corpus contains a substantial volume of literature from numerous genres, disciplines, topic areas, and registers. This kind of corpus offers a wide range and a significant representation of texts. It is always feasible to consult a general corpus for information needed when accessing the information needed in a specialized corpus is impossible. General corpus is also referred to as reference corpus because it is

frequently utilized as a benchmark against which lesser specialized corpus' linguistic variety can be judged. British National Corpus (BNC) can be given as an example of general corpora because BNC aspires to represent the entire universe of modern British English to encompass the full range of linguistic variations.

2.4.2. Specialized Corpus

The specialized corpus can be characterized as a corpus that is planned with more explicit examination objectives and spotlights on a specific verbally expressed or composed assortment of language. Specialized corpus focuses on a particular genre, domain, or sub-language (McEnery et al., 2006). Specialized corpus serves as a good resource for academic and professional work. The Corpus of Professional Spoken American English (CPSA) and the Michigan Corpus of Academic Spoken English (MICASE) can be examples of specialized corpora.

The specialized corpus can thoroughly analyze comparable and divergent use patterns across numerous fields. Blecha (2012) states that numerous semantic examinations utilize corpora nowadays, and large numbers do not fall into any current corpus arrangement bunch. A specialized corpus is confined to a specific field, text type, or segment bunch.

2.4.3. Monitor Corpus

A monitor corpus is regularly updated with new material (e.g., annually, monthly, or even daily) and grows in size, while the fraction of text types contained in the corpus remains constant. Compared to other corpora, a monitor corpus is unique in that it may be expanded; in other words, it is continuously updated with new text kinds. The Bank of English (BoE) can be an example of a monitor corpus. Pearson (1998) defines a monitor corpus as a corpus into which texts are added at a predetermined flow rate. The information contained in the corpus is always changing, and new data flows in at the predetermined rate. After reaching a certain level of immersion, a monitor corpus goes through a partial self-reuse process. For instance, the inflow of new information is exposed to a programmed observing interaction that only adds new material to the corpus when that material exhibits a few highlights significantly different from the continuous piece of the corpus.

2.4.4. Multilingual Corpus

A corpus that includes texts in multiple languages is referred to as a multilingual corpus. It is created along the same lines and is evaluated using the same amount of design requirements. The assortments of a language can measure up to one another. For the examination of various dialects, interpreters or students can contrast them with distinguishing contrasts or reciprocals in a similar language. A multilingual corpus is a good tool for comparing different languages. The multilingual corpus includes the parallel corpus as a subcorpus (Hunston, 2002).

2.4.5. Parallel Corpus

The parallel corpus can be viewed as a subcorpus of the multilingual corpus, as has already been stated above. Collections of materials written concurrently in many languages are known as parallel corpora. Bowker and Pearson (2002) emphasize that parallel corpora allow for creating of bilingual concordances that can be used to find equivalent terms and examine language differences. Parallel corpora allow for the translation of two or more languages that are not mutually intelligible. Parallel corpora are referred to as bi- or multilingual (sentence-wise) aligned and have text tokens that are translations of one another.

2.4.6. Diachronic/ Historical Corpus

A diachronic corpus of texts from several periods is constructed to explore how language evolves. Diachronic corpora are utilized to follow changes in a language's development. One of the most popular diachronic corpora of English is the Helsinki Diachronic Corpus of English Texts which comprises roughly 1.5 million expressions of English as 400 content examples, dating from the 8th to 18th century (Baker et al., 2006).

2.4.7. Learner Corpus

A learner corpus is a digital compilation of materials written by learners of a second or foreign language constructed using some design standards. Because it gets data from language learners, it is a unique form of the corpus that necessitates a broader set of skills from the analyst than native corpora (Granger, 2009). McEnery et al. (2006: 5) allege that the learner corpus is a “collection of machine-readable authentic texts (including transcripts of spoken data) which is sampled to be representative of a particular language or language variety.”

According to Leech (1998), a learner corpus is a computer-based textual database that contains language samples created by language learners. The store and process capacity of corpus supplies a way to investigate a vast volume of data which was not feasible earlier. Granger (2008) affirms that learner corpus as research is a relatively new but rapidly growing part of corpus linguistics that emerged as a separate study in the late 1980s and early 1990s.

Learner corpus, which is generally described as electronic collections of writings and spoken materials produced by language students, has been used to satisfy two distinct but related purposes: it can support the second language acquisition hypothesis by providing a better depiction of interlanguage (for instance, the temporary language produced by students speaking a second or unfamiliar dialect) and a better understanding of the factors that influence it, and they can support the second language acquisition hypothesis by adding new information. Similarly, Granger (2004) claims that learner corpora are used to compare L1 and L2 students' authentic spoken and written data. By looking at the data, it is possible to follow up contrastive interlanguage analysis. Additionally, it can be utilized to look into and analyze second language learners' mistakes. Learner corpus ensures a new sort of data that prompts thought in both Second Language Acquisition (SLA) research; moreover, it seeks to improve both the teaching and learning of foreign languages by attempting to comprehend the structure of second and foreign language learning as well as the research on language instruction.

In light of the advancements in computer science, scholars could have opportunities to accumulate a vast range of data quickly. For example, some major corpora include 50 or 100 million words, which cannot be compiled by hand and facilitate the search of foreign language learners' profiles. Even though learner corpus is a quite new branch in language study, it allows researchers to investigate learners' mistakes, get a gist to interpret data, and inquire about contrastive interlanguage analysis. An electronic archive of continuous written or spoken data generated by foreign or second language learners was listed by the Centre for English Linguistics Corpus. The following list of learner corpora examples includes certain projects:

Table 1. The Currently Existing Learner Corpora Around the World (Adapted from Centre for English Corpus Linguistics) (UCLouvain, 2023)

Name of Corpus	Target Language	Medium	Text Type/ Task Type	Proficiency Level	Size in Words
The Advanced Learner English Corpus (ALEC)	English	Written	Essays written by university students of English linguistics and English literature	Advanced	c. 1.3 m.
The British Academic Written English (BAWE) Corpus	English	Written	ESP papers	4 levels of study (from undergraduate levels to final year and taught masters level)	c. 6.5 m.
The Cambridge Learner Corpus (CLC)	English	Written	Exam scripts	Various	c. 50 m.
The EFL Teacher Corpus (ETC)	English	Spoken	Teacher talks in language classrooms	Upper-intermediate to advanced	c. 123.000
The International Corpus of Cross linguistic Interlanguage (ICCI)	English	Written	Essays (20-min in-class tasks without the use of a dictionary)	Beginner to lower-intermediate	9.000 essays
The International Corpus of Learner English (ICLE)	English	Written	Argumentative and literary essays	High-intermediate to advanced	c. 3 m.
The Louvain International Database of Spoken English Interlanguage (LINDSEI)	English	Spoken	Interviews and picture descriptions	High-intermediate to advanced	c. 800.000
Russian Learner Corpus	Russian	Written and spoken	Academic and non-academic	Teachers and heritage speakers	Unknown
Spanish Learner Oral Corpus	Spanish	Spoken	Semi-spontaneous interviews, narrative and descriptive tasks	A2-B1	c. 50.000

In Table 1, some major learner corpora have been shown. One of the best-known and chiefly cited corpus is the International Corpus of Learner English (ICLE). ICLE is a collection of essays produced by advanced and upper-intermediate students. At the University of Louvain, Sylviane Granger founded and oversaw the corpus. It is the outcome of nearly 30 years of cooperative work among numerous universities worldwide. The corpus has been used in numerous global research projects since the first and second editions were published in 2002 and 2009, respectively. It has also been the foundation for many MA and Ph.D. theses and has generally played a significant role in advancing learner corpus research. The current version of

ICLE contains 5.7 million words and data from 25 mother tongue backgrounds. Its 16 sub-corpora allow for comparison between native and learner English using LOCNESS (Granger, et al., 2020).

LOCNESS is a sub-corpus of ICLE and is made up of native English essays. In initiatives involving corpus research, LOCNESS has been used as a native corpus, sometimes known as a control or reference corpus. Granger et al. (2009: 42) suggested that "to ensure comparability with the ICLE data, the Louvain team has collected a corpus of essays written by native English students, LOCNESS which is the mirror of the ICLE." Given that LOCNESS is a representation of the ICLE and that the ICLE was built using very similar criteria, allowing data to be compared within each other. LOCNESS is the most widely used and recommended NS corpus for comparison (Akbana, 2011). LOCNESS comprises three types of writing: British university students' essays, which comprise 95,695 words, and essays written by British university students, which include 60,209 words. 324,304 words make up the entirety of LOCNESS (Granger, 1998).

2.5. Corpus and Language Teaching

Thanks to technological advancements, corpus-based language teaching has started to be applied in a classroom setting. Using corpus-based materials by teachers and students has increased day by day. Biber (2001) stated that corpora are a major contributor to the teaching-learning process because empirical analysis provides a more solid foundation for describing authentic language use. In order to create interesting realistic, detailed, and up-to-date data teaching materials, the corpus-based description of the language can be used as a source (Braun, 2005). Johns (1994) suggested that using corpora in a language learning setting offers many advantages for EFL students and teachers. The fact is that corpora help scholars to find out language patterns that deviate from conventional English language models. Corpus contributes to students' understanding of language in a context. It provides instructors to use authentic communicative context rather than decontextualized and lacks empirical grounding textbooks (Römer, 2005). Corpus helps instructors understand whether non-native learners use the target language correctly or incorrectly (McEnery & Wilson, 2001). Owing to the corpus' concrete evidence of learners' mistakes, teachers can detect and correct the mistakes easily (Allan, 2009).

Besides, thanks to corpora, students can see more words that are frequently used in any text, and also corpora help students to be familiar with the words and their collocation in real-

life contexts. Thereby, students' awareness increases and they show positive attitudes towards language; as a result, they smoothly learn the language.

Some studies conducted using corpora in language teaching have shown that corpus-based language teaching improves learners' language skills. For instance, the viability of employing a corpus to help students distinguish between close synonyms—words that sound similar but cannot be used interchangeably—was studied by Kayaoğlu (2013). Kayaoğlu (2013) used the Corpus of Contemporary American English (COCA) for this purpose and asked to choose close synonyms from 50 given sentences by consulting the corpus. After finishing the task, participants were further questioned by COCA about how they used the corpus. The study's corpus utilization effectiveness was demonstrated by the participant's performance on the vocabulary section of the pretest and posttest, which showed a statistically significant change.

Through corpus-based research, Kök (2019) investigated the frequency of specific prepositional types in papers in ELT produced by Turkish speakers and native English speakers. The researcher randomly selected 100 articles in ELT, 50 by Turkish speakers and 50 by native speakers. The study's findings revealed a notable difference between Turkish and native speakers in terms of the size of their corpora and the highest frequency of the preposition "of" in both groups.

Keklik (2019) tried to find out the similarities and differences of conjunction types in the MA theses between the Turkish and native speakers of English in ELT via corpus-based analysis. Another purpose of the study was to categorize conjunctions used by both groups. The results of the study suggested that native speakers generally overuse conjunction types; however, Turkish speakers of English underuse cohesive devices.

Girgin (2011) investigated the efficiency of corpus-based activities in helping lower-level EFL students acquire grammar. According to the test results statistical analysis, the students could learn the target grammar structures effectively using corpus-based activities. Furthermore, it was discovered that employing corpus-based activities in learning the target grammatical structures generated outcomes comparable to those of using a course book.

Babanoğlu (2012) used a corpus-based approach to research the use of adverbial connectors to identify the shared linguistic characteristics of various English as Foreign Language (EFL) learners. The use of adverbial connectors by Turkish EFL learners exhibited various characteristics concerning the L1 transfer.

Jaworska et al. (2022) researched a learner corpus into the formulaic language in native and non-native German. For this study, argumentative essays written by native German

speakers with those written by advanced British German language learners were compiled. According to a corpus-driven analysis, advanced British learners of German are more prone than their peers who are native speakers to utilize formulaic language in their argumentative writing.

Mondor (2008) compared verb-particle combinations in argumentative writing using data from native students and advanced Swedish learners. Swedish International Corpus of Learner English and LOCNESS were used to compare verb-particle combinations to determine overuse, underuse or misuse in the learner data. The findings revealed that learners need fewer verb-particle combinations than native speakers to produce equivalent tokens. The primary justification for under- or overuse is the students' topic. Misuse was found to be widespread. Particles are frequently used inappropriately by learners to emphasize their points.

A corpus-based analysis of a few polysemous lexical verbs employed to convey modality in student argumentation writing was carried out by Salazar and Verdaguer (2009).

Three 100,000-word corpora of argumentative essays produced in English by university students from the United States, the Philippines, and Spain were searched for 23 lexical verbs. The findings showed that, in contrast to their native counterparts, the non-native writers had a limited understanding of the complete range of meanings of lexical verbs like “*feel*”. It also demonstrated that all of the student writers used just a small number of lexical verbs under investigation to convey modal meanings in their writing.

2.6. Academic Writing: The Essay

Writing is communication of using words; academic writing is the deliberate use of words to convey complicated concepts to various readers and audiences. Writing is a crucial skill to develop when studying a language and transferring knowledge internationally. This particular ability has to do with more than just how language is used to convey and negotiate meaning or ideas; it also has to do with how well knowledge is retained and transferred into written form. Myhill (2009) suggests that writing's central role in academia involves more than just language proficiency. Academic writing is formal and has a clear focus on the research problem which is under investigation. Academic writing is different from other types of writing (e.g., creative writing or personal writing). It has some specific characteristics, such as using a formal tone and a third-person perspective. Academic writing aims to inform the reader and provide reliable information. According to Halliday (1996), academic writing uses certain

words with specific grammatical structures, distinctive co-occurrences, and typical qualities of expression in the case of content and register.

The essay is a piece of writing containing a mix of facts and opinions and follows specific guidelines, techniques, and stylistic standards, all of which are learnable and comprehensible (Eunson, 2020). Students can expose themselves to the English language through essay writing, a component of developing writing abilities. Writing ability is accomplished by looking up relevant sources to improve the content's quality and using the right words that adhere to the proper grammatical standards to communicate the knowledge acquired. A thorough vocabulary, grammar, use, and mechanics knowledge is generally necessary for an effective essay (Ariyanti, 2017). Rolls and Wignell (2013) provide an excellent framework for writers. A typical essay structure needs to be built as a thesis statement as an introduction which is the outline of the main ideas that writers will discuss, body paragraphs including supporting evidence, and a conclusion paragraph that summarizes the main points. Essays are subjective yet non-fictional. Essays might include literary criticism, political manifestos, educated debates, observations of everyday life, memories, and the author's comments.

2.7. Types of the Essay

In the educational system, essay writing is crucial. Writing essays is a way for students to demonstrate their knowledge and language proficiency in learning English as a foreign language. Like many from of writing, essays come in many different types. Each type is different and is written from a different perspective. Expository, narrative, descriptive, and argumentative essays are the four most common types of writing (Suriyanti & Yaacob, 2016).

2.7.1. The Expository Essay

The expository essay is one of the most common essay types. To write an expository essay, a student must research a topic, consider the evidence, elaborate on the topic, and then make a convincing argument. Martin and Rose (2017) state that arguments made in expository essays generally support a single viewpoint.

The three primary stages of this genre's structure indicate the progression of knowledge as arguments are developed. To make the text cohesive, these phases are broken into various moves or sub-steps so that the material is understandable to the intended audience and concentrates on a specific subject. Because they serve as the foundation for coherently developing this genre, students should consider these stages.

2.7.2. The Narrative Essay

A narrative essay explains anything based on the author's knowledge of the event or tale being told. The chronological method of structuring ideas according to when they occurred is appropriate for narrative essays. Because it is constructed from the narrative's chronological occurrences rather than critical ideas and supporting information, it necessitates a distinct set of writing skills from other essays. Because a narrative essay is constructed using events from a story instead of primary ideas and supporting information, which ultimately leads to the message (either implicit or explicit), writing a narrative essay may demand a different set of abilities than writing an academic essay (An, 2021). As a result, a learner must possess the skills necessary to paragraph a narrative essay based on the stages of important occurrences; in other words, they must comprehend the stages of fiction's plot to construct an appropriate arrangement of events.

2.7.3. The Descriptive Essay

The descriptive essay deals with sensory encounters, including those involving the senses of sight, hearing, smell, taste, and touch, as well as the figurative language that goes along with them. The key to writing effective descriptive essays is to describe people, locations, and things vividly. Students must construct sentences in this essay that have a relationship or relationship with one another. Meyer (2009) expresses that descriptive essay is crucial and the finest technique to establish the writing craft's foundation. The writing method of descriptive essays, which may also be relevant to other essay genres or types, makes it essential.

2.7.4. The Argumentative Essay

According to Harahap and Anwar (2022), a scientific essay that analyzes a topic or a few socially divisive topics is an argumentative essay. In order to persuade the reader, both for and against the problem, the writers of argumentative essays must state their strong opinions and relevant theories. As it is understood from the definition, argumentative essays typically address controversial themes, and the narrators try to defend the idea that he/she supports. The ultimate goal of an argumentative essay is to convince the opposing person, gain adhesion, defend a certain interpretation of the facts, disprove popular theories about an incident or influence the reader's viewpoint. Stab and Gurevych (2014) have proposed that an essential element of an argumentative essay is a claim that at least one premise can substantiate. The assertion is a key point in an argument that should spark public debate.

Some scholars (Bailey, 2011; Hogue, 2008) set some principles that a well-written argumentative essay needs to have:

- An argumentative essay consists of at least three paragraphs; an introduction, a body(ies), and a conclusion.
- A general or thesis statement occurs in the introduction part of the argumentative essay.
- A thesis statement which has to be written as a complete sentence, includes both the topic and the main idea.
- A main idea has to be a controversial issue with clearly explained benefits and drawbacks.
- In the thesis statement, the author has to clarify what she/he believes.
- The main idea is where both proponents and opponents situate. The idea is introduced and subsequently elaborated in the body (ies) paragraph.
- To write a body paragraph, the writer has to start with a topic sentence. A rebuttal, also known as a refutation, is followed by further arguments and examples and closes with the author's advice.
- Before stating his viewpoint as a recommendation to reconfirm the position, the writer may follow a body paragraph with a brief explanation and some opinion.
- If the writer wants to add one more body paragraph, she/ he should follow the same steps described in the first paragraph.
- The advantages and disadvantages should be presented in the concluding paragraph, but it must end with a clear declaration of the author's stance. As a result, the sentence structure can flow from inductive to deductive reasoning.

There are five essential components to an argumentative essay (Oshima & Hogue, 2014):

- An explanation of the issue
- A clear thesis statement
- A summary of the opposing arguments
- Rebuttals to the opposing arguments
- Your own arguments

Figure 1. Argumentative Essay Patterns (Oshima & Hogue, 2014: 156)

BLOCK PATTERN	POINT-BY-POINT PATTERN
I. Introduction Explanation of the issue Thesis statement	I. Introduction Explanation of the issue, including a summary of the other side's arguments Thesis statement
II. Body Block 1 A. Summary of the other side's arguments B. Rebuttal to the first argument C. Rebuttal to the second argument D. Rebuttal to the third argument Block 2 E. Your first argument F. Your second argument G. Your third argument	II. Body A. Statement of the other side's first argument and rebuttal with your own counterargument B. Statement of the other side's second argument and rebuttal with your own counterargument C. Statement of the other side's third argument and rebuttal with your own counterargument
III. Conclusion	III. Conclusion —may include a summary of your point of view

While writing an argumentative essay, it is possible to organize argumentative essay elements in several ways. A block pattern or a point-by-point pattern can be used to structure an argumentative essay (Oshima & Hogue, 2014). These two patterns come in a lot of different forms. Your topic will determine the pattern you use. Some themes lend themselves to certain patterns more than others. It's crucial to explain your argument clearly and methodically when refuting the opposing viewpoint.

2.8. Definition of Academic Vocabulary

The term "academic vocabulary" refers to a group of lexical items regularly used in academic literature from various disciplines but less frequently used in non-academic texts (Coxhead, 2000; Nation, 2001; Schmitt & Schmitt, 2005). Academic vocabulary has been referred to differently by many scholars. To exemplify, Farrel (1990) names it as a semi-technical vocabulary, Yang (1986) calls it sub-technical vocabulary, Cohen et al. (1988) define it as specialized non-technical lexis, Nagy and Townsend (2012) specify it as general academic words and Gardner and Davies (2014) identifies it as core academic vocabulary. Despite various labels, academic vocabulary is the common word used in academic texts and shows high frequency in academic literacy.

Nation (2001) states that academic literature uses academic vocabulary more frequently than general publications, which is notably advantageous for academic purposes across professions. Paquot (2010) defines academic words as a set of explanatory acts that categorize academic work, structure scientific discourse, and shape the discourse in academic texts. Baumann and Grave (2010) define academic words as the words students come upon when

reading informational and academic texts. Torgesen et al. (2007:3) express another view as "the kind of reading proficiency required to construct the meaning of content-area texts and literature encountered in school. It also encompasses the reading proficiencies typically assessed on state-level accountability measures". Snow and Uccelli (2009) explained the linguistic elements and domains associated with academic language as opposed to more colloquial registers, such as content word precision, diversity, and density. Townsend (2009) expands on academic vocabulary as words that are difficult to acquire, employed in all subject areas, and have abstract interpretations. Gardner and Davies (2014) define academic words as equally dispersed throughout several academic domains and do not notably occur in any area, appearing 50% more frequently in academic publications than in non-academic writings. Table 2 lists the top 50 terms from Garner and Davies' academic vocabulary list (2014).

Table 2. The Top 50 Items of the Academic Vocabulary List

Items 1-25	Part of Speech	Items 26-50	Part of Speech
study	n	history	n
group	n	develop	v
system	n	suggest	v
social	j	economic	j
provide	v	low	j
however	r	relationship	n
research	n	both	r
level	n	value	n
result	n	require	v
include	v	role	n
important	j	difference	n
process	n	analysis	n
use	n	practice	n
development	n	society	n
data	n	thus	r
information	n	control	n
effect	n	form	n
change	n	report	v
table	n	rate	n
policy	n	significant	j
university	n	figure	n
model	n	factor	n
experience	n	interest	n
activity	n	culture	n
human	j	need	n

Note: The parts of speech noted in Table 2 are n = noun, v = verb, j = adjective, and r = adverb (Gardner & Davies, 2014: 317)

2.9. Learning and Teaching Academic Vocabulary

Learning academic vocabulary is quite significant for many reasons. In order to get the main idea of the written academic texts, academic vocabulary is the core element. Studying academically in English-medium institutions requires students to know many words to

understand academic texts. Nation (2006) states that to comprehend 98% of academic written texts, students need 8000-9000 word families and proper nouns. Dang and Webb (2014) state that not only written texts but also academic spoken texts require considerable vocabulary knowledge. Students need to know 4000-word families plus proper nouns and marginal words to cover 95% of lectures.

Nevertheless, mastering all academic words can take much work, particularly for non-native English speaker students. It should be kept in mind that for maximum educational effectiveness, high-frequency words should be studied first because all words are not critical to learn (Waring & Nation, 1997). Studying high-frequency words can facilitate focusing on the words that students most often come across in their works (Nation & Webb, 2011). It helps students feel relaxed and avoid them tired of massive vocabulary learning (Durrant, 2009).

The most effective approach a teacher can use to ensure pupils have the academic background knowledge they need to understand certain concepts is to teach them in a certain fashion. When every instructor in a school uses the same academic terminology and focuses on teaching it, the institution has a strong, inclusive philosophy (Marzano & Pickering, 2005). Students need help with academic vocabulary because they are often unfamiliar with technical terms in their profession, and academic vocabulary items appear less frequently than general service vocabulary items (Worthington & Nation, 1996). Coxhead (2000) states that one of the reasons for focusing on this vocabulary is that it will support students' academic work at university. Therefore, students may encounter these words in their lectures as well as their readings at the university. Other reasons are to help students increase their general vocabulary and raise their awareness of the importance of vocabulary in college. Another reason to focus on vocabulary is to use both written and spoken words appropriately and correctly, which can show that these students belong to the academic community (Corson, 1985). To be successful in an academic community, students need to have a strong academic vocabulary (Hyland & Tse, 2007). Nagy and Townsend (2012: 96) view academic vocabulary as a strong tie to their ability to read and understand texts from various content areas or disciplines. Another key part of learning academic vocabulary is the objective that students must achieve, whether in a work or academic setting because a lack of qualifications and poor communication skills stifles or dims students' productivity and ingenuity (Kaur & Hegelheimer, 2005). Washburn (2009) emphasizes that academic vocabulary is extremely vital because students can use it as a cognitive tool to help them improve critical thinking skills and problem-solving and decision-making abilities. The ideal vocabulary list will be broken into smaller, frequency-based sublists to assist with instructional sequencing and curriculum creation. One way to learn how words

are used is to create a word list based on forming word families in a corpus of texts reflecting diverse academic records (Biber et al., 1994).

2.10. Academic Word List & Academic Vocabulary List

As a result of English's widespread contribution to the advancement of academic knowledge during the latter half of the twentieth century and the beginning of the twenty-first century, Academic English has received particular attention. Various scholars have started to create a list of essential academic words to address the expanding requirement since the 1970s. During the 1970s, several lists of general academic words were created by pioneering vocabulary researchers using a variety of small corpora of literary texts, primarily textbooks. The lists were created manually due to the limited computational capability available (Campion & Elley, 1971).

With technological development, researchers used basic computer programs to identify academic word families with broad coverage across many academic disciplines in that corpus representation. A list of academic words is a collection of often-used words that are seen to be the most beneficial and valuable for students' academic study of English (Nation, 2013). Creating a list of academic words aims to identify the most frequently-used academic vocabulary for tackling the challenging work of acquiring academic vocabulary in a systematic and defective manner (Gardner & Davies, 2014). In order to achieve these purposes, the Academic Word List (AWL) was developed by Coxhead in 2000, Academic Vocabulary List (AVL) by Gardner and Davies in 2014, New Academic Word List by Browne et al. in 2013, and the Spoken Academic Word List by Dang et al. in 2017. The main goal of these studies was to identify the academic language that all students, regardless of the subject they are learning, will use in their academic writing (Coxhead, 2000).

The AWL (Coxhead, 2000) has been extensively used in English education and research over the past ten years for a variety of purposes, including vocabulary testing (Schmitt, 2010), creating English course materials (Schmitt & Schmitt, 2005), and developing wordlists for various discipline-specific needs (Li & Qian, 2010) and it is thought to be the best list (Nation & Webb, 2011) because;

- To guarantee high-frequency words across many academic fields, the AWL used harmonious and comprehensible word selection principles.
- Compared to earlier academic corpora created for developing academic vocabulary lists, the AWL was substantially larger (Campion & Elley, 1971).

- It adhered to the corpus-building principles of representativeness and text variation because it was drawn from an academic corpus (Biber, 1993).

A decade after Coxhead (2000), Gardner and Davies (2014) compiled the AVL. The AVL was far more significant in size than other previous corpora. Also, it represents English better with free access to the lemma head-word and the word family list. Among all the other published academic words listed, the AWL and the AVL are the ones that should be analyzed in detail. Because, except for the AWL and the AVL, other early-made lists of academic words need to be updated and are rarely used. However, the AVL has published and demonstrated some exciting compilation characteristics and has been the most prominent list which is still frequently used. Since academic wordlists are crucial for academic achievement, comparing these top-performing wordlists will help students identify which list will be most beneficial when studying for exams or other academic coursework. Table 3 below compares these two-word lists based on their essential features. The table is created from Coxhead's (2000: 221) Academic Word List and Gardner & Davies' (2014: 313-316) Academic Vocabulary List.

Table 3. A Comparative Overview of the AWL and the AVL

Wordlists	AWL (Coxhead, 2000)	AVL (Gardner & Davies, 2014)
Publication Time	Published in 2000	Published in 2013
Counting Units	Word family	Lemma headword and word family
Number of Items	570 word families	3,015 lemma headwords and 1,991 word families
Academic Disciplines	4 disciplines: Arts; Commerce; Law; and Science.	9 disciplines: Education; Humanities; History; Social science; Law and political science; Science and technology; Medicine and health; Business and finance; Philosophy, religion, and psychology
Corpus	3.5-million-token corpus	120-million-token corpus
Corpus Texts	Textbooks, laboratory tutorials, lecture notes, journal articles.	Academic journals, magazines, newspapers.
Target Audience	Academic English learners, especially, undergraduates.	Academic English learners.
Word Selection Principle	Range, frequency, and specialized occurrence: at least 10 occurrences in each of the 4 disciplines and in at least 15 of the 28 subject areas, at least 100 times of occurrence in the corpus, and the exclusion of the General Service List	Range, frequency and dispersion: at least 50% higher in frequency in academic corpus than in nonacademic corpus; at least 20% of the expected frequency in at least 7 of the 9 academic disciplines; a dispersion of at least 0.80

The Table 3 clearly shows the similarities and differences between AWL and AVL. Both lists consist of interdisciplinary corpus and appeal to students who want to study academic English. However, when the table is examined, there are striking differences between the two lists created. For example, AWL has a 570-word family, while AVL has a 1991-word family. In this case, AVL is approximately 2.49 times the more extensive list. Another critical

difference is that AWL includes only 4 different disciplines, while AVL includes 9. In addition, while the target audience of AWL is undergraduate students, AVL appeals to all students who use English academically.

For the reasons mentioned above, this study is based on the AVL list of Gardner and Davies (2014).

2.11. Academic Vocabulary Studies

Townsend and Kiernan (2015:113) define academic vocabulary as "words are typically abstract, technical, nuanced, and/or densely packed with meaning." Similarly, Paquot (2010: 9) states that academic vocabulary is "a set of lexical items that are not core words but which are relatively frequent in academic texts." Subsequently, sufficient academic vocabulary knowledge plays a critical role in having a successful academic performance. Several studies from various perspectives highlight the importance of academic vocabulary. To illustrate, Cooper (1999) conducted a study to analyze the correlation between academic vocabulary knowledge and academic performance. Cooper proposed that pupils who failed the vocabulary test failed the year. For the study, Cooper applied a receptive vocabulary test composed of three levels of frequency based on the 1000 and 2000-word list, the University Word List (Nation, 1990), and the advanced word list among undergraduate students. The analysis results supported a high relation between students' academic success as indicated by their test scores and academic vocabulary scores. Cooper resolved that L2 students do not have sufficient academic vocabulary knowledge to understand the reading material and concluded that it is a requirement for these undergraduate students to teach academic vocabulary explicitly to accomplish the lexical threshold.

The academic word list has been a standard for creating EAP materials and courses worldwide (Coxhead, 2011; Wells, 2007). The academics' interest in examining its contribution to scholarly discourse has grown. Corpus linguistics has recently gained popularity in EAP research, assisting scholars, educators, and students better comprehending the nature of language. Consequently, it is a methodology that often uses corpus linguistics to study naturally occurring language (McEnery & Wilson, 2001). Taking into account the everyday use of corpus linguistics, Pathan et al. (2018) conducted a study to investigate the usage of AWL words in Pakistani doctoral theses. The study results showed that 8.76% of scientific doctoral theses in the corpus had text coverage for academic word lists, demonstrating the usefulness and significance of thesis lists in the two disciplinary groups of science and the academic genre

of theses. The study's findings also revealed that 550-word families—or 96.50%—of the 570-word families in the AWL are found to be widely utilized in doctorate theses from scientific disciplinary studies.

Similarly, Mozaffari and Moini (2014) conducted a study to determine how frequently the AWL appeared in the corpus of education research papers. The study discovered that just 4.94% of the Education Research Articles Corpus contained AWL word forms, which shows that they could be more important in education. In light of the study's conclusions, it is advised that education students focus on the first two subgroups of AWL and the list of words offered by this study's analysis. Moreover, in a multi-genre, multi-disciplinary corpus with roughly 3.3 million words, Hyland and Tse (2007) looked into the application of the AWL. The corpus was collected using ethical principles and reliable standards from academic publications such as research articles, lectures, lab instructions, textbooks, theses, and dissertations. The study's findings gave convincing evidence of the drawbacks of adopting a uniform core perspective on academic vocabulary. The study significantly impacted the researchers' ongoing work to create more discipline-specific academic word lists to meet the vocabulary learning requirements of students in many subject areas. In another study, Valipour and Nassaji (2013) examined the frequency and distribution of the AWL in a corpus of approximately four million running words. According to this study, the AWL items in the corpus were used in different ways. According to the findings, 327 AWL word families, which were frequently used, accounted for 9.60% of the tokens in the corpus

CHAPTER III

3. METHODOLOGY

3.1. Introduction

This chapter describes the research design of the current study, data collection instruments, materials, and data analysis procedure.

3.2. Research Design

This study aimed to investigate Turkish ELT Department students' academic vocabulary usage in argumentative essays. Moreover, the study was designed to address the distribution of ELT students whose native language Turkish and native English speakers, from the most frequently used to the least used of the top 50 words of Gardner and Davies' AVL (Academic Vocabulary List). It also examined whether there was a statistical difference in lexical diversity in the non-native corpus compared to the native corpus. It searched the over and /or underuse of academic vocabulary used in the non-native corpus compared to the native corpus. In line with the purpose of the study, a specially designed learner corpus, the TLC (Turkish Learner Corpus), was compiled by the researcher. Consisting of 61,216-word tokens, the TLC is a non-native corpus consisting of 140 argumentative essays of first-year ELT students who study at Amasya University, Gaziantep University, and Trabzon University as reference corpus LOCNESS (The Louvain Corpus of Native English Essays) was used. LOCNESS is a corpus compiled from native English learners' essays.

The researcher used Gardner and Davies' AVL (2014) as a base list in this study. Because (i) the AVL (3,015 lemma-headwords; 1,991-word families) was created from a 120 million token corpus and encompassed roughly 14% of the academic sub-corpora for the British National Corpus (BNC) and the Corpus of Contemporary American English (COCA), (ii) all of the texts used in the AVL are ones that students are likely to read (primarily academic journals and magazines), (iii) in terms of the representativeness of the corpus on which it is based and the methods employed, the AVL represents a significant improvement over earlier academic wordlists. For the reasons mentioned above, Gardner and Davies AVL (2014) was used as a base list for the current study.

Furthermore, in the current study, a descriptive quantitative research design was used to obtain information about Turkish ELT students' academic vocabulary when writing an

argumentative essay. According to Dulock (1993), the descriptive research design is used to depict the traits of conditions, situations, events, and the frequency with which specific phenomena occur. The study is quantitative because it collects numerical data and uses that data to examine occurrences using mathematical methods (Creswell, 1994).

3.3. Materials

There have been 2 materials, namely LOCNESS and TLC, used in the current study. The central part of the material has been taken from LOCNESS and TLC. LOCNESS and TLC are two learner corpora compiled based on argumentative essay criteria.

3.3.1. Turkish Learner Corpus (TLC)

The Turkish Learner Corpus (TLC) was constructed from the writing samples collected for this study. The TLC corpus is a small, specially created learner corpus that serves the goals of the investigation. TLC was composed of 140 argumentative essays totaling 61,216 words, authored by first-year Turkish students in the English Language Teaching Department. The essays in the TLC were written during the academic year 2021–2022 as a part of the Writing Skills Course.

The second term of the 2021-2022 academic year started with instruction on essay writing rules. Each week, lecturers focused on one type of essay. After examining a sample essay for 1 week, students were asked to write a sample essay in that type of essay the following week. Students were asked to provide a few references while writing an essay. When it came time to prepare an argumentative essay, lecturers discussed the characteristics of argumentative essay with the class. After teaching the details, lecturers wanted students to write their essays. Writing an argumentative essay involves two stages. The pupils were instructed to choose one of the essay topics in the first phase. The essay topics were chosen from the International Corpus of Learner English (ICLE) database. The essay topics were chosen from this database because ICLE is the most substantial corpus of essays written by upper-intermediate and advanced-level students (Granger, 1998). It plays a crucial role in promoting the field of learner corpus research. In the second phase, students were asked to write argumentative essays using at least 500 words long (up to 1000) in a week based on the suggested essay structure. Students were informed that they might consult reference materials such as dictionaries and grammar books provided that the reference material was specified. The essay topics chosen from ICLE for this study are shown below (Granger et al., 2009):

- Some people say that in our modern world, dominated by science, technology, and industrialization, there is no longer a place for dreaming and imagination. What is your opinion?
- Most university degrees are theoretical and do not prepare students for the real world. They are therefore of very little value.
- Poverty is the cause of the HIV/AIDS epidemic in Africa. Marx once said that religion was the opium of the masses. If he was alive at the end of the 20th century, he would replace religion with television.
- The prison system is outdated. No civilized country should punish its criminal: it should rehabilitate them.
- The Gulf War has shown us that it is still a great thing to fight for one's country.
- In the 19th century, Victor Hugo said "How sad it is to think that nature is calling out but humanity refuses to pay heed." Do you think it is still true nowadays?
- The role of censorship in Western society.
- Feminists have done more harm to the cause of women than good.
- In the words of the old song "Money is the root of all evil."
- In his novel "Animal Farm," George Orwell wrote, "All men are equal: but some are more than others." How true is this today?
- Crime does not pay.
- A man/woman's financial reward should be commensurate with their contribution to the society they live in.
- All armies should consist entirely of professional soldiers: There is no value in a system military service.
- Europe; Loss of sovereignty or the birth of a new society.

When students finished writing, lecturers collected essays and sent them to the researcher. Following ethical guidelines, the researcher used Microsoft Word's dictation feature to record the essays, then manually edited and proofread the transcriptions. The participant's private information was also kept private. The 140 essays were transcribed, checked for spelling errors, and stored as independent txt files on the computer. After that, the transcribed texts were uploaded to the AntConc 3.5.8 corpus program.

3.3.1.1. Population and Sampling

The convenience sampling method was used in this study as the researcher focused on the accessibility of the participants. The participants for the current study are 140 first-year Turkish students who study English Language Teaching Department at Amasya University, Gaziantep University, and Trabzon University. The participants shared a common educational background and had studied English for at least nine years, starting in the fourth grade of primary school. They successfully passed a language exam or completed one preparatory year at the university. All participants and university administration were informed of the research, and the necessary permission was received. Before collecting the essays, a demographic questionnaire was applied to see participants' profiles, as done in LOCNESS. The questionnaire had the same design criteria as LOCNESS. The questionnaire reveals that there are 95 female and 45 male participants. Participants' mother tongue is Turkish, and only 7 of them had been to a country where English is spoken as their mother tongue.

All of the participants are at upper-intermediate and advanced levels. The participants are thought to be at the same level by looking at their university entrance points. The entrance score for the English Language Teaching Department of Amasya University is 377, Gaziantep University is 378, and Trabzon University is 391.

3.3.1.2. Length

In TLC are essays written by Amasya University, Gaziantep University, and Trabzon University ELT Department students. In TLC, there are 140 essays totaling 61,216 words. Table 4 shows us the number of essays, the total number of words in the university, and the distribution of essays/words per word.

Table 4. The Number of Essays, Total Number of Words and the Distribution of Essays/Words Per Word in TLC

University	Number of Essays	Total Number of Words	Average Length-per Word
Amasya University	38	10.314	271
Gaziantep University	61	24.969	409
Trabzon University	41	25.933	632
TLC in Total	140	61.216	437 words

As Table 4 illustrates, the total number of words is 61,216, compiled out of the written performances of 140 participants. From Amasya University, 38 essays have been collected, equal to 10,314 words; 61 essays have been collected from Gaziantep University, equal to

24,969 words in this corpus. The remaining 41 essays were collected from Trabzon University with 25,933 words. It was asked by participants to write at least 500 words on their selected choice of topics. All the essays are initially collected texts with an average length of 437 words. However, differences have been observed between the participants- from an average of 271 words in Amasya University essays to 632 words in Trabzon University essays. Table 4 displays the number of essays, the total number of words in each university, and the average length of each university.

3.3.1.3. Topic

Fourteen topics were chosen from ICLE. Table 5 illustrates the topics and the number of essays for each contributor university.

Table 5. The Essay Topics in TLC

Suggested Essay Topics	Number of Essays at Amasya University	Number of Essays at Gaziantep University	Number of Essays at Trabzon University	Total number
Crime does not pay.	2	3	2	7
The prison system is outdated. No civilized society should punish its criminals: it should rehabilitate them.	3	8	2	13
Most university degrees are theoretical and do not prepare students for the real world. They are therefore of very little value.	11	10	9	30
A man/woman's financial reward should be commensurate with their contribution to society they live in.	1	0	1	2
The role of censorship in Western society.	0	0	0	0
Marx once said that religion was the opium of the masses. If he were alive at the end of the 20 th century, he would replace religion and television.	1	1	1	3
All armies should consist entirely of professional soldiers: there is no value in a system of military service.	1	4	4	9
The Gulf War has shown us that it is still a great thing to fight for one's country.	0	0	1	1
Feminists have done more harm to the cause of women than good.	6	9	9	24

Table 5. (continued)

Suggested Essay Topics	Number of Essays at Amasya University	Number of Essays at Gaziantep University	Number of Essays at Trabzon University	Total number
In his novel Animal Farm, George Orwell wrote “All men are equal: but some are more equal than others.” How true is this today?	1	2	2	5
In the words of the old song, “Money is the root of all evil.”	9	14	9	32
Europe; Loss of sovereignty or the birth of a new society?	0	0	0	0
In the 19 th century, Victor Hugo said: “How sad it is to think that nature is calling out but humanity refuses to pay heed. Do you think it is still true nowadays?	1	3	1	5
Some people say that in our modern world, dominated by science, technology, and industrialization, there is no longer a place for dreaming and imagination. What is your opinion?	2	7	0	9

Table 5 shows us the topics chosen for this study and the number of essays written for each topic. The topics “*Most university degrees are theoretical and do not prepare students for the real world. There are therefore of very little value.*”, “*Feminists have done more harm to the cause of women than good.*”, and “*In the words of the old song, “Money is the root of all evil.”*” are the topics chosen by participants mostly. On the other hand, “*The role of censorship in Western society.*” and “*Europe; Loss of sovereignty or the birth of a new society.*” topics have not been preferred by participants.

3.3.2. The Louvain Corpus of English Essays (LOCNESS)

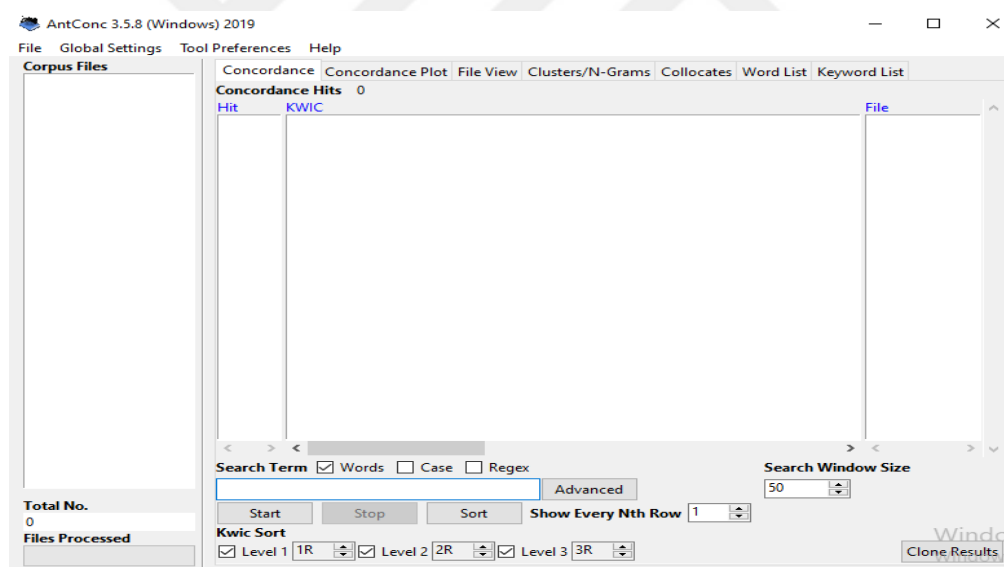
In order to compare Turkish students' corpus with native speakers' corpus, a reference corpus is needed. The LOCNESS was chosen as the reference corpus in the current study because LOCNESS is cited as the most frequently used native speakers' corpus studies (Granger & Petch-Tyson, 1996; Lin, 2002; Tapper, 2005; Virtanen, 1998). LOCNESS is a corpus of essays written by native English and American speakers between 1991 and 1995. It is made up of (i) British pupils' A-level essays (60,209 words), (ii) British university students' essays (95,695 words), and (iii) American university students' essays (168,400 words). The corpus texts include examination papers, timed essays, and free essays. Essays typically have a word count of 500. Most students are between 17 and 23, but a tiny percentage is significantly older. The works cover various topics, from campus-related issues like college cheating,

controversy in the classroom, and prayer in schools to social problems, including water pollution, nuclear power, sex, violence, and gender roles. The subjects covered in the ICLE corpus, which focuses on argumentative essays, are likewise highly comparable. The overall feature of the writing style is argumentative based on the subjects discussed in the texts. The current study compiled argumentative essays from Turkish learners, and learners' variables align with LOCNESS. As TLC is in the same design criteria as LOCNESS, LOCNESS was chosen as the reference corpus.

3.4. Corpus Software: AntConc 3.5.8

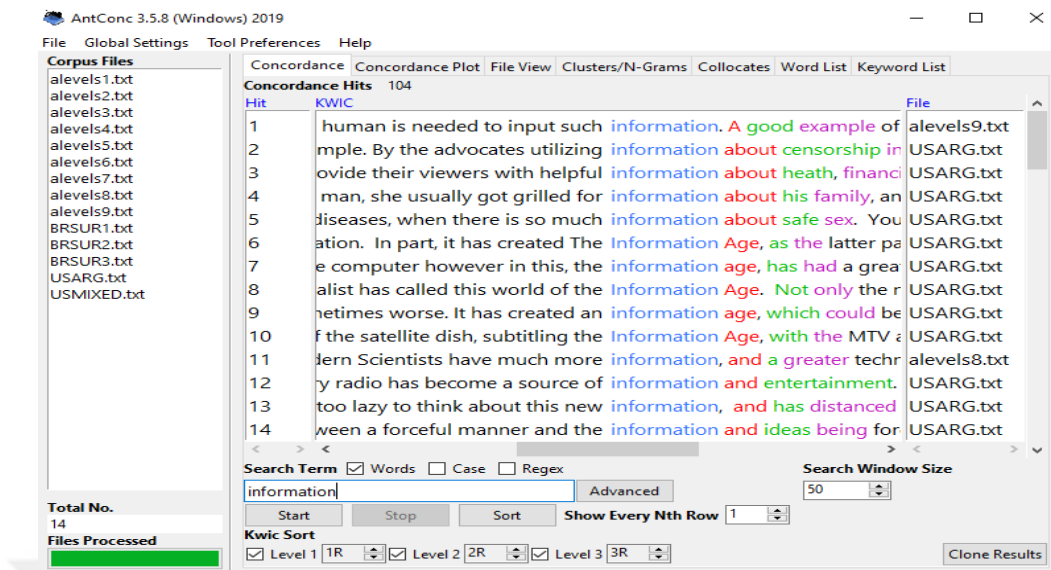
AntConc 3.5.8 is a freeware, multiplatform program frequently used in corpus linguistics and data-driven learning research (Antony, 2020). The program includes seven tools to access data: concordance tool, concordance plot tool, file view tool, clusters/N-Grams, collocates, word list, and keyword list.

Figure 2. Home Screen of AntConc 3.5.8 Software



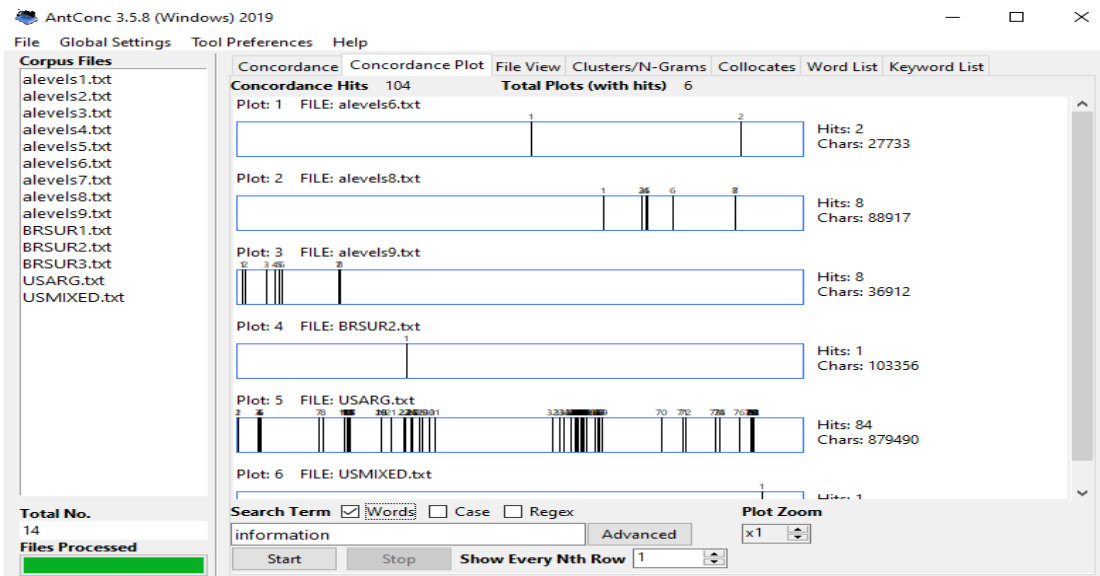
The concordance tool displays the results in a “KWIC” (Keyword in Context) format. This tool allows academics to see how frequently certain words and phrases appear in a corpus of text (Antony, 2020). As the central tool, the concordance tool includes a variety of characteristics that make it a handy tool for learners, researchers, and teachers. The concordance tool is generally used for acquiring second language learning or effectively teaching new vocabulary, collocations, grammar, and writing styles (Sun & Wang, 2003).

Figure 3. Concordance Tool of AntConc 3.5.8



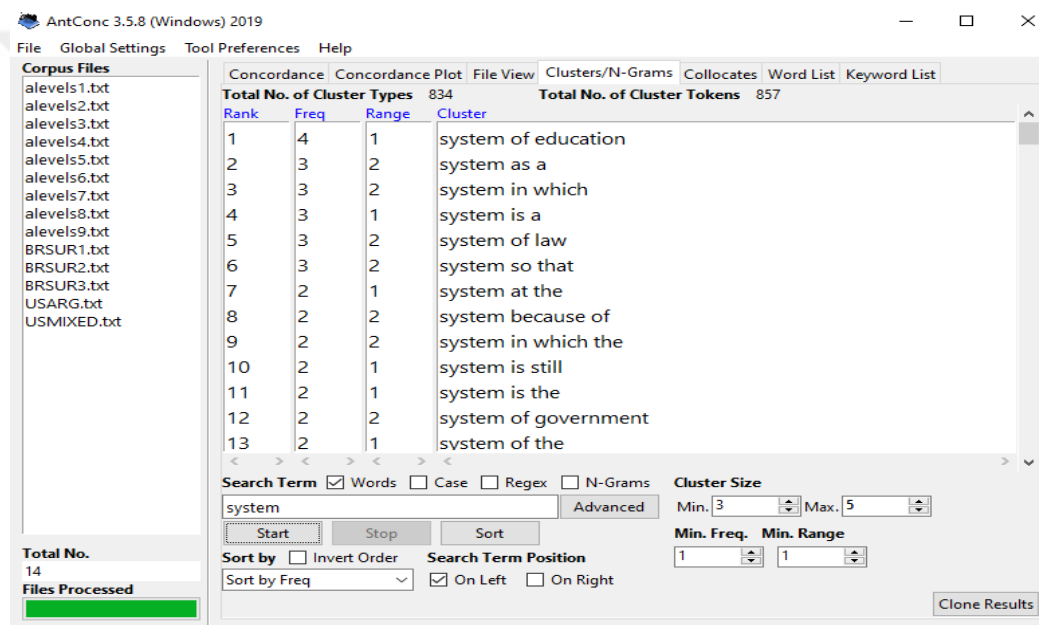
In order to see the position of results, a "barcode" format or concordance plot tool is preferred. This tool's main objective is to show how a "search term" is applied throughout the target corpus. Thanks to this display, it is available for researchers to see how frequently, where, and in what distribution a search term takes part in a corpus of data (Antony, 2020). Users can view the keyword in the original file using the view files tool. It helps researchers to investigate the results in detail. It is a pretty effective search tool for researchers to examine any substring, word, statement, or common expression in a target file (Antony, 2020).

Figure 4. Concordance Plot Tool of AntConc 3.5.8



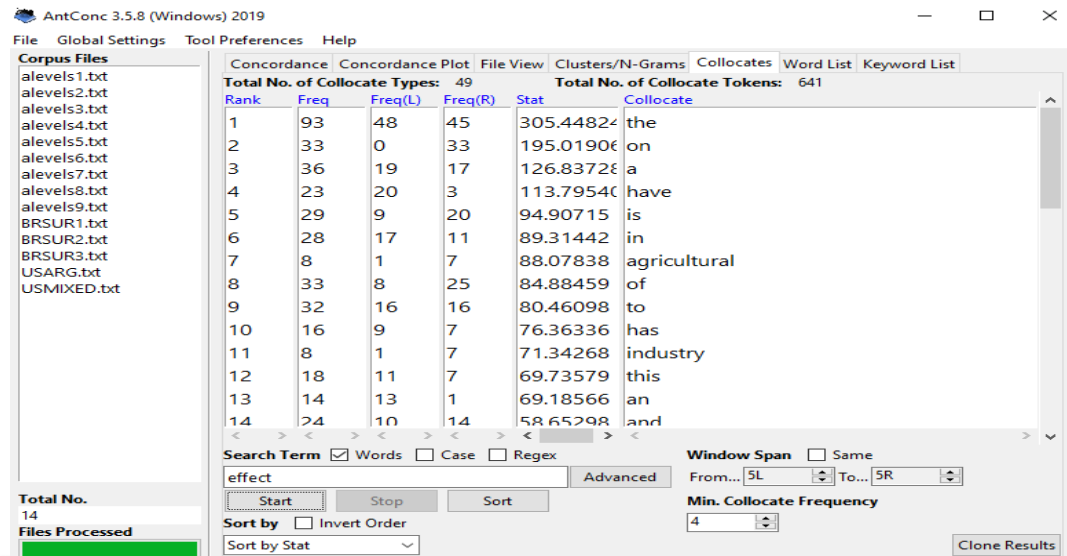
The word clusters/ N-Grams tool is utilized to investigate multiword expressions. Multiword expressions, collocations, phrasal verbs, and idioms are tough to learn (Nesselhauf & Tschichold, 2002). Despite their complex nature, their significance increases even further if the researcher deals with a text written for technical and scientific topics (Bowker & Pearson, 2002). The clusters of words surrounding the node word are unveiled through the cluster tool, and the tool lists the clusters alphabetically or by frequency. In contrast, the N-Grams tool looks for clusters of "N" (for instance, 1 word, 2 words, etc.) length over the entire corpus. The word clusters/ N-Grams tool makes it possible to locate frequent words within a corpus (Antony, 2020).

Figure 5. Clusters/N-grams tool of AntConc 3.5.8



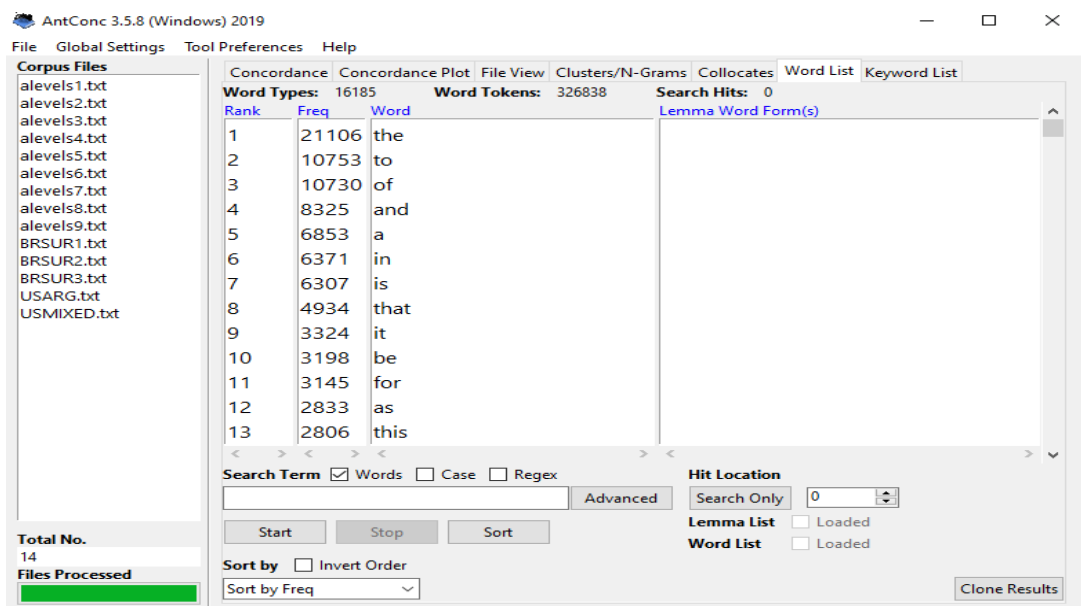
AntConc 3.5.8 software is quite helpful in exploring the non-sequential linguistic patterns in a language. The collocation tool can be used to sort the value of a statistical measure between the search phrase and the collocate (Antony, 2020). The collocation tool looks for a word or phrase close to one of the node words. It does not have to be next to it; it could be a couple of words away on one side or the other. The collocation tool can be handy if the researcher tries to find which words are connected with other words but not necessarily forming a traditional cluster (Anthony, 2020).

Figure 6. Collocation Tool of AntConc 3.5.8



The word list tool shows researchers the words in the corpus. This tool lets us quickly get a list of all the words in the corpus. Also, this tool makes it simple to identify the terms that appear the most frequently in a corpus. Word lists are handy for researchers to highlight important sections of a corpus and identify problematic areas. AntConc 3.5.8 program offers to see the lemmas of words in a corpus and sort words alphabetically of frequency order, as well as it provides for users to count the number of terms using their stem forms (Antony, 2020).

Figure 7. Wordlist Tool of AntConc 3.5.8



The word list tool helps researchers to determine a word's importance within a corpus. Hence, Antconc software offers a keyword list function. The tool can identify keywords that appear particularly frequently in a corpus compared to the exact words in a user-selected reference corpus (Antony, 2020). The Keywords Tool utilizes the chi-square or log-likelihood statistical metrics to similarly determine the keyness of words. It allows the user to display or suppress extremely uncommon keywords (or negative keywords) in the settings screen (Kilgarriff, 2001).

3.5. Data Analysis Procedure

To analyze the data, we followed the steps below:

In the first step, the data of both corpora were extracted and saved as a “.txt” file. Afterward, each corpus set was uploaded to the AntConc 3.5.8 software.

In the second step, the normalized frequency counts were calculated to compare frequency distributions across different corpora, usually of different sizes. “It is usually considered good practice to report both raw and normalized frequencies when writing up quantitative results from a corpus” (McEnery & Hardy, 2012: 51). It is a must to bring them on the same basis to compare the numbers. Normalized frequency is standardized as “in per million words” for large corpora and “in per ten thousand words” or “in per ten hundred thousand words” for small corpora. As normalized frequency depends on the corpus size, the researcher normalized the number of instances per 100,000 words.

The following formula was used to calculate normalized frequency of both corpora:

Normalized frequency = (raw frequency / number of tokens) x 100000

In the third step, AntConc 3.5.8 software was used to calculate the frequency of academic vocabulary in both corpora. As a result of the analysis made in the AntConc software, a list was made from the most used academic vocabulary to the least used in both corpora.

In the fourth step, the type-token ratio was calculated to find lexical diversity in the reference corpus, LOCNESS, and specialized learner corpus, TLC. As Granger (2004) points out in her study, the type-token ratio helps us to conclude lexical richness in the corpus. The formula which is used to calculate the type-token ratio is shown below:

The type-token ratio = (all the unique words called as types/ total amount of words) x 100

In the final step, log-likelihood values were computed to compare the two corpora and obtain numerical data for the text analysis. Log-likelihood, sometimes called G-square or G score (Baker et al. 2006), is a statistical test used in corpus studies. The online calculator at

<http://ucrel.lancs.ac.uk/llwizard.html> can be used to calculate LL automatically. Paul Rayson from Lanchester University created a calculator that enables researchers to compare two corpora in terms of the frequency of pre-selected words, phrases, or pragmatic components. Figure 2 below displays a log-likelihood calculator wizard screenshot. This study used the log-likelihood tool to assess whether the overuse and/or underuse of academic vocabulary presented in TLC is significant compared to LOCNESS.

Figure 8: A Screenshot of Rayson's log-Likelihood Calculator (<https://ucrel.lancs.ac.uk/llwizard.html>)

	Corpus 1	Corpus 2
Frequency of word		
Corpus size		

CHAPTER IV

4. FINDINGS

4.1. Introduction

The present study compares the frequencies of Turkish ELT students' academic vocabulary usage based on the top 50 words in Gardner and Davies' (2014) AVL and investigates the overuse and/or underuse of academic vocabulary compared to native speakers' corpus data, LOCNESS. In this chapter, Turkish EFL students' corpus data on academic vocabulary has been analyzed and compared with native speakers' corpus data to find answers to research questions. In order to reveal the answers to the research questions, the study used a descriptive quantitative research design. Following this purpose, AntConc 3.5.8 software, normalizing frequency calculation, type-token ratio analysis, and log-likelihood calculator were used in the research process.

This chapter presents the results of the analysis in three main sections. The first section presents overall results concerning the academic vocabulary identified in each corpus. The second section discusses the difference between TLC and LOCNESS in terms of the statistical significance of the frequency of academic vocabulary. In the third section, comparisons are presented to see to what extent Turkish and native English writers differ in their over and/or underuse of academic vocabulary.

4.2. Findings

4.2.1. Overall Comparison of TLC and LOCNESS

This part shows the findings of the analysis of the most frequently used academic vocabulary in TLC and LOCNESS. The top 50 academic vocabularies were retrieved in both corpora based on Gardner and Davies' (2014) AVL list. Data analysis shows that TLC has 5430-word types (the total number of distinct words in the corpus) in raw frequency and 61,216-word tokens (the total number of words in the corpus), while LOCNESS has 16,185-word types and 326,838-word tokens. Due to the difference in the number of tokens across TLC and LOCNESS, it is essential to show the results of the normalized frequency calculation. For this reason, the data were listed according to raw and normalized frequency values. The purpose of showing both raw and normalized frequency is that raw frequency tells us how often "academic vocabulary" occurs and is distributed regardless of the corpus size. On the other

hand, normalized frequency is calculated as it considers the corpus's number, and normalized frequency can help us make frequency counts comparable.

Table 6 shows the total number of words in both corpora, number of word types, overall raw frequency values of academic vocabulary and normalized frequency values (per 100,000).

Table 6. Overall Comparative Analysis of TLC and LOCNESS

	TLC	LOCNESS
Corpus Size	61.216	326.838
Word Types	5430	16.185
Overall Raw Frequency of Academic Vocabulary	1461	5549
Normalized Frequency Values of Academic Vocabularies (per 100.000 words)	2.38	1.69

Table 6 illustrates that LOCNESS has a higher number of words. The numbers of tokens in TLC and LOCNESS are different, so it is essential to calculate the normalized frequency of the total number of words per 100,000. Findings indicate that TLC includes 1461 instances of academic vocabulary in raw frequency or 2,38 instances per 100,000 academic vocabularies. On the other hand, LOCNESS includes 5549 or 1,69 instances per 100,000. Normalized frequency measurement implies that although LOCNESS is 5 times larger than TLC, the frequency of academic vocabularies in the TLC is almost two times more than LOCNESS.

4.2.2. Research Question 1

The first question of the study was: “What is the distribution of academic vocabulary usage from the most frequently used to the least in participants’ argumentative essays regarding Gardner and Davies’ (2014) Academic Vocabulary List?

- a) What are the frequently used academic words in native English students’ argumentative essays?
- b) What are academic words frequently used in Turkish ELT students’ argumentative essays?”

In order to answer the first research question and sub-questions, which investigates the distribution of the top 50 academic words in Gardner and Davies’ (2014) AVL from the most frequently used to the least in native and non-native students’ argumentative essays, we analyzed the frequencies of the academic vocabularies. The sizes of TLC and LOCNESS were different in number, so we calculated the raw and normalized frequency values of academic vocabularies in both corpora.

Table 7. Overall Frequency Analysis of Academic Vocabularies With their Raw and Normalized Values

Rank	Academic Vocabulary	TLC		Academic Vocabulary	LOCNESS	
		Raw f	Normalized f		Raw f	Normalized f
1	society(n)	144	235.60	however(r)	591	180.82
2	university(n)	134	219.24	society(n)	438	134.01
3	use(n)	110	179.97	use(n)	362	110.75
4	however(r)	108	176.70	human(j)	322	98.51
5	need(n)	93	152.16	system(n)	286	87.50
6	important(j)	78	127.62	need(n)	234	71.59
7	human(j)	73	119.44	both(r)	225	68.84
8	system(n)	59	96.53	important(j)	214	65.47
9	both(r)	48	78.53	social(j)	174	53.23
10	social(j)	45	73.62	change(n)	155	47.42
11	information(n)	43	70.35	form(n)	143	43.75
12	result(n)	37	60.53	thus(r)	139	42.52
13	change(n)	34	55.63	control(n)	127	38.85
14	experience(n)	30	49.08	role(n)	127	38.85
15	value(n)	29	47.44	effect(n)	119	36.40
16	control(n)	27	44.17	result(n)	105	32.12
17	thus(r)	26	42.54	information(n)	104	31.82
18	study(n)	24	39.26	economic(j)	100	30.59
19	provide(v)	24	39.26	research(n)	96	29.37
20	develop(v)	22	35.99	group(n)	90	27.53
21	level(n)	21	34.35	process(n)	84	25.70
22	history(n)	20	32.72	policy(n)	83	25.39
23	research(n)	20	32.72	experience(n)	80	24.47
24	practice(n)	18	29.45	culture(n)	78	23.86
25	rate(n)	18	29.45	level(n)	75	22.94
26	development(n)	14	22.90	rate(n)	67	20.49
27	process(n)	13	21.27	history(n)	66	20.19
28	economic(j)	12	19.63	university(n)	66	20.19
29	role(n)	11	17.99	provide(v)	65	19.88
30	culture(n)	11	17.99	development(n)	62	18.96
31	require(v)	10	16.36	value(n)	60	18.35
32	effect(n)	10	16.36	study(n)	58	17.74
33	difference(n)	9	14.72	significant(j)	52	15.91
34	significant(j)	9	14.72	low(j)	48	14.68
35	form(n)	8	13.08	interest(n)	47	14.38
36	model(n)	7	11.45	relationship(n)	44	13.46
37	relationship(n)	7	11.45	practice(n)	42	12.85
38	group(n)	7	11.45	difference(n)	40	12.23
39	low(j)	7	11.45	include(v)	38	11.62
40	figure(n)	7	11.45	model(n)	38	11.62
41	data(n)	6	9.81	develop(v)	34	10.40
42	report(v)	5	8.18	figure(n)	32	9.79
43	factor(n)	5	8.18	factor(n)	28	8.56
44	interest(n)	4	6.54	report(v)	26	7.95
45	include(v)	4	6.54	suggest(v)	21	6.42
46	policy(n)	4	6.54	require(v)	20	6.11
47	suggest(v)	2	3.27	activity(n)	19	5.81
48	activity(n)	2	3.27	data(n)	10	3.05
49	analysis(n)	1	1.63	analysis(n)	9	2.75
50	table(n)	1	1.63	table(n)	6	1.83

Table 7 shows the raw and normalized frequency ordering of the LOCNESS and TLC corpus of the first 50 academic words in the AVL list (Gardner & Davies, 2014). Table 7 indicates that according to normalized frequency values, the top 10 academic vocabularies used in LOCNESS are *however*, *society*, *use*, *human*, *system*, *need*, *both*, *important*, *social*, and *change*. On the other hand, the top 10 academic vocabularies used in TLC are *society*, *university*, *use*, *however*, *need*, *important*, *human*, *system*, *both*, and *social*. The syntactic categories of these words vary as nouns (e.g., *society*), verbs (e.g., *use*), adjectives (e.g., *important*), and conjunctions (*however*)—figures 9 and 10 below present KWIC examples of the number one academic words in both corpora.

Except for their rank order, 9 out of the top 10 academic vocabularies are identical. It can be implied that Turkish ELT students, to the most extent, rely on the same frequent academic vocabulary as native speakers. As is seen in Table 7, the words *table* and *analysis* are the least used words among the first 50 words in the AVL list in both corpora. In TLC and LOCNESS, the most frequently used and the least used academic words are similar.

Figure 9. The KWIC of “However” in LOCNESS (However is the Most Frequently used Academic Word in LOCNESS)

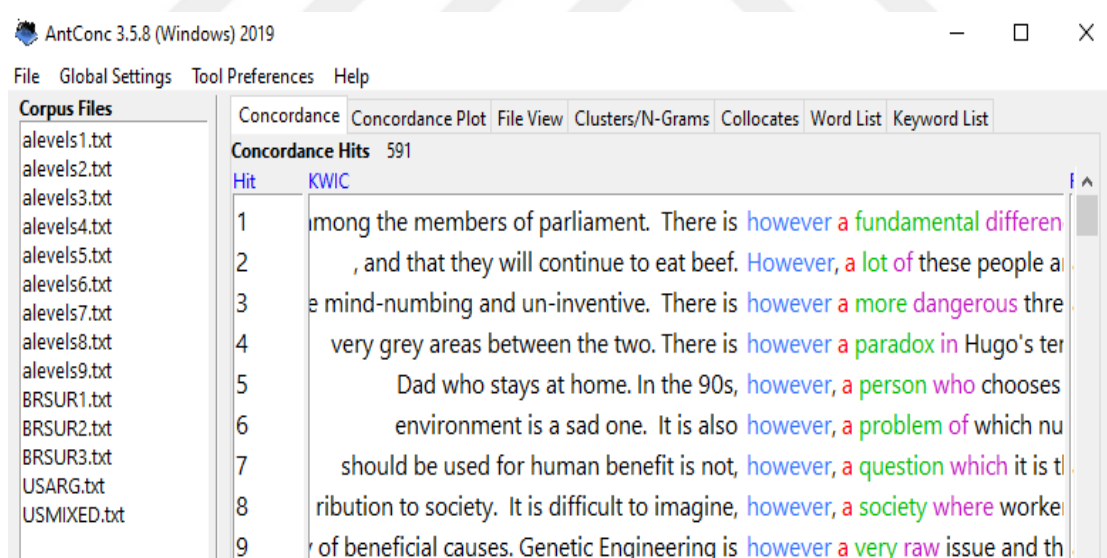
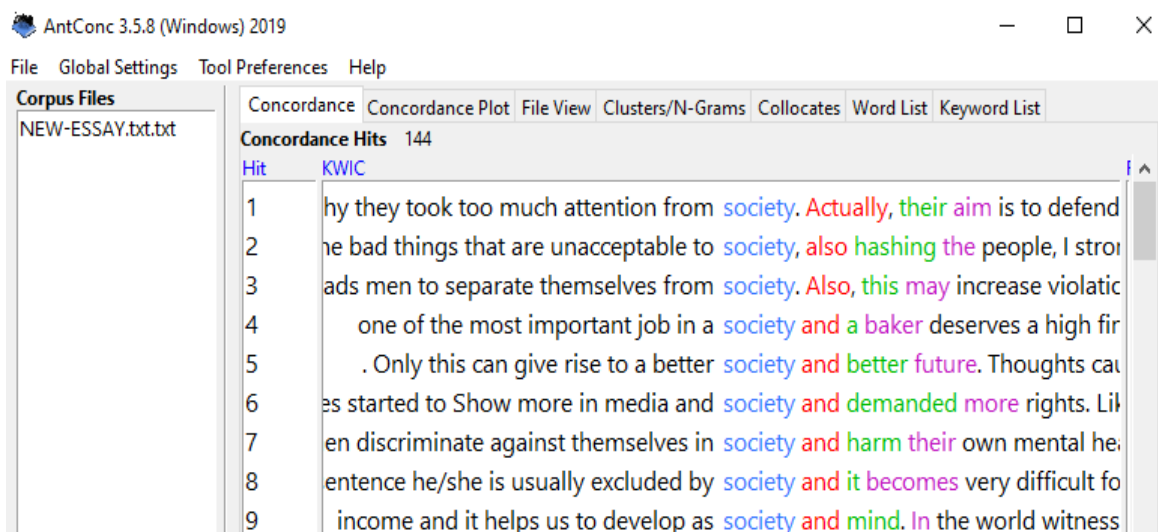


Figure 10. The KWIC of “Society” in TLC (Society is the Most Frequently Used Academic Word in TLC)



4.2.3. Research Question 2

The second question of the study was: “Compared to native English learners, is there a statistical difference in the lexical diversity of the words used by Turkish ELT students?”

In accordance with the second research question, we carried out a type-token ratio analysis. Table 8 indicates the TTR results of both corpora. Researchers can draw basic interpretations about the lexical variety in a corpus by computing the type/token ratio (Granger, 2002).

Table 8. Type-Token Ratio Analysis

Corpus	Token	Type	TTR (%)
TLC	61.216	5430	8.87
LOCNESS	326.838	16.185	4.95

The second research question was about the lexical diversity of argumentative essays written by Turkish ELT students and native English students. Table 8 shows that number of different word types in TLC is 5430, and the total number of all the word tokens is 61,216. Thus, the type/token ratio (TTR) value is calculated as 8,87. However, the number of word types in LOCNESS is 16,185, the total corpus size is 326,838, and the TTR result of LOCNESS is 4,95. When comparing the two corpora, findings show that TLC had a higher type/token ratio than LOCNESS. So, this finding implies that the vocabulary used in TLC is more varied than in LOCNESS. Namely, in LOCNESS, the words are used repetitively compared to the non-native corpus, TLC. To put it another way, the TLC has greater lexical diversity.

4.2.4. Research Question 3

The third question of the study was: “Do Turkish ELT students overuse and/or underuse academic vocabulary in their argumentative essays compared to native students?”

In order to answer the third research question, we calculated the Log-likelihood values of words in TLC and LOCNESS. In addition to the frequency analysis and type/token ratio, measuring the significance of overuse/ underuse is essential to validate indications of the frequency calculations. Log-likelihood (LL) is "a measure of error, or unexplained variation, in categorical models, based on summing the probabilities associated with the predicted and actual outcomes" (Field, 2005: 736). LL ratio, utilized to scrutinize the overuse and underuse amounts of comparable data, was employed to see whether the academic vocabularies in the TLC corpus are used appropriately compared to the reference corpus, LOCNESS, or not. Hasselgrad and Johansson (2011) report that underuse and overuse are viewed as quantitative measurements examining language variance. Gaining frequency data for the learner's and native language will highlight their contrasts. Rayson (2013) provides a scale to interpret Log-likelihood values as;

Table 9. Values of Log-Likelihood

95th percentile; 5% level; $p < 0.05$; critical value = 3.84
99th percentile; 1% level; $p < 0.01$; critical value = 6.63
99.9th percentile; 0.1% level; $p < 0.001$; critical value = 10.83
99.99th percentile; 0.01% level; $p < 0.0001$; critical value = 15.13

According to Table 9, if the absolute value is over 3,84, there is a significant difference. If there is not, it means that there is no significant difference in the use of academic vocabulary between native and non-native learners. Also, when the value is $p < 0.05$, it can be concluded that academic vocabulary usage is the same way. In short, if the LL ratio score is closer to zero, it can be accepted that corpora are used similarly for that bundle. However, if there is a big gap, then there is no likeness between the corpora, there are overuses and underuses of bundles compared to the reference corpus. Table 10 below shows the LL scores of the 50 most frequently used academic vocabularies in TLC and LOCNESS.

Table 10. Log-Likelihood Ratio in LOCNESS and TLC

	LOCNESS			TLC		
Academic Vocabulary	Raw <i>f</i>	Normalized <i>f</i>	Raw <i>f</i>	Normalized <i>f</i>	+ / -	LL Score
however	591	180.82	108	176.70	-	0.06
society	438	134.01	144	235.60	+	31.01
use	362	110.75	110	179.97	+	18.05
human	322	98.51	73	119.44	+	2.08
system	286	87.50	59	96.53	+	0.45
need	234	71.59	93	152.16	+	33.36
both	225	68.84	48	78.53	+	0.65
important	214	65.47	78	127.62	+	22.63
social	174	53.23	45	73.62	+	3.49
change	155	47.42	34	55.63	+	0.67
form	143	43.75	8	13.08	-	16.07
thus	139	42.52	26	42.54	-	0.00
control	127	38.85	27	44.17	+	0.35
role	127	38.85	11	17.99	-	7.49
effect	119	36.40	10	16.36	-	7.45
result	105	32.12	37	60.53	+	9.80
information	104	31.82	43	70.35	+	16.84
economic	100	30.59	12	19.63	-	2.39
research	96	29.37	20	32.72	+	0.18
group	90	27.53	7	11.45	-	6.47
process	84	25.70	13	21.27	-	0.43
policy	83	25.39	4	6.54	-	10.82
experience	80	24.47	30	49.08	+	9.36
culture	78	23.86	11	17.99	-	0.83
level	75	22.94	21	34.35	+	2.45
rate	67	20.49	18	29.45	+	1.72
university	66	20.19	134	219.24	+	263.92
history	66	20.19	20	32.72	+	3.25
provide	65	19.88	24	39.26	+	7.20
development	62	18.96	14	22.90	+	0.38
value	60	18.35	29	47.44	+	15.36
study	58	17.74	24	39.26	+	9.41
significant	52	15.91	9	14.72	-	0.05
low	48	14.68	7	11.45	-	0.41
interest	47	14.38	4	6.54	-	2.87
relationship	44	13.46	7	11.45	-	0.17
practice	42	12.85	18	29.45	+	7.60
difference	40	12.23	9	14.72	+	0.24
include	38	11.62	4	6.54	-	1.40
model	38	11.62	7	11.45	-	0.00
develop	34	10.40	22	35.99	+	17.89
figure	32	9.79	7	11.45	+	0.13
factor	28	8.56	5	8.18	-	0.01
report	26	7.95	5	8.18	+	0.00
suggest	21	6.42	2	3.27	-	1.01
require	20	6.11	10	16.36	+	5.61
activity	19	5.81	2	3.27	-	0.70
data	10	3.05	6	9.81	+	4.42
analysis	9	2.75	1	1.63	-	0.28
table	6	1.83	1	1.63	-	0.01

(Normalized rate calculated per 100,000 words; core corpus – TLC (61,216 tokens); reference corpus – LOCNESS (326,838 tokens))

It can be figured out from table 10 that Turkish ELT students use 30 academic vocabularies in accordance with native learners; in other words, 60% of the academic vocabularies are compatible, and 40% are incoherent with each other. Among the academic vocabularies, *thus* with the LL score of 0,00; *model* with an LL score of 0,00; *factor* with an LL score of 0,01; *report* with an LL score of 0,00, and *table* with the LL score of 0,01 are the most coherent academic vocabularies in both corpora. Besides, *however*, *human*, *system*, *both*, *social*, *change*, *control*, *economic*, *research*, *process*, *culture*, *level*, *rate*, *history*, *development*, *significant*, *low*, *interest*, *relationship*, *difference*, *include*, *figure*, *suggest*, *activity*, and *analysis* are the other academic vocabularies which are consistent in TLC and LOCNESS.

The following sentences were taken from TLC and LOCNESS.

Example 1

[The reason for that is that the country is financially in a bad shape. If we look at the inflation rate in the American region the highest rated one is Venezuela. This harms the economy of the country drastically which affects its citizen and **thus**, it causes the increase of crime...]

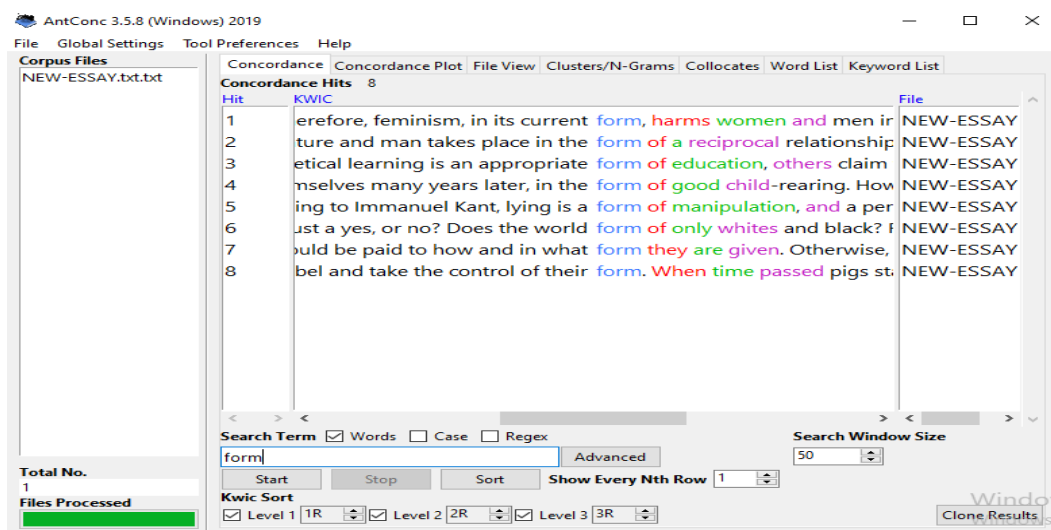
Extracted from TLC

[Voltaire goes about his subject using the evidence of facts. Candide goes through all kinds of adventures in different countries and everywhere he met evil. Voltaire wanted to show that evil - human inflicted evil was not only real but universal and **thus** violently attacked the principle that "whatever is, is right"...]

Extracted from LOCNESS

Another significant finding that can be drawn from Table 10 is that Turkish ELT students frequently overuse and underuse academic vocabulary. 5 of the academic vocabulary, which equals 10% of the whole academic vocabulary, are underused by Turkish ELT students. If LL values are over 15,13, these academic vocabularies are excessively underused by Turkish ELT students. When the table is analyzed, the word *form* is the most excessively underused academic vocabulary with an LL score of 16,07. Other underused academic vocabularies are *role*, *effect*, *group*, and *policy*.

Figure 11. The KWIC of “form” in TLC



Following sentence samples were extracted from both corpora.

Example 2

[She further states that there are some women’s associations that oppose feminism and they assert three main complaints: they do not want to be told by a **group** called radical feminists, they do not want to be judged by other women and they do not feel oppressed by someone...]

Extracted from TLC

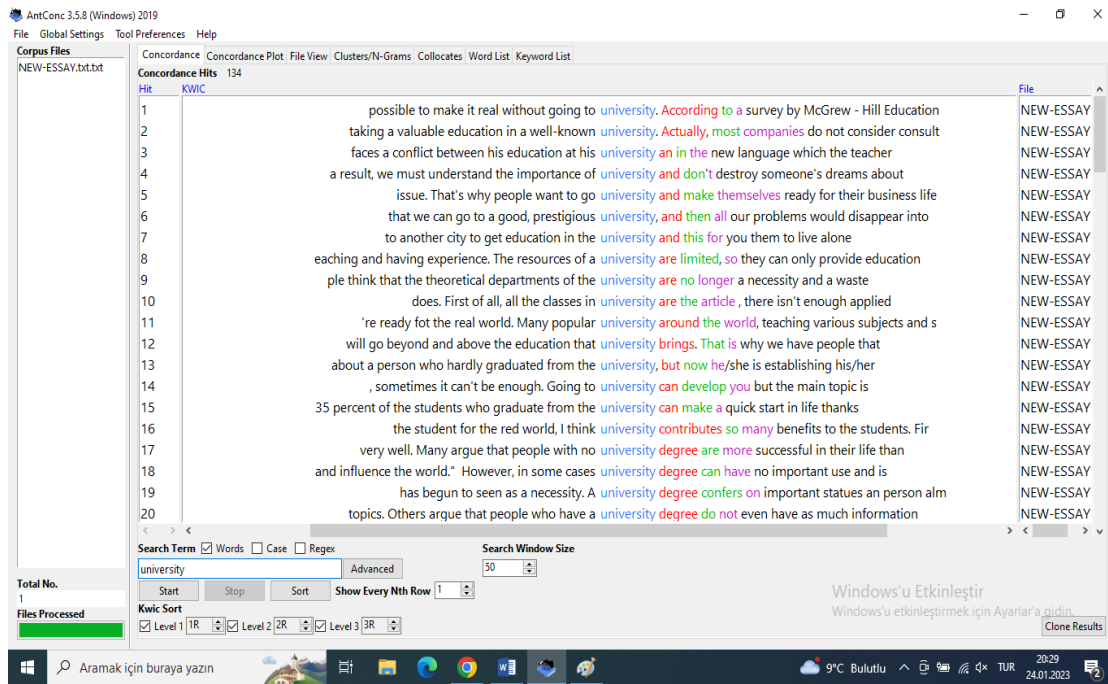
[They were a **group** who recognized evil in the form of the Grand Duke Sergei and other members of the ruling class and yet by exterminating these people, they realized they were perpetrating crimes of equal magnitude...]

Extracted from LOCNESS

Overusing academic vocabulary is another point to be considered. There is 15 academic vocabulary in the table, which equals 30% of the whole academic vocabulary which Turkish ELT students overuse. Among them, the academic vocabulary *university* is the most excessively overused by Turkish ELT students, with an LL score of 263,92. It can be seen from the Table 10 that *need* with an LL score of 33,36; *society* with an LL score 31,01; *important* with the LL score 22,63; *use* with the LL score 18,05; *develop* with the LL score 17,89; *information* with the LL score 16,84; *value* with the LL score 15,36 is the academic vocabularies which were used excessively overused by Turkish ELT students. Besides, 7 academic vocabularies, namely, *result*, *experience*, *provide*, *study*, *practice*, *require*, and *data* were overused by Turkish ELT students. Granger (2015) states that by examining overuse, it is possible to identify faults by comparing L1 and L2. She claims that

although overusing high-frequency words might be a successful learning approach in the beginning stages, the situation is different for advanced learners. This misuse may indicate that advanced students need to increase their vocabulary knowledge.

Figure 12. The KWIC of “University” in TLC



The following sentences were taken from TLC and LOCNESS.

Example 3

[According to the **study**, both of them are required to obtain a career in a certain field. Practical education, on the other hand, is more important for success in any employment. This is because it helps us apply what we've learned in the classroom to real-life situations...]

Extracted from TLC

[Demography is the **study** of population and the effect that its general character has on a country's society and economy. Demographers claim that it is a major factor in considering the problems of that country's evolution - for example, it is thought that many of France's problems during the twentieth century have been caused by a premature decline in the birth rate in the nineteenth century, and the consequent ageing of the population...]

Extracted from LOCNESS

In conclusion, the results revealed that when the first 50 words in the AVL were evaluated, the most frequently used and the least frequently used academic vocabularies in TLC and LOCNESS were similar. Furthermore, Turkish ELT students used more varied words

in their argumentative essays than native English speakers. Moreover, Turkish ELT students overused some academic vocabulary while underusing others when compared to native speakers of English.



CHAPTER V

5. DISCUSSION

This section will present and discuss the research findings on academic words in the Turkish ELT context.

5.1. Discussion of Findings

The current study aimed to discover the use of academic vocabulary in Turkish ELT students' argumentative essays. For this purpose, the top 50 academic words in Gardner and Davies' (2014) AVL were extracted and analyzed in terms of their frequency distributions, overuse, and underuse of academic vocabulary compared to native English learners. As a result of this comparison, the findings revealed that the most frequently used and the least used academic words in native and non-native learners' corpora were identical. Besides, the words used in non-native learners' corpus were more varied than in native English learners' corpus. Furthermore, some academic words (*university, need, society, important, use, develop, information, value, result, experience, provide, study, practice, require, data*) in the non-native corpus were overused. In contrast, others (*form, role, effect, group, policy*) were underused compared to the native English learners' corpus. The possible reasons behind such overuse and underuse in non-native learners can be attributed to some factors such as i) students may lack vocabulary proficiency (Fraser, 1998), ii) using academic vocabulary effectively and accurately in this type of argumentative essay writing requires a broad vocabulary, so students may not be able to use academic vocabulary effectively in their writing due to a lack of academic vocabulary (Zamora, 2011).

According to the study's first finding, the top 10 most frequently used academic words in non-native speakers' corpus are identical to native speakers' corpus. These findings indicate that Turkish ELT students had knowledge of the words and used the terms in their essays. This finding is similar to Waluyo and Bakoko's (2021) study. They searched for high school students' use of academic vocabulary in essay writing and their contributions to English proficiency. They found that students understood and could effectively employ the terms in sentences since they were familiar with the words and correctly utilized them in their sentences.

According to the study's findings, the most frequently used academic word by native speakers is "*however*." This finding is in line with Hyland's (2008) claim. In Hyland's idea, the community supports better perception and comprehension of the differences in genre usage

and genre justification between various groups. Compared to many other languages, native English speakers tend to use more sentence connectors in their academic texts. Unlike German, Korean, Chinese, and Japanese, where the reader is expected to sift through a dense text to find the meaning, English places the responsibility for clarity on the writer rather than the reader (Hinds, 1987). On the other hand, the academic word "*society*" is the most frequently used word by non-native Turkish students. Plausible explanations for this finding could be that "writing can be understood only from the perspective of a society rather than a single individual" (Faigley, 1986: 535), and according to Geertz (1973), writing and knowledge are influenced by what local community members do. Community helps improve interpretation and comprehension of genre usage and genre-explaining diversity among various groups. In addition, it can be said that the "*society*"-based topics among the recommended essay topics are more preferred by the students, which is influential in the emergence of this result.

Another finding from the research is that the academic vocabulary "*university*" was the excessively overused word in TLC compared to LOCNESS. The possible explanation for this finding is that one of the essay topics is "Most university degrees are theoretical and do not prepare students for the real world. They are therefore of very little value." The participants are university students, so this topic was the second most preferred. That's why "*university*" was the most excessively overused word.

Students tend to be unfamiliar with academic vocabulary because it is defined as a set of lexical items that are not core terms but appear in many academic texts (Paquot, 2010). These lexical items also occur less frequently than general vocabulary. For this reason, we presupposed that Turkish ELT students underused the academic vocabulary. However, the findings revealed that the students overused 30% of the academic vocabulary (*university, need, society, important, use, develop, information, value, result, experience, provide, study, practice, require, data*). The possible reasons behind this finding are that (i) students need high vocabulary knowledge to pass the Foreign Language Test that these students take in order to be placed in the ELT departments, (ii) in the Writing Skills Course, lecturers taught basic rules of APA format that apply to argumentative essay, and they asked from students to cite a few references while writing the essays. That is why some academic vocabularies in Gardner and Davies' (2014) AVL may have been overused.

Paquot (2010) stated that learners tend to use recurring lexical items because of their limited lexical knowledge. Also, Saville-Troike (2006) claimed that compared to native speakers with the same educational level, non-native speakers are more likely to choose and use lexical items from a smaller lexical repertoire. However, the second finding of this study

did not fully support these arguments. The type-token ratio analysis showed that Turkish ELT students used more varied words than native English learners in their argumentative essays.

Hyland (2002) states that instead of using the text as a simple measure of competence or lexical quality, academic writing should be evaluated based on an analysis of the text in connection to its particular context, register, and academic discourse community. In light of Hyland's idea, we chose an argumentative essay for the study. Because while writing an argumentative essay, students need to support their own opinion by giving some scientific references. The study's findings revealed that the academic vocabulary use of non-native Turkish students is high at the university level. The study's finding supports Hyland's (2002) idea that the use of academic vocabulary is strongly related to the text types.

In the study by Mozaffari and Moini (2014), the word frequency and text coverage of Coxhead's AWL in research articles on education were searched. In order to achieve this, a corpus of 239 research articles totaling 1.7 million words was compiled. This study discovered that just 4.94% of the Education Research Articles Corpus contained AWL word forms, which shows that they are not very important in education. Additionally, quantitative results indicate that only the first two categories of AWL accounted for nearly half of all occurrences. Researchers recommend field-specific word lists for students in various fields, given AWL's low importance in education. These word lists are regarded as one of the most effective and useful techniques for basic academic courses taught and learned by Pammu and Jubhari's (2021) research. They investigated the use of words in Gardner and Davies' (2014) Academic Vocabulary List in undergraduate theses in English Education and obtained similar results. Pammu and Jubhari's (2021) study revealed that AVL is successful in helping students write their undergraduate theses. However, a new academic vocabulary unique to the English Education area must be developed because some words closely related to the English Education field are not included in the AVL.

CHAPTER VI

6. CONCLUSION

6.1. Introduction

The objectives and conclusions of the study are briefly summarized in this section. Additionally, the study's implications are discussed. Suggestions for teachers and students and proposals for additional research were given.

6.2. Summary of the Study

The purpose of the current study was to compare academic vocabulary usage in argumentative essays written by Turkish ELT students and native English speakers. Based on the top 50 academic vocabularies in AVL, the frequency analysis of TLC and LOCNESS was examined, the lexical diversity of TLC and LOCNESS was compared, and the overuse and/or underuse of academic vocabulary usage of Turkish ELT students was investigated. Descriptive analysis was used to discover the most frequently used academic words, while AntConc 3.5.8 was used to analyze quantitative data.

The study's results showed that of the 50 words chosen from the most frequently occurring academic words used in Gardner and Davies' (2014) AVL, the most frequently used academic words and the least frequently used academic words are identical in both corpora. Therefore, it can be concluded that non-native Turkish students do not use academic words differently when compared to native English speakers. However, Log-likelihood analysis shows that 40% of the academic words were used differently. 30% of the academic words were overused, and non-native Turkish students underused 10%. Furthermore, type-token ratio analysis showed that lexical diversity in Turkish ELT students' argumentative essays is more than in native English students.

6.3. Pedagogical Implications

Based on the present study's findings, some pedagogical implications can be drawn. Firstly, this study provides corpus-based evidence for academic vocabulary use in the Turkish ELT students' context. The corpus-based investigation is a valuable technique for examining a large amount of real-life linguistic data.

Secondly, because learner corpus research is one of the top research areas in corpus linguistics and SLA, as a specialized learner corpus study, the present one will help us to understand learners' needs and tendencies.

Thirdly, the current study's argumentative genre was the focus since it is crucial for students' writing growth, and its principal function is a critical skill for all academic fields (Shin, 2018). Therefore, the genre that students are asked to produce affects academic vocabulary use. In addition, as the text types preferred by the students' fields can vary, it is necessary to teach academic vocabulary that is equally pertinent to those disciplines. More specifically, in an argumentative essay, students are asked to persuade their audience on an issue, and a wide range of vocabulary is necessary. The genre or text type influences the vocabulary employed in a text. Further implications include the possibility of using genre analysis and discipline-specific vocabulary lists to help students integrate into the academic discourse community of their chosen field.

Finally, the research showed that students use academic words in their writing studies. According to the study's results, teachers can inform students about the correct use of academic words whose frequency is determined to be high. Teachers can organize in-class activities on the effective use of academic vocabulary. In addition, research findings showed that academic words are frequently used in argumentative writing. For this reason, the frequency of using argumentative essays in language lessons can be increased.

6.4. Suggestions for Further Study

Despite the critical findings about academic vocabulary, the study has some limitations. The scope of the current study is limited to the analysis of the overuse and underuse of academic vocabulary. Only the 50 most frequent words could be analyzed, not the entire 500 words in the AVL. The analysis also did not involve the accuracy of word usage, meaning that the words might be found in students' writing but might not be accurately used. In order to acquire more information about the usage of academic vocabulary, further research can focus on misuse and interlanguage-specific features of academic vocabulary. Another issue that can be regarded as a limitation is that the corpus used in this study is small, and it can be suggested for future research to compile larger corpora. Moreover, in the current study, the academic vocabulary use of ELT department students in their argumentative writings was examined. Preparation class students' writing from different departments may be investigated for future studies.

Despite these limitations, it is essential to note that more attention should be paid to ELT students' academic vocabulary use in the context of non-English speaking countries. The study can give an overview of academic vocabulary used in argumentative essays, which may be used to create curricula and serve as a resource when teaching and studying academic terms at the university level. The new academic vocabulary list belonging to the specific field is crucial for future research.



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APPENDICES

Appendix 1. Consent Form

Sayın Katılımcımız

Katılacağınız bu çalışma, " The use of academic vocabulary in argumentative essays of the Turkish ELT students and the native speakers of English: A corpus-based study (Anadili Türkçe olan İngiliz Dili Eğitimi öğrencileri ve anadili İngilizce olan ve anadili İngilizce olan öğrencilerin tartışmacı yazılarında akademik sözcük kullanımı: Derlem temelli bir çalışma)" adıyla, Hatice BİRİNCİ tarafından yapılacak bir araştırma uygulamasıdır.

Araştırmanın Hedefi: İngiliz dili eğitimi bölümü öğrencilerinin akademik kelime kullanımını incelemek ve akademik gelişmelere bu yönde ışık tutmaktır.

Araştırmanın Nedeni: **Tez çalışması**

Araştırmanın Yapılacağı Yer(ler): **Üniversite**

Araştırma Uygulaması: **Tartışmacı deneme yazımı**

Araştırma T.C. Yükseköğretim kurum yönetiminin izni ile gerçekleştirilmektedir. Araştırma uygulamasına katılım tamamıyla gönüllülük esasına dayalı olmaktadır. Çalışmada sizden kimlik belirleyici hiçbir bilgi istenmemektedir. Cevaplar tamamıyla gizli tutulacak ve sadece araştırmacılar tarafından değerlendirilecektir. Veriler sadece araştırmada kullanılacak ve üçüncü kişilerle paylaşılmayacaktır.

Uygulamalar, kişisel rahatsızlık verecek sorular ve durumlar içermemektedir. Ancak, katılım sırasında sorulardan ya da herhangi başka bir nedenden rahatsız hissederseniz cevaplama işini yarıda bırakabilirsiniz.

Katılımı onaylamadan önce sormak istediğiniz herhangi bir konu varsa sormaktan çekinmeyiniz. Çalışma bittikten sonra bizlere telefon veya e-posta ile ulaşarak soru sorabilir, sonuçlar hakkında bilgi isteyebilirsiniz. Saygılarımızla,

Araştırmacı : Hatice Birinci
İletişim Bilgileri :

Yukarıda bilgileri bulunan araştırmaya katılmayı kabul ediyorum.

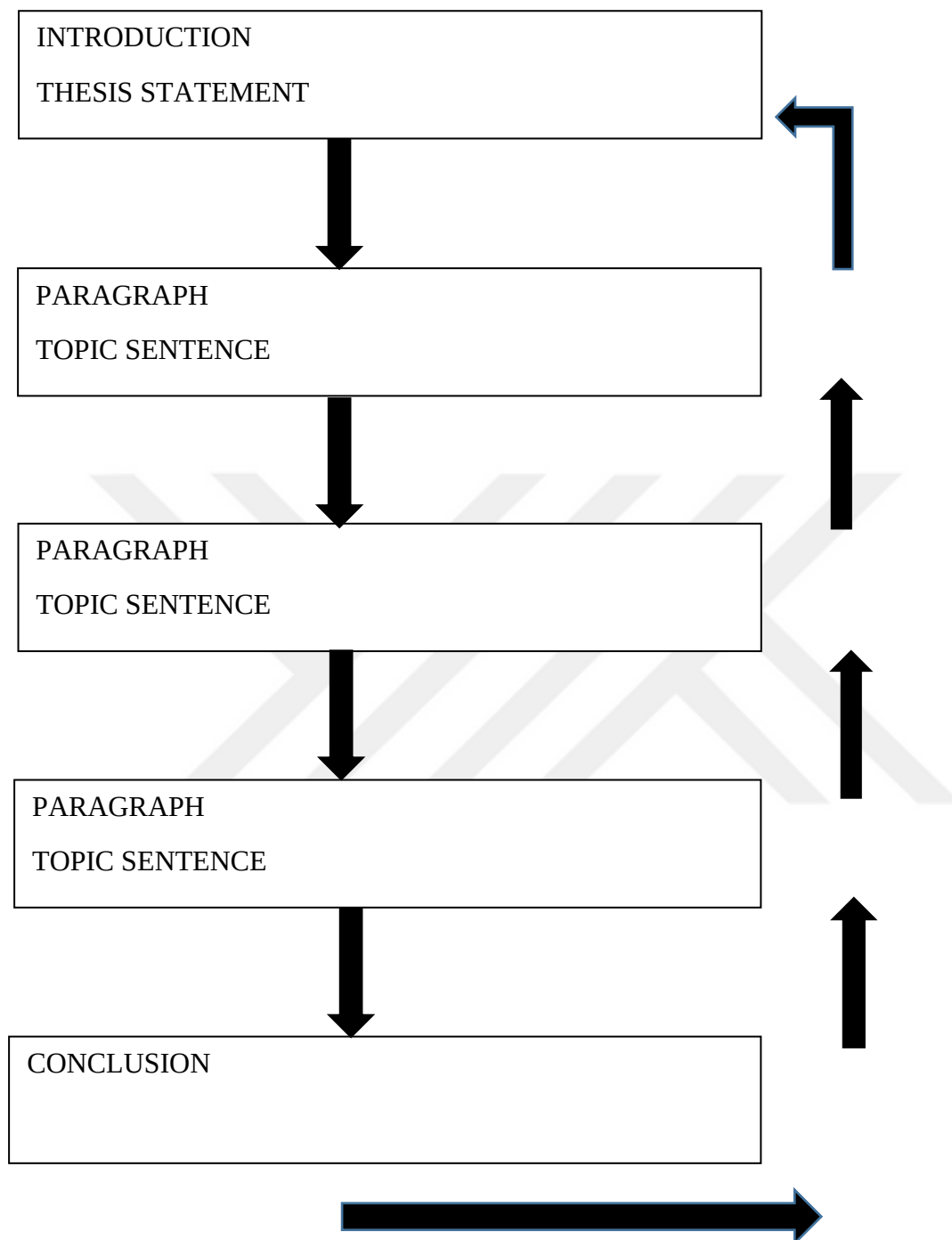
....../...../.....

Katılımcı e-mail adresi :

Öğrenim gördüğü kurum :

Okul numarası :



Appendix 2. Suggested Essay Structure Used in This Study

Appendix 3. Research Permission Form 1

Appendix 4. Research Permission Form 2



T.C.
TRABZON UNIVERSİTESİ REKTÖRLÜĞÜ
Yabancı Diller Eğitimi Bölümü

Sayı : E-84107604-300-2200011000
Konu : Anket İzni (Hatice BİRİNCİ)

09.03.2022

FATİH EĞİTİM FAKÜLTESİ DEKANLIĞINA

İlgi : Yazı İşleri Biriminin 09.03.2022 tarihli ve E-48203248-300-2200010932 sayılı yazısı.

Amasya Üniversitesi Sosyal Bilimler Enstitüsü Yabancı Diller Eğitimi Anabilim Dalı Eğitim İngiliz Dili ve Eğitimi Bilim Dalı Tezli Yüksek Lisans Programı öğrencisi Hatice BİRİNCİ'nin tez çalışması kapsamında Bölümümüz İngilizce Öğretmenliği Programı öğrencilerine anket uygulama talebi veri toplama sürecini kendisi yapması koşuluyla uygun görülmüştür.
Bilgilerini ve gereğini arz ederim.

Doç. Dr. Servet ÇELİK
Bölüm Başkanı

Belge Doğrulama Kodu: MCF986C

Bu belge, güvenli elektronik imza ile onaylanmıştır.

Belge Takip Adresi: <http://akys.trabzon.edu.tr/SROAS/Record/ConfirmationPageIndex>

Adres: Trabzon Üniversitesi Fatih Kampüsü, Fatih Mah. Adnan Kahveci Bulvarı, 61085 - Akçağlar-

Trabzon / TÜRKİYE

Tel/Fax No:

e-Posta:

Kapı Adresi: yabancidiller@trabzon.edu.tr

Faks No:

İnternet Adresi:

Bilgi İçin :

İletişim Adresinde

Bölüm Başkanı

Tel/Fax No:



Appendix 5. Research Ethics Committee Approval Form

Evrak Tarih ve Sayısı: 24.08.2021-28936



T.C.
AMASYA UNIVERSİTESİ
Bilim Etik Kurulu
Sosyal Bilimler Etik Kurulu

Sayı : E-30640013-108.01-28936
Konu : etik kurul başvurusu

24.08.2021

REKTORLUK MAKAMINA
Sayın Dr. Öğr. Üyesi Melike BAŞ
Öğretim Üyesi

İlgi : 02.08.2021 tarihli ve 470 sayılı yazı.

"The usage of academic words in argumentative essays of the Turkish ELT students and the native speakers of English: A comparative corpus-based study" (Anadili Türkçe olan İngiliz Dili Eğitimi öğrencileri ve anadili İngilizce olan öğrencilerin tartışmacı makalelerde akademik kelime kullanımı: Karşılaştırmalı derlem dilbilim çalışması) adlı araştırmamız Sosyal Bilimler Etik Kurulu tarafından bilimsel araştırma etiği yönünden incelendi ve değerlendirildi. Konu ile ilgili kurul görüşü ektedir.

Bilgilerinizi rica ederim.

Doç.Dr. Songül KEÇECİ KURT
Etik Kurul Başkanı

Ek:

- 1- Başvuru Değerlendirme (1 sayfa)
- 2- etik kurul başvurusu (10 sayfa)

Bu belge, güvenli elektronik imza ile imzalanmıştır.

Belge Doğrulama Kodu :35E4ZTU02 Pin Kodu :50952

Belge Takip Adresi :
<https://belge.gov.tr/belge/35E4ZTU02PinKodu=50952>

Adres:Albülhak Mah. Mahmut Yavuzoğlu Cad. No:7 Merkez/Amasya
Telefon:3600060 Faks:3600059
e-Posta:genelsekretarlik@amasya.edu.tr Web: <http://www.amasya.edu.tr/iceri/etik-kurulu/bilim-etik-kurulu.aspx>
E-posta: genelsekretarlik@amasya.edu.tr

Bilgi için: Fatih CAN
Uzman: Etik Kurul Üyesi
Tel No: 5425299839



Bu belge,güvenli elektronik imza ile imzalanmıştır.

	AMASYA ÜNİVERSİTESİ SOSYAL BİLİMLER ETİK KURUL DEĞERLENDİRME FORMU
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Ek-1

Araştırmanın Başlığı : "The usage of academic words in argumentative essays of the Turkish ELT students and the native speakers of English: A comparative corpus-based study" (Anadili Türkçe olan İngiliz Dili Eğitimi öğrencileri ve anadili İngilizce olan öğrencilerin tartışmacı makalelerde akademik kelime kullanımı: Karşılaştırmalı derlem dilbilim çalışması)	
Başvuru Formunun Etik Kurula geldiği tarih	02.08.2021
Başvuru Formunun Etik Kurulda incelendiği tarih	16.08.2021
Karar tarihi	16.08.2021

SONUÇ

1.	☒ Kabul
2.	☐ Düzeltme gereklidir: Etik sorun olabilecek sorular/maddeler, streşler ya da unsurlar bulunmaktadır. Açıklama:
3.	☐ Red Gerekçe, Görüş, Tavsiye ve Açıklamalar:

Başvuru dosyasının incelenmesinde hazır bulunan ve araştırma ile doğrudan veya dolaylı olarak ilişkisi bulunmayan Etik Kurul başkan ve üyelerinin ad, soyad ve imzaları.

(Başkan)
Doç. Dr. Songül KEÇECİ
KURT

(Üye-Bşk Yardımcısı)
Dr. Öğr. Üyesi Fatih CAN

(Üye)
Dr. Öğr. Üyesi Davut AĞBAL

(Üye)
Dr. Öğr. Üyesi Kâzım EFE

(Üye)
Dr. Öğr. Üyesi Mustafa YILDIZ